Light

Light for Generations

For Armin
* 20.02.1934 † 07.11.2020

With deepest respect.
For decades Armin Bansbach shaped the Selux group as managing director, shareholder, member of the supervisory board and visionary.

In a corner of the universe, a star is spinning. A star that means everything to us because it is our home. It is a place of exceptional beauty, diversity and exuberant nature, of which we are a part. It must be a temporary mistake for us to go against nature in the pursuit of short-term interests, for how much more rewarding, how much more beautiful it is to do as nature does and strive for perfection. Nothing in nature is out of place, no stone in the wrong position: nature itself, however it appears, is necessarily beautiful.

This beauty draws us in and is where we relax and feel at home. Places that have grown over centuries, old cultural landscapes or Italian hillside villages fill us with joy. We feel at home where everything has its place: in the park, by the lake, in the open countryside. Yet we have designed cities according to the needs of cars and shopping centres according to the scale of maximum profit. We have concreted over entire landscapes ignoring man and his nature. It is time to correct this. Back to nature does not mean sacrifice but profit because the beauty of nature is purposeful, sustainable and therefore economic.

We live in a time where completely different places start to look the same. It's the same logic which is indiscriminately at work there: the logic of the quick and cheap, of the arbitrary. The result is separation, nature is locked out, the short-term goal is the measure for everything. As a consequence, beauty expires because it is more than the sum of its parts. If you replace one of them carelessly, then the calculation no longer works and we lose our home. We only feel good if everything is right, if the individual elements of our surroundings harmoniously intertwine. We feel good because we are allowed to be human, because our environment complies with us.

Nature and urbanity are only opposites where we have generated them with glass, concrete and asphalt. »The world is a process of our thinking,« wrote Einstein, who added: »It cannot be changed without changing our thinking.« The fact that it can be done differently by thinking differently is shown for example with the Bosco Verticale in Milan, a vertical forest with 900 trees rooted in the facades of two high-rise buildings. It was created by the architect Stefano Boeri with ecological and aesthetic density – decades after Hundertwasser had planted a »tree tenant« on the first floor of a rented flat in Alserbachstrasse in Vienna. The tree grew along the window and amazed passers-by. The visionary later outlined his programme with the phrase: »Roofs must become forests and streets must become green valleys.« Hundertwasser tackled the urban landscape with bright colours and round shapes like exclamation marks. But you need whole sentences to do the same thing with nature because the design vocabulary of nature is extremely complex but not striking. Its beauty unfolds in its structure, rhythm and repetition.

Beauty always involves functionality: nature doesn't know superfluousness. Even the splendour of a flower serves a purpose and appears sublimely beautiful because of this: nothing can be left out or added. Besides form, material and appearance, it needs another quality for us to feel something is beautiful: time. Beauty must prove itself. Only something that stands the test of time and lasts decades later is truly beautiful. In order to preserve it, it is necessary to think in cycles and not in short-term trends. Good is what remains, what survives. Beauty is not a short-term effect but only flourishes with sustainability. Something that is sustainable, that holds together, is automatically beautiful. It integrates itself naturally into the respective environment and merges into it. This is why grown structures create well-being and why the permanent brings comfort.

Flora and fauna are the result of an ongoing process of adaptation. Nature is above all practical: anything that doesn't work or is superfluous is devoured by the weather or evolution. What remains is clarity, endurance and renewal. For thousands of years, man has shaped his world: we have cultivated deserts, created cultural landscapes and preserved habitats worth protecting.

It's up to us: what we do, undertake or produce must be permanent and still make sense decades from now. This is how the world will remain a beautiful place for us. We have the technical opportunities, resources and knowledge for this.

Let's get started, let's get on with it!

»Oh my God! Look at that picture over there! There's the Earth coming up. Wow, that's pretty.«
»You got a color film, Jim? Hand me that roll of color quick, would you …«
»Oh man, that's great!«

Earthrise is the name of the NASA photo AS8-14-2383HR taken by William Anders from the Apollo 8 space capsule. The image was taken on 24 December 1968 during the fourth of ten planned orbits of the moon: an iconic photographic record that changed our view of the Earth forever. Audio recordings and transcriptions of the mission are available online on the NASA website. Above is an extract of the conversation between Apollo 8 crew members Bill Anders and Jim Lovell.

In a beautiful place

»A human being is a part of the whole, called by us ›Universe‹, a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest — a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.«

Albert Einstein

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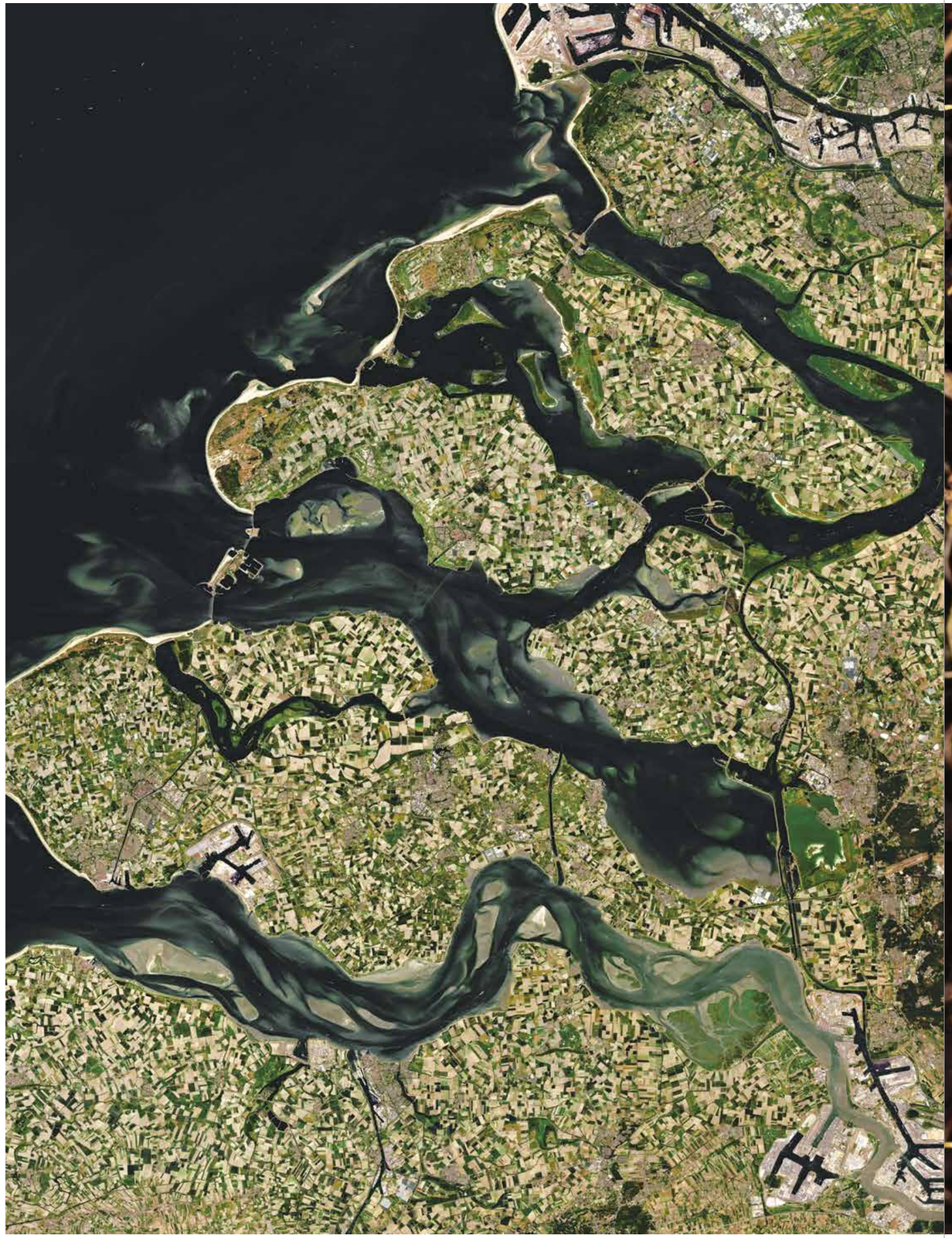
I
Unique places

II
More than light

III
Selux luminaires

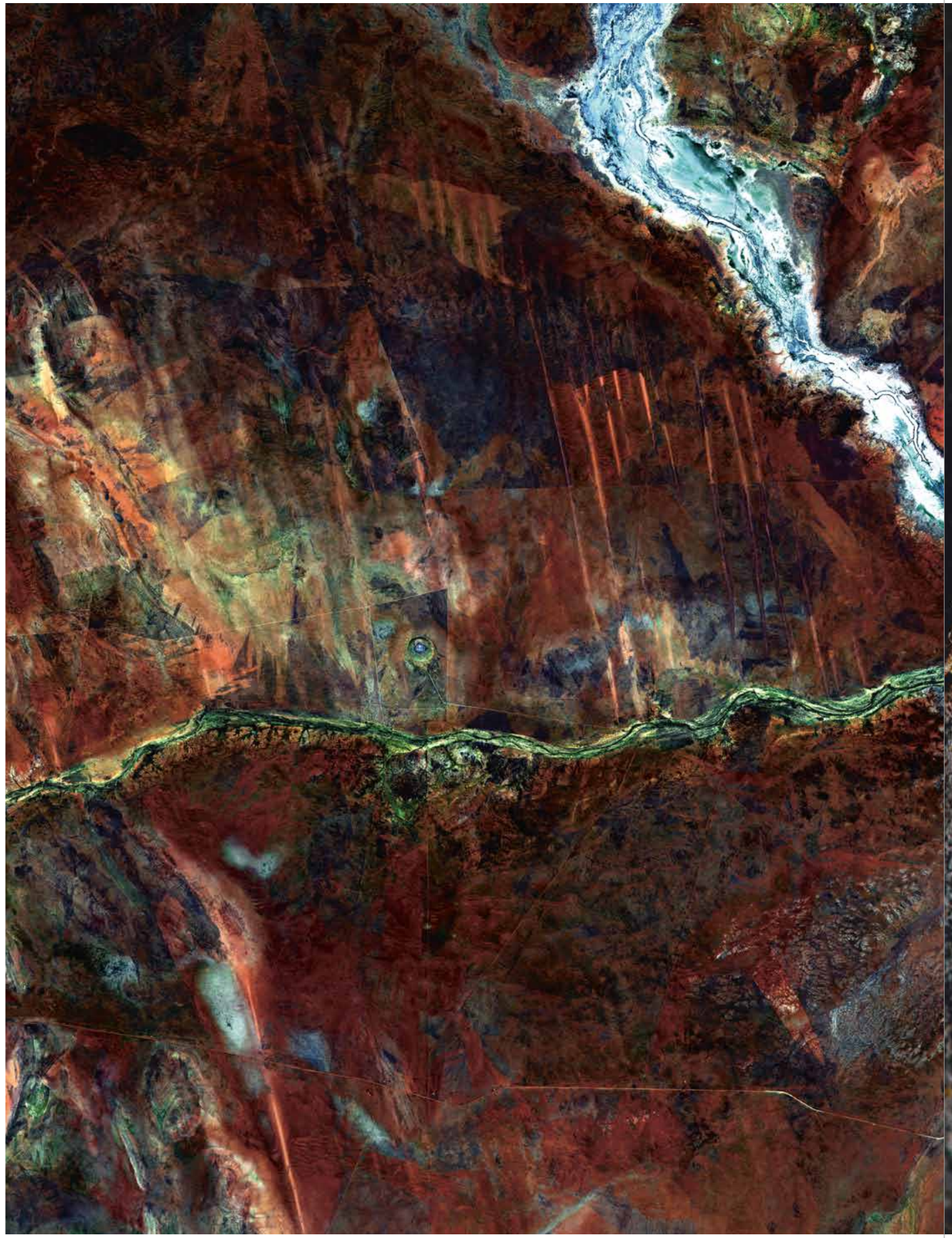
Appendix

PLACES



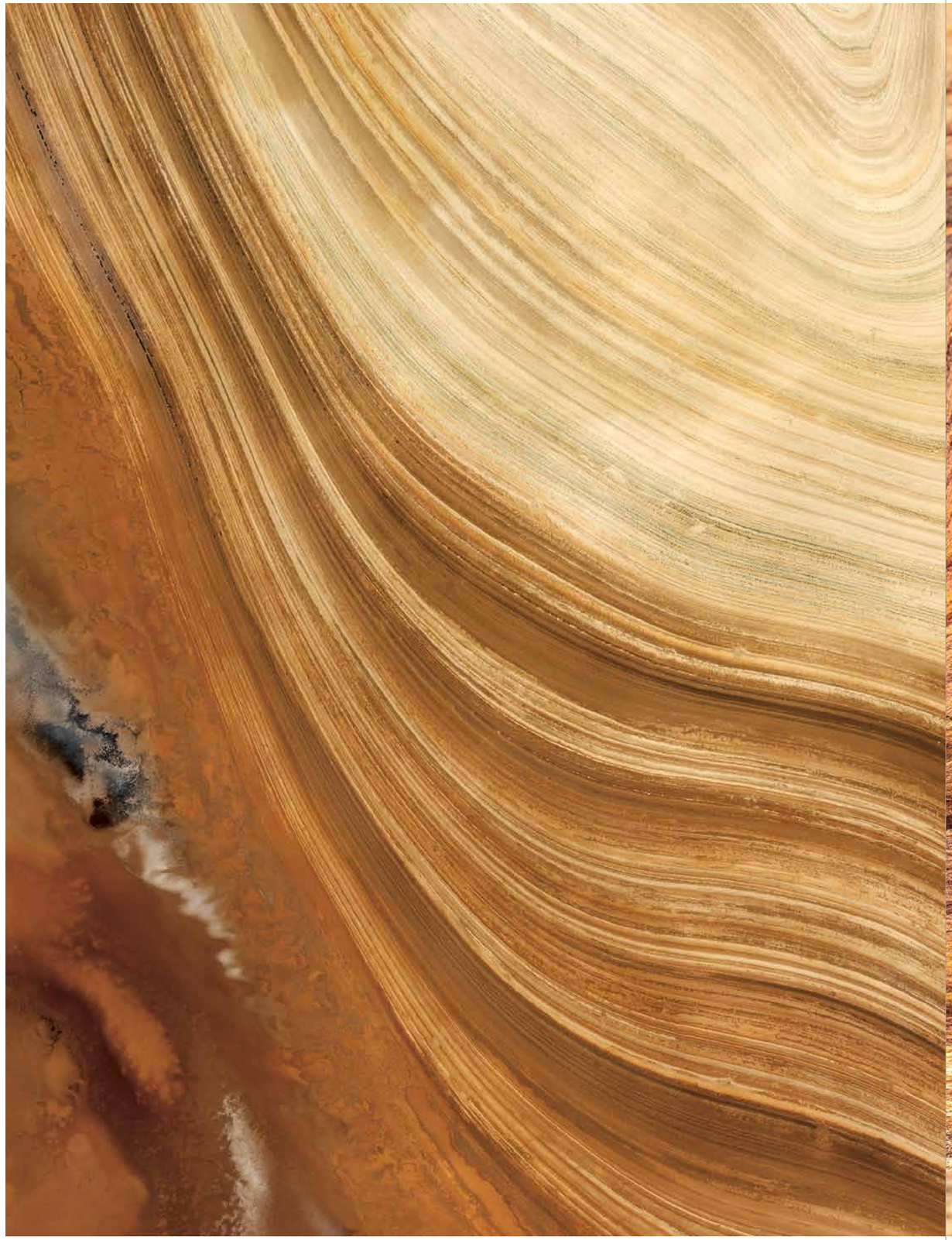
51°42'53.6"N 004°22'38.8"E

The design vocabulary of nature is extremely complex but not shocking.

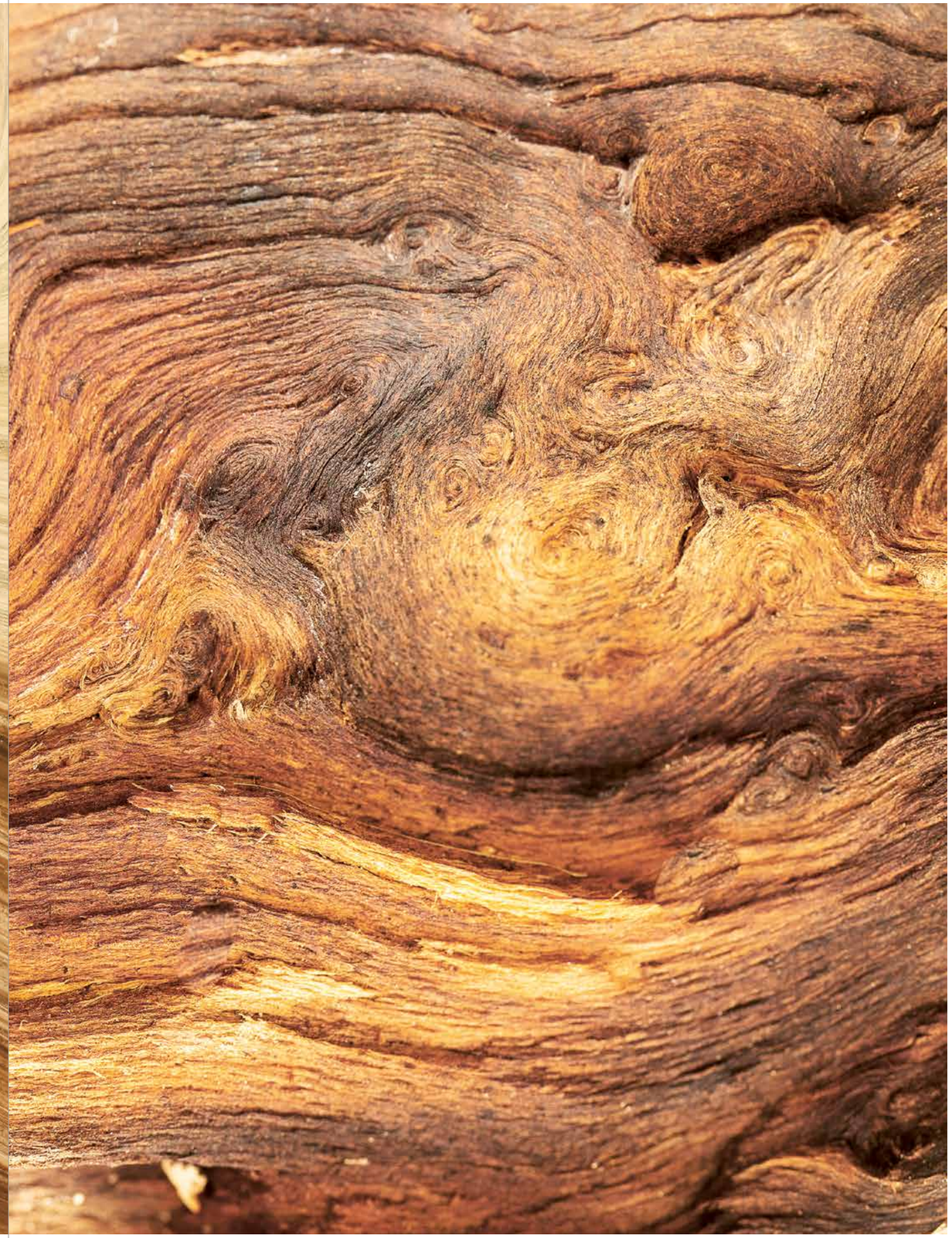


19°10'02.6"S 127°47'07.0"E

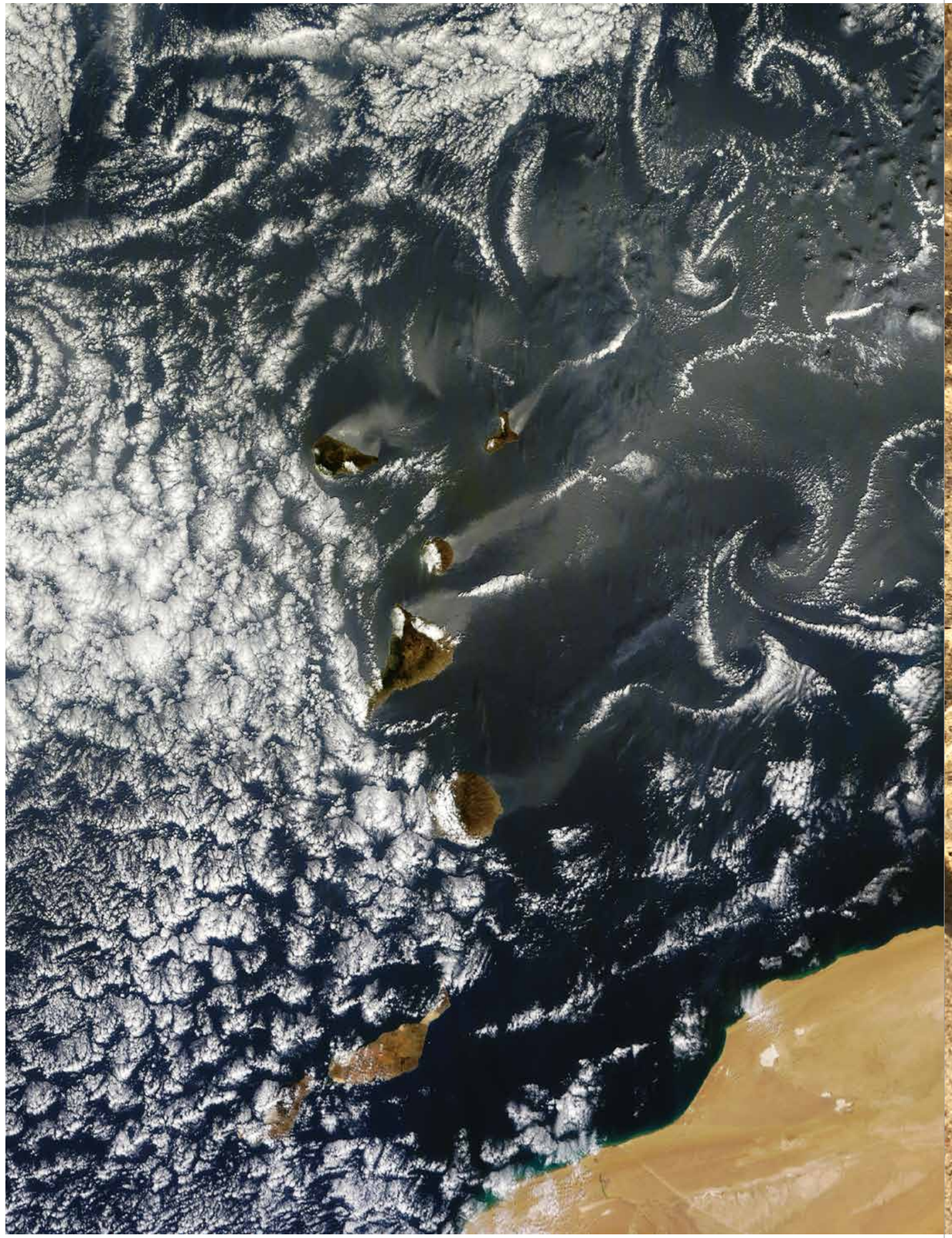
Nothing in nature is out of place, no stone in the wrong position.
Nature itself, however it appears, is necessarily beautiful.



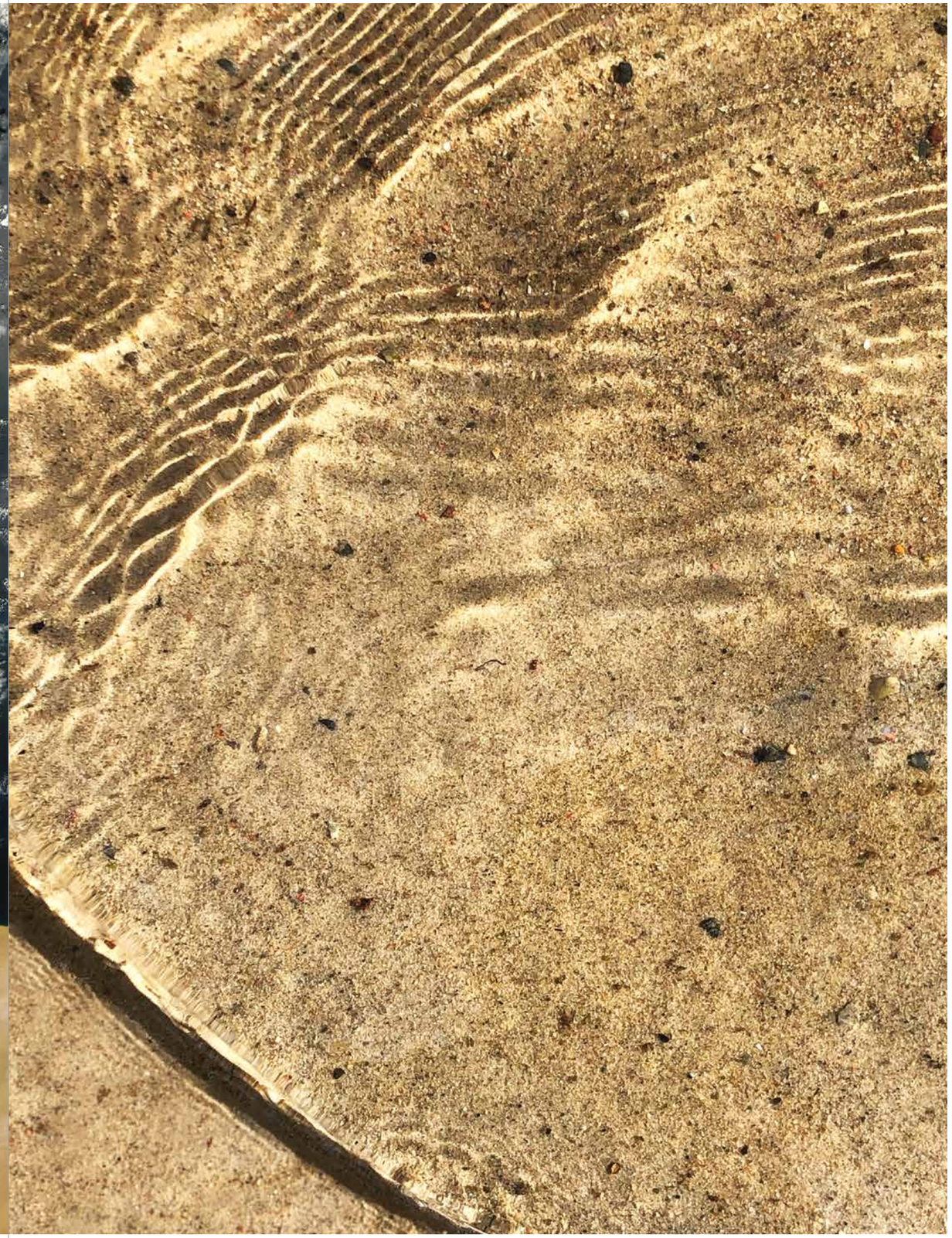
34°44'27.9"N 054°48'57.7"E



Beauty unfolds in its structure,
rhythm and repetition.



28°18'03.7"N 015°56'54.7"W



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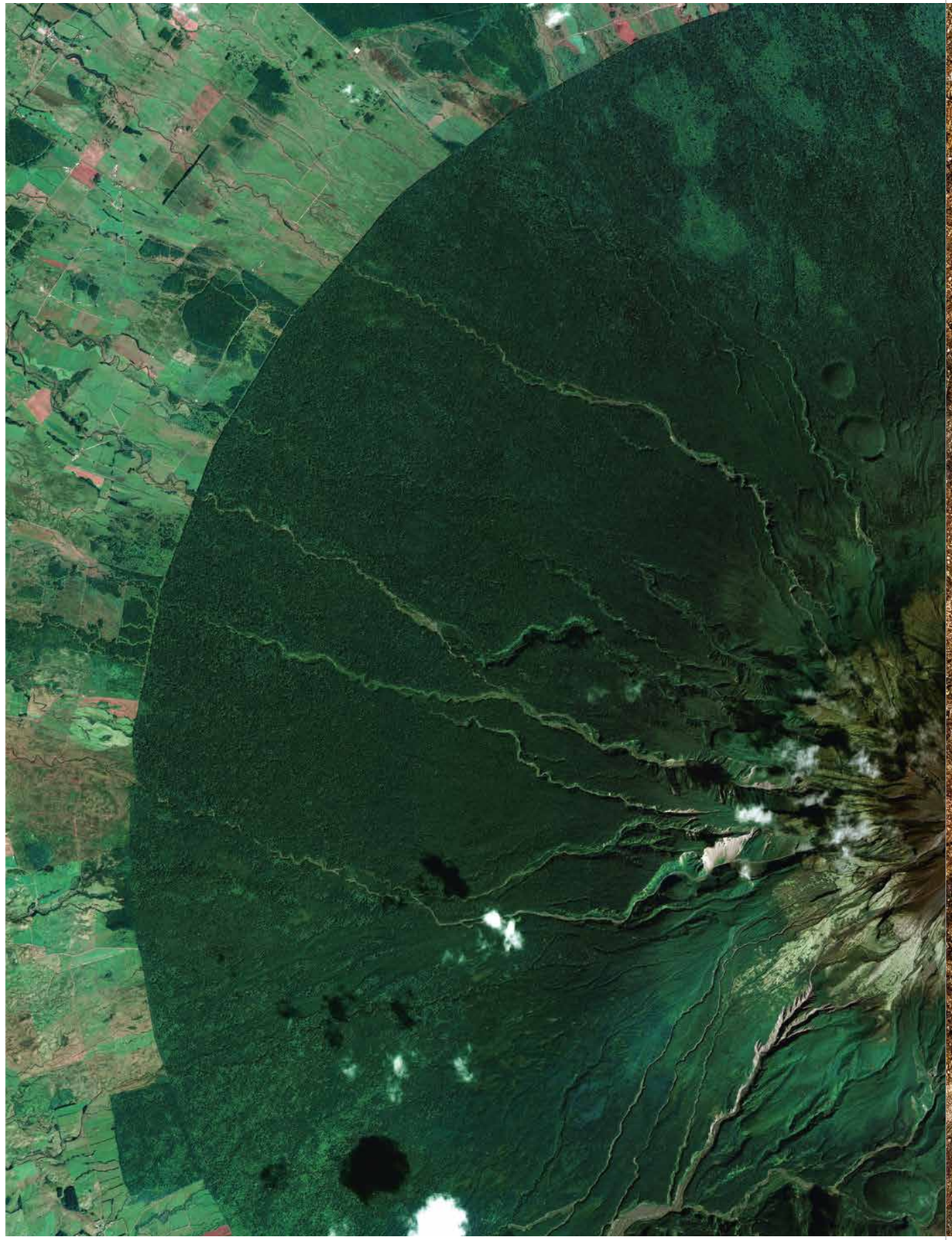
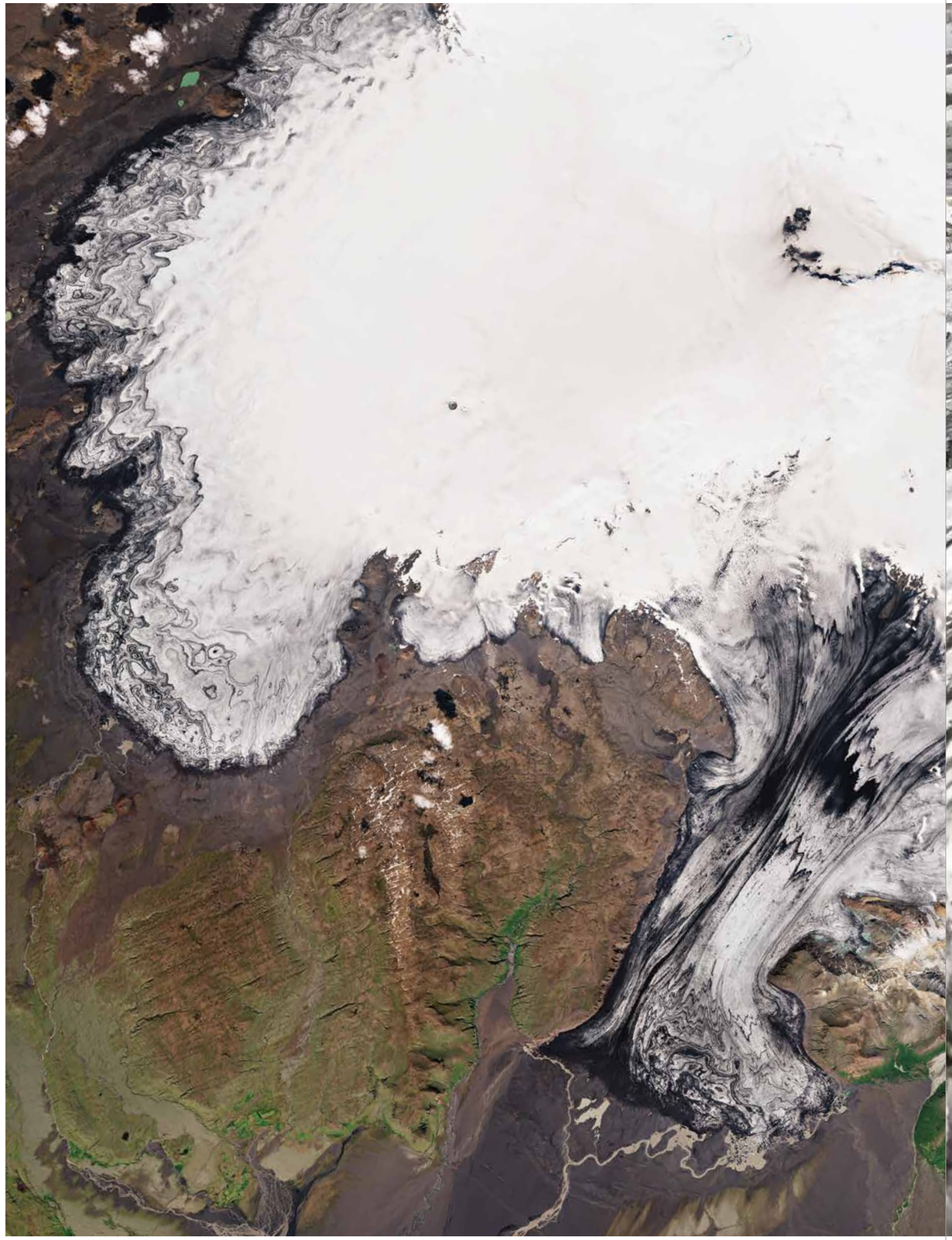
the weather or evolution.
What remains is clarity, endurance and renewal.

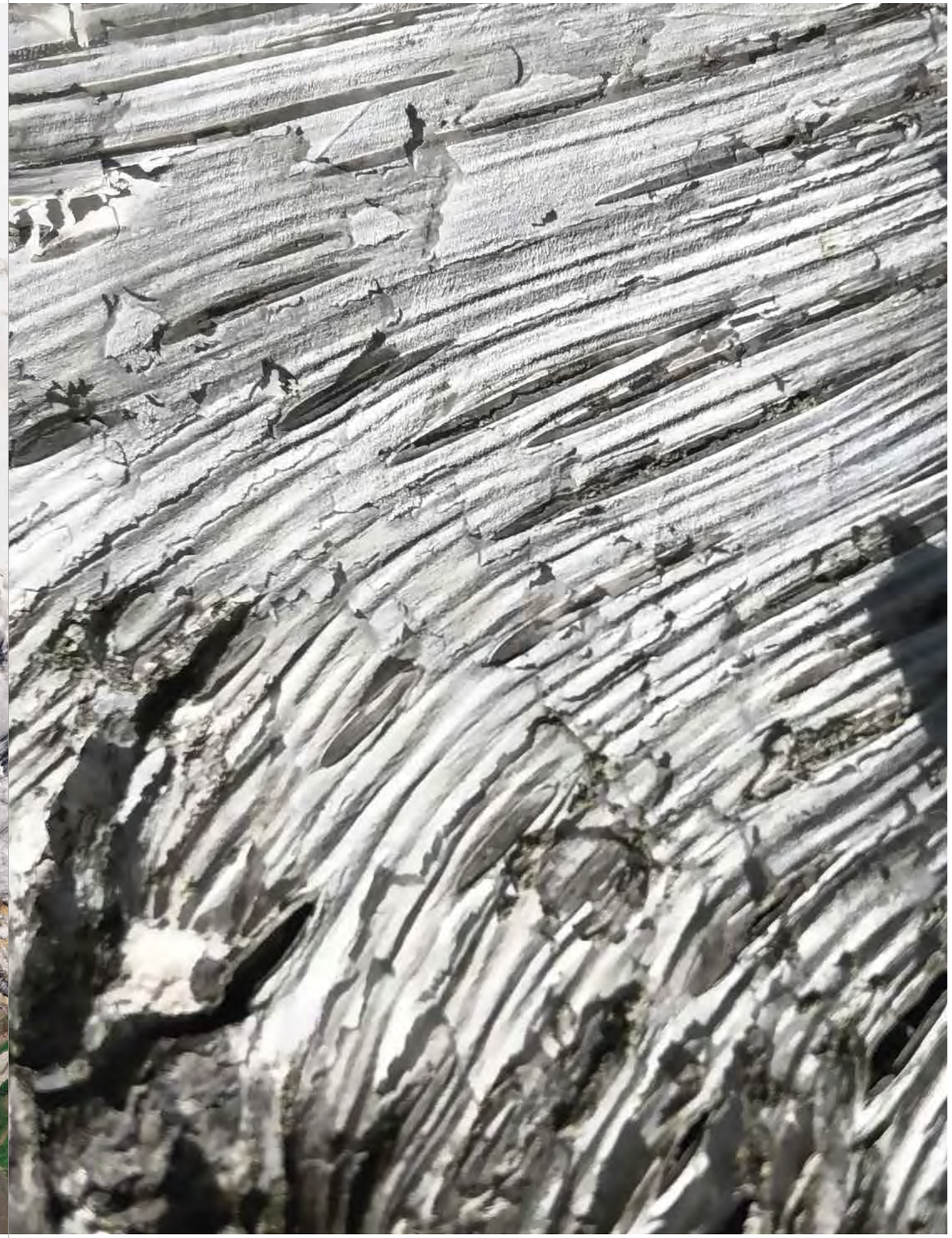


39°17'50.4"S 174°03'46.4"E

In order to preserve it,
it is necessary to think in cycles and
not in short-term trends.



64°13'34.5"N 017°02'35.1"W



Besides form, material and appearance,
it needs another quality for us
to feel something is beautiful: time.

40°45'23.7"N 074°00'29.5"W

Back to nature does not mean sacrifice but
profit because the beauty of nature is purposeful,
sustainable and therefore economic.

45°25'54.5"N 075°41'22.5"W

Nature and urbanity are only opposites
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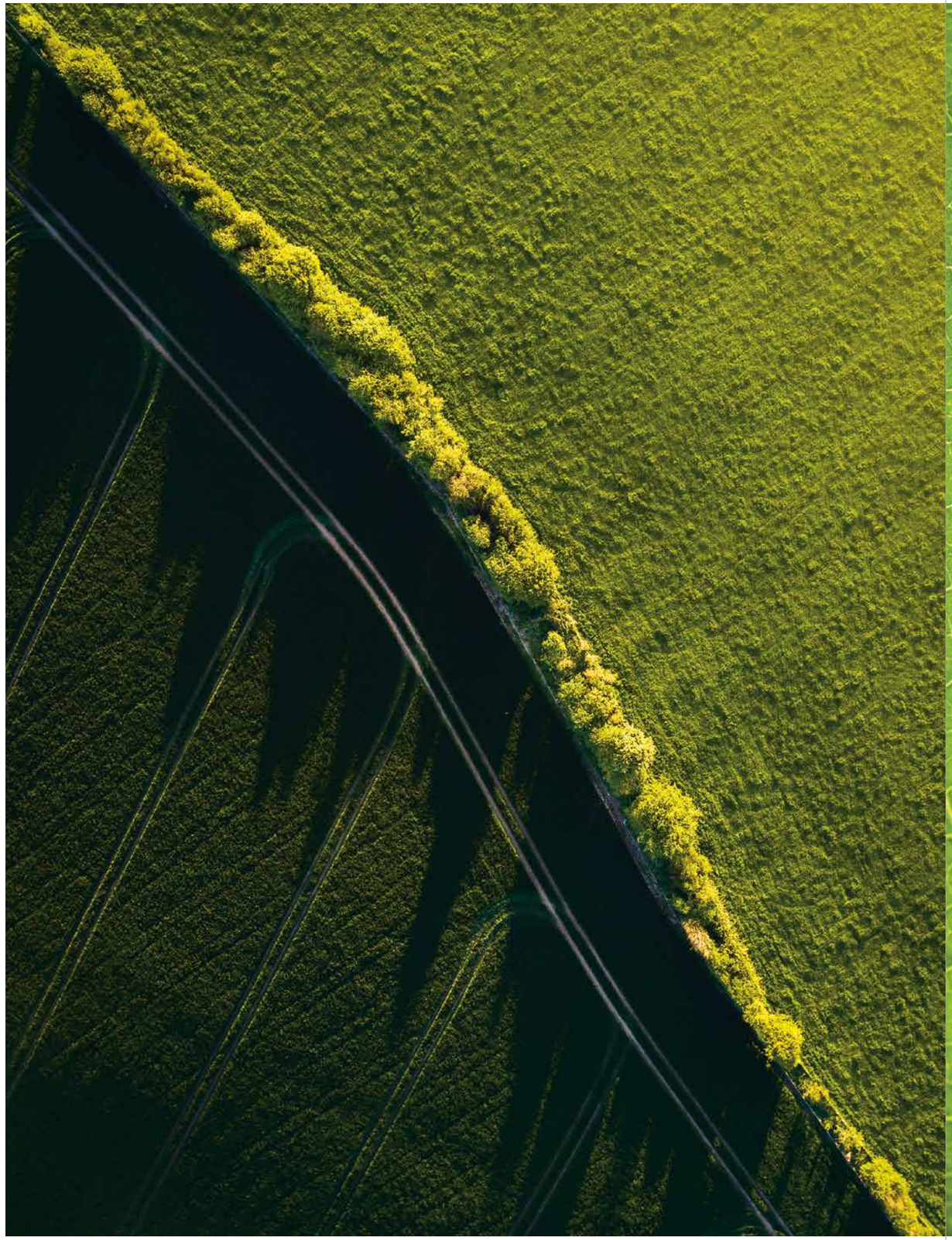
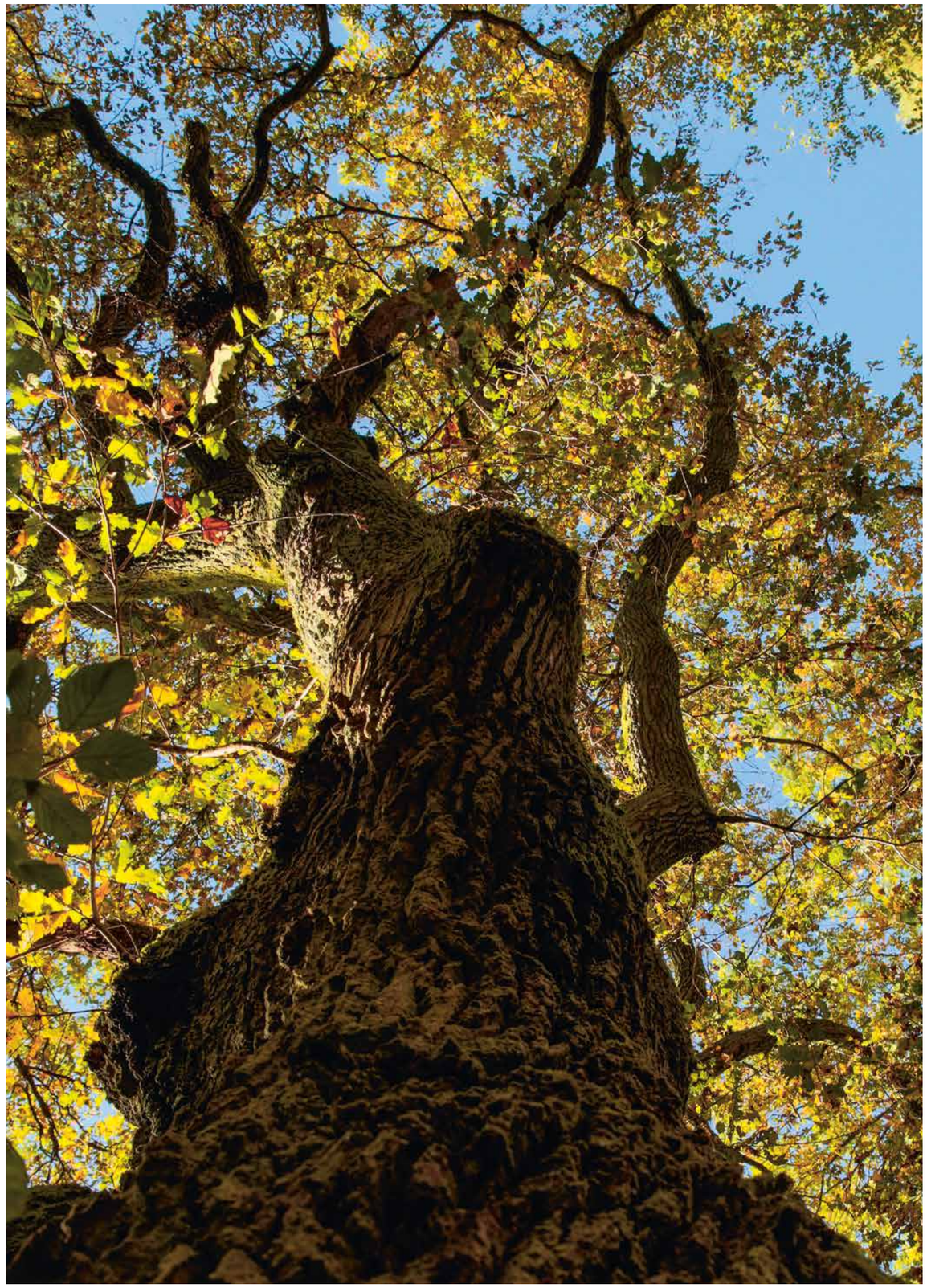
with glass, concrete and asphalt.



Unknown, probably UK

We feel at home where everything has its place:
in the park, by the lake,
in the open countryside.



53°07'36.6"N 013°13'24"E

What we do, undertake or produce must be permanent and still make sense decades from now. This is how the world will remain a beautiful place for us. We have the technical opportunities, resources and knowledge for this.

Let's get started, let's get on with it!

LIGHT

Landscape design of the future

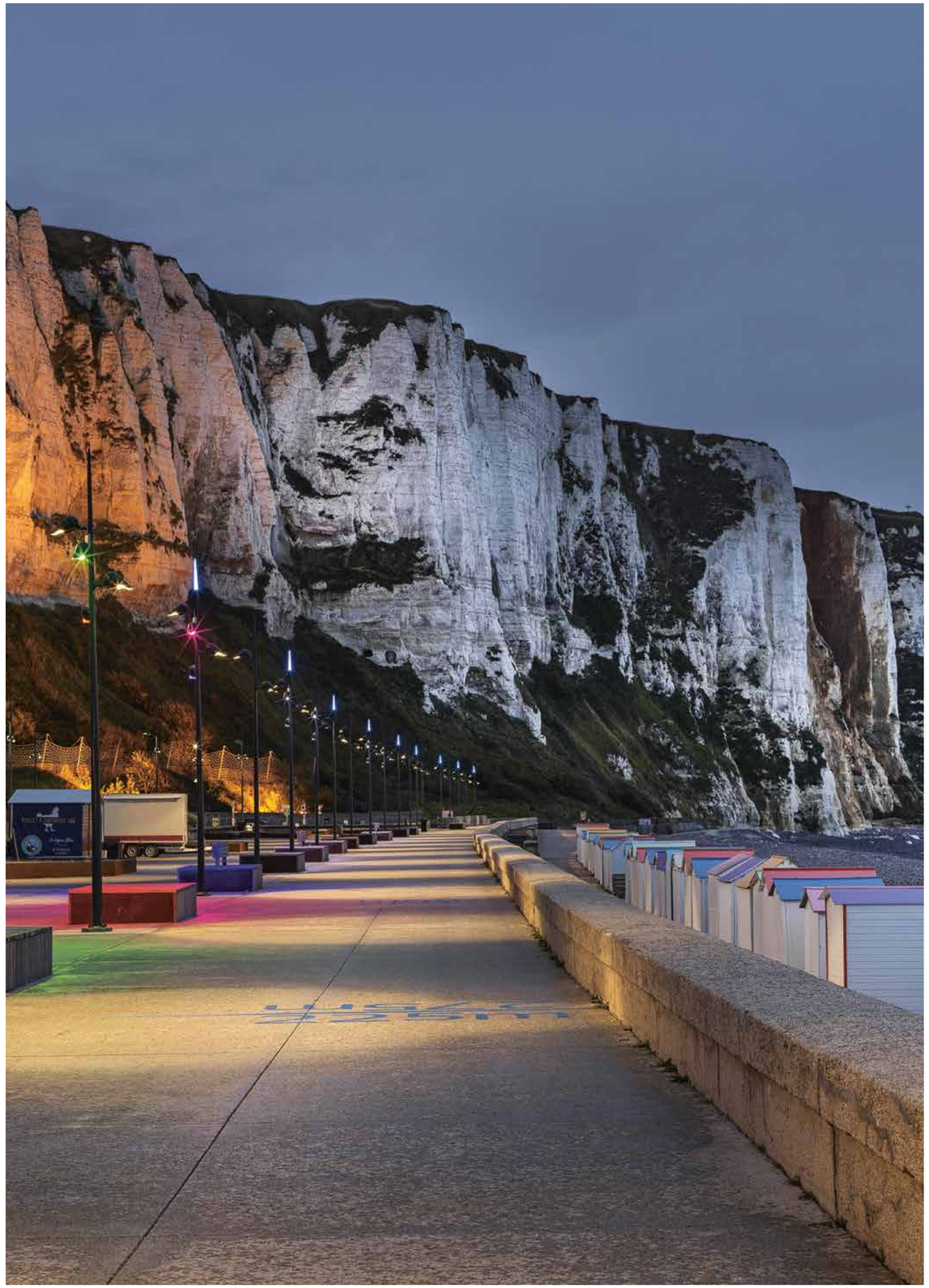
Public spaces need to embrace nature once more to become more human-centric. How can light help?

Our mission is to support designers in creating subtly layered public spaces that are neutral, simple and authentic in form and function. Timeless and integrative spaces that are shared spaces in the truest sense: where behaviour isn't watched, dictated or manipulated, where people don't have to follow the herd but can be themselves.

We constantly encounter all sorts of natural light without always noticing it: direct and indirect, during the day and at night. Depending on the time, weather and season, the sun radiates various types of light. Even after the sun goes down, we see its light reflected as moonlight, starlight, a reflection on the water's surface or a gentle glow on a snow-capped mountain.

Our aim is not to imitate these natural phenomena with artificial light. Rather, we approach light like an ingredient in a »painting«. Artists such as Ruysdael, Mesdag and Israëls painted psychedelic skies above low horizons, summer beach scenes and wild seascapes with waves seeming to ripple out from the canvas. They created light using nothing more than a paintbrush, colour and emotion.

These powerful pictures have the ability to transport us into a different world.



In this modern age, where technology seems to know no barriers, we believe people are seeking a return to authentic experiences.

Light in the urban landscape can set scenes. It should appear natural – unobtrusive yet essential, familiar, and appropriate to the particular place.

↑ Cannes Old Town: how can we use light to create a vibrant urban space that suits everyone equally?

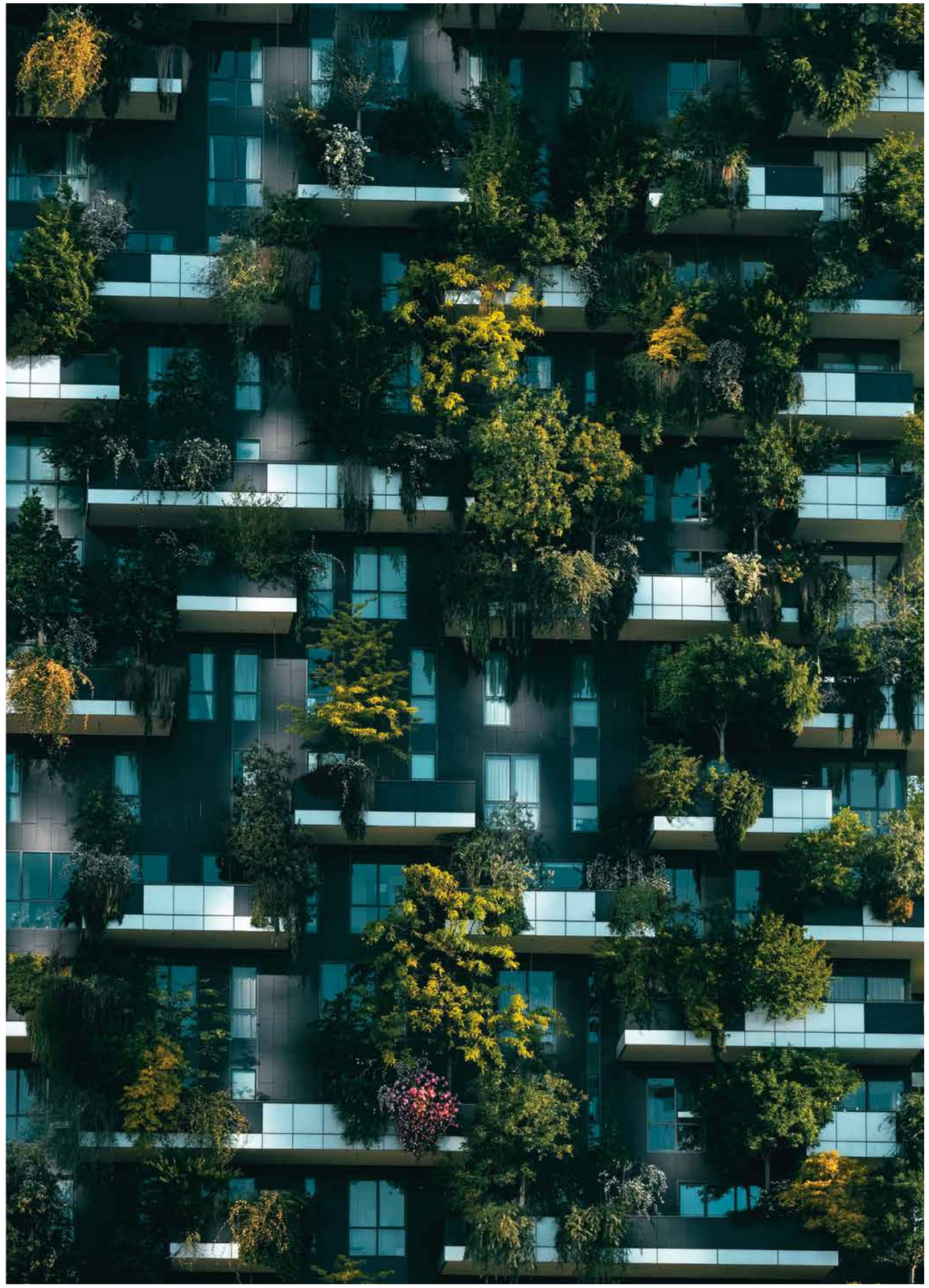
← On the coast of the English Channel at the mouth of the river Bresle lies the little fishing village of Le Tréport.

We seek variations in colour, light intensity and movement to create spaces that invite people to dance, to play, to imagine and – the most important thing of all – allow people to be exactly who they want to be.

↑ The Miami Beach Soundscape Park, West 8 Architects: coherent expression of leisure, pleasure and culture.

→ Bosco Verticale in Milan, Stefano Boeri: with his Urban Forestry Manifesto, Boeri invites architects, developers, scientists and politicians to »multiply the presence of forests and trees in our cities.«

This text has been worked out with kind support and inspiration of Perry Mass, West 8, Landscape Architects, Rotterdam.



Light quality

For decades, lighting has focused on the functional aspects. But what is lighting really all about? About people? Of course! But it's not just about people.

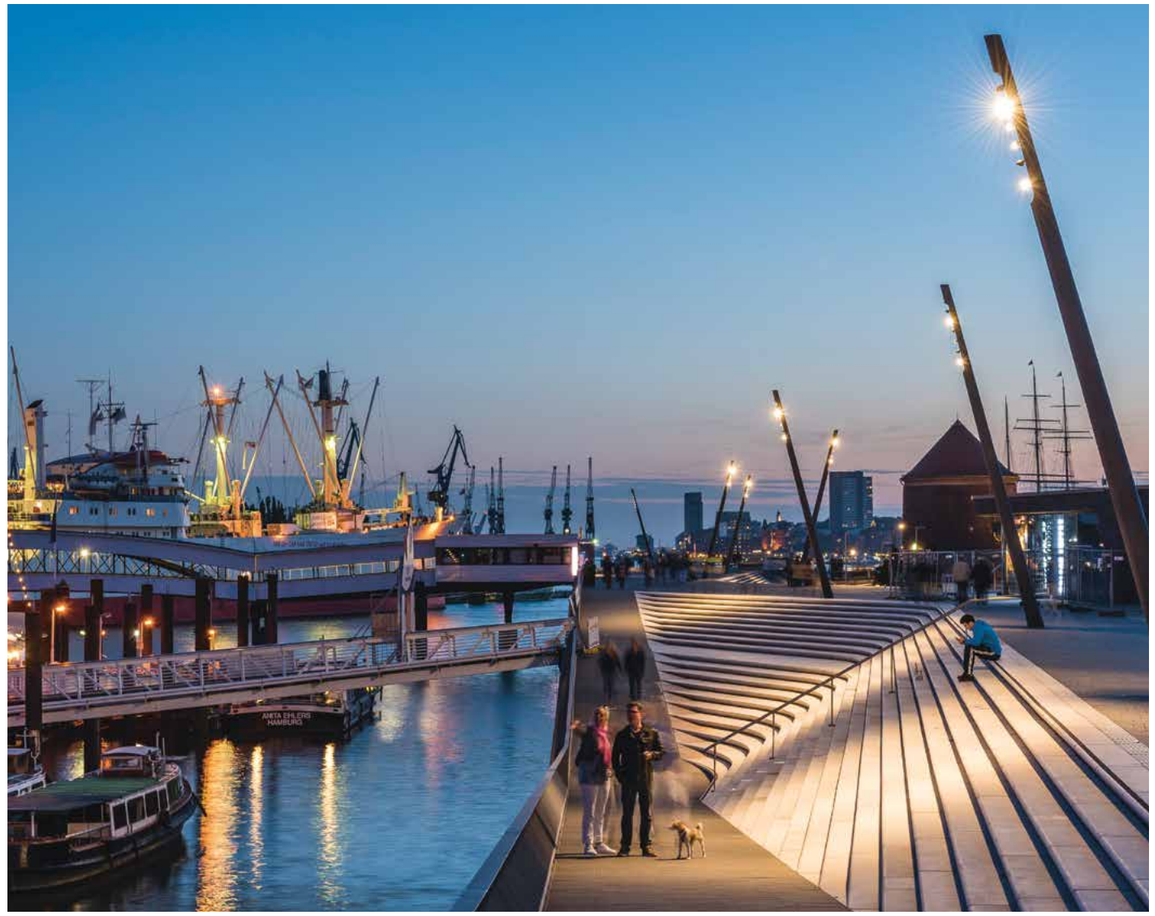
Our cities are changing. They have witnessed continual growth in recent decades, and more than two-thirds of the global population is expected to live in urban areas by 2050. As cities expand, structures are defined: industrial and residential areas emerge along with retail and leisure facilities. The urban development model of the 20th century was based on the premise of controlling traffic. Today, the car seems to dominate the city in many ways. And we have created an urban environment that is designed to function so tightly that we as humans are ourselves suffering the consequences. We have created an environment that no longer feels right to us. In response, we spend our weekends fleeing to the countryside to recover.

↑ Lighting quality created through several light sources in warmer tones installed at a lower height.

People-friendly light

It's time to up our quality of life. We can achieve this by allowing infrastructure to become more natural again, managing mobility in our cities more intelligently, and by living, working and enjoying our leisure time more in tune with nature. The answers lie in taking a holistic view of our needs. In restoring harmony. Lighting plays an important part in the redesign of outdoor spaces. Light provides security, directs movements and views and can be an invitation to stop and ponder. Minimising scattered lights creates natural dark zones for animals and allows us to enjoy the night skies. Planning perspectives are shifting, and this will also have an impact on the local identity of our cities – and how we illuminate them.

For this new view on lighting planning, we have coined the term »people-friendly lighting«. People-friendly lighting is light that takes into account people's various activities and adapts flexibly to their needs; lighting that reinforces a sense of belonging. Good lighting tools support this. They help to strengthen local identities and improve quality of life. Especially when it comes to outdoor lighting: in daylight, a luminaire is part of the street furnishings, its presence constantly shaping the environment. It is a sculpture. At night, it takes on the role of sunlight, providing security, orientation and directing the view. Luminaires can be discreet or expressive. They can draw people's gaze onto themselves or onto other objects. Their appearance and the colour of the light can create a variety of effects:



↑ Light is about more than brightness: light can connect, inform and protect.

colder light draws attention while warmer light feels cosier. Light can invite people to pause for a while and can be fascinating in itself. We all know the magic of sitting around a camp fire, simply watching the light and never wanting to move away: successful lighting design can evoke just that feeling.

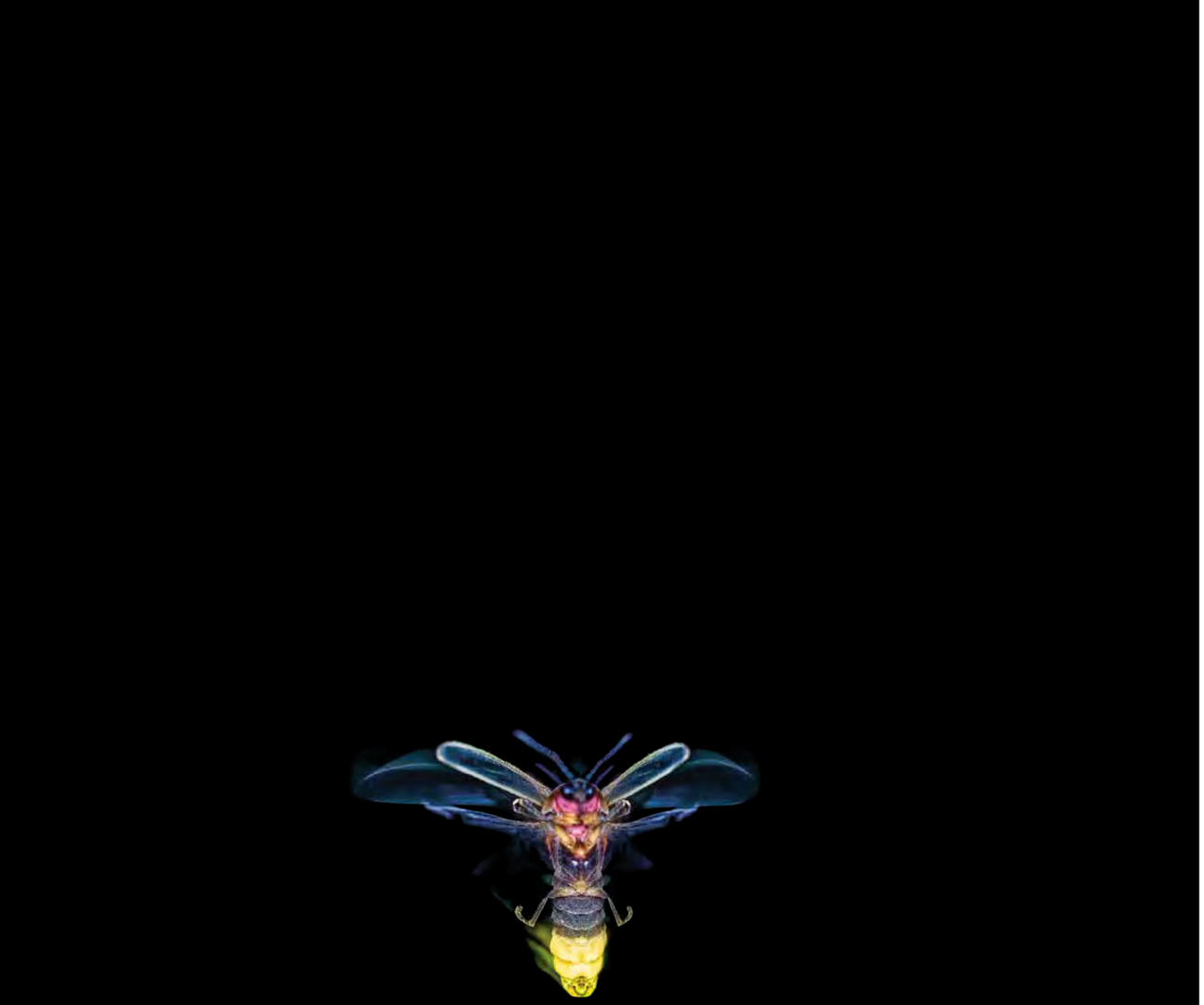
LED lighting has been put to highly efficient use in the last decade. The main aim was to achieve minimum energy usage while optimising illumination. LEDs have now become so efficient that it's time to turn more of our attention to other factors: the colour of the light, the effect of the light source, the beauty and character of the luminaires. They shape our environment and so influence our emotions. Lighting thus needs to meet individual requirements, and underpin the personality of the town, the community, the locality. It's why we offer our lighting units in a variety of versions: the »Performance« series for more performance-driven optics, and »Comfort« products that consider visual comfort, plus a range of colour temperatures. This ensures efficient compliance with standards even with widely spaced poles, and allows adjustment of the lighting points according to other opportunities and requirements. High visual comfort is created through light-widening apertures and warmer light tones (2700K to 2200K). All our new products are also available with an optic of less than 1% scattered light proportion to make the night sky visible again. We call this our Night Sky technology.

Intelligent technology is thus creating new opportunities that don't compromise on efficiency. For example, lighting control systems that control the level of illumination according to the time of day, the number of people or what they are doing, offer huge potential. Light poles can be individually equipped and extended: for example with sensors that control the flow of traffic or with a host of other intelligent options which we present in greater detail in the Smart Lighting chapter.

The animal kingdom
Light as an environmental factor has an impact on all living creatures. That much we know.

Light influences both human and animal emotions and behaviour – including those of insects and generally nocturnal creatures such as bats, owls and migratory birds. As well as the shift from daylight to darkness, moonlight and starlight also play an important part.

Bats, for example, hunt only at night using echolocation. Migratory birds navigate their passage using the stars in the sky. On the water, insects hatch their larvae at night. They are all dependent on darkness. Darkness protects them from heat and hunters, allows them to search for food in safety, provides orientation, and controls biological cycles – including reproductive cycles as we see with the firefly. Female fireflies emit their gentle light signal to the males. If the surroundings are too bright, the males miss the signal and mating fails. Lighting along waterways attracts insects in their droves but this is out of balance with nature, and so they are not available as food for fish, birds and bats.



In harmony with the animal kingdom – with the right light

Artificial lighting affects the behaviour of our animal kingdom. We are learning more every day about the true impacts of exterior lighting, and adapting our behaviour accordingly. Bats, for example, are protected by a raft of binding international and European agreements (e.g. the Fauna Flora Habitat Directive) which also identifies light as a relevant factor. Against this background, sustainable exterior lighting in urban or rural areas – and in particular in places designated as being of special ecological interest or a habitat to endangered species – must take into account the needs of insects and other animals.

← Fireflies are becoming increasingly rare. One reason for this is the increasing brightness caused by artificial light.

Light that looks out for insects
A main focus of Selux is the development of Night Sky technologies. LED technology plus new materials and production processes today give us considerably greater opportunity to control the direction, light distribution, duration, intensity and spectrum of luminaires.

Targeted light with a clear cut-off
Specially developed optics with a precise downward beam enable an even more targeted focus. This means that no direct light components are radiated above the horizontal plane of a luminaire. And the star-studded inky black night sky so crucial to people, animals and plants is maintained.

Warm colour temperatures
The composition of light is a determining factor as we journey towards sustainable lighting. Living organisms react highly sensitively to spectral compositions of electromagnetic radiation in the visible range, many of them to blue light in particular. The spectrum used should therefore minimise short-wave light (blue/violet) as much as possible. The recommendation is to install street lights with maximum 3000K. The lower the colour temperature, the more warm tones the light will have, and the less impact it will thus have on the animal kingdom. Wherever lighting and urban development impinge on the habitat of sensitive or endangered animals, the recommendation is to use maximum 2400K or the extremely warm »PC Amber« colour tone. We offer corresponding light colours as standard in our new product ranges.

Reduced light intensity
Light should be no brighter than it needs to be. Where possible, normative specifications should not be exceeded. Illuminated surfaces also play a role: some materials reflect more light back into the night sky than others. Every last detail counts here — we ensure that our luminaires do not light up their poles as well, for example.

Controlled lighting
Light that adapts to the circumstances: it's there when you need it and not when you don't. Lighting should be operational according to use. Motion sensors or timer controls ensure light is provided at the right time, and is otherwise dimmed or switched off completely.

Materiality

Objects that touch us must be tangible. That calls for greater naturalness in terms of materials, texture and colour.

There are two faces to luminaires in the urban environment: at night, their intangible impact and the nature of their light dominate; during the day, they exist as spatial design objects. In a successful urban lighting concept, these two personae exist in harmony with the atmosphere that characterises the area, the practical and emotional needs of the residents, and the expectations of visitors. The district, the quarter, the neighbourhood have established themselves as the ideal frame of reference for identity-forming light planning of this type.

The aim: to create unique atmospheres where people can spend quality time. We achieve that through lighting in a vast range of versions in terms of both look and lighting effect. Advances in LED technology and optics allow us to achieve increasingly differentiated lighting effects, while at the same time regaining control over luminaire design: it's an opportunity to liberate the cityscape from the visual chaos that reigns in many places.

We see colour and materiality as strong design elements in terms of expressing local identity and qualities on a sensory level. Once the district is perceived as a comfortable place to live, the horizons for diversity open up, as has long been a given in interior design.

»There are hidden harmonies or contrasts in colours which involuntarily combine to work together.«

Vincent van Gogh (1853–1890)

Metal

Metals such as steel and aluminium – the most common materials used for poles and luminaires in the urban landscape – are generally powder-coated to protect against corrosion. With a comprehensive colour palette available, users have every opportunity to steer the design, from harmonious colour tones to high-contrast accents. This can be used in addition with various reflector colours such as gold or as a block colour for the housing. The diversity of finishes includes metallic surfaces in tones such as bronze, gold or rosé which are created through a process of vaporisation. These surfaces lend the products a high-end look, and interact perfectly with their environment.

Concrete

It is still unusual to see concrete luminaires, even though it is the most commonly used construction material in modern architecture. Concrete is something of a chameleon: depending on how it is processed, it can form either rough, or smooth cool surfaces, and it can be coloured-matched to its surroundings. In its typical manifestation as slightly structured exposed concrete, it is plain, simple, and radiates calm. Colour accents such as golden reflectors can be used to create a charming contrast with the cool of the concrete. From a practical perspective, this is a robust, durable and rugged material. In the cityscape, concrete elements are viewed less as technology and more as architecture – perfect for a clear,
iconic urban landscape.

Wood

Just as modern planning concepts are again embracing nature as an integral element of urban space, wood is also experiencing a renaissance. Its advantages extend far beyond the functional: wood arouses emotions, it emanates a sense of warmth and naturalness, it is relaxing, and at the same time creates a vibrant atmosphere. Wood binds CO_2, produces oxygen as it forms, and integrates beautifully with its surroundings. As a material for luminaires and poles, wood is particularly suitable for living spaces that are in harmony with nature and that are designed to make people feel good. To get the right technical properties, careful choice of the wood type, its origins and the right surface treatment are crucial. This protects the wood from the impacts of weather, ensures a long lifespan, as it also affects the appearance: for example with glaze effects that lighten or darken the natural colour tone, or take it in a cooler or warmer direction without masking the wood's natural grain and organic character.

Glass and polycarbonate

We use glass to protect our lighting units. Its high light transmittance makes glass – this amorphously solidified melting of minerals – not just a favourite construction material for architects; its good refraction index means it is used as a functional optical material in lighting technology – think lenses, filters or glass covers. Researchers and engineers have successfully overcome its proverbial fragility. Tempered glass elements in luminaires can withstand the highest of loads – and are easily recyclable at the end of the product's life. As an alternative to glass, we use visually identical transparent plastics such as acrylic glass (PMMA) or polycarbonate (PC). Their advantage is that they are lighter, more robust and, as thermoplastics, they can be diecast to create complex components, which in luminaires can serve as both visual and structural elements. This multifunctionality, coupled with type-pure recycling opportunities, ensures optimal use of valuable resources.

Design

What is beauty? Can there ever be a consensus on what is considered beautiful? Or is beauty a purely subjective perception? Is beauty timeless?

The logic of beauty

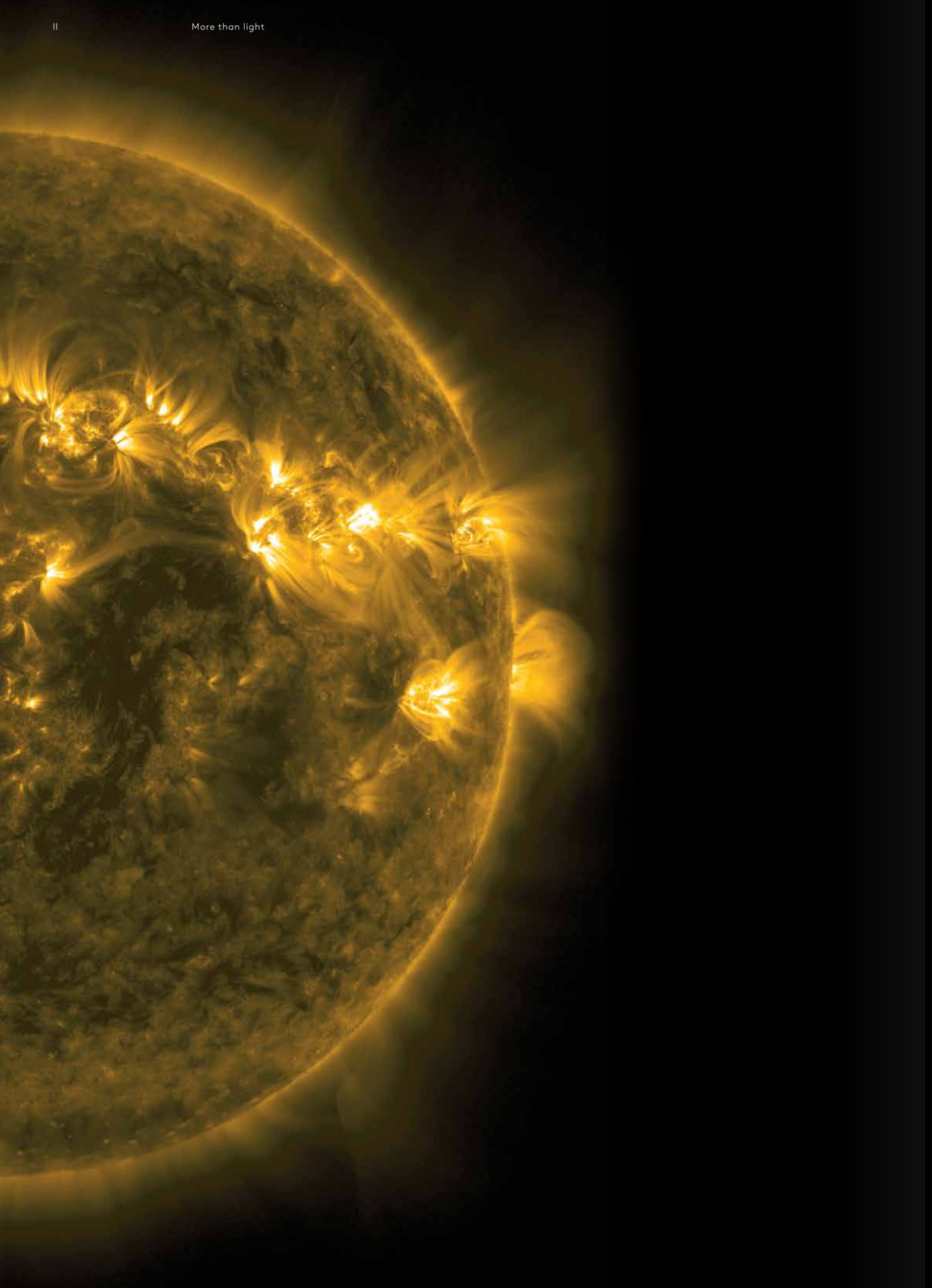
If you look at design classics from the Bauhaus period, for example, you can see a pattern. At the time of their creation, these designs were radical and revolutionary, conceived of a readiness to break with convention and completely rethink solutions.

Steel pipe furniture redefined the concept of a handcrafted wooden chair. Curved steel piping was intended for industrial manufacturing, but now it came to enable a new archetype – the cantilever chair. It heralded a new dimension in comfort and ultimately became a classic that has lost nothing of its relevance 80 years after it first appeared. This logic creates a true beauty and at the same time results in a sustainable – think timeless – product.

LED technology not only allows us to design extremely economical luminaires, but new archetypes too. A luminaire like »The Line« would be inconceivable without this technology, and fully integrating the reflectors into the pole is a logical next step. This maximum reduction in form allows these luminaires to be used in the complex urban space in a range of shapes, colours and styles from different periods of construction. It forms a bridge between high efficiency on one side of the divide and light quality on the other, and will still be relevant in many years to come.

← B55 cantilever chair by Marcel Breuer, 1930s
Image: www.zeitlosberlin.com

This text has been worked out with kind support and inspiration of Tom Schönherr, Founder Phoenix Design, Stuttgart.



Solar

Producing light from light sounds strange at first. Bur solar luminaires, even in moderate climates, make perfect sense.

Our sun is without a doubt the most important source of energy for all life on earth: its light warms the atmosphere, and enables the photosynthesis of algae and plants, it drives the water cycle, our weather and the wind. What could be more natural than to use this inexhaustible and free source of energy in technical solutions? It takes the sun just a few minutes to transmit as much energy to the earth as all of humanity consumes in an entire year. Solar energy thus offers a promising option to cover our civilisation's energy needs in a solution that is in harmony with the environment and nature.

The challenge lies in capturing this energy, exploiting it technically and storing it, because the fluctuation in light intensity during the course of the day is out of kilter with man's energy requirements. The best example of this is artificial lighting that is needed at night, precisely when the sun doesn't shine.

As well as using solar energy for heating, in the form of solar collectors or solar thermal power stations for example, transforming sunlight directly into electrical energy through photo-voltaics is becoming increasingly significant. It already accounts for 9.5% of the German electricity supply (2019), and globally, by the end of 2018 photovoltaic installations with a combined output of over 500 gigawatts have been installed – a major contribution to a move towards renewable, sustainable sources of energy.

Photovoltaics
Clean electricity from sunlight

How do photovoltaics work?
Solar cells are based on the photoelectric effect that was discovered by the French physicist Alexandre Edmond Becquerel in 1839, which interested many other great researchers including Heinrich Hertz, his student Wilhelm Hallwachs and even Albert Einstein. In 1907, Einstein submitted a quantum theory explanation as to why light generates electrical charges in certain materials. But it wasn't until the 1950s that American laboratories produced the first solar cells made from the semi-conductor silicon with an electrical output that could be used in a technical application. In this case, the emerging aerospace industry, but also as a decentralised power supply for telephone amplifiers, for example. The same electricity that solar cells generate can be used immediately, stored in batteries or transformed into alternating current and fed into the grid.

Silicon as base material
Silicon, the material used in most of today's solar cells, is a semi-conductor. This raw material is common in the earth's crust in the form of silicon dioxide (quartz, sand), making it available in almost unlimited quantities. Monocrystalline, polycrystalline and amorphous silicon can be produced from high purity silicon. These base materials are in turn used to produce solar cells with varying properties. Solar cells made from amorphous silicon offer low efficiency at a correspondingly low cost; solar cells made from monocrystalline silicon may be more costly, but they are also more efficient. The right cell type depends on the specific application. Luminaires with a decentralised power supply require a compact design and high efficiency, which is why hei solar luminaires from Selux use highly efficient solar cells generally made from monocrystalline silicon.

Nominal power and yield
The nominal power of photovoltaic installations is measured in Wp (Watt-peak). Wp refers to the performance under test conditions that approximate the maximum solar radiation in Germany. These standard test conditions (STC), used to compare different solar-modules, are defined as a cell temperature of 25°C, radiation of 1000W/m² and an air mass of 1.5. A typical PV-installation on the roof of a family home (with 40m²) yields around 4–5kWp; the PV cells on a hei-solar luminaire from Selux have nominal power ratings in the range of 100 to 250Wp. Photovoltaics are ideally suited to regions within what we call the solar belt, where there are high levels of solar radiation irrespective of the season. These include southern areas of Europe and North America, Central and South America, Africa, Asia and Australia. Photovoltaics are also a cost-efficient alternative in neighbouring regions such as Central Europe, as has been demonstrated in recent decades. Several cities and regions in Germany and elsewhere are recording photovoltaic yields in solar land registers.

Financial feasibility
Solar power is not only sustainable from an ecological point of view, it is now also financially competitive. Over recent decades, technical advances have improved the performance of solar cells, as well as other system components such as inverters, control and charging electronics and battery storage. At the same time, the economics of scaling production mean costs have fallen considerably: solar cell prices today are 90% lower than in 2010.

In many regions with corresponding light intensity, photovoltaics are already considered the cheapest way to generate electricity. In applications such as making road or path lighting self-sufficient (»off-grid«), additional factors positively impact economic efficiency and the ecological balance sheet: not only are there no electricity costs per se, neither are there any line charges or wiring installation costs.

Smart City

How can technology help make our cities better places to live in?

Scheveningen boasts one of the most beautiful beaches in the Netherlands. Nature and big city living come head to head here – with all the potential and problems that entails. The seaside resort, part of The Hague, is situated around 50km to the south-west of Amsterdam and sits right at the centre of the extremely highly densely populated »Randstad« megalopolis that is home to over 8 million people. The Hague is experimenting with the county's first »Living Lab« project, with innovative »Smart City Hubs« that are looking at how smart technologies can make cities more intelligent, and how these technologies can be integrated into urban furnishings in a way that brings the beauty and appeal of the natural surroundings back into the forefront.

As part of the project, the first Lif luminaire columns were erected on the redesigned Noorderboulevard – as strategic support points for an integrated smart city infrastructure.

A mobile waste bin on a boulevard? A self-driving shuttle bus to transport visitors? A robot that resembles a moon buggy and collects rubbish from the beach? In Scheveningen, scenarios like this are not a vision of the future, they are the result of a Living Lab project: intelligent technologies are being applied to address the current challenges of a big city with intelligent solutions.

Adaptively equipped modular Lif system luminaires are being used as strategic support points for this smart technology. Special recording devices in these posts allow varying functions to be integrated, such as a Cyrb microphone: it recognises vehicles moving along the promenade when they shouldn't be and alerts the police or the public order authorities. Acoustic monitoring is also able to identify sounds such as breaking glass, verbal altercations and shouts. The light poles will soon also measure air quality and visitor numbers.

In designing the lighting concept, the planners focused on environmentally compatible lighting to respond equally to the needs of people and of nature. The Lif top element and Twinspot module handle the traditional lighting tasks of general illumination and accent lighting. The top element lights up the boulevard in an even light. The modified Twinspot modules allow the light points to be switched on or off and controlled as needed via the Remoticom telemanagement system. Additional special features of the luminaires include their coating and colour: referencing the colours of the North Sea, Lif is finished in a project-specific light grey varnish. The varnish on the columns is resistant to seawater (C4) and has a special anti-sticker coating.

The smart lighting, as part of the »Living Lab«, thus allows visitors to the Noorderboulevard to enjoy the unique experience of the merging of wild nature and urban living comfortably and safely.

↑ Scheveningen boasts one of the most famous beaches in the Netherlands. Nature and big city living come head to head here.

← Appropriately equipped modular Lif system luminaires are being used as strategic support points for the Living Lab project.

Motion-controlled lighting

The lighting is controlled as required via motion sensors. Individual or multiple light points change in brightness as people or objects move – the light tracks them.

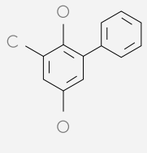
Adaptive lighting

Intelligent sensors allow the lighting to adjust to different weather conditions. The distribution of light from the luminaires changes according to whether the road surface is wet or dry.

Light management

The luminaires are connected via an intelligent communication network. Individual or multiple light points are controlled centrally, or locally via an app.

Environmental data recording



Intelligent sensors in the luminaires or on the pole measure environmental and weather parameters in real-time.

Public information systems

Information can be retrieved via components such as buttons or displays integrated into the pole, including timetables, audio clips for the blind and partially sighted or for use in advertising.

Public safety module

Camera systems, audio speakers and emergency call buttons flexibly integrated into the light pole improve safety in the urban space.

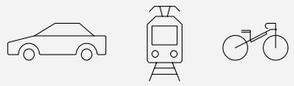
Public WiFi hotspots

Luminaires are equipped with WiFi components to create public hotspots. Information and services for professional and private use are provided via broadband internet.

Electric vehicle charging stations

Charging stations installed at or in the luminaire pole allow electric vehicles to be charged.

Traffic and parking space management



Intelligent sensors record the current traffic situation and provide real-time data for sustainable transport optimisation in cities.

Extended Lighting Key to the Smart City

Fewer traffic queues, better orientation, more information and improved safety: smart, networked technology has great potential to raise the quality of life in our cities. Rather than a vision of the future, networked cities are a sea change that we are experiencing today. Around the world, global metropolises are growing and overcrowding presents huge challenges when it comes to communal living. At the same time, digitalisation is providing new opportunities for organising the way we live together, enhancing the quality of life in cities. Light has long since been an integral part of urban infrastructure – and now Selux Smart Lighting is building new bridges to ensure our cities have a smart future.

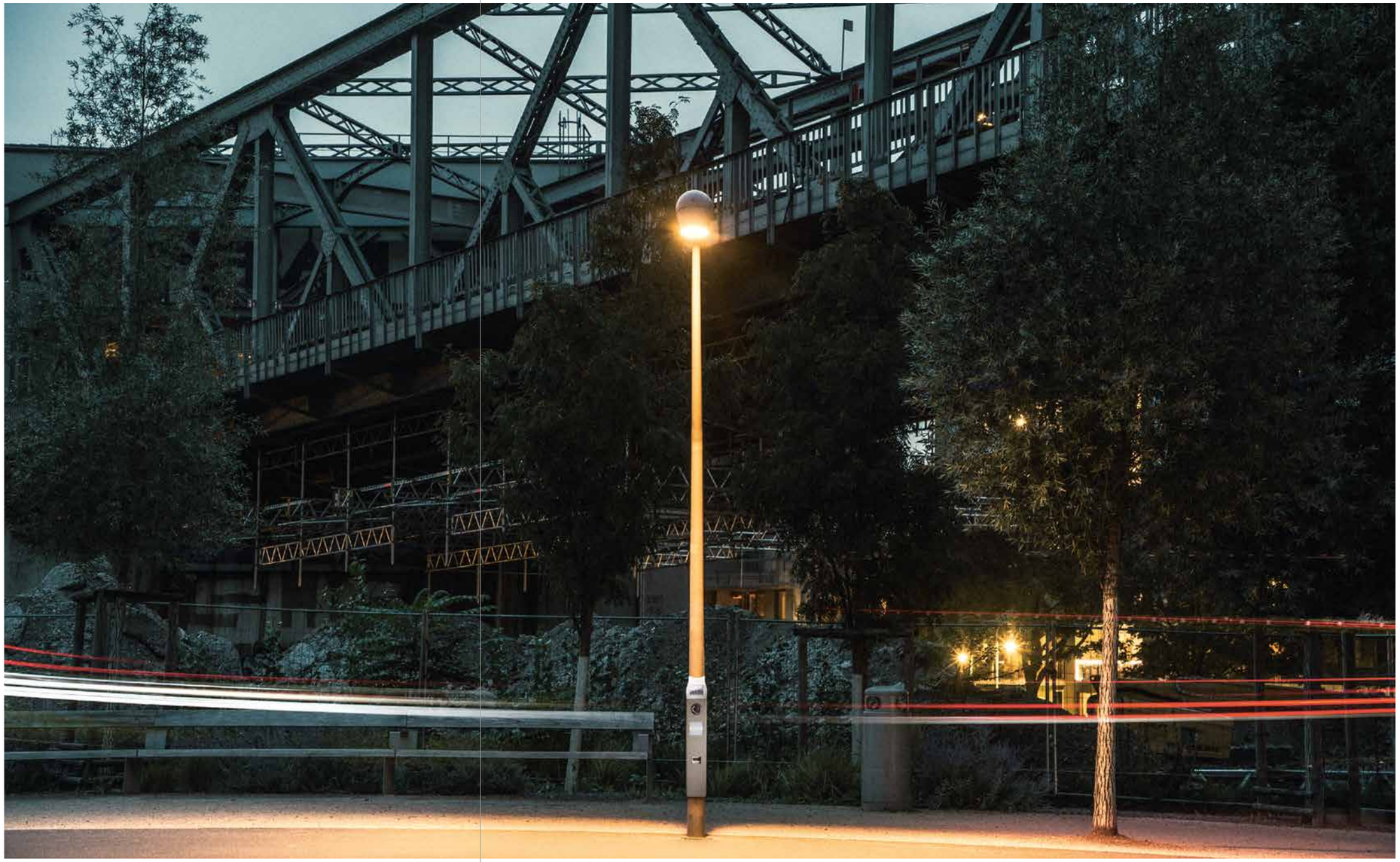
Smart Lighting by Selux follows the principle that rather than being an end in itself, technology is closely connected to life and the needs, expectations and potential of human beings. The modular design of our products makes them perfect for the integration of smart functions. Our profound technical understanding enables us to work with our customers, users and technology partners to jointly develop solutions that are individually tailored to each particular situation.

Through this strategy, Selux is making the smart city an aspirational goal, a living space with a sustainable quality of life for everyone. Urban lighting forms the logical basis for this since it already has in place a large number of installation points with an electricity supply. A smart luminaire from Selux, networked via the internet can on one hand be integrated into intelligent controls that switch lights on, off or dim them as needed. On the other hand, it can provide data via sensors: from how bright it is locally to the volume of traffic or the air quality. And it can provide information to the local environment – via audio speakers, displays or WiFi hotspots. The smart city thus interacts with its visitors and residents, it learns and collates knowledge to continually adapt better to the lives that are lived there.

Get in touch – we look forward to working with you to bring visions and solutions for your Smart City project to life!

Jewish Museum
Frankfurt am Main, Germany

Lif light columns set the stage for the new museum forecourt with inviting light, with integrated and adjustable cameras providing an additional important function.



The dream of emission-free transport

Emission-free and renewable energy climate-neutral transport is a key factor in making our cities better places to live. But low-threshold entry to e-mobility requires a closely meshed, easily accessible network of charging stations. But in the inner cities in particular, not everyone has a fixed parking spot with vehicle charging facilities. What could be more obvious than to use an existing national supply network – street lighting – to build a public charging infrastructure?

Using existing networks intelligently
The integration of e-mobile charging stations in exterior luminaires is a simple and smart concept with a whole raft of benefits compared with additionally installing separate charging columns: it saves valuable space in the city and reduces the visual complexity of the environment. Implementing new cost-intensive underground infrastructures is now unnecessary.

The charging station: flexible, aesthetic and space-saving
The Selux charging station represents the interface between exterior lighting and e-mobility. It is installed directly on the luminaire pole. Its slim, reduced design dovetails naturally with most varied of environments and supports a harmonious, calm image of the urban environment. Cities are able to respond flexibly to changing needs since the charging stations are easily dismantled and re-installed elsewhere – which is interesting not just on new build projects, but also with respect to the modernisation or renovation of street lighting. Pilot projects are already underway in cities such as Bottrop, Aachen, Hanover and Cologne, in Brussels, Herten and on the island of Usedom.

L U M I N A I R E S

Tritec Optics
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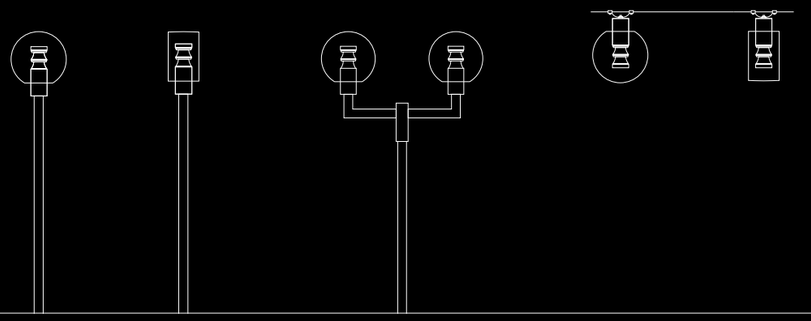

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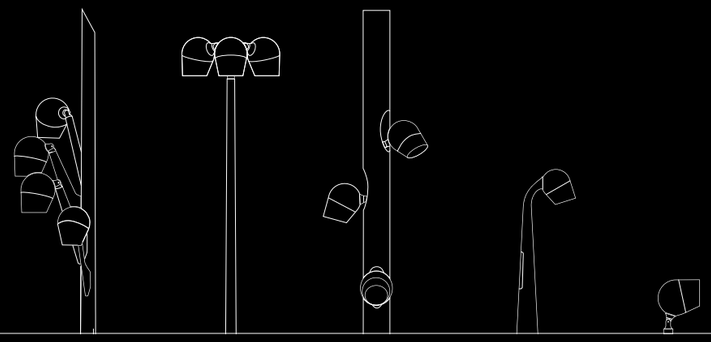

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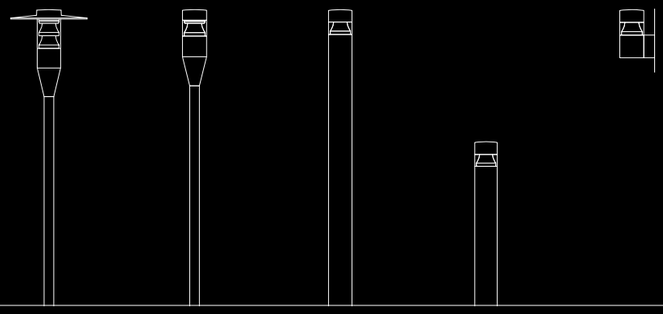

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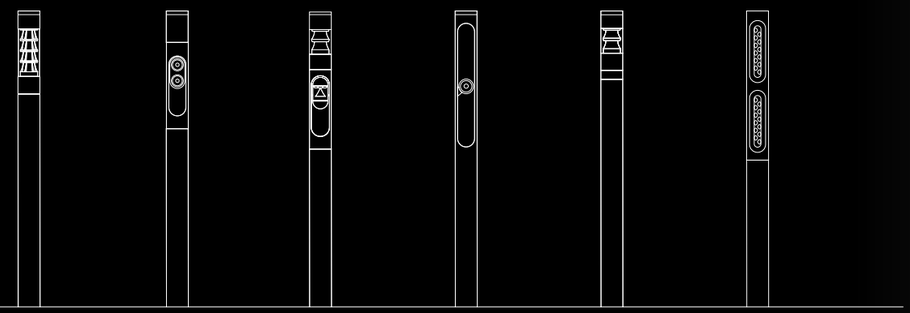

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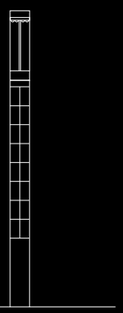

Solar Lukida
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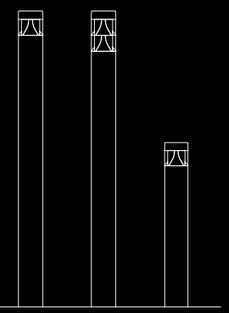

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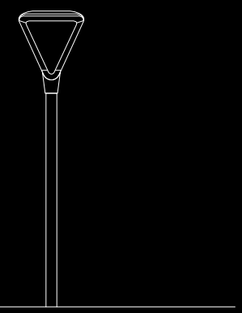

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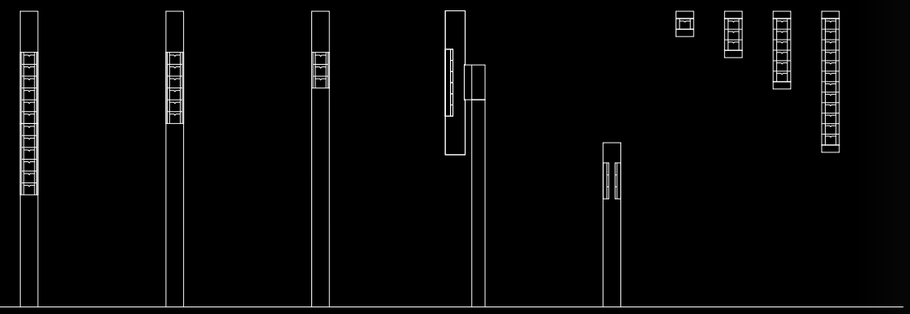

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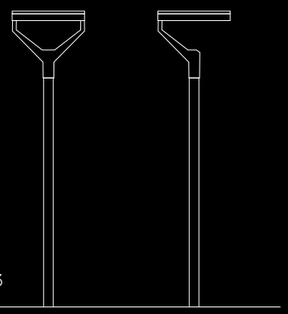

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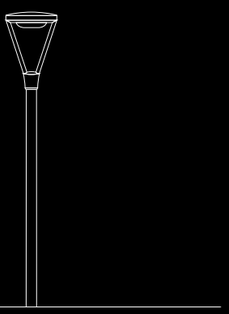

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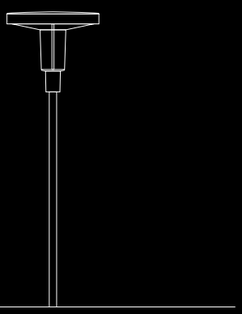
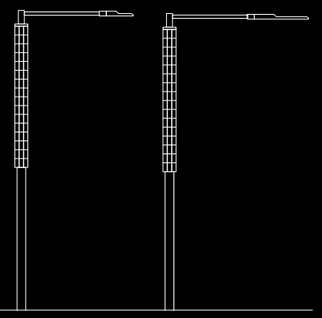


Yloo
→ 274, 395



Solar Anatar
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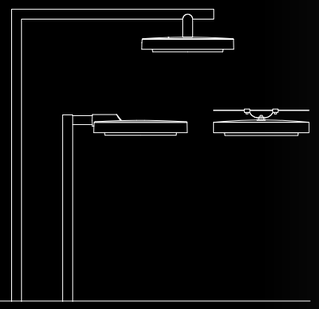

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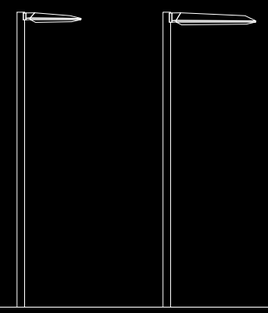

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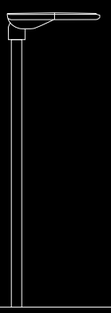

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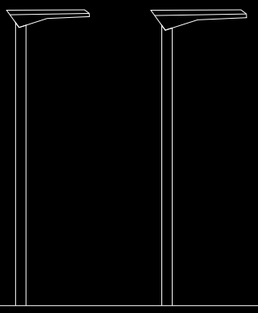

Tessia
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Arca
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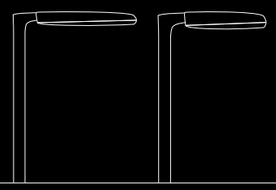
Classics



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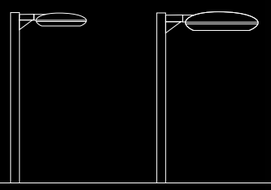

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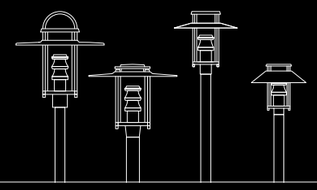

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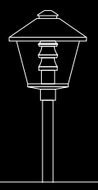

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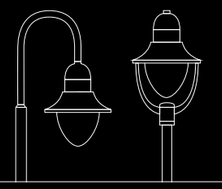

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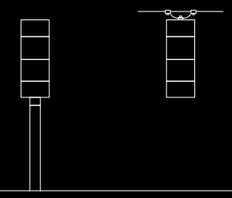

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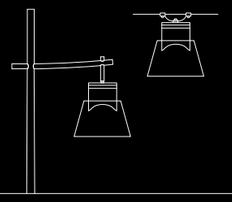

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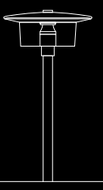

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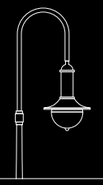

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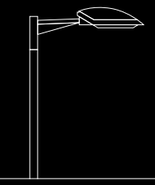

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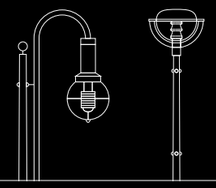

Urbi 1 / 3
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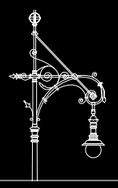

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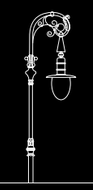

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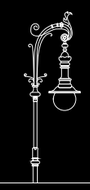


Schupmann
→ 346, 458

Leaf beetle

The exoskeleton of some insects is made up of up to 70 layers of chitin that refract and reflect light at different frequencies. This gives many beetles, like the leaf beetle, a metallic look.

TRI TEC

OPTICS

A new type of natural for man and the environment

Urban quality of life is at its best wherever human beings can feel the location's contact to nature. Lighting with Tritec Sky makes every urban space sensual and distinctive. The new optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impairing the beauty of the environment, stars or night sky. The warm and accentuating character of Tritec Sky makes for a purposeful atmosphere where urban areas and nature are in harmony, where humans feel good and the natural rhythm of the animal life is protected. The modular optics of Tritec Ambiance have already proven its worth in several current luminaire ranges such as the Lif, Aira and Elo – with maximum light quality and a distinctive visual style.

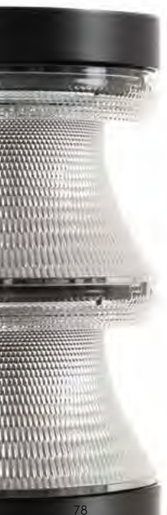
Urban lighting with an atmospheric quality

Tritec creates a relaxing atmosphere using warm light. This emphasizes the individual character of roads, paths and squares – in harmony with the environment. The lower the colour temperature of the lighting, the less it affects or disrupts insects and birds. With warm white LEDs and optional gold-tinted reflectors, Tritec comes with colour temperatures of 2200K, 2700K or 3000K. For applications that require a neutral white light, Tritec is also available in 4000K.

Tritec A – Ambiance

Lighting with character

With its high proportion of vertical light and soft transitions, the tried-and-tested Tritec Ambiance optics are particularly suitable for inner-city living spaces. As general lighting, it creates an airy, bright atmosphere due to the brightened façades it illuminates. The brilliant effects of the Tritec Ambiance optics provide a timeless splendour in inner cities, for historic lanes or busy squares.



Tritec S – Sky

Extra precision

Lighting with Tritec Sky makes every urban space sensual and distinctive. The optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impacting the environment, stars or night sky.

Tritec A – Ambiance

Light distribution

- asymm. street
- symm.

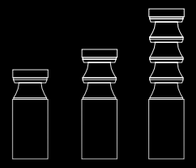
Light colours

- 4000K
- 3000K
- 2700K

Reflector colour

- silver
- gold

Modules



36 Configurations

Tritec S – Sky

Light distribution

- asymm. street
- asymm. street with pathway
- asymm.
- symm.

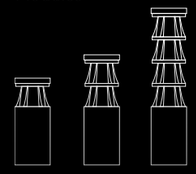
Light colours

- 4000K
- 3000K
- 2700K
- 2200K

Reflector colour

- silver
- gold

Modules



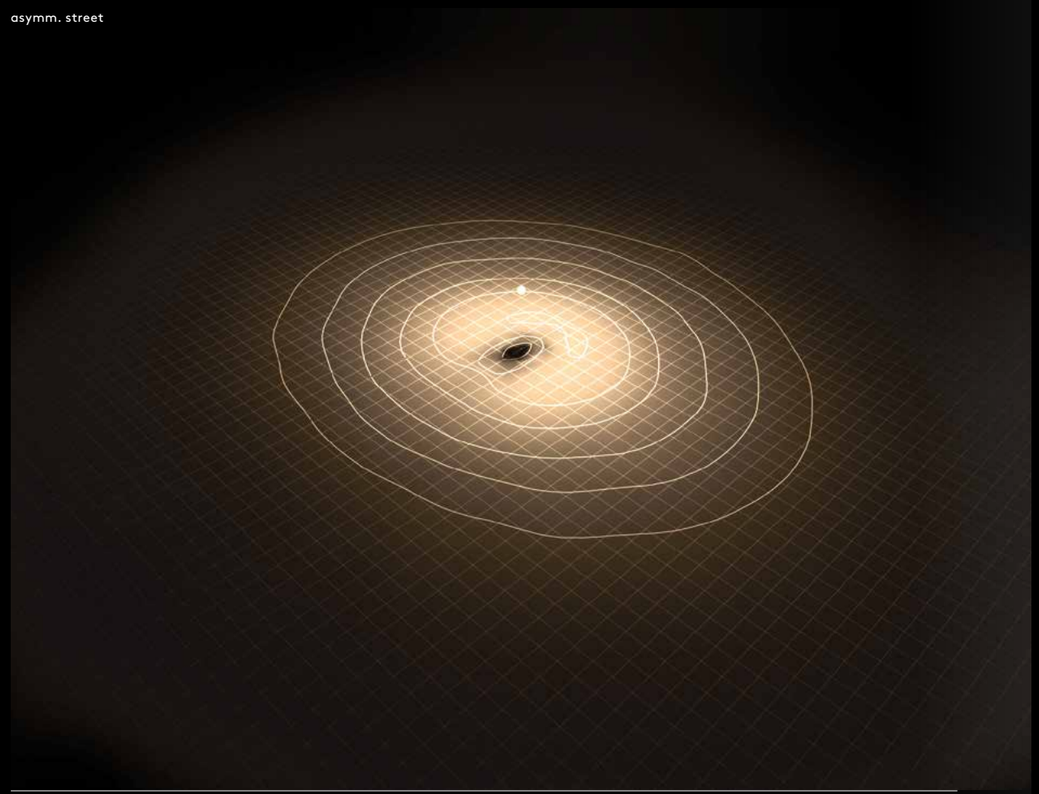
96 Configurations

Luminaires

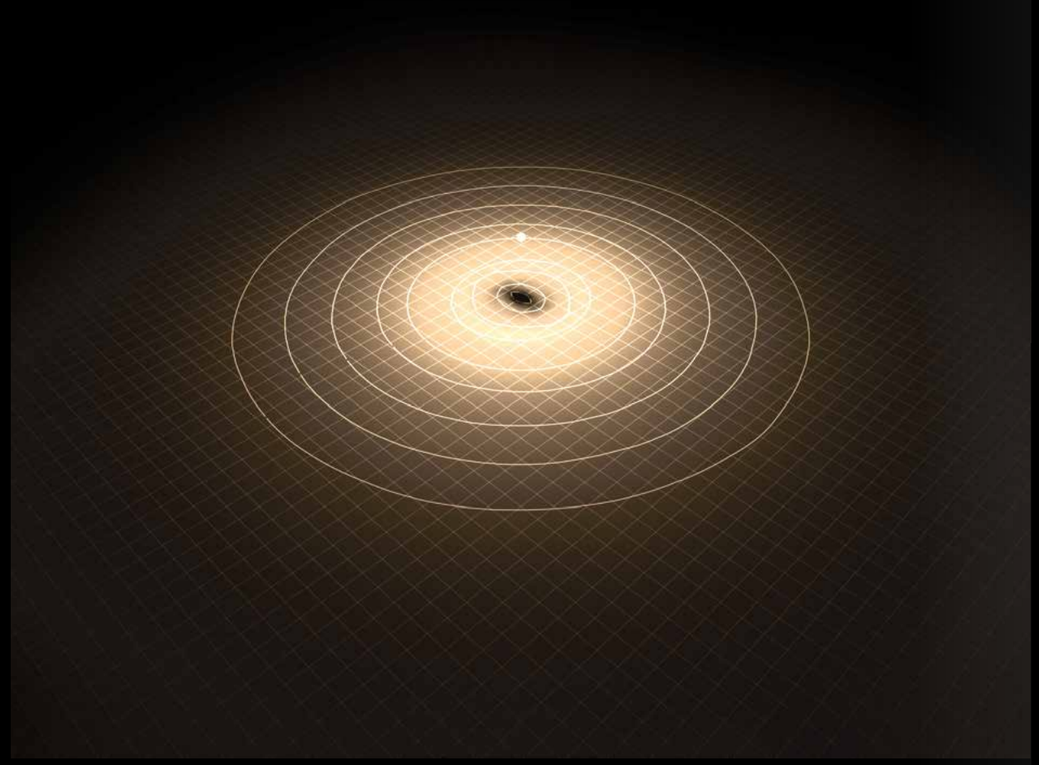
Tritec A

Light output max. 7200lm
Light colour 2700K, 3000K, 4000K
Reflector colour silver, gold

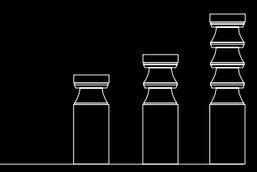
asymm. street



symm.



Tritec A

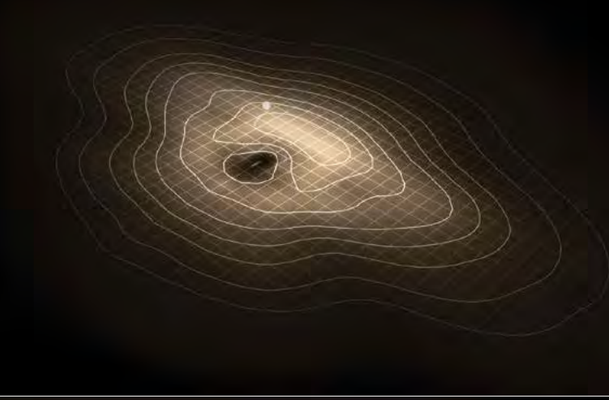


Tritec

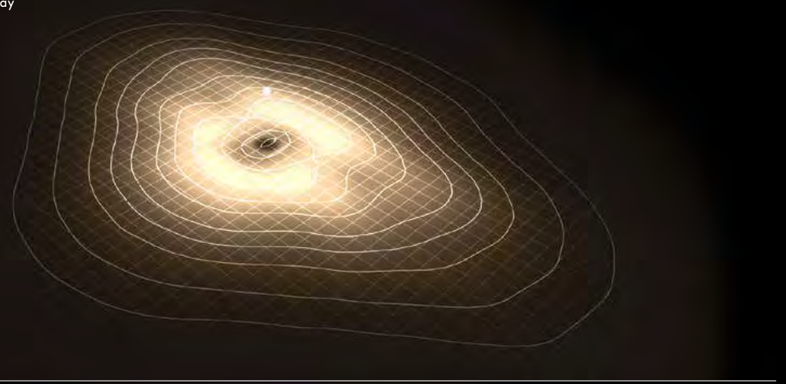
Tritec S

Light output max. 7200lm
Light colour 2200K, 2700K, 3000K, 4000K
Reflector colour silver, gold

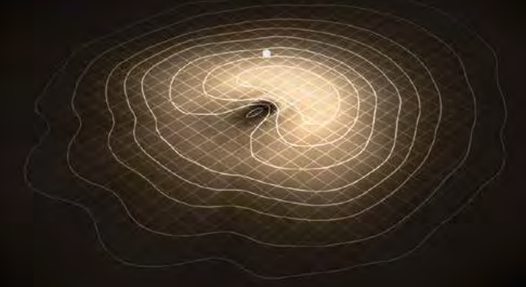
asymm. street



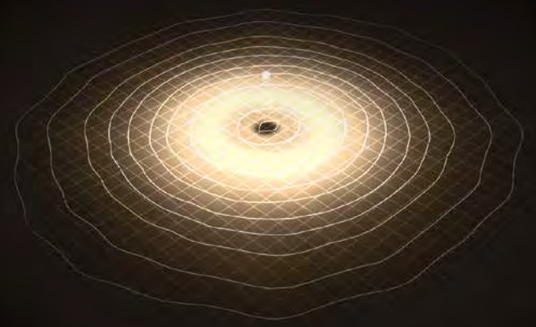
asymm. street with pathway



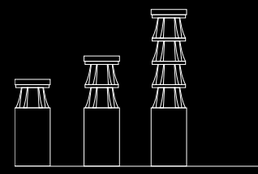
asymm.



symm.



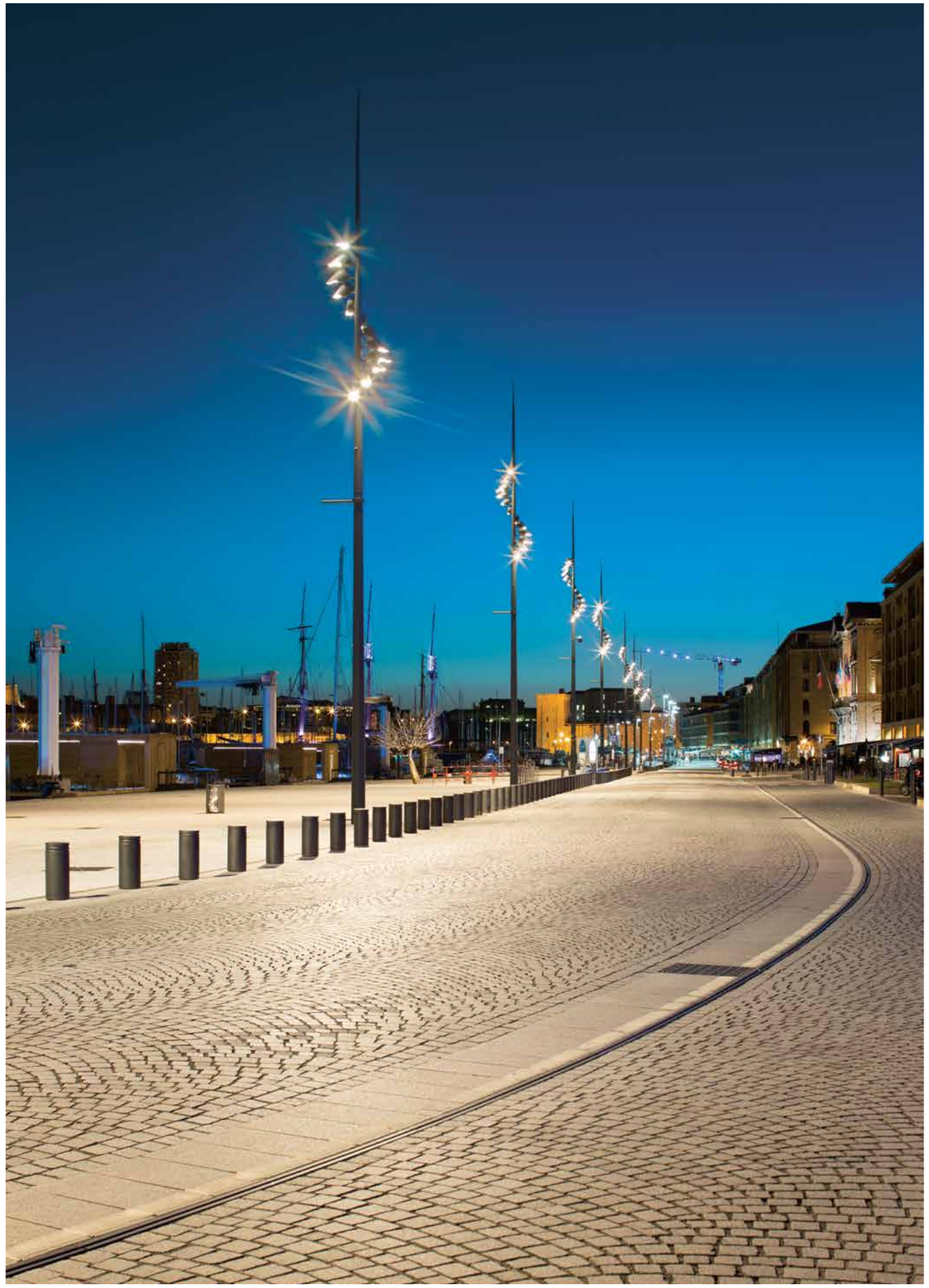
Tritec S



Tulip

Tulips have one of the largest genomes in the entire plant kingdom. This genetic wealth results in an enormous range of varieties. Around 100 species of the genus Tulipa have given rise to more than 4000 crosses since the 16th century.

OLIVIO

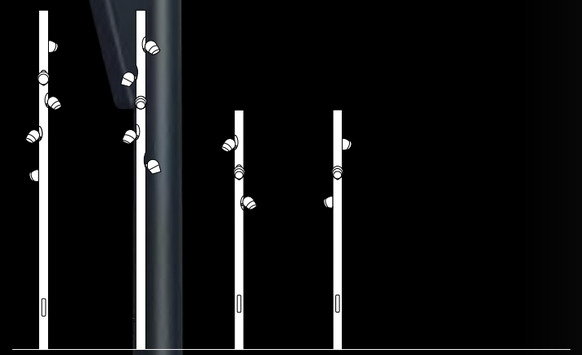


Diversity in urban spaces

Olivio offers a wide range of options for realising impressive and efficient lighting concepts and individual design solutions within urban spaces. The diversity of the product range enables planners to create both functional and atmospheric lighting. These solutions are based on three luminaire heads with different optical systems for a broad spectrum of technical lighting applications – all of course ready for Smart City networking. Add to this a wide selection of arms and pole types for individual configurations.

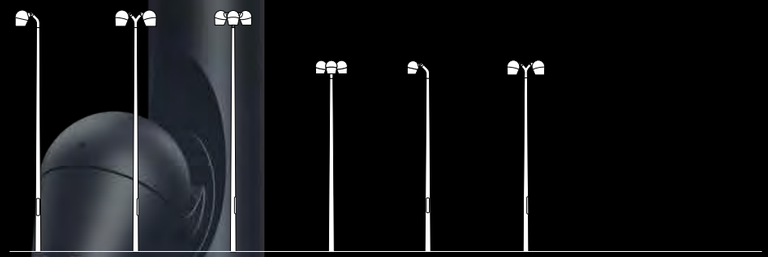
Three design lines, one common aspect: creativity

Olivio Sistema



Olivio Floracion

Olivio offers the ideal solution for all outdoor areas, with three design lines – Sistema, Floracion and Candelabra – the Olivio range guarantees versatility. Each design line offers its own options, enabling planners to create an impressive look that is ideally harmonised with the surrounding environment using individually configured luminaire shapes.



Olivio Candelabra

Olivio Universal

Olivio Bollard

Olivio Sistema
expressive and attractive

Olivio Sistema is highly expressive and creates attractive visual accents. With Olivia Sistema, luminaire heads can be arranged between 0° and 360° around the pole – on single or staggered levels. With pole heights of up to 12m, three different types of arms and the ability to place various lighting points in differing heights all provide a great deal of creative freedom.

Olivio Floracion
floral and lively

This configuration results in a floral yet lively effect. The elegant Olivio design line will inspire without being overly obtrusive – enabling targeted design of public spaces. With the Olivio Floracion, pole and luminaire are directly combined with one another. Its independent character is emphasised by the different luminaire head arrangements. The various colour combinations for luminaire head, pole and inlay result in further exciting, design-enhancing options.

Olivio Candelabra
reserved and graceful

Olivio Candelabra is the most reserved design line in the Olivio luminaire family. This graceful luminaire concept harmoniously underlines urban living spaces in a discreet way.

Single, double or triple: The Olivio Candelabra too can also be arranged in different variants depending on the pole and luminaire head combination.

Olivio Wood
For unique feel-good living spaces

For Olivio Floracion Wood poles we use premium-quality, robust pine wood from sustainable forests. The correct choice of wood is key to attaining optimal technical characteristics. As well as being a sustainable raw material, wood is also durable, moisture-regulating, lightweight and robust at the same time – ideal as a construction material for all types of architecture. A special weather-proof glaze provides long-term protection for the natural beauty of the material. Six different shades of wood mean Olivio Wood can be coordinated to all architectural contexts – three graduated brown shades for a particularly warm and natural effect and three shades of grey for a neutral look in urban spaces.

Liverpool

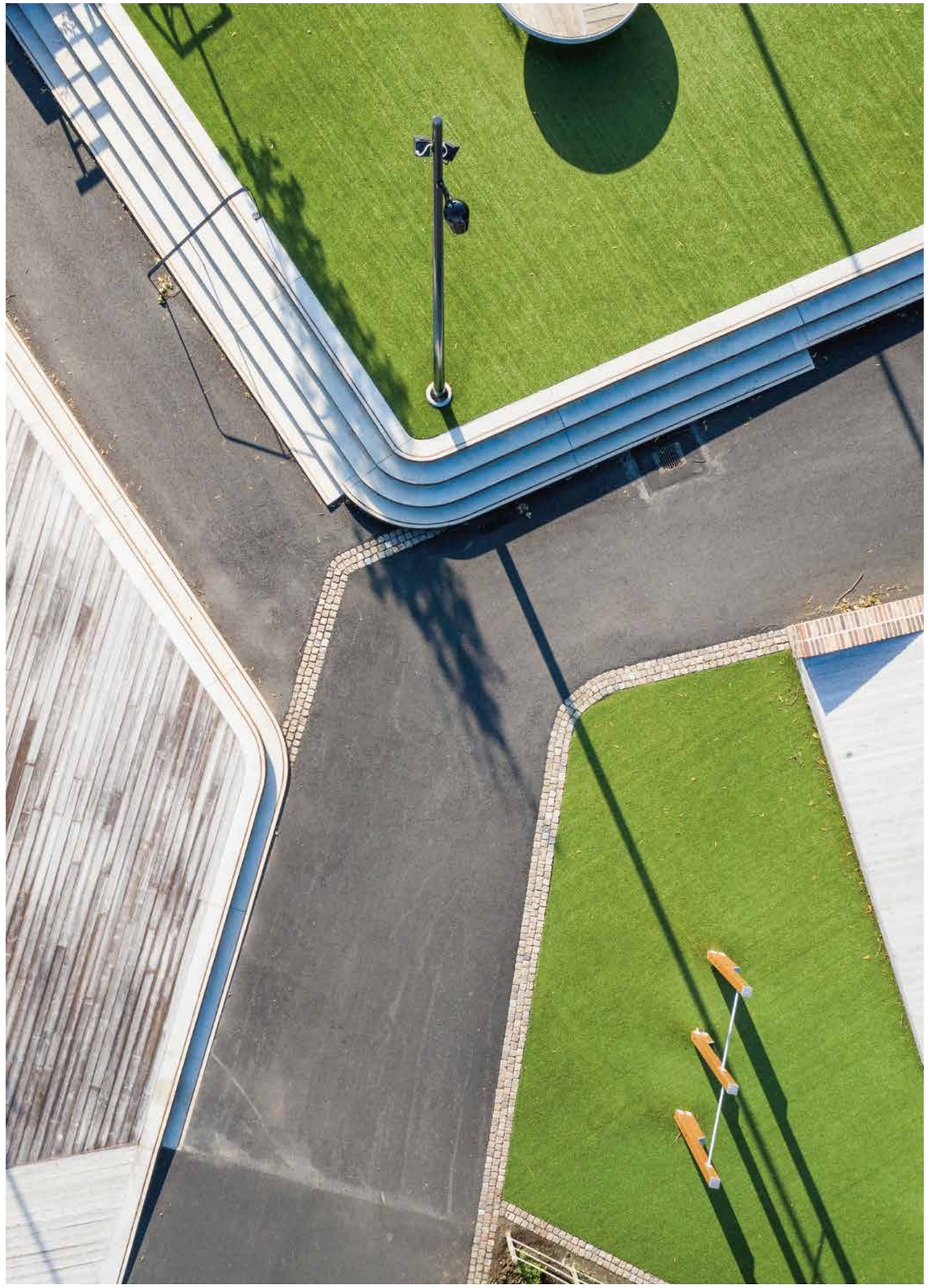
Sanssouci

Versailles

Black matte | Selux Graphit | Anthracite grey | White aluminium

Redwood | Canadian brown | Cool Scandinavian | Himalaya grey | Rocky Mountain grey | Teneriffa grey


ER 929NG



One basic shape with a wide range of functions

Piccolo

Medio

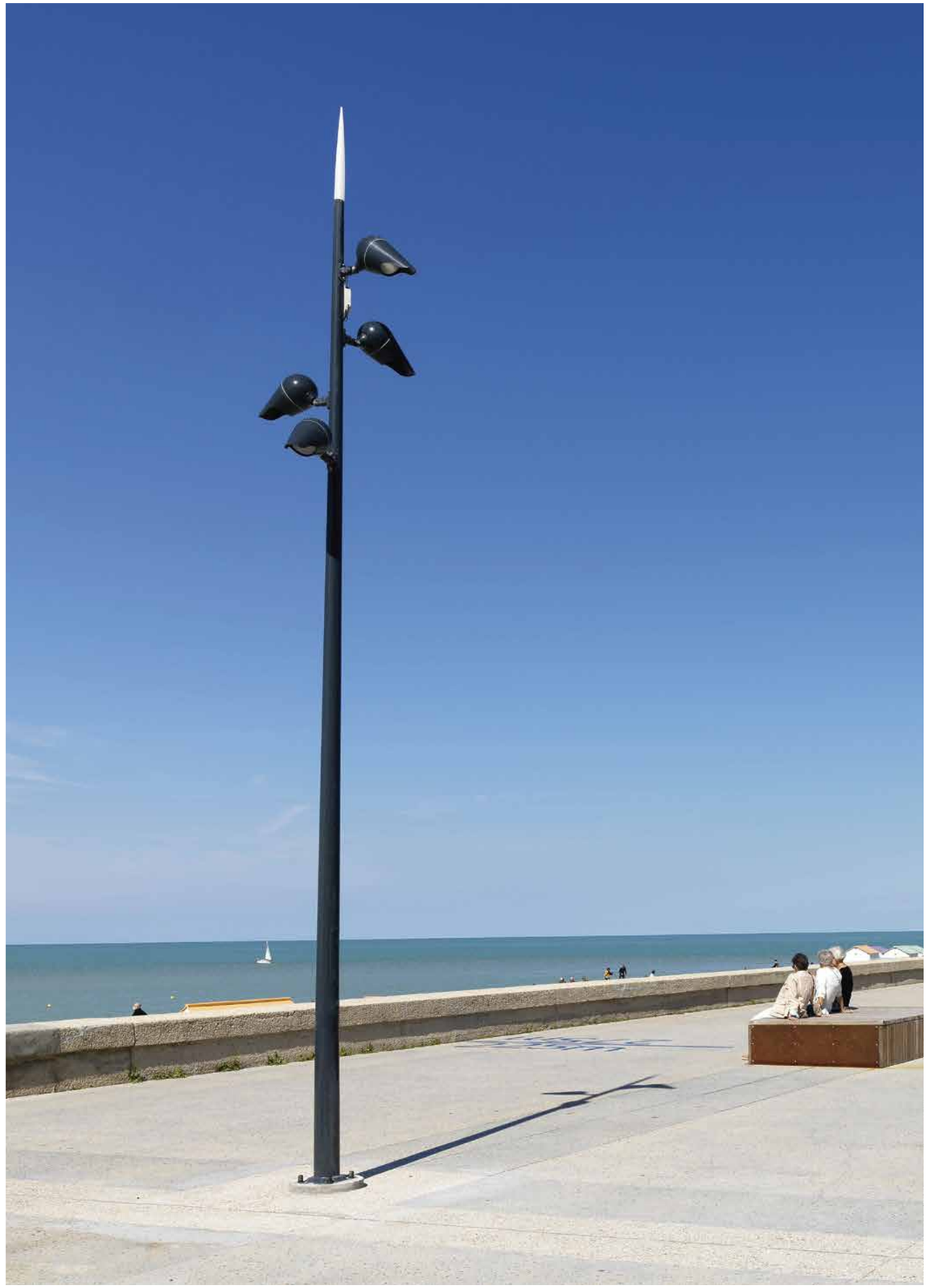
Grande

Audio Speaker

Camera housing

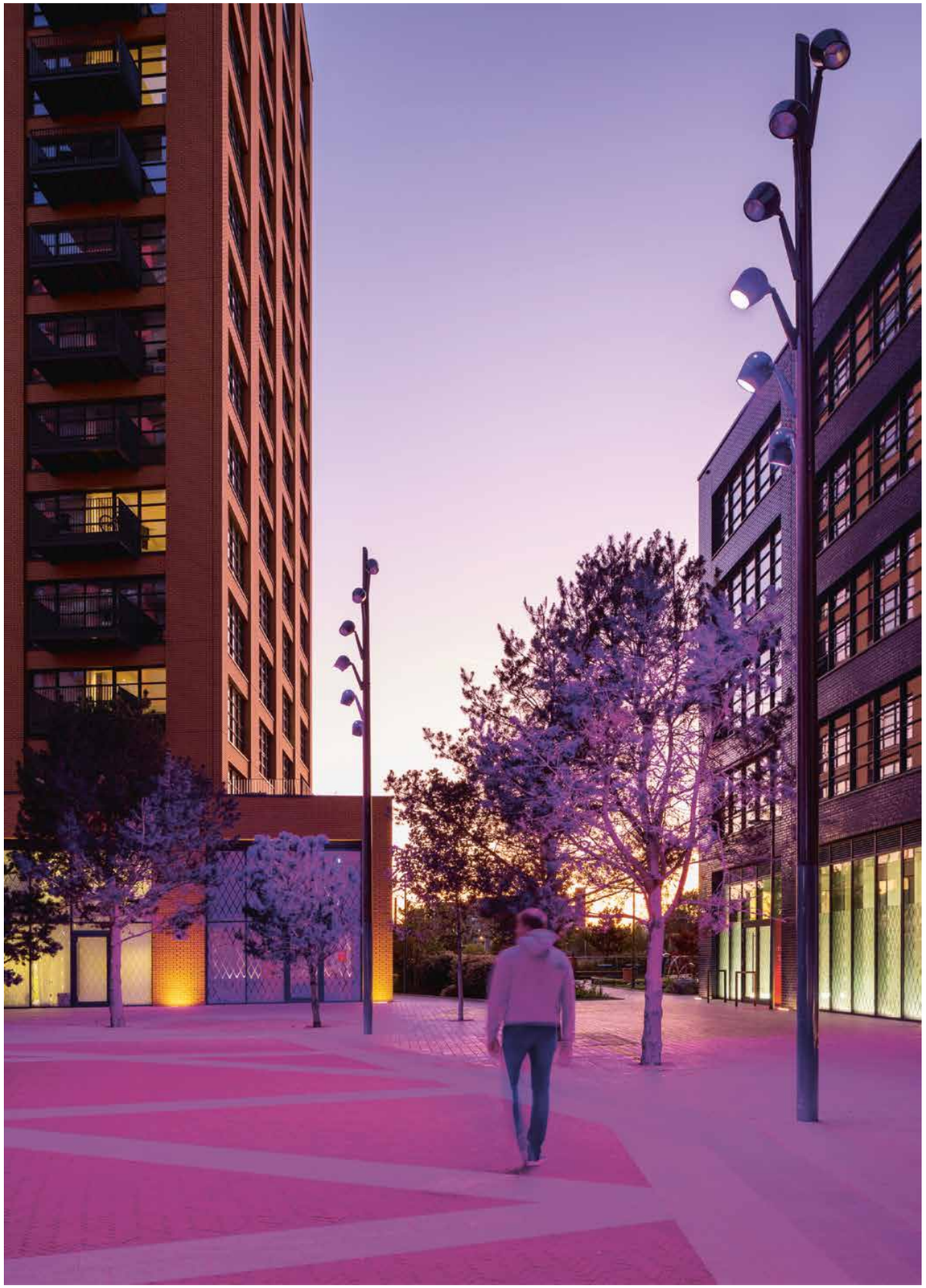
The floral shape of the Olivio provides space for more than just lighting. Sound, video and projections can be incorporated discreetly into individual luminaire configurations too.

Gobo projectors, audio speaker, and camera modules can be added to the Olivio system all within a uniform luminaire design to make it suitable for Smart City applications.



Olivio Cap
For a dark night sky

In order to improve visual comfort and prevent any scattering of light towards the sky, a cap has been specially designed for the Olivio luminaire. This accessory harmoniously extends the lines of the projector to blend in perfectly with the surroundings.



RGBW-Optics
Accents for special locations

The upscale optics of the Olivio luminaires are based on the perfect combination of LED module and reflector geometry. At the same time, the deep-set light source ensures glare reduction and visual comfort. A wide range of beam angles with precise light distribution is available. The RGBW optics are based on a ring-shaped arrangement of the LEDs in rotationally symmetrical freeform reflector – enabling a precise colour blend even from within the optical units.

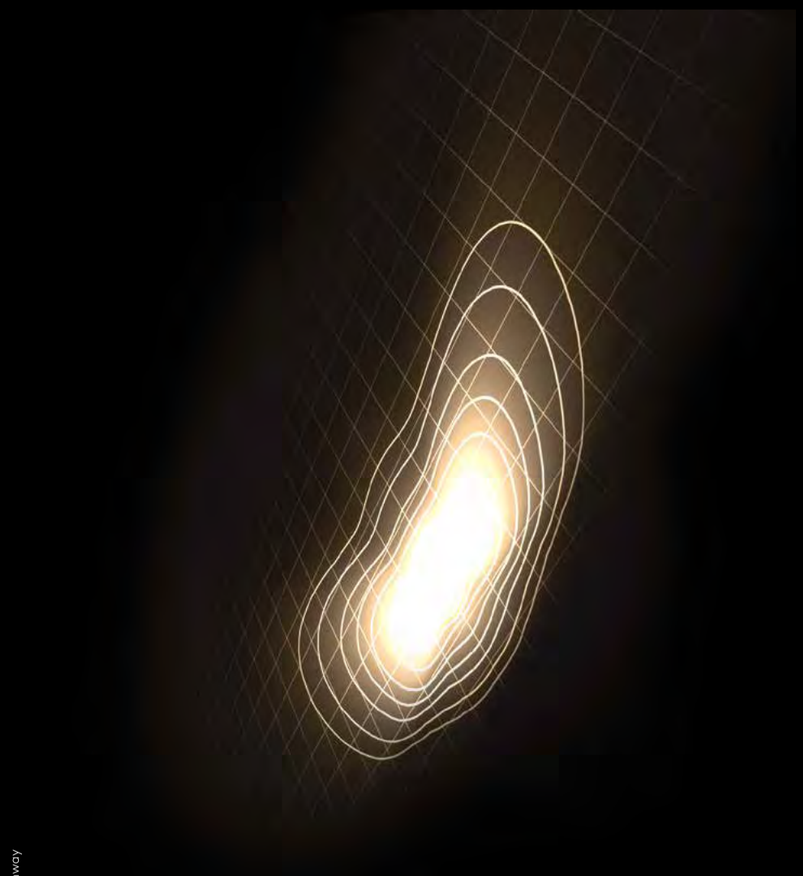
Olivio Gobo
Precise projection for perfect staging

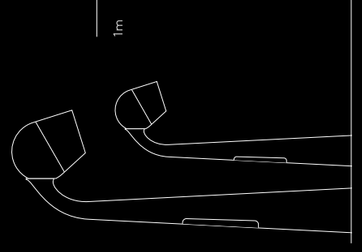
The Olivio Gobo projector complements the Olivio series of system luminaires as a professional event, marketing and highlighting tool. Lasered glass gobos within the luminaire allow any desired graphic to be projected precisely and with sharp contours – from classic white light projection and monochrome and multi-coloured images to finely graduated images made up of gradients of grey or CMYK rasters. Four different lenses allow the projection size to be adjusted flexibly to the distance to the projection surface.

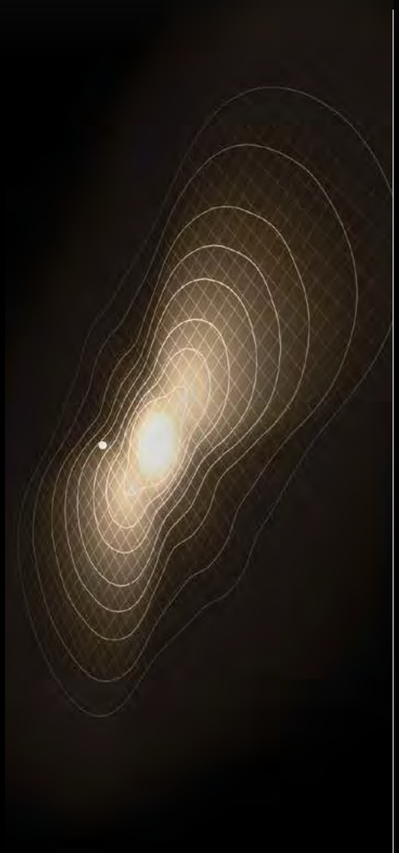
Olivio Bollard

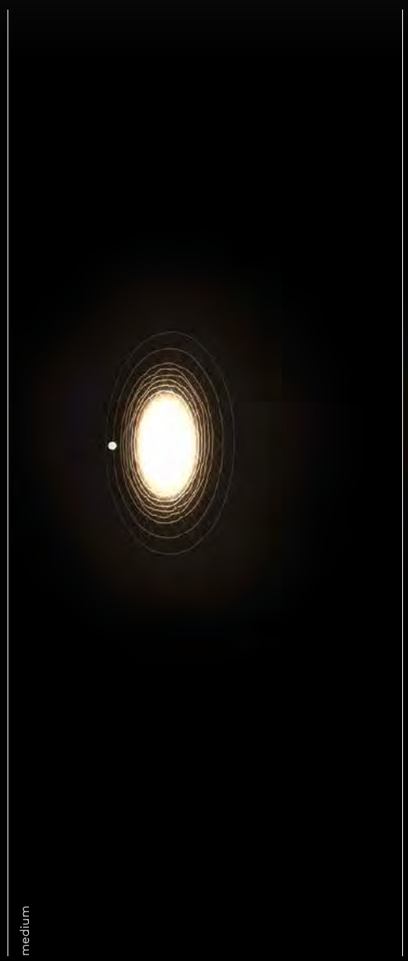
Light output **max. 2400lm**

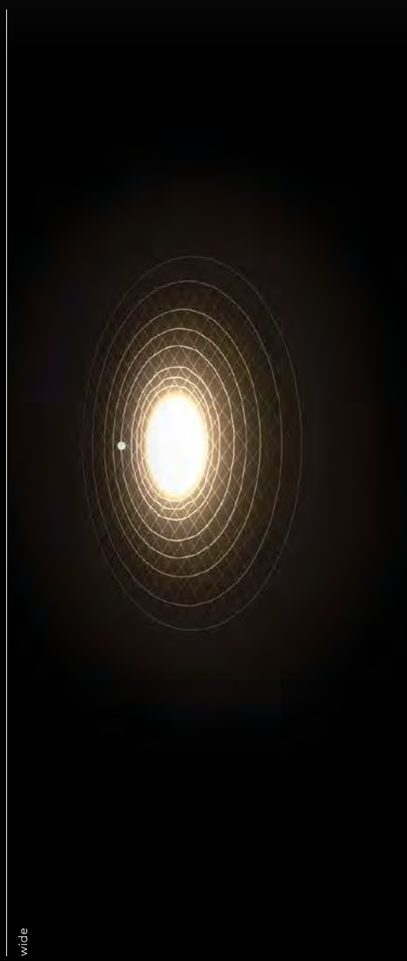
Light colour **2700K, 3000K, 4000K**











Olivio Luminaire heads

Light output **max. 4500lm**

Light colour **2700K, 3000K, 4000K, RGBW**

Grande

Medio

Piccolo

Bamboo

In terms of its size, lightness and strength, bamboo is an extreme product of nature. It is stable, and because it is hollow, it's extremely light and elastic. Its physical properties mean bamboo is far superior to other natural and synthetic materials.

The new urban light

Cities are lively, vibrant places that are always in motion. Changing uses such as communal spaces or multimodal transport concepts are transforming the urban space and thus also the demands on lighting. As a modular system luminaires in the form of a slim line, cylindrical light column, Lif provides full freedom to stage urban spaces with light and make the better places to live in through smart functions. More flexible than any other luminaire, it adapts itself to the widest variety of urban lighting tasks. Depending on the configuration, it can be used to light up squares or pathways, as façade or accent lighting or even all these at once – while at all times remaining a minimalist light column. Because with Lif, the focus is on the light, not the luminaire. Lighting tools like the pathway module or the gobo projector for eye-catching projection effects expand the scope of planning. And with intelligent modules such as audio speaker, camera or WiFi elements, the Lif is a key aspect of the Smart City.

The light of the sun by day

No matter what can be seen in the city in the light of day, the Lif cuts a superb figure in all surroundings – slim, discreet and elegant, it blends effortlessly into the hustle and bustle of the city. Its flexibly configurable light modules are stacked on top of one another in a linear arrangement. As a result, lines from the surrounding environment can be continued or references made to architecture without any compromise to functionality.

The light of the Lif by night

As soon as darkness falls, Lif illuminates the urban environment. The range of applications is practically unlimited. Starting from just a single point or surface, the Lif can beam its light in various directions, spotlighting facades or objects, creating impressive settings or immersing squares and paths in atmospheric light.

Lif modules

Accent element
→ 130–131

Façade module
→ 126

Top element
→ 128–129

Pathway module
→ 127

Twinspot module
→ 126

Gobo projector
→ 136–137

A new dimension in versatility

Camera housing element
→ 134–135

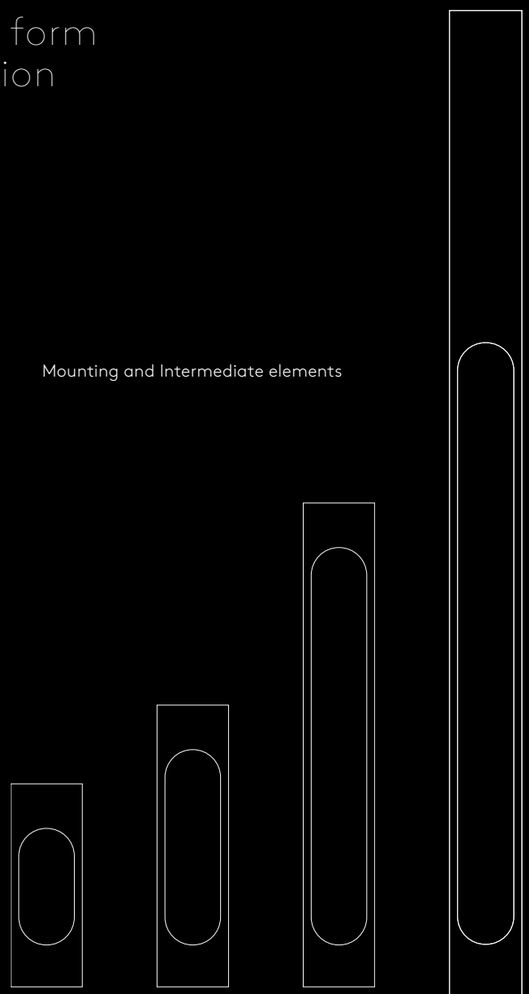
Audio Speaker module
→ 134–135

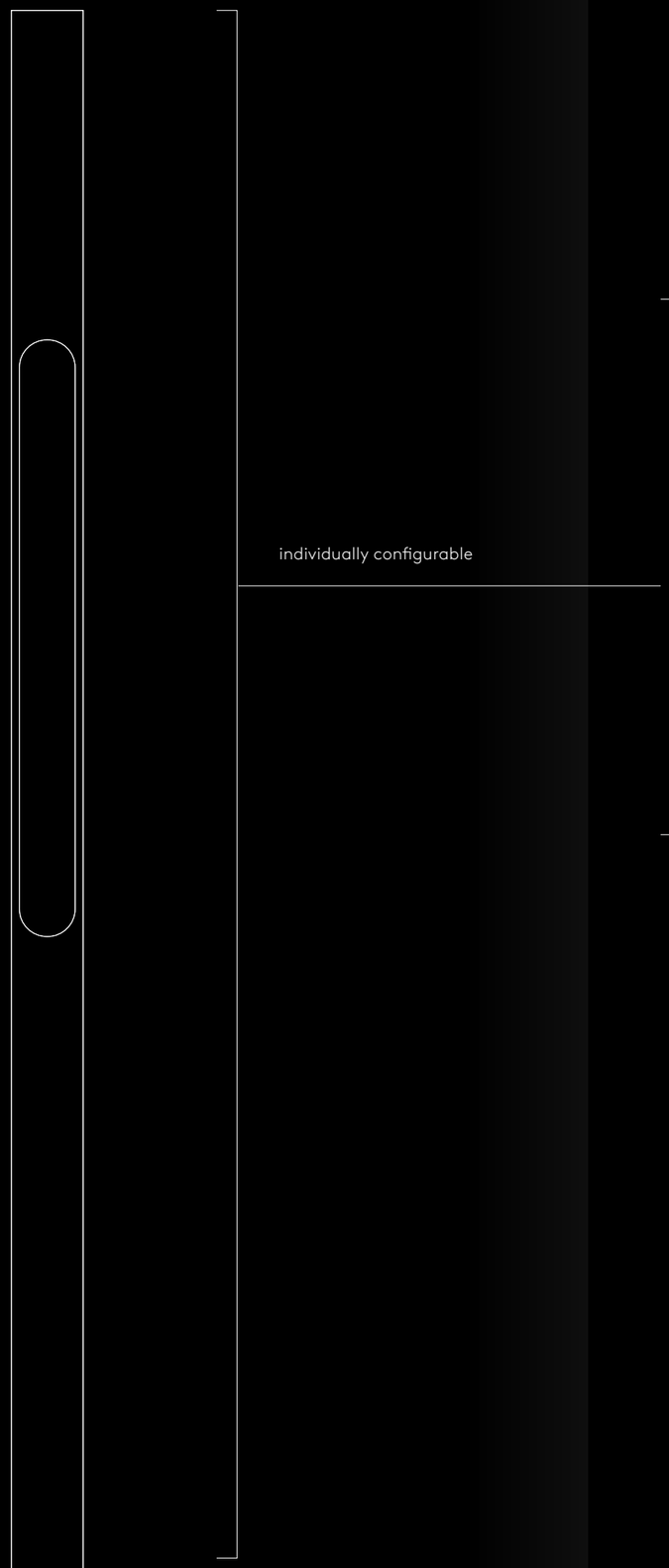
WiFi housing element
→ 134–135

Charging station
→ 134–135

Flexible in form and function

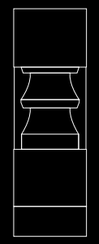
Mounting and Intermediate elements



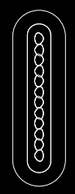


individually configurable

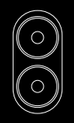
Top element



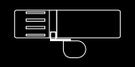
Façade module



Twinspot module

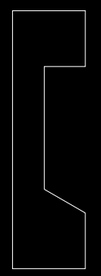


Gobo projector

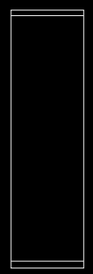


Audio Speaker module

Camera housing element



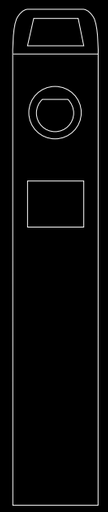
WiFi housing element



Pathway module

Accent element

Charging station



It’s amazing just how flexible the design of a luminaire can be. The Lif is entirely customizable in terms of shape and function. Depending on the lighting task and desired design, the Lif can be individually configured. There are no bounds to your imagination thanks to a wide range of light modules, various mounting elements and additional components for all aspects of urban application.

Lif light modules
transform urban spaces
into an experience

The **Lif Twinspot module** can be used in all four Mounting elements. It enables the creation of settings or precise spotlighting of important objects, monuments or landmarks. Spot or medium beam characteristics are available with the Lif Twinspot module.

The **Lif Façade module** is equipped with a number of different radiation characteristics to illuminate all forms of architecture and can be used in Lif Mounting elements. This precise and high-performance module guarantees optimal illumination from just a few light points.

The **Lif Pathway module** can be used in any of the four Lif Mounting elements. It enables precise illumination of paths from a vertical light column.

The Lif Top element
with two optics for greater flexibility

Tritec A – Ambiance

Lighting with character

With its high proportion of vertical light and soft transitions, the tried-and-tested Tritec Ambiance optics particularly suitable for inner-city living spaces. As general lighting, it creates an airy, bright atmosphere due to the brightened façades. The brilliant effects of the Tritec Ambiance optics also provide a timeless splendour in inner cities, for historic lanes or busy squares.

Tritec S – Sky

Extra precision

Lighting with Tritec Sky optics makes every urban space sensual and distinctive. The optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impairing the beauty of the environment, stars or night sky.

Accent element
Accents for special locations

The Lif Accent element conveys information to cities throughout the day by means of coloured light. The Lif Accent element can be used for communication and staging of all forms: for example to highlight signage through a guidance system, to point to a possible electro mobility connection point or to impressively highlight the corporate colours of a company or a local football team.

Mounting and Intermediate element
Room for flexibility

The Lif Mounting element is available in four sizes. It can be used to integrate Facade, Pathway or Twinspot modules or as a straightforward design element to create a transparent, gentle effect. Mounting elements can be added together and installed at a rotation between 0–360° around their own axis, enabling maximum precision of illumination in multiple directions.

Charging station

Camera housing element

Audio Speaker module

WiFi housing element

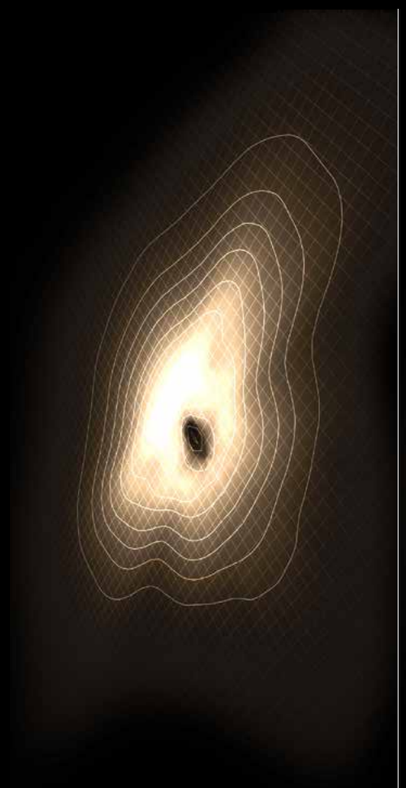
Smart modules
Even greater flexibility for the light column

Smart functions combined with the basic lighting function enable the Lif to become a key element in consistently designed, networked Smart Cities. Smart modules also allow all kinds of sensors to be integrated in the Lif.

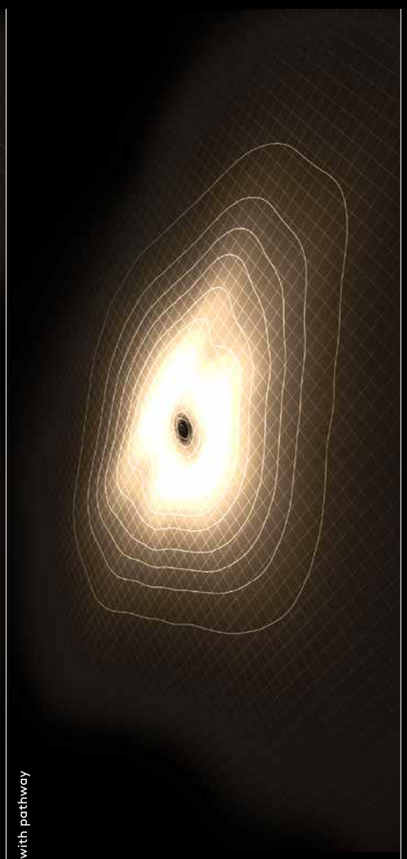
Lif Gobo
Precise projection for perfect staging

The Lif Gobo projector complements the series of light modules as a professional event, marketing and highlighting tool for the light columns. Lasered glass gobos within the luminaire allow any desired graphic to be projected precisely and with sharp contours – from classic white light projections, to monochrome and multi-coloured images, to finely graduated images made up of gradients of grey or CMYK screens. Four different lenses allow the projection size to be adjusted flexibly to the distance of the projection surface.

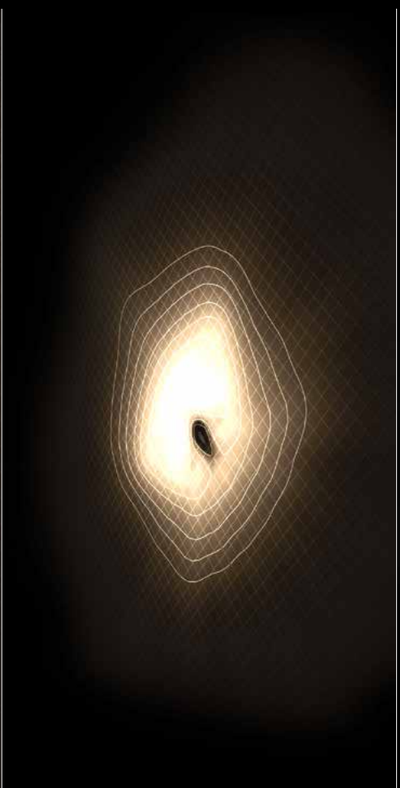
asymm. street



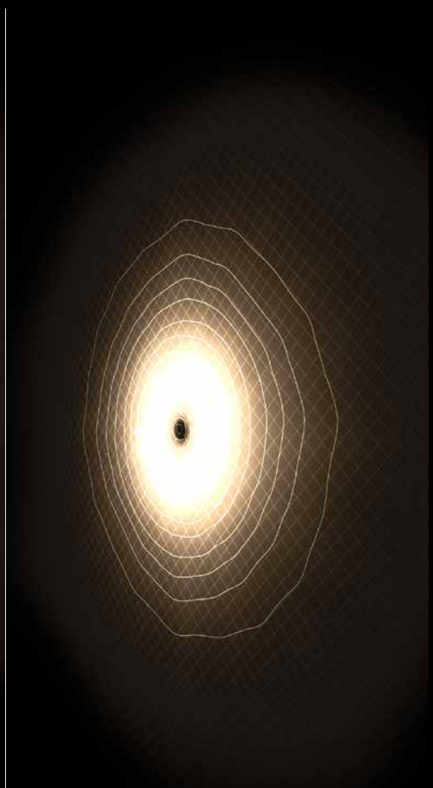
asymm. street with pathway



asymm.



symm.



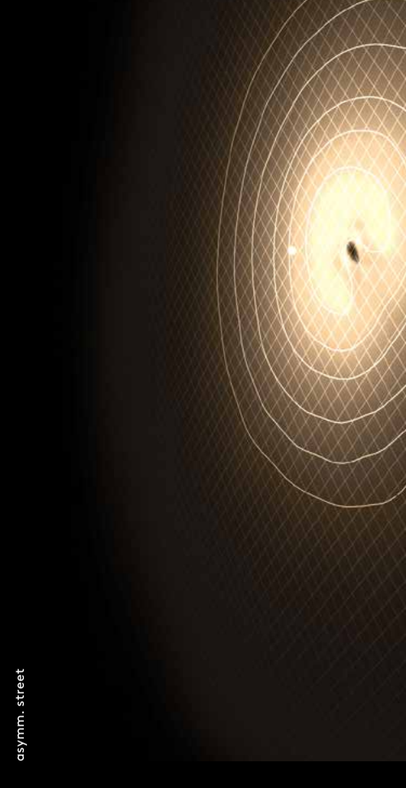
Tritec S

1m

Lif Top element with Tritec S

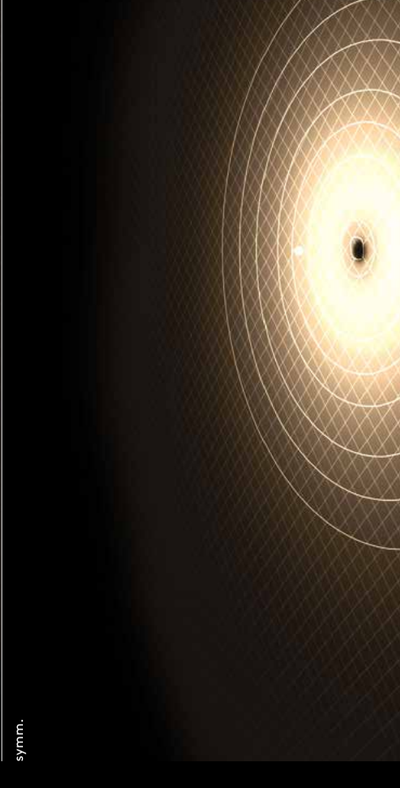
Light output	**max. 7200lm**
Light colour	**2200K, 2700K, 3000K, 4000K**
Reflector colour	**silver, gold**
Smart City	**optional Zhaga interface**

asymm. street

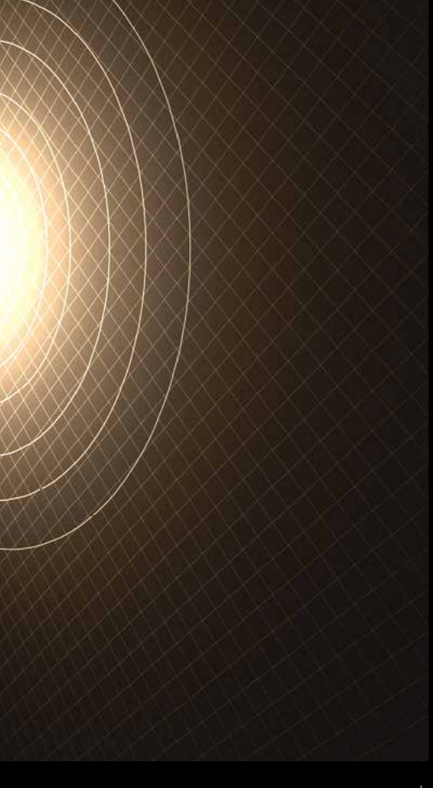


asymm. street with pathway

asymm.



symm.



Tritec A

1m

Lif Top element with Tritec S

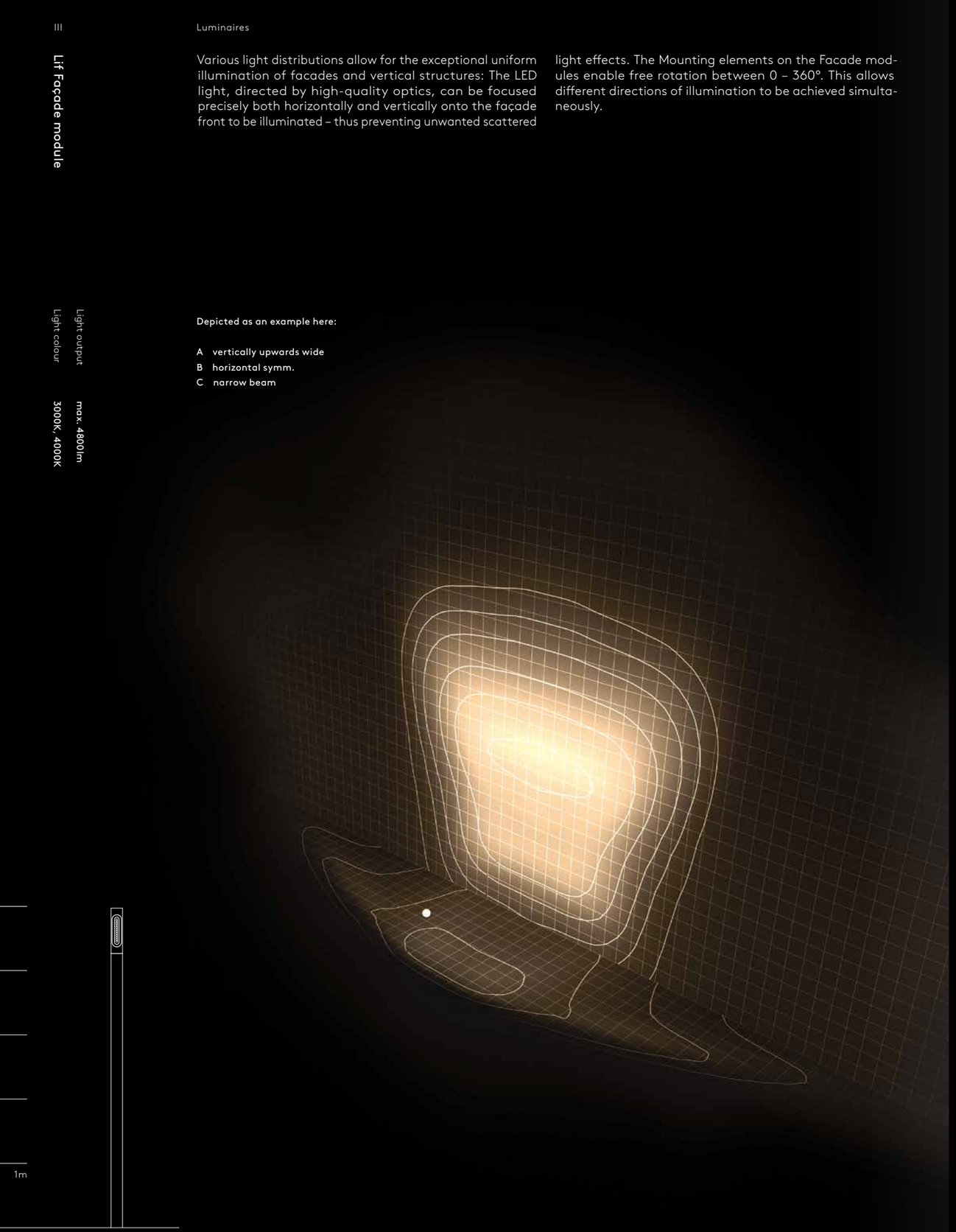
Light output	**max. 7200lm**
Light colour	**2200K, 2700K, 3000K, 4000K**
Reflector colour	**silver, gold**
Smart City	**optional Zhaga interface**

Various light distributions allow for the exceptional uniform illumination of facades and vertical structures: The LED light, directed by high-quality optics, can be focused precisely both horizontally and vertically onto the façade front to be illuminated – thus preventing unwanted scattered light effects. The Mounting elements on the Facade modules enable free rotation between 0 – 360°. This allows different directions of illumination to be achieved simultaneously.

Light output max. 4800lm
Light colour 3000K, 4000K

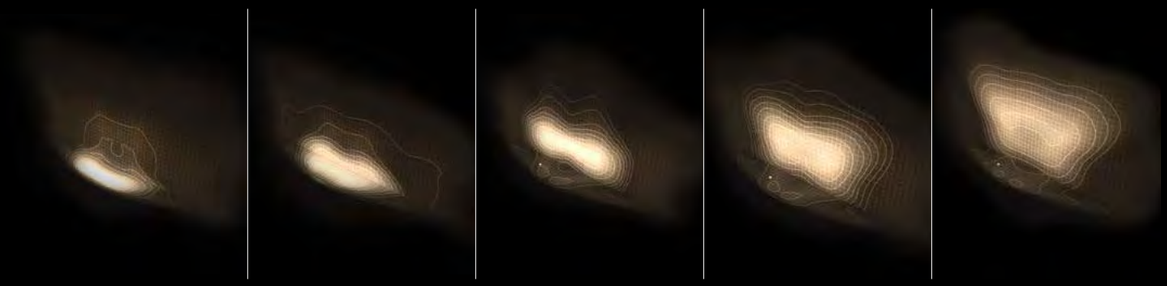
Depicted as an example here:

A vertically upwards wide
B horizontal symm.
C narrow beam



Selectable illumination character parameters

A Vertical from downwards to upwards

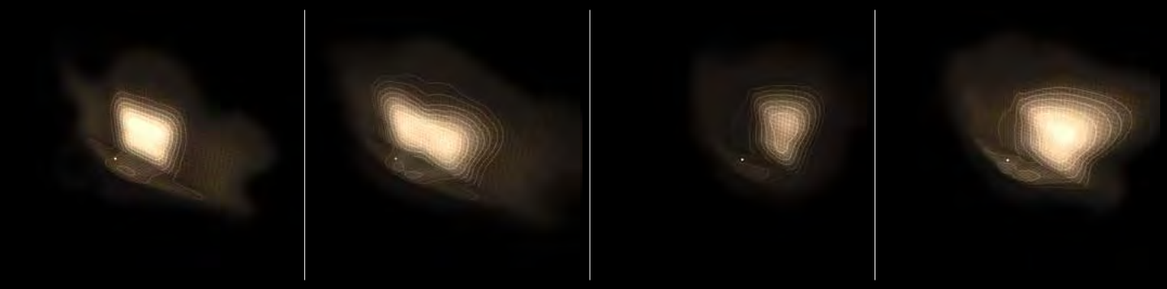


downwards near | directed downwards | parallel concentrated | medium upward offset | flood upward offset

B Horizontal left-directed, symmetrical or right-directed

asymm. left | symm. | asymm. right

C Horizontal narrow or wide

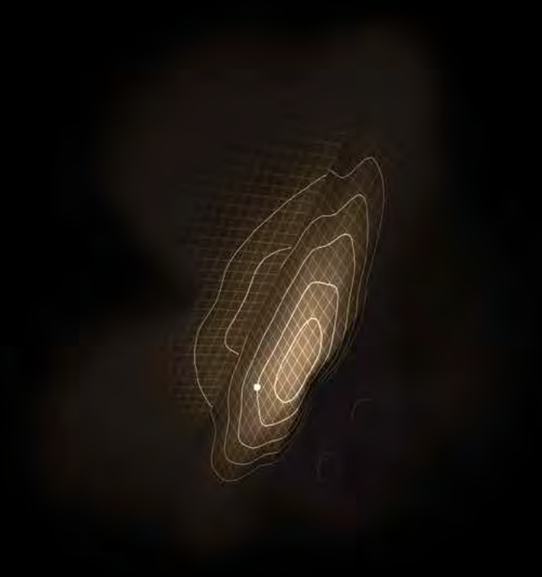


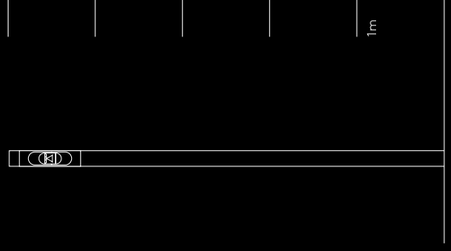
symm. narrow | symm. wide | asymm. narrow | asymm. wide

Lif Pathway module

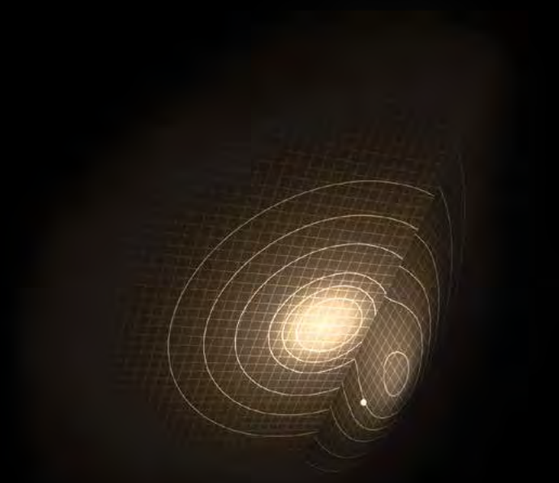
Light output **max. 1800lm**

Light colour **3000K, 4000K**

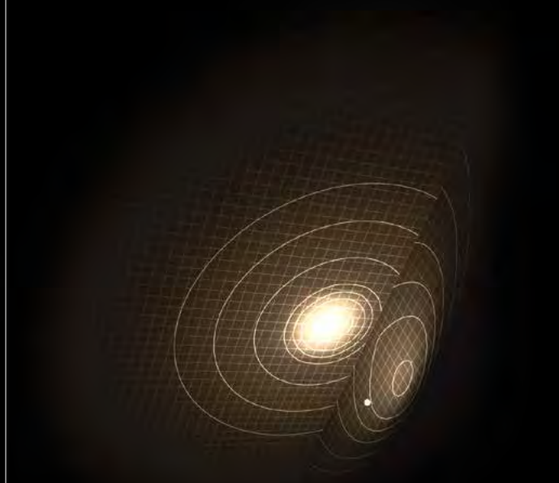




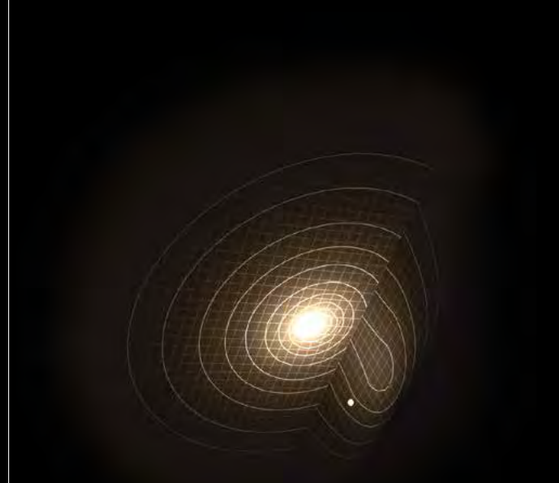
Medium



Semi Spot



Spot



Lif Twinspot module

Light output **max. 3600lm**

Light colour **3000K, 4000K**

Dragonfly

Dragonflies have the ability to move each of their two pairs of wings independently of each other, enabling them to make abrupt changes of direction, stop in mid-air and even fly backwards. The muscular, elongated torso serves as a stabiliser.

LINE

The Line

Minimised to the max – lighting for streets, paths and squares all from one vertical line

GERMAN DESIGN AWARD WINNER 2021

The design philosophy behind the Line is to radically reduce the complexity of a luminaire's form by integrating the optics into a vertical line. The result: slim line luminaires that support a calm and clear urban landscape. The discreet form brings the lighting effect and the individual character of the luminaire's materials and surfaces more to the foreground. Minimised cross-sections ensure elegant proportions across the different column, pole, bollard and wall variations.


P
K-LS 210E

The Line
Crosses boundaries, connects opposites

With the Line, Selux is revolutionising the look of street lighting: it combines diverse functions in a radically reduced design, and creates new clarity in the urban landscape. Vertical, linear optic modules fit seamlessly into a pure luminaire shape. Using innovative lighting technology, the Line handles all relevant lighting tasks: from applications close to buildings to lighting squares, parks, streets and paths. To achieve this, the product family includes light columns, bollards, pole and wall-mounted luminaires as well as pole-top versions for existing poles – creating a universal toolkit for lighting. Microfacetted reflectors provide high visual comfort and standard-compliant glare control.

The precision optics prevent light pollution and illuminate residential spaces with respect to nature. Zhaga-compliant interfaces diversifies the abilities of the Line, enabling it to connect with intelligent Smart City options. The Line supports individual lighting concepts not just in its diversity of lighting technology modules. The possibility of combining different luminaire surfaces, colour temperatures and reflector finishes provide the freedom to align lighting design to the surroundings: a contrast-rich look combing concrete, gold reflectors and warm light colours or a timeless look fusing tradition-al steel with silver reflectors: both are equally easy. The Line: flexible in its form, diverse in its applications, pure in its appearance.

The Line

Light columns

Pole luminaires

Wall-recessed
and surface-mounted luminaires

Bollards

Linear optics
The scaling of light

The linear optic modules fit seamlessly in the reduced design of the Line. To meet different applications, four module sizes are available with light outputs scaled accordingly. The modules have innovative microfacetted gold or silver reflector systems with engineered light distribution to illuminate streets, paths, squares and parks. The precise reflectors minimise scattered light and thus reduce light pollution – for lighting residential and urban areas in harmony with nature. By combining reflectors in gold with warm light colours such as 2200K or 2700K, the Line is considerate of the sensitive needs of nature and the animal kingdom. Additionally, 3000K and 4000K provide additional neutral light colours choices: this allows the lighting atmosphere to be tailored individually to the character and identity of districts and urban areas.

Performance and Comfort optics for individual needs

To meet individual needs while also emphasising the character of a city, a community or a square, all the optics in the Line family are available in two different versions: a performance version that is, as the name suggests, performance-driven lumen output and efficiency, and a Comfort design with light guiding louvers, which guarantee exceptional visual comfort. This ensures efficient compliance with lighting standards even when using widely spaced poles, and allows areas with lower mounting heights and higher requirement in terms of visual comfort to also be illuminated in a people-friendly way.

Performance Optics

Comfort Optics

Smart City

Intelligent Smart City functions via an optional Zhaga interface.

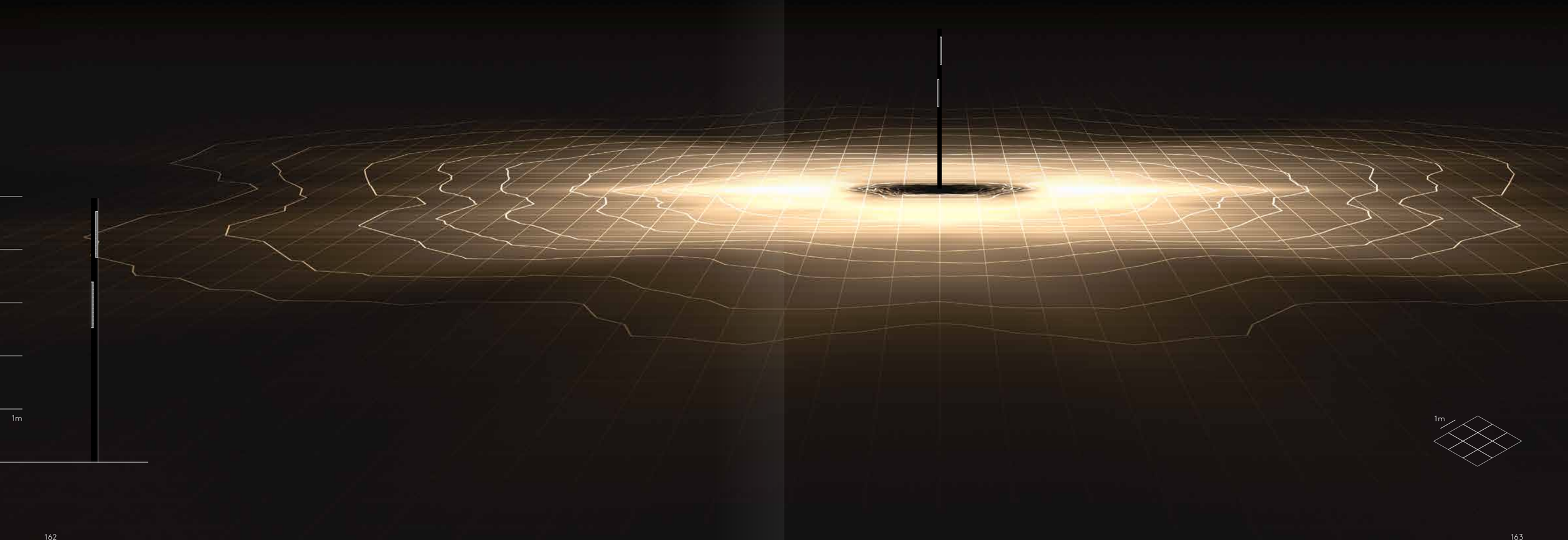
Night Sky

Thanks to its precise optics, the Line does not emit any disruptive scattered light, and protects the night sky against light pollution.

All-around lighting

Symmetric

Combining two optics in a column creates symmetric illumination.



Combines multiple functions

Asymmetric + pathway

The multifunctional character of the Line enables it to integrate two optics in a single light point: urban spaces look cleaner and clearer as a result, for example, where two optics in a pole combine to illuminate both the street and pathways in compliance with standards.

Asymmetric

A single optic creates pure light for asymmetric illumination.

Diversity
of materiality and colour

In addition to steel, there is also a special edition concrete-look finish for the Line. The look of both materials can be customised to no end. Steel poles are tailored with a powder coating, for example, which also protects them against corrosion. A comprehensive palette of colours allows different characteristics to be achieved, from harmonious colour tones to contrast-rich accents, as well as a choice of surface finishes such as matte, gloss or a metallic effect. Concrete finishes create new accents in luminaires. The most commonly used material in modern architecture is something of a chameleon: depending on how it is processed, it can form rough and warm, or smooth and cool surfaces, and it can be coloured to fit with its surroundings. Concrete constructions are robust, durable and rugged, and are viewed less as technology and more as architecture in the cityscape.

Black matte

Selux graphite

Concrete grey

Clay

Sand

Concrete look

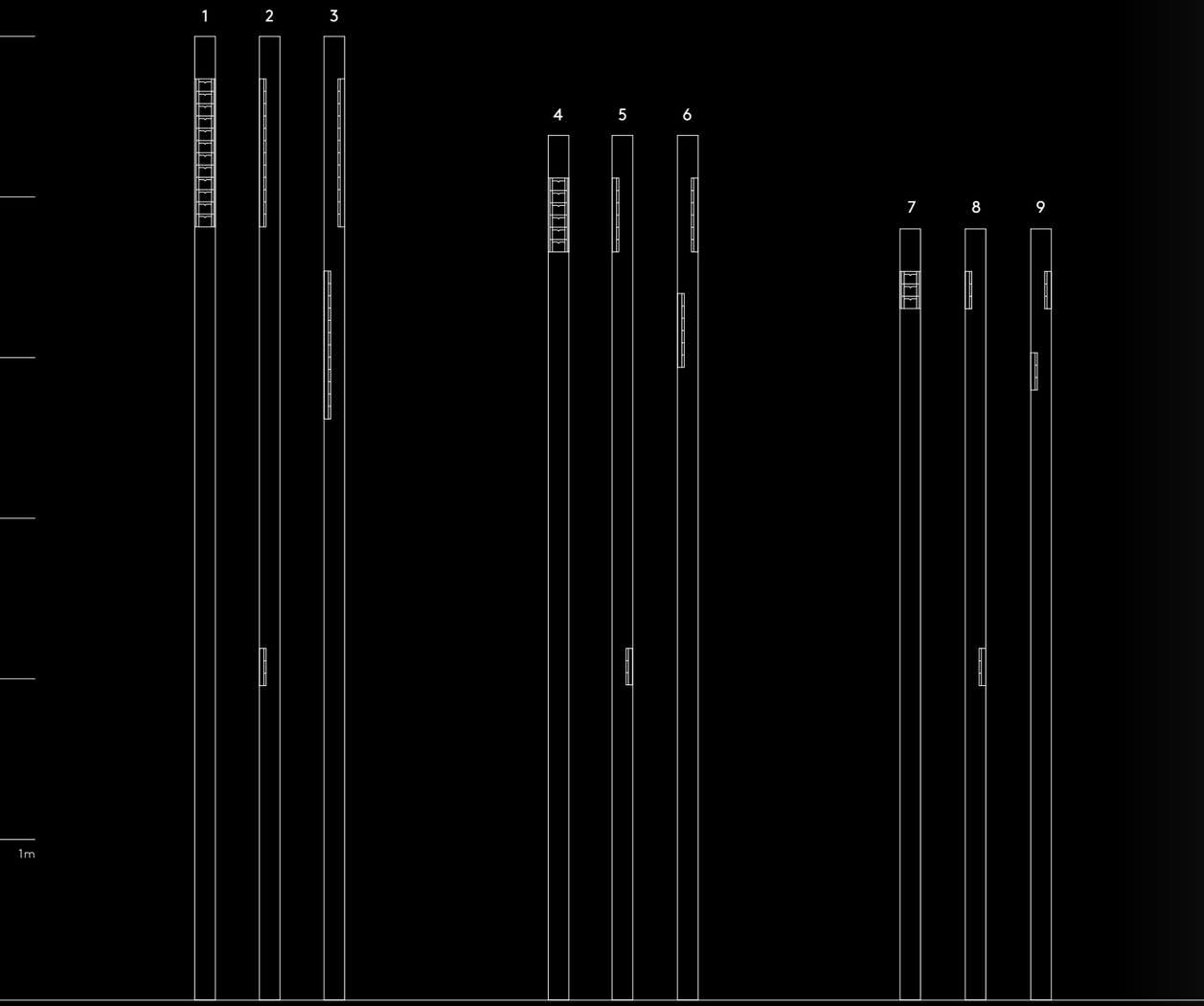
Wall-mounted and bollard luminaires for lighting to envelop buildings

With the right choice of material and optics, the extremely reduced form of Line fits like a glove with architecture. The bollard, wall-integrated and wall-mounted luminaires in this series are thus the perfect tools for light-ing buildings close up. The wall-mounted luminaires are available in four sizes, and the bollards in four heights.

Lateral mounted and top modules for poles

The Line universal toolkit also includes vertical, linear optic modules for mounting on or on top of existing poles. Streets and paths can thus be outfitted with innovative lighting technology cost-effectively.

Light columns

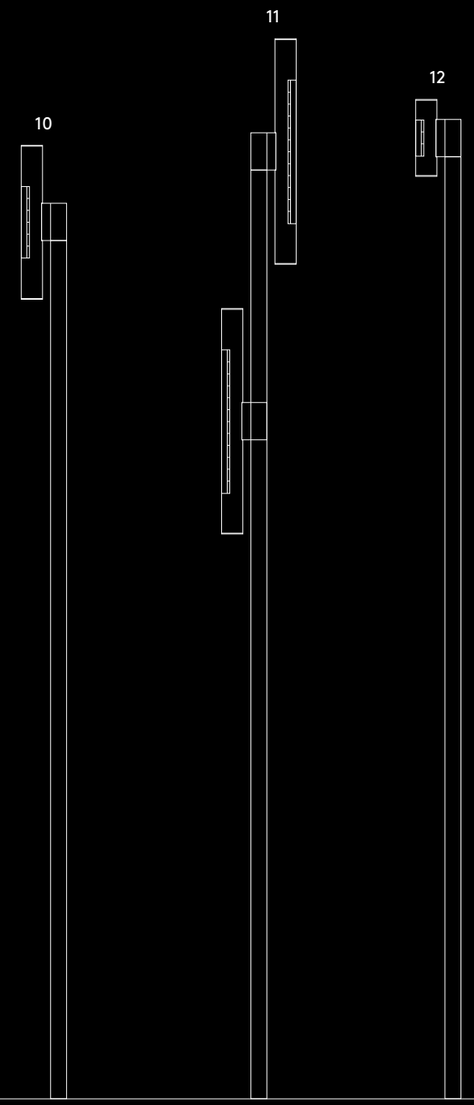


1 asymmetric – M12
2 asymmetric plus pathway – M12 + M3
3 aymmetric – M12 + M12

4 asymmetric – M6
5 asymmetric plus pathway – M6 + M3
6 symmetric – M6 + M6

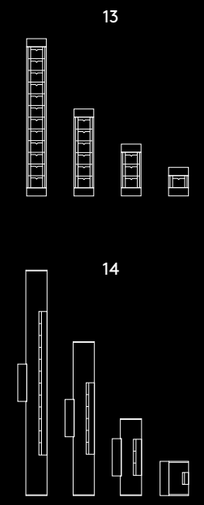
7 asymmetric – M3
8 asymmetric plus pathway – M3 + M3
9 symmetric – M3 + M3

Pole luminaires



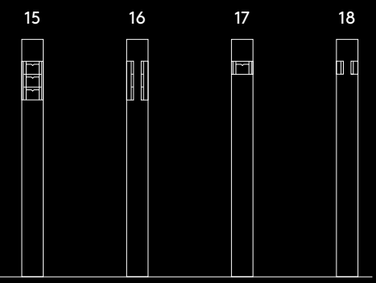
10 asymmetric – M6 pole top
11 asymmetric – M12 pole top + M12 Lateral
12 asymmetric – M3 pole top

Wall-recessed and surface-mounted luminaires



13 asymmetric – M12, M6, M3, M1
14 asymmetric – M12, M6, M3, M1

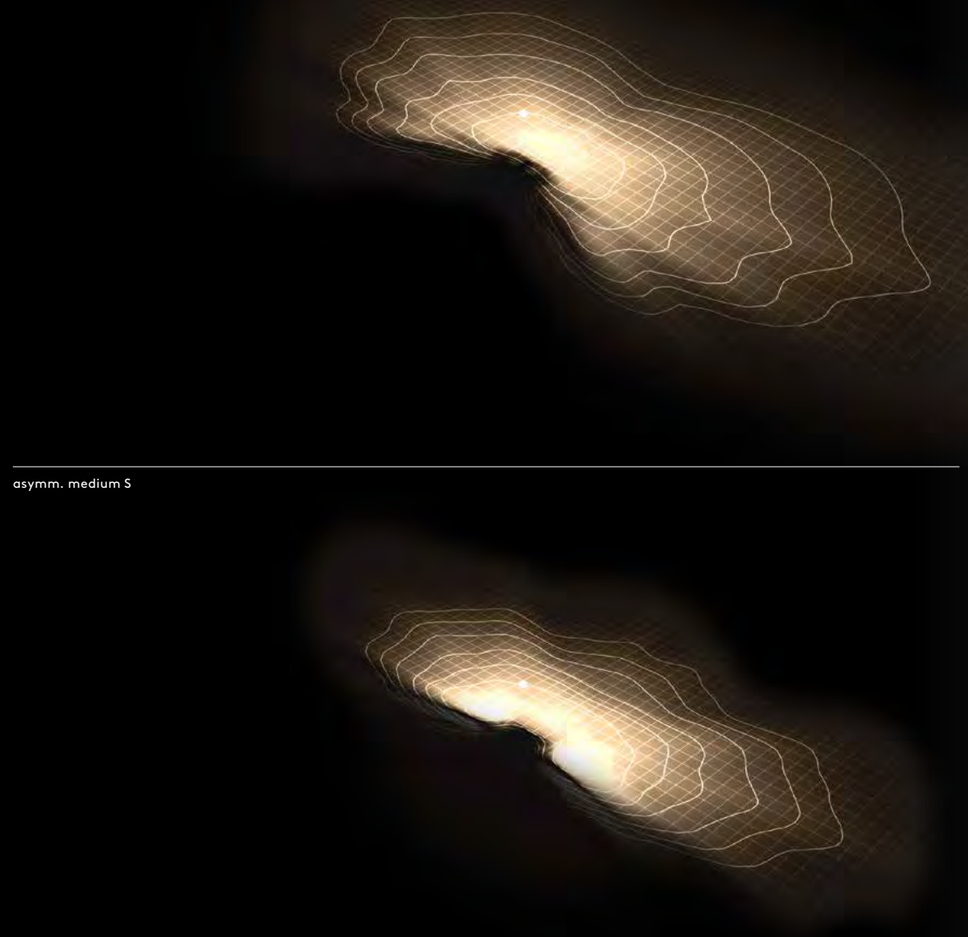
Bollards



15 asymmetric – M3
16 symmetric – M3 + M3
17 asymmetric – M1
18 symmetric – M1 + M1

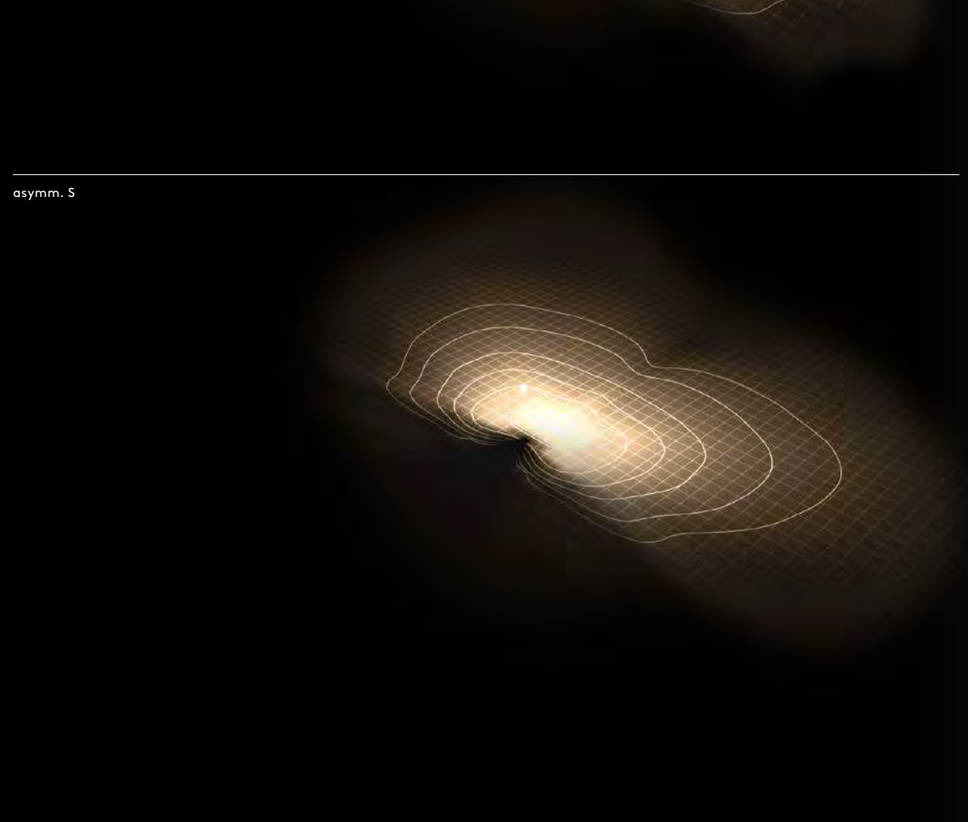
Luminaires

asymm. wide



Light output	max. 7000lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface

asymm. medium S

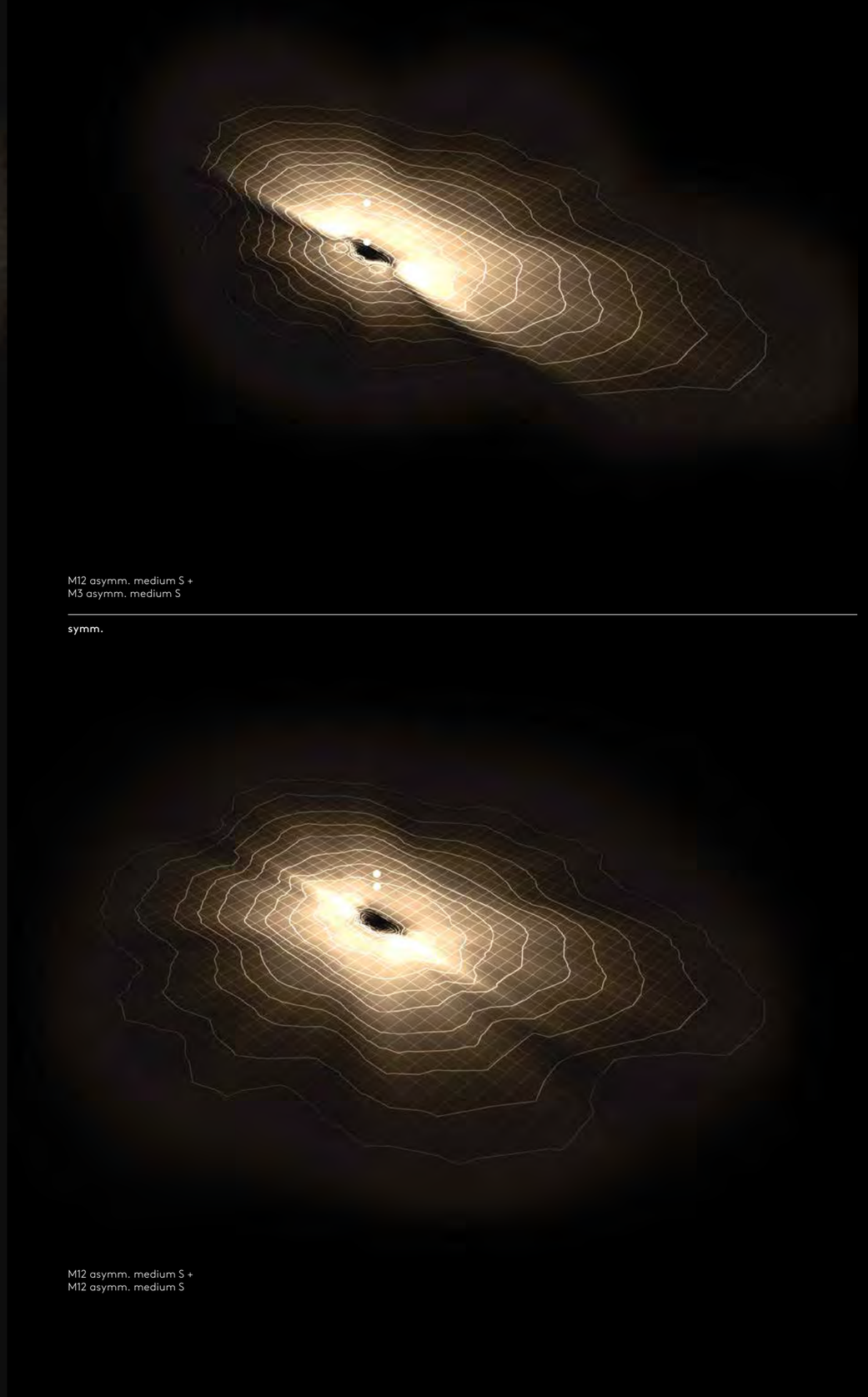


asymm. S

1m

Line

asymm. street + pathway



Light output	max. 7000lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface

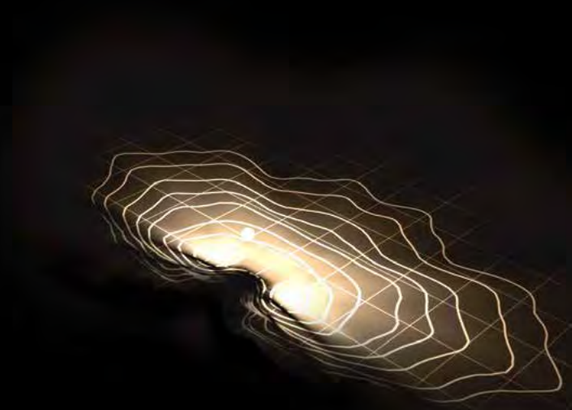
M12 asymm. medium S +
M3 asymm. medium S

symm.

M12 asymm. medium S +
M12 asymm. medium S

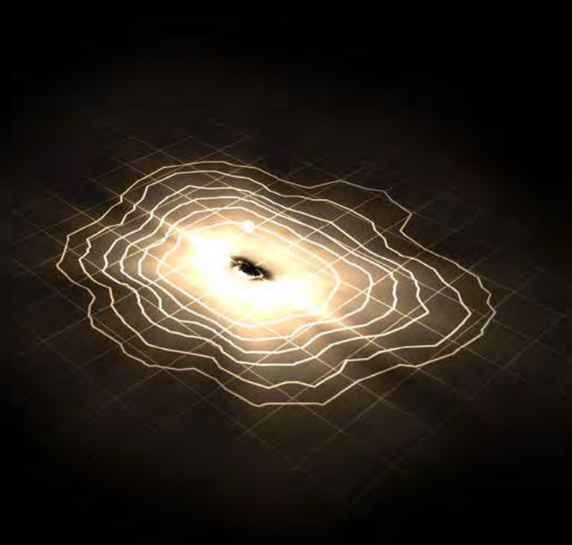
1m

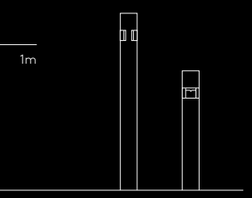
asymm. pathway



M3 asymm. medium S

symm. pathway





M3 asymm. medium S +
M3 asymm. medium S

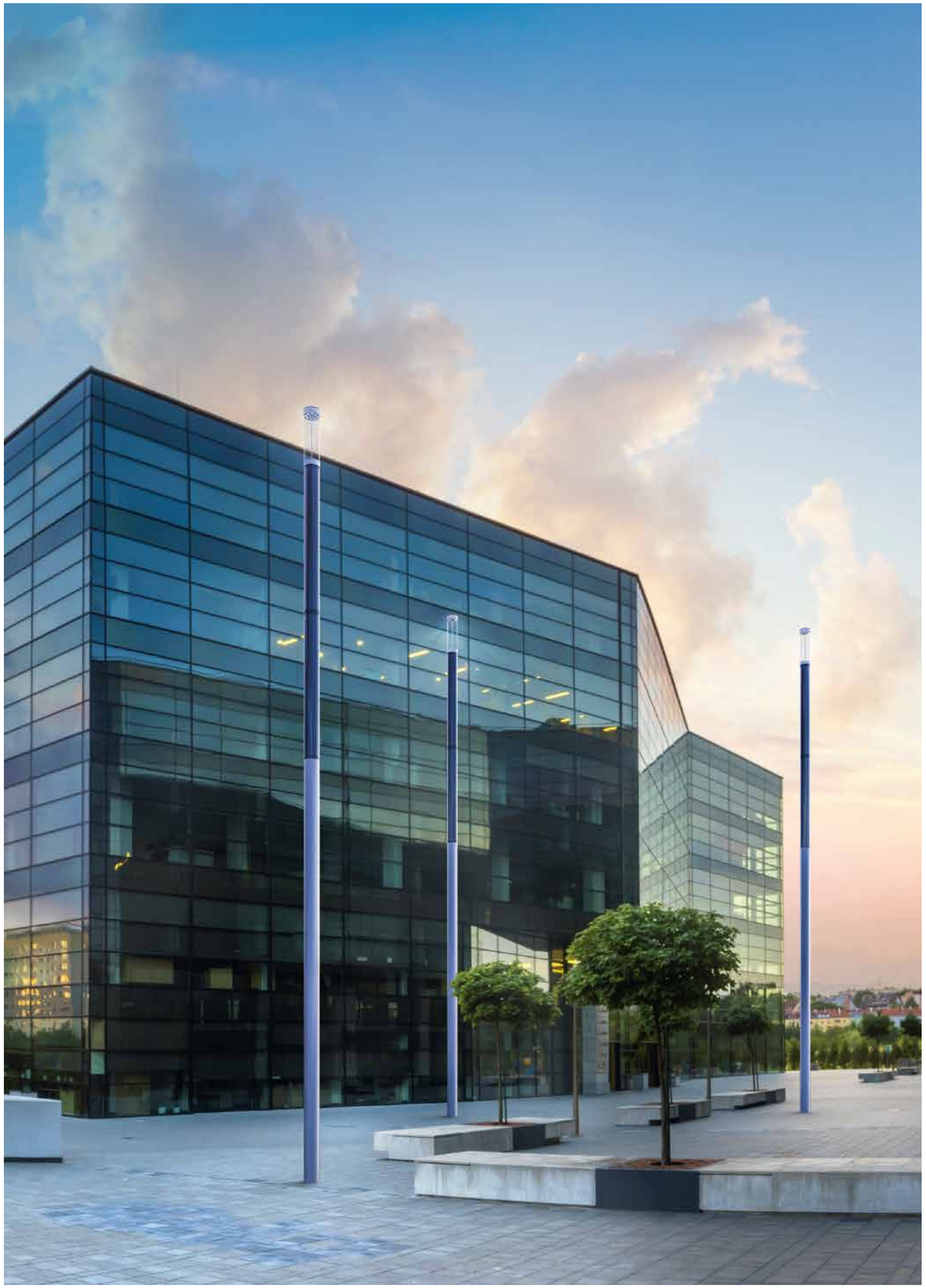
Light output	max. 2100lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface

Blade of grass

Photosynthesis is the most important process under the sun – without it, life on earth couldn't exist. As part of the process, under sunlight, and with the help of carbon-dioxide, plants produce not only oxygen, but also the sugar molecule glucose which the plants use as a building block and source of energy.

SOLAR

LUK IDA



Off-the-grid and sustainable illumination

Off-the-grid and sustainable illumination for urban spaces, available when required but can take a back seat whenever not necessary. Solar luminaires that generate energy themselves in an environmentally friendly manner and provide light independent of the availability of electricity networks allow for this new way of thinking. Selux Solar luminaires by Hei have a modular structure and are manufactured according to customer requirements for each individual project. Selux Solar luminaires by Hei work entirely autonomously as off-grid solutions: There are no electricity or connection costs, installation is quick and without any disruption to the surroundings. Hybrid solutions that combine battery operation and network connection are also possible. Integrated sensors and smart controllers not only optimise luminous flux and limit energy consumption, but together with efficient optics, they ensure light pollution is by and large reduced. The self-contained luminaires can be interconnected via communication modules and integrated into smart interfaces and applications.

hei by Selux

Night Sky

With its precise optics, the Lukida does not emit disruptive scattered light, thus protecting the night sky from light pollution.

Light from solar energy

The Hei Lukida by Selux family of light columns uses cylindrical solar modules. This design offers several benefits: the modules can be installed regardless of orientation; highly efficient silicon solar cells ensure the maximum attainment of solar energy with a minimal tube size. Furthermore, the cylindrical modules are optimally encapsulated - for a long life cycle and an aesthetically pleasing appearance. At the same time, the vertical mounting position prevents sand, snow or dust from accumulating on the solar cells.

Lukida 4000 – P200-160
Peak performance solar module approx. 200W
Ø160mm

Lukida 4000 – P100-160
Peak performance solar module approx. 100W
Ø160mm

Free orientation, efficient and durable

Hei Lukida by Selux is an aesthetically designed family of solar light columns with integrated photovoltaics. With a choice of light distribution options, lumen packages and heights, it is suitable for public and private lighting applications such as gardens, parks, promenades and side streets. The cylindrical shape of the solar modules enables installation regardless of orientation and complements the organic look of the luminaires.

The **microcontroller** integrated in the pole forms the heart of the Hei Solar luminaires by Selux. It brings together the luminaire, solar module and battery pack; it also controls the battery charging process and optimises the energy consumption of the Lukida using intelligent dimming profiles. Thus the stored solar energy is used optimally, ensuring reliable operation all night long.

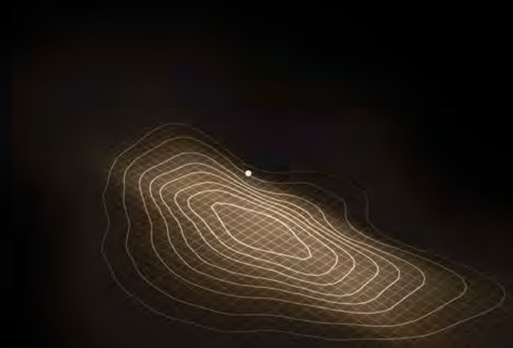
Lukida Light column

Light output max. 3600lm

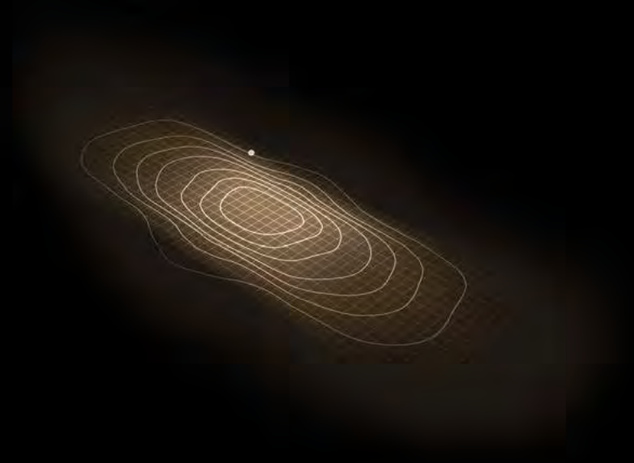
Light colour 2700K, 3000K, 4000K

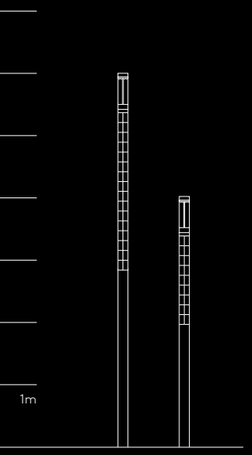
Luminaires

asymm. street



asymm. street with pathway

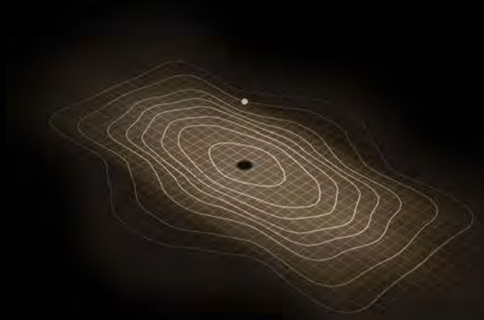




Lukida

symm.

asymm. long



Eagle owl

Eagle owls are the largest species of owl in Europe. It is their eyes that are so striking: they are constructed according the same principle as a fast telephoto lens. Large lenses with a wide-open aperture or pupil allow a high light yield. The result is exceptionally good spatial vision, even in low light conditions.

I N U L A

Using light to design the night

A pitch-black night sky with glistening stars is much more than just the perfect background for designing urban space using light. A Night Sky is important for natural rhythms too and as a result for the well-being of human beings, animals and plants. Rather than more light, it is often just greater light precision that is required in public spaces around buildings, in parks or at other locations. With their special lighting technology and controlled illumination of areas, Inula bollards and light columns have earned the 'Night Sky' epithet– as officially recognised by the International Night Sky Association (IDA). With an extremely reduced design, the cylindrical luminaires offer guided, attractive and efficient light that is free of light scatter. The Inula bollard and light columns form a single consistent, modular system. With different heights, light distributions, light colours and power levels, planners can react individually to situations and lighting tasks in exterior areas using Inula.

Night Sky

Thanks to its precise optics, the Inula does not emit any disruptive scattered light, and so protects the night sky against light pollution.

Scaling of light

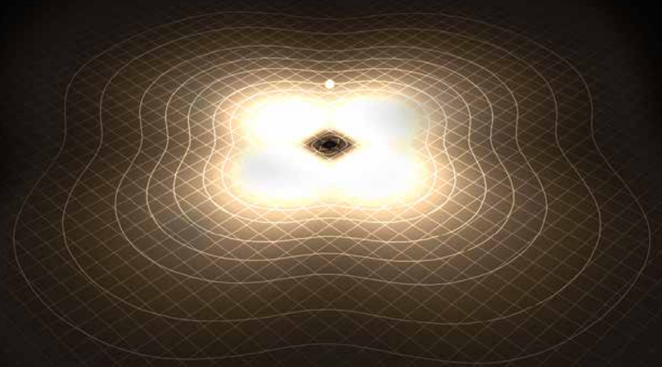
The Inula light column can be fitted with one or two modules depending on the demand for luminous flux or strength of illumination.

Inula
Light column

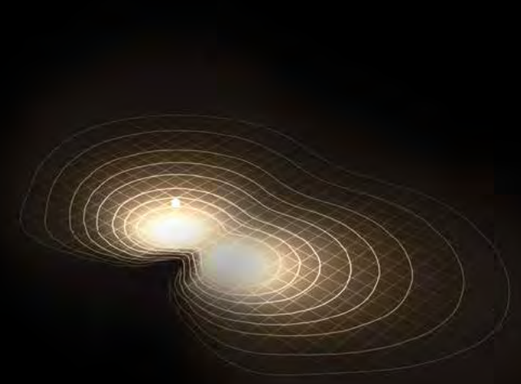
Light output max. 6000lm
Light colour 2700K, 3000K, 4000K

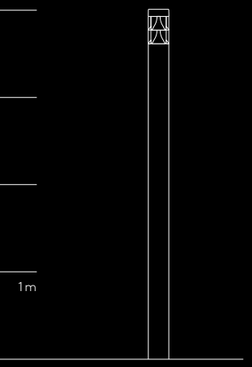
Luminaires

symm. 4Q



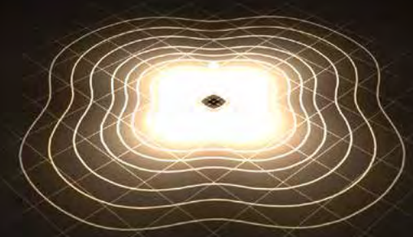
asymm. pathway 2Q





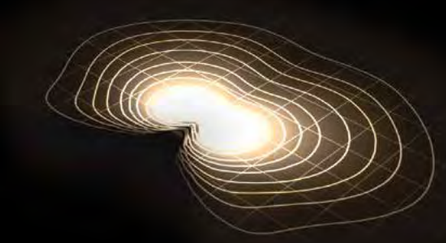
Inula

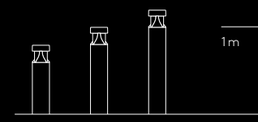
symm. 4Q



asymm. 1Q

asymm. pathway 2Q





Inula Bollard

Light output max. 2100lm
Light colour 2700K, 3000K, 4000K

Portuguese man-of-war

Jellyfish comprise of 98 to 99 percent water,
and their vital organs are held together by a thin layer of
cells only two fiftieths of a millimeter thick.
Despite this simple morphological structure, an enormous
diversity of forms has evolved over 500 million years.

E L O


NORRTELJE
NORRTÄLJE

Pure light
all around the building

For pure light all around the building, the Elo family includes bollards, columns, wall-mounted and post-top luminaires. The slender cylindrical luminaires not only impress with the high lighting quality and efficiency of the Tritec optics, but also with their design. The minimised design language blends harmoniously into a wide variety of stylised architectural contexts. Elo thus forms a holistic system that, thanks to its versatility, enables lighting applications close to the building from a single source. Whether paths, entrance areas or driveways: Elo provides differentiated, balanced light for every situation and, as an elegant signpost, ensures safety and orientation.

Elo Pure

Elo Shape

Two optics for greater flexibility

Lighting with character
With its high proportion of vertical light and soft transitions, the tried-and-tested Tritec Ambiance optics are particularly suitable for inner-city living spaces. As general lighting, it creates an airy, bright atmosphere due to the brightened façades. The brilliant effects of the Tritec Ambiance optics also provide a timeless splendour in inner cities, for historic lanes or busy squares.

Tritec A – Ambiance

Extra precision
Lighting with Tritec Sky makes every urban space sensual and distinctive. The optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impairing the beauty of the environment, stars or night sky.

Tritec S – Sky

Atmosphere for urban quality of life

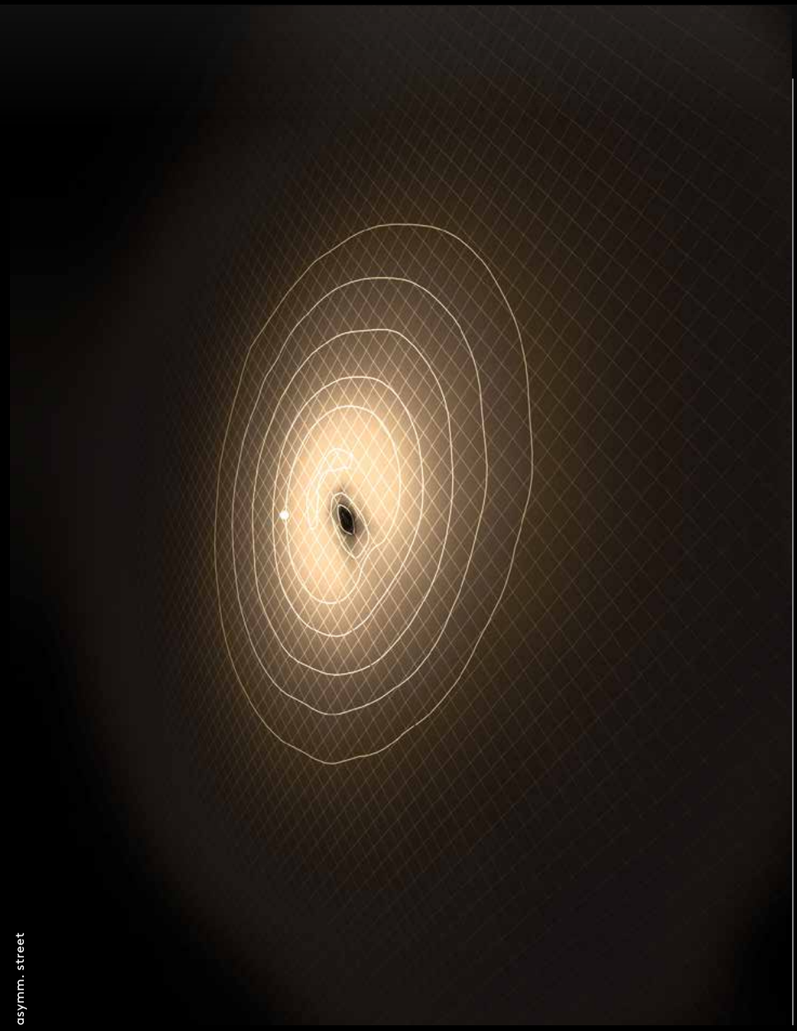
With golden reflectors and warm light, the Tritec optics integrated in the Elo create a homely atmosphere. This emphasises the individual character of streets, paths and squares – in harmony with the environment: due to the lower the colour temperature of the lighting, fewer insects and birds are influenced or irritated by it.

Elo Pole top luminaire and Light column with Tritec A

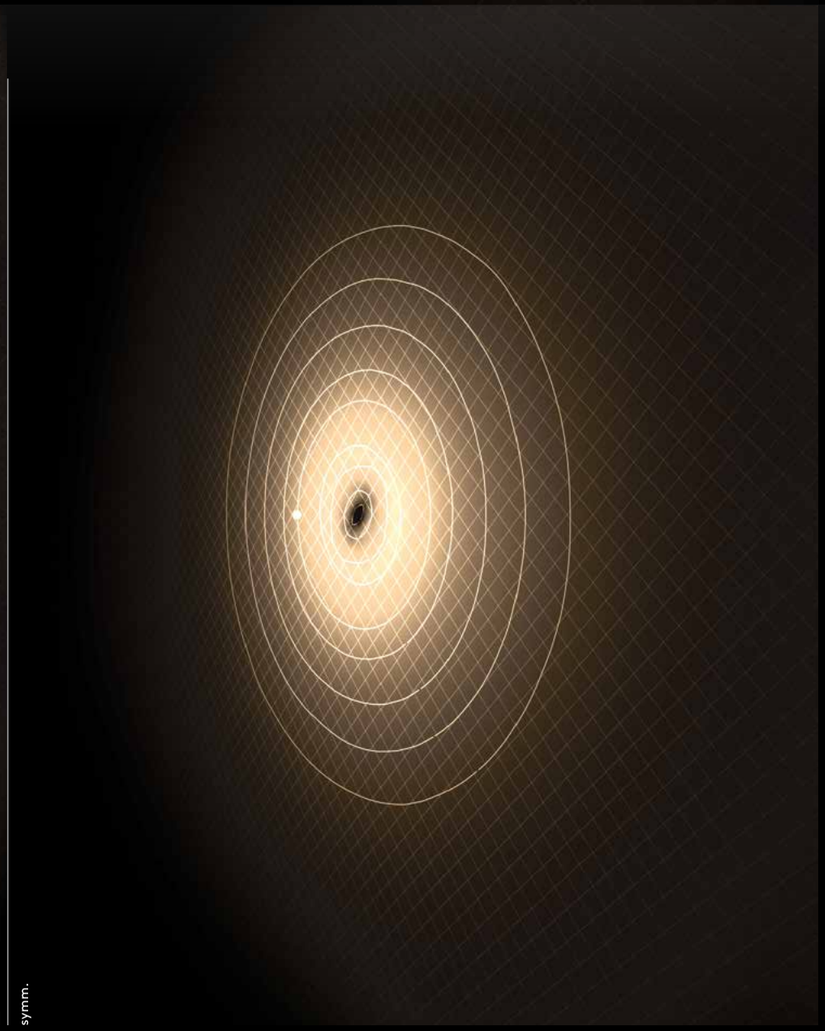
Light output	**max. 5400lm**
Light colour	**2700K, 3000K, 4000K**
Reflector colour	**silver, gold**

Tritec A

asymm. pathway



symm.

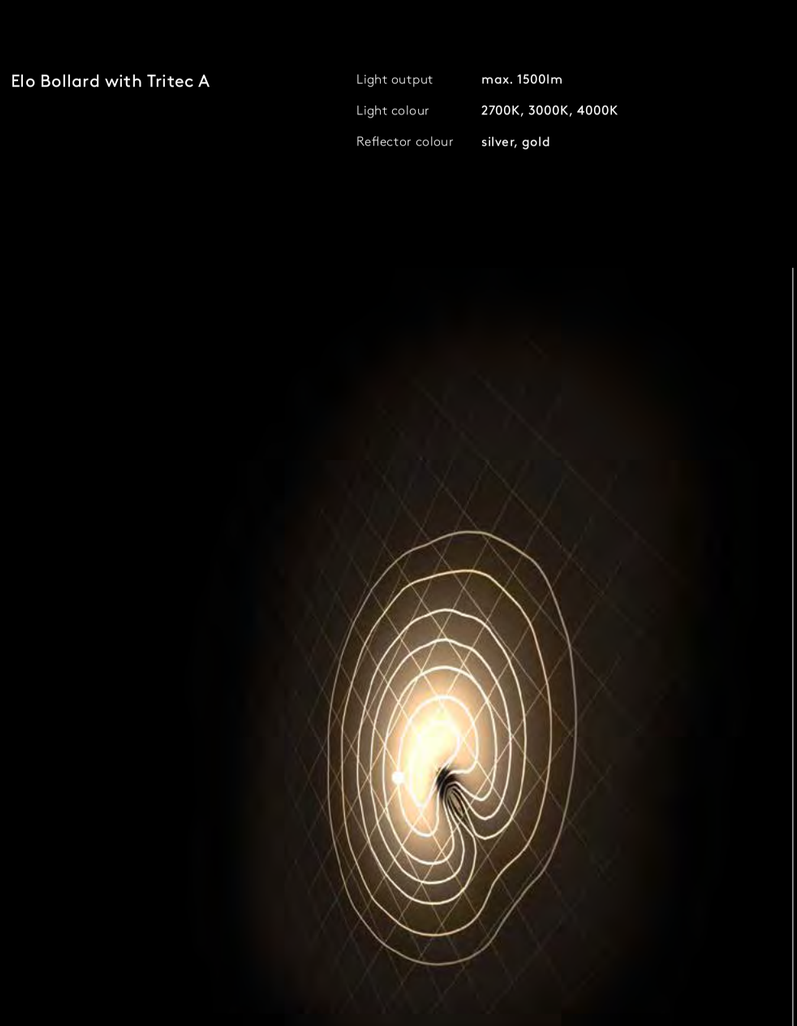


Elo Bollard with Tritec A

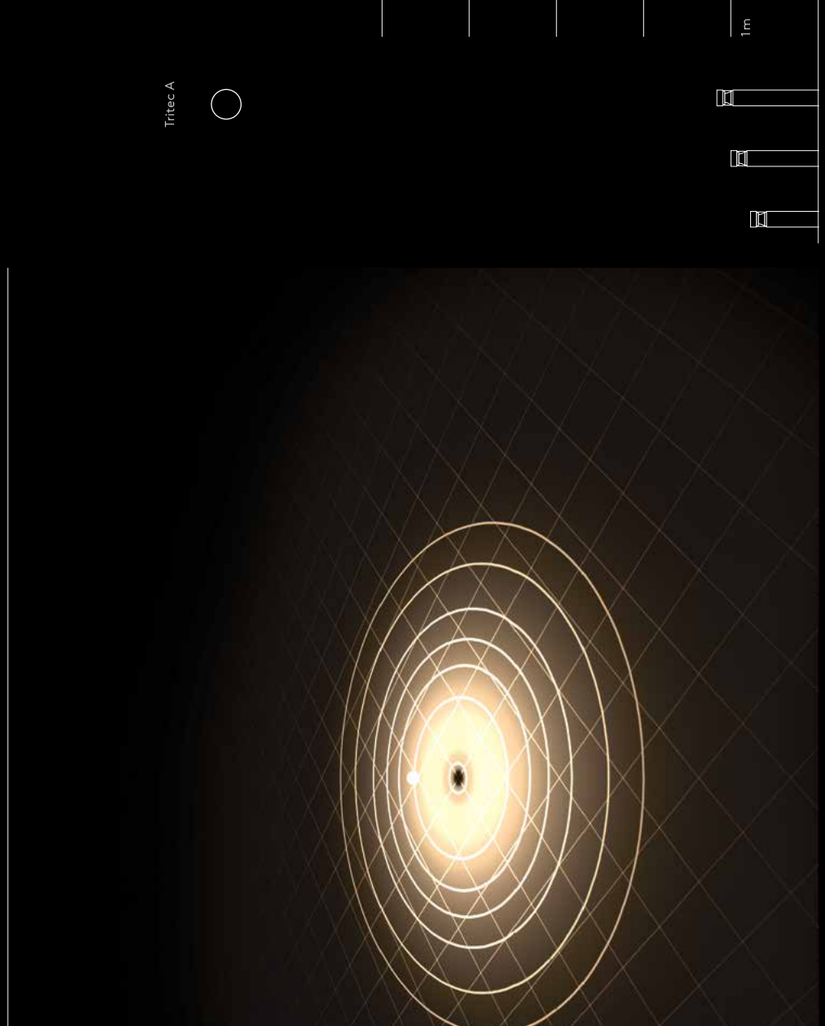
Light output	**max. 1500lm**
Light colour	**2700K, 3000K, 4000K**
Reflector colour	**silver, gold**

Tritec A

asymm. pathway



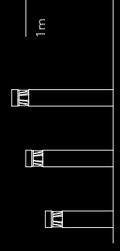
symm.

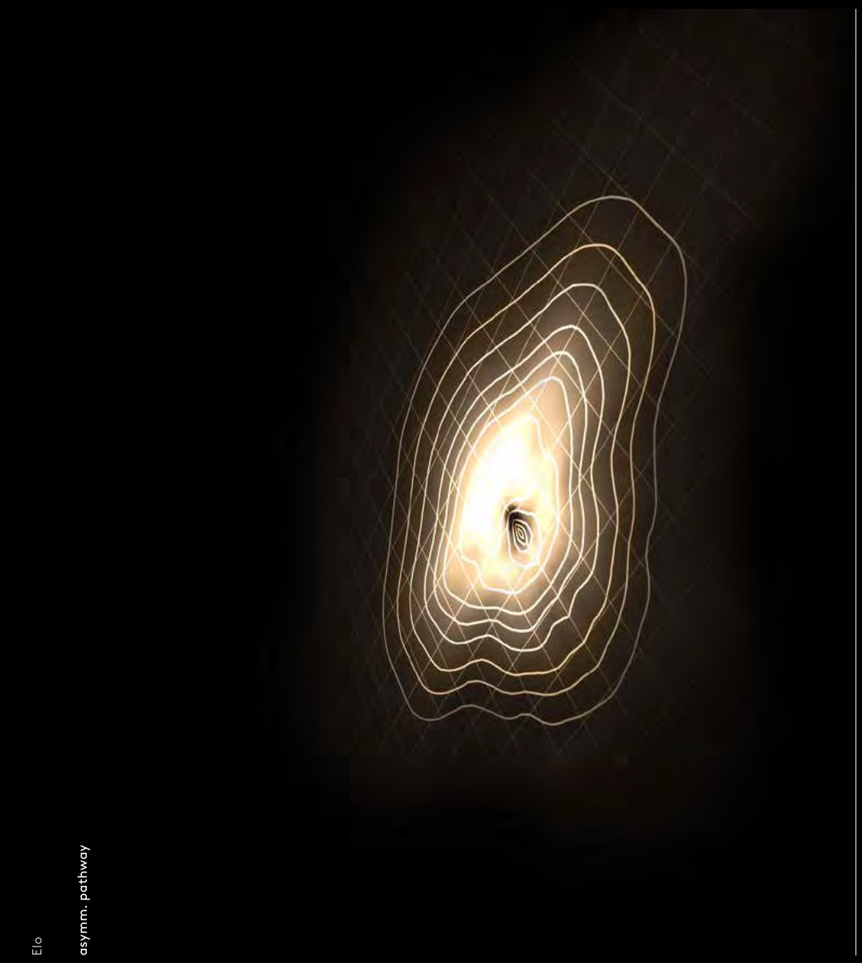


Elo Bollard with Tritec S

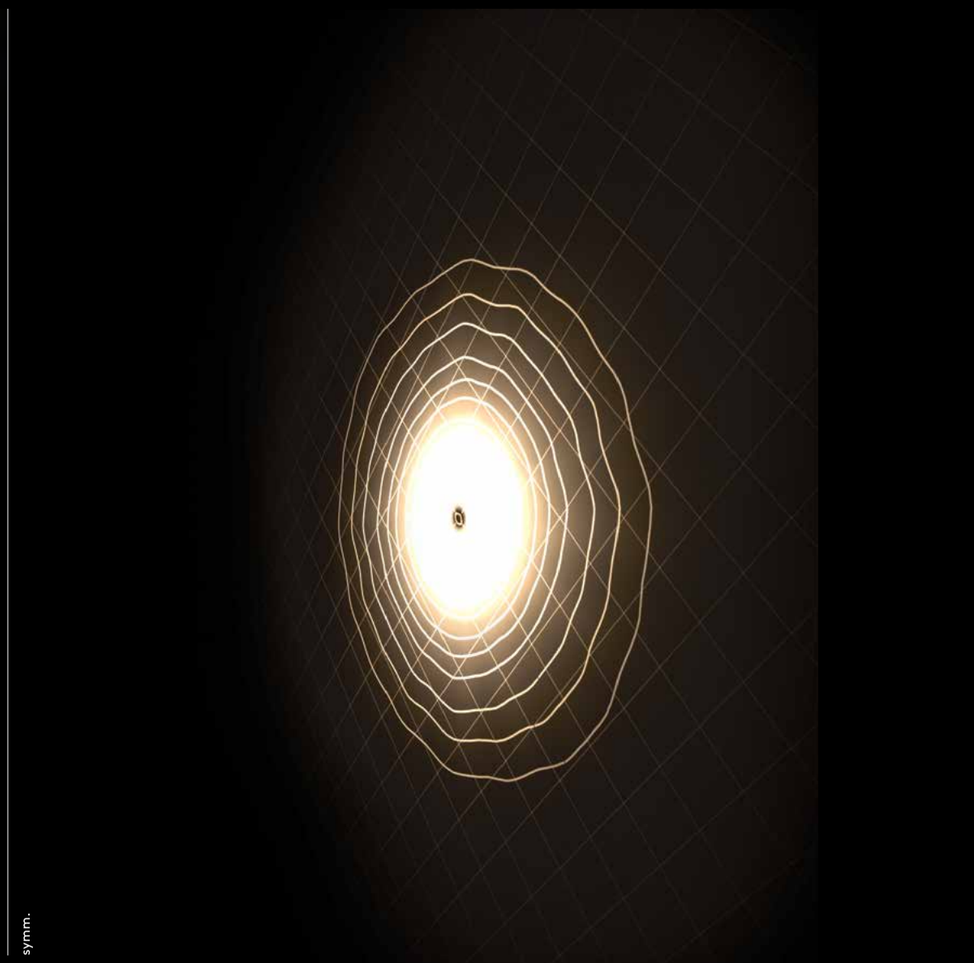
Light output	max. 2400lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold

Tritec S





asymm. pathway

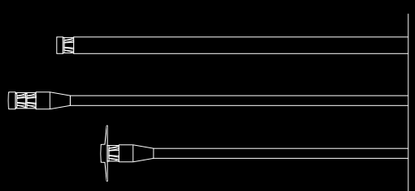


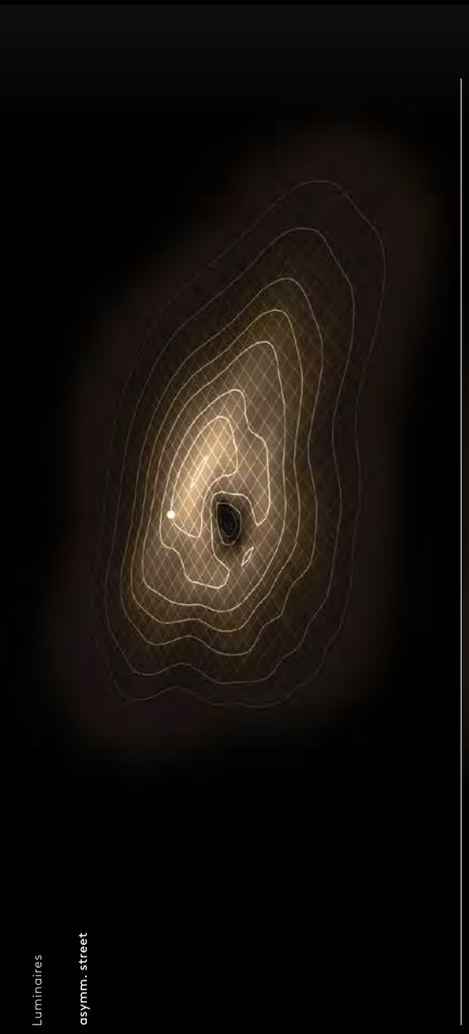
symm.

Elo Pole top luminaire and Light column with Tritec S

Light output	max. 4200lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold

Tritec S





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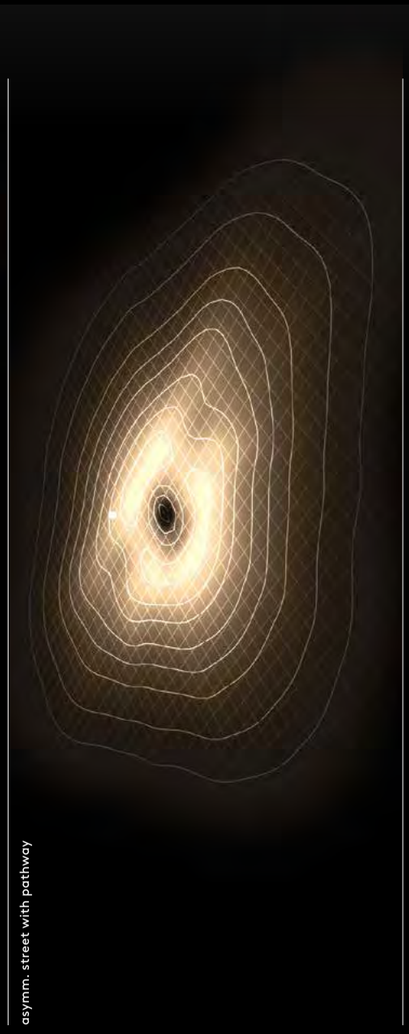
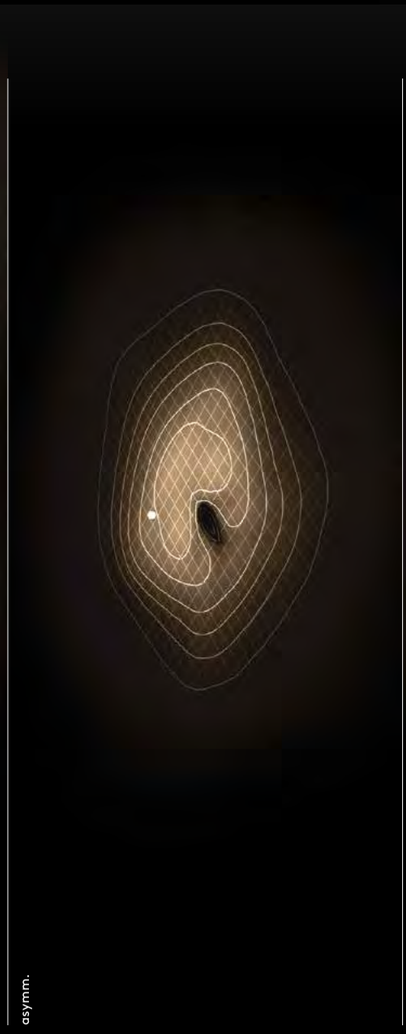


asymm. street with pathway



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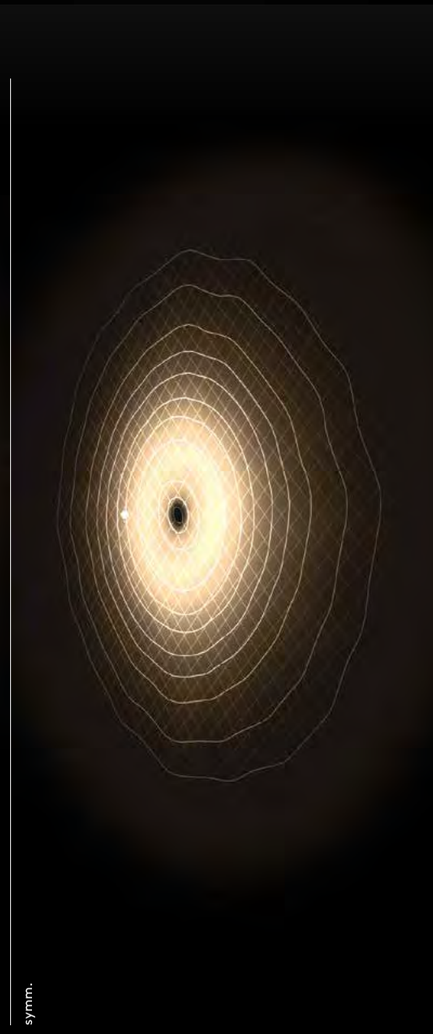
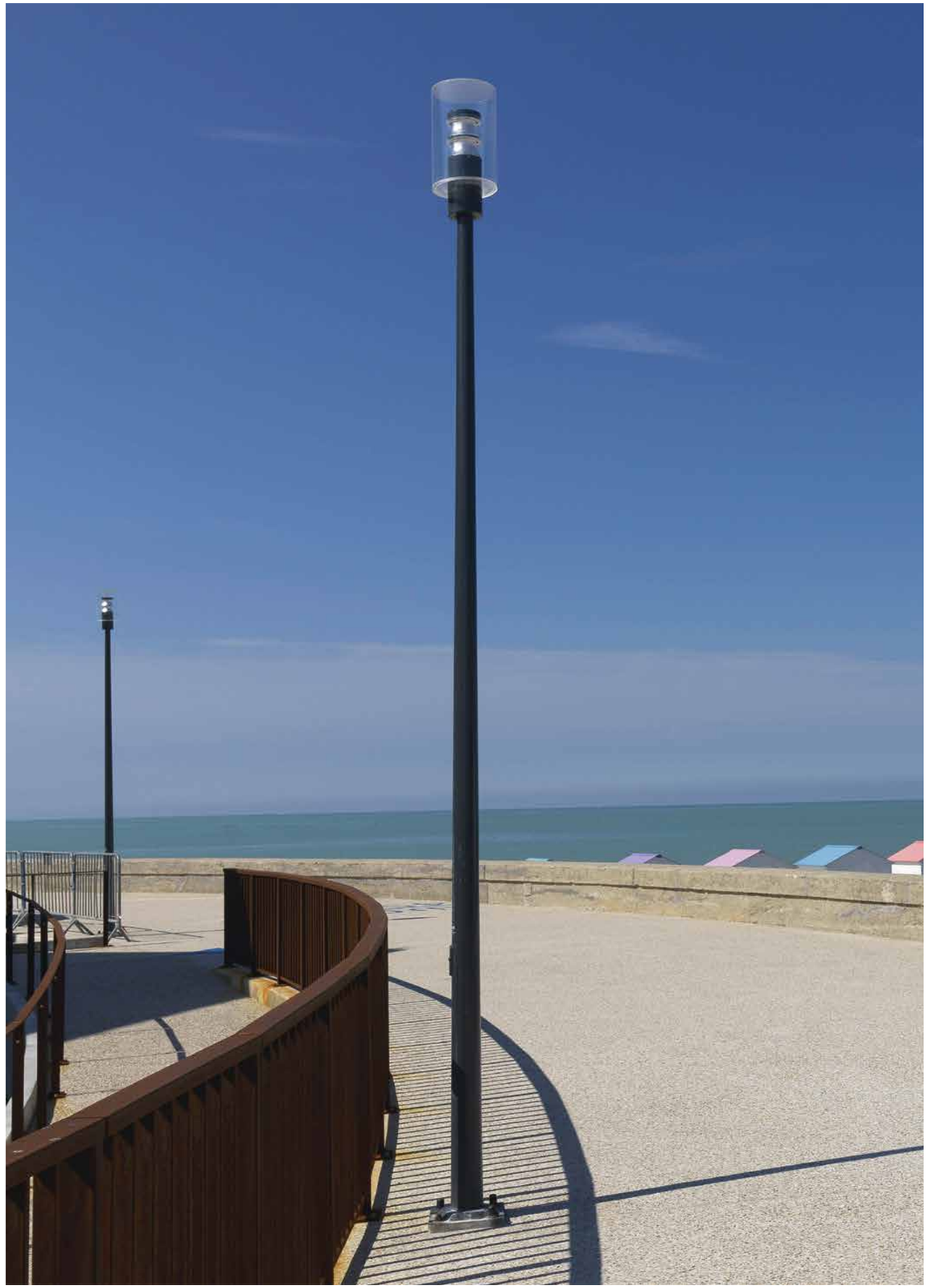


symm.

Dandelion

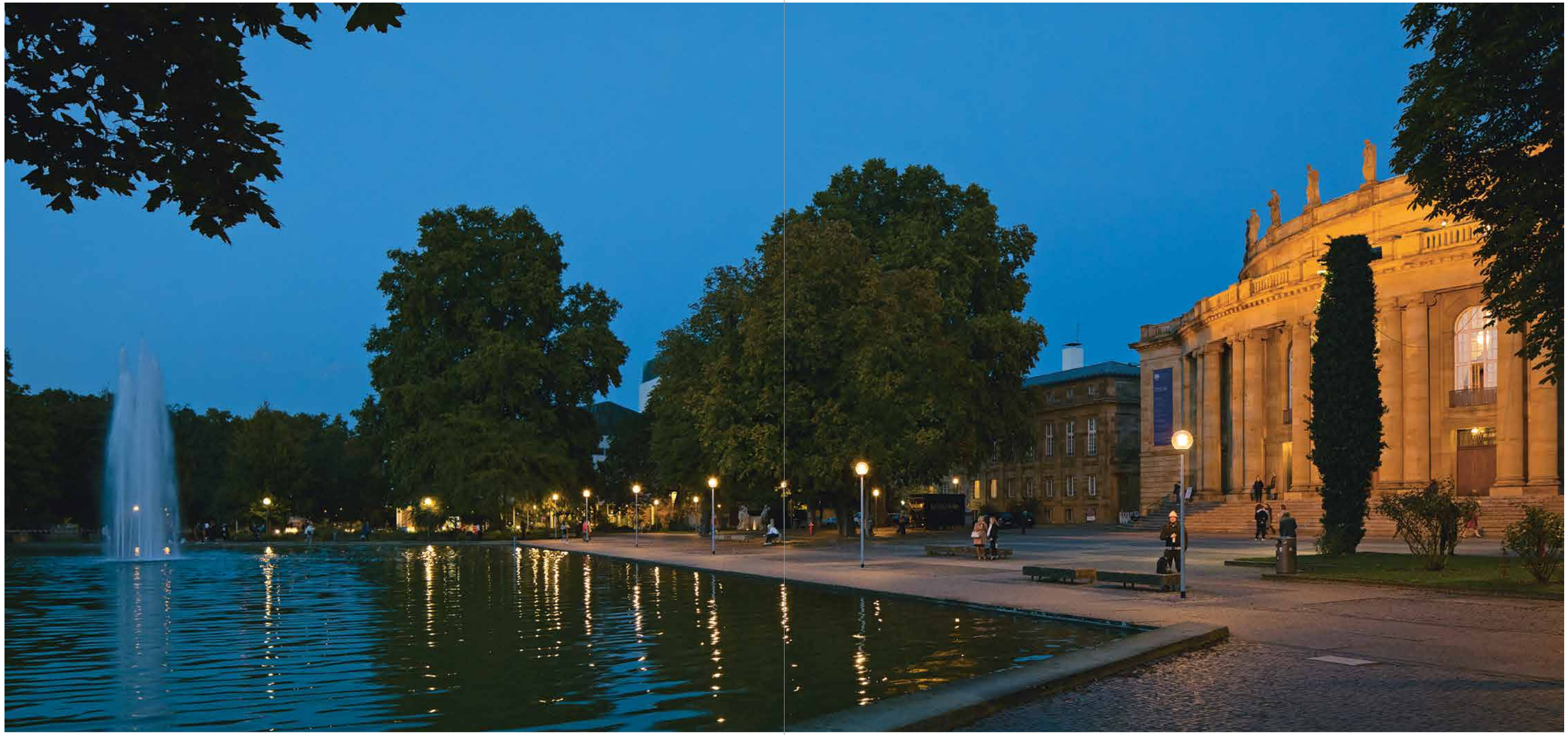
Although the umbrella of each individual dandelion seed is 90 percent open, it functions more effectively than a closed structure. The reason: the open structure creates the finest air turbulence and thus a suction effect that makes the seeds fly even further than has long been thought.

AIRA



The staging of light

It is the atmosphere of individual residential areas, squares and neighbourhoods that define a city's character. These places also have individual lighting needs if they are to promote a sense of well-being and quality of life. The Aira pole-top and pendant luminaires blend perfectly into different and heterogeneous environments while developing a distinctive presence. The heart of the Aira are the Tritec optics, which can be flexibly adjusted to the respective situation and lighting task with one or two modules, different light distributions and light colours. The transparent sleeves give designers further scope to harmonise the design of the luminaires with their surroundings. They are also capable of receiving radio waves, making the Aira ideal for use in Smart City scenarios.



Lightness and transparency

With its transparent, almost intangible-looking housing, the Aira luminaire shows just how harmoniously modern lighting can blend into urban environments creating an iridescent presence.

Shaped bodies for the Aira

Shaped bodies for the Aira create individual design accents. Whether an historical old town or a modern city – with its diversity of shapes, sizes and lighting technology, Aira transforms urban living spaces into individually designed feel-good places.

Atmosphere for urban quality of life

With golden reflectors and warm light, the Tritec optics integrated in the Aira create a homely atmosphere. This emphasises the individual character of streets, paths and squares - in harmony with the environment: due to the lower the colour temperature of the lighting, fewer insects and birds are influenced or irritated by it.

Minimal floating illumination

Aira as a pendant luminaire, catenary suspension or pendant bracket. Here too, the Tritec optics define the look. With one or two modules, various light distributions and light colours, the light technology adapts flexibly to the specific situation and its demands.

As a pendant luminaire, Aira also generates a variable downlight portion, allowing sophisticated lighting tasks to be solved efficiently – on roads or squares, as well as in narrow lanes or under arcades.

Two optics for greater flexibility

Lighting with character

Tritec A – Ambiance

With its high proportion of vertical light and soft transitions, the tried-and-tested Tritec Ambiance optics are particularly suitable for inner-city living spaces. As general lighting, it creates an airy, bright atmosphere due to the brightened façades. The brilliant effects of the Tritec Ambiance optics also provide a timeless splendour in inner cities, for historic lanes or busy squares.

Extra precision

Tritec S – Sky

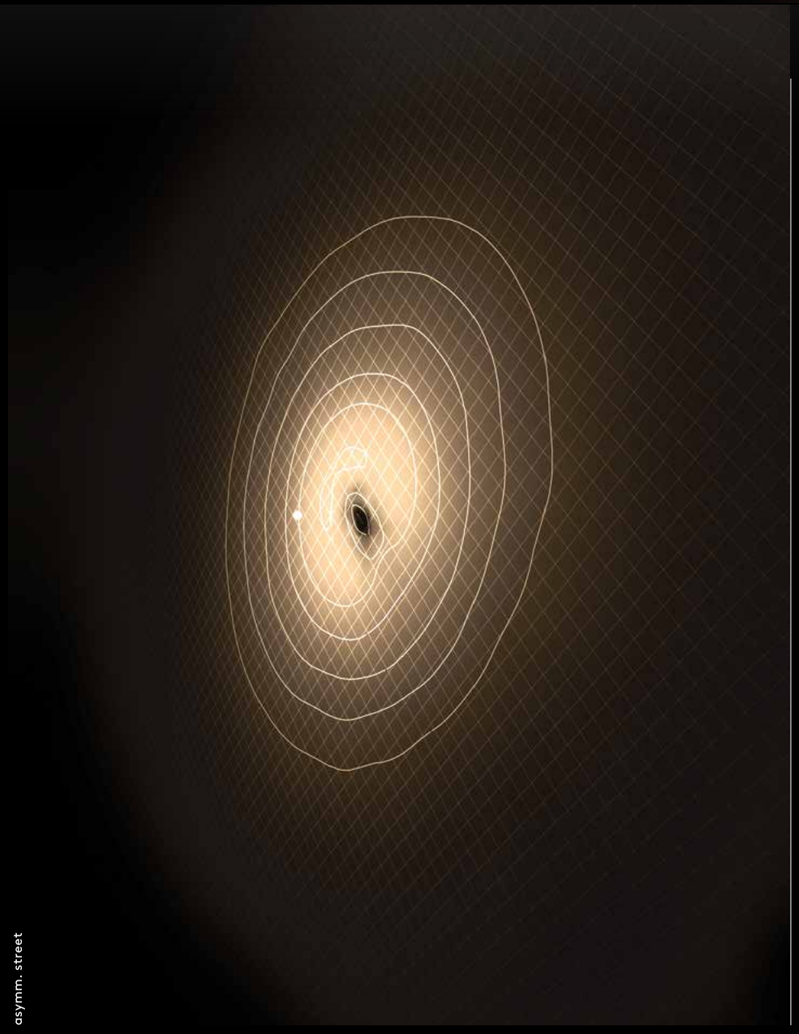
Lighting with Tritec Sky makes every urban space sensual and distinctive. The optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impairing the beauty of the environment, stars or night sky.

Smart City

As if created for the Smart City
The transparent diffuser lets in radio signals, allowing smart functions to be invisibly integrated in the Tritec module, for example via a Zhaga interface.

Aira Pole top luminaire with Tritec A

Light output	max. 5400lm
Light colour	2700K, 3000K 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface



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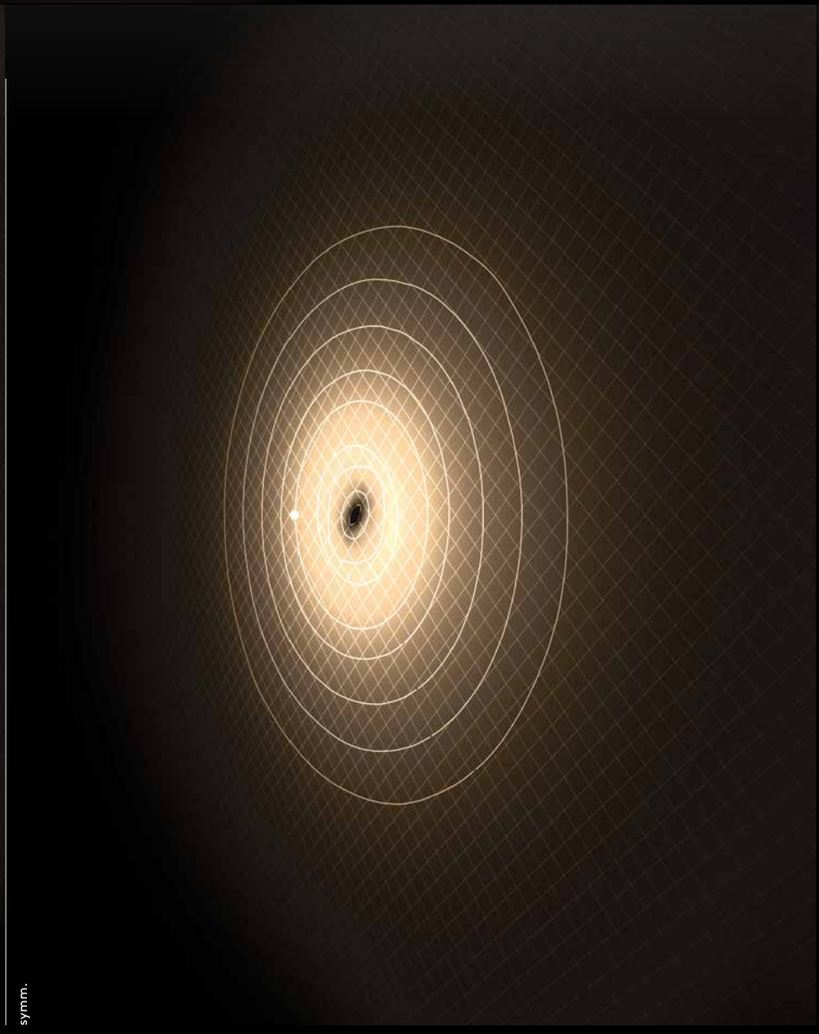

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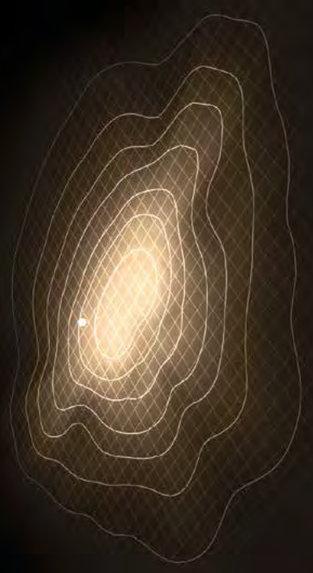
Aira Pole top luminaire with Tritec A

Light output	max. 5400lm
Light colour	2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface



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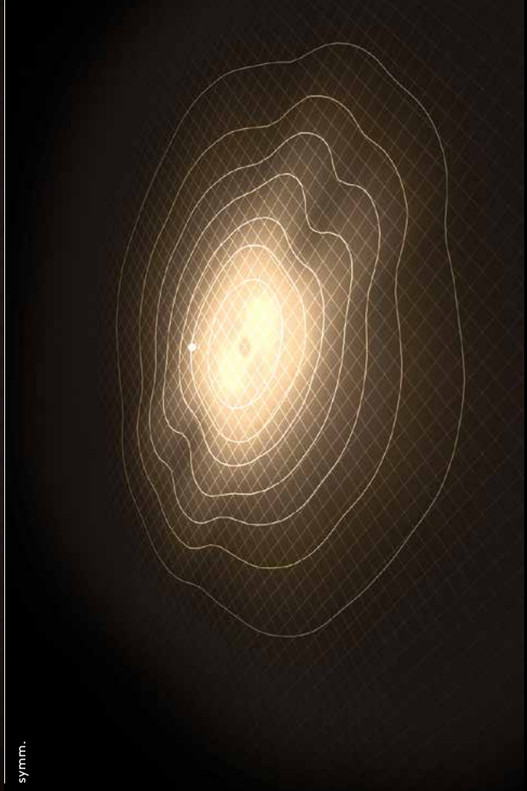

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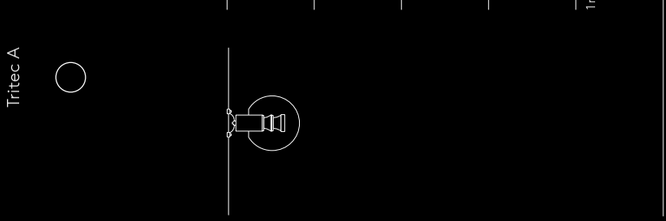
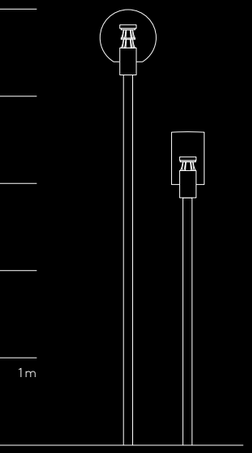


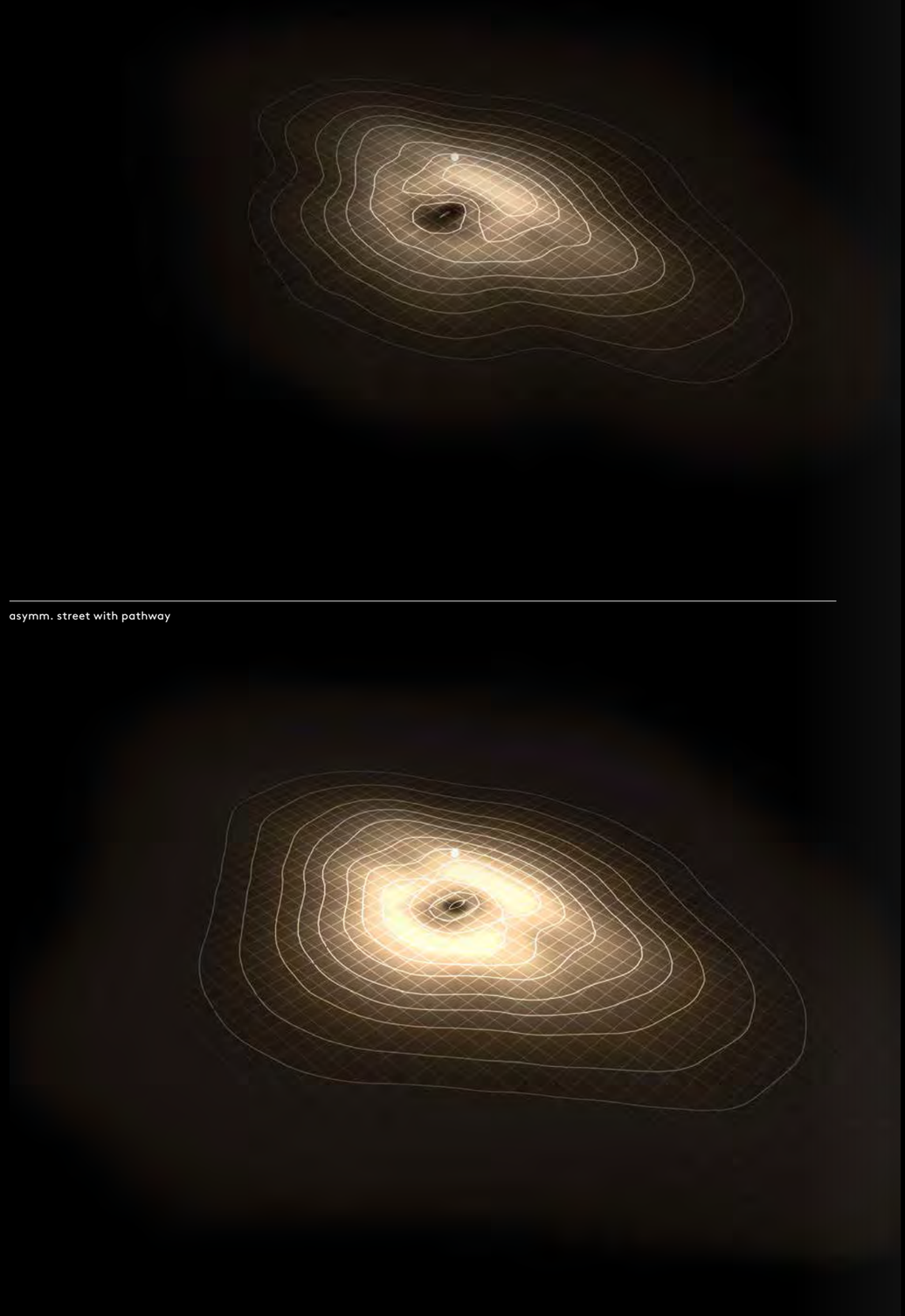
Aira Catenary luminaire with Tritec A

Light output max. 4500lm
Light colour 2200K, 2700K, 3000K, 4000K
Reflector colour silver, gold
Smart City optional Zhaga interface

Tritec S



asymm. street



asymm. street with pathway

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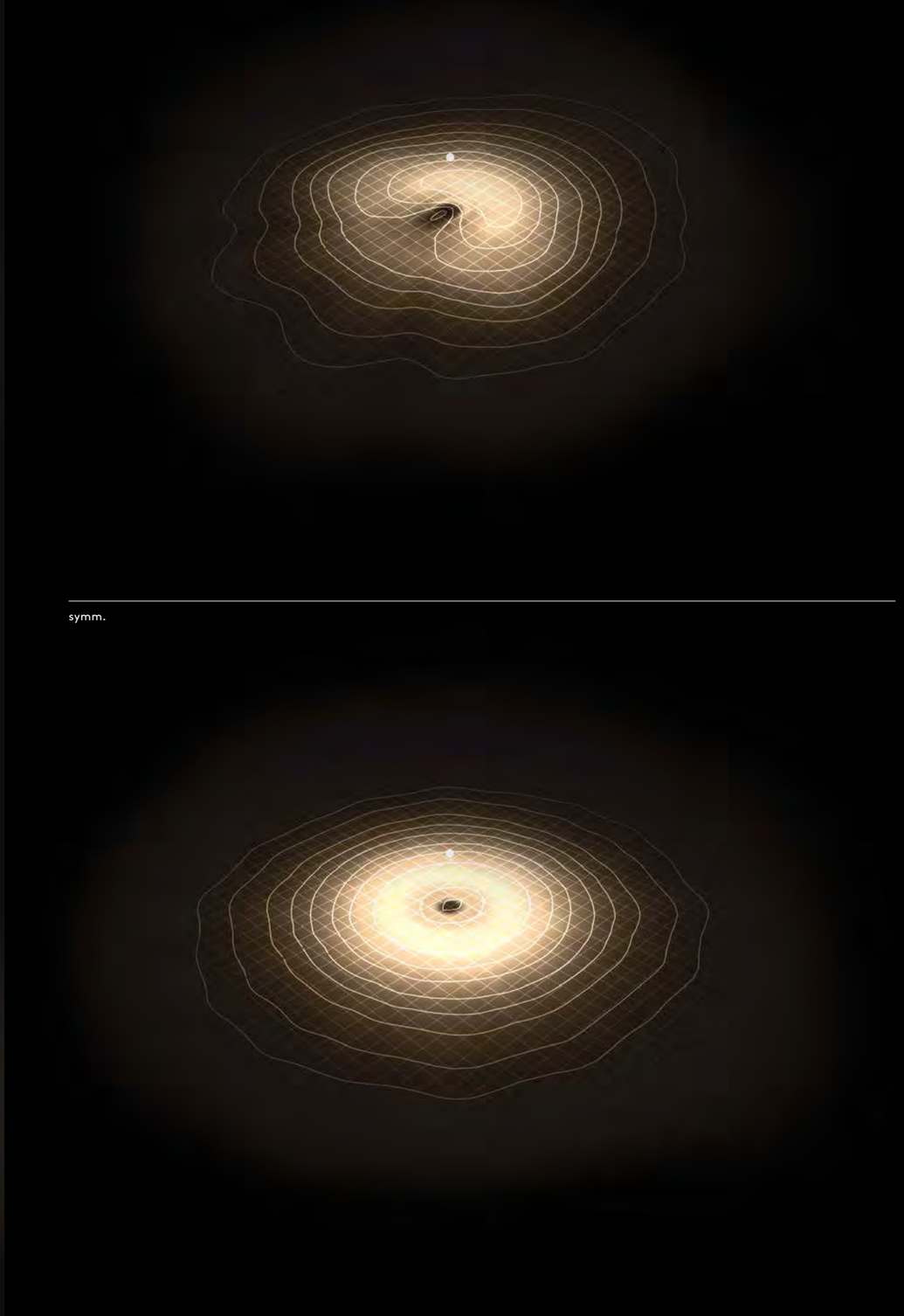

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Wasp nest

Wasps build their nests from weathered wood, using their saliva secretions to process it into a paper-like composite material. The hexagonal shape of the individual cells ensures a perfect balance of space utilisation, and lends the nest a high degree of stability combined with low weight

MI STE LLA

State of the art lighting technology, iconic shape

A flat, disc-shaped luminaire housing held up by two slim, V-shaped arms: Mistella is a fresh and innovative interpretation of an iconic pole-top luminaire shape. Its clear proportions and fluid transitions illustrate the attention to detail of the Selux designers. With its elegant appearance, Mistella is ideal for lighting roads and footpaths, as well as for low traffic zones, public spaces, parks, or other green spaces, and blends harmoniously into a variety of architectural contexts. In addition to efficiency and precision, Mistella Gen5 lighting technology also offers excellent visual comfort. Disruptive scattered light dispersed upwards or onto neighbouring buildings is reliably prevented. The Mistella is of course also Smart City-ready – meaning it is already designed for integration into intelligent lighting scenarios thanks to the right control devices and interfaces.

Night Sky

Thanks to the high-precision optics, Mistella generates no disruptive light scatter and consequently protects the night sky from light pollution.

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.

Design and Performance

The Gen5 LED light technology is a development by Selux that allows maximum diversity of light distributions and thus offers excellent visual comfort. The patented technology uses silicon lenses to direct light.

Mistella
Pole top luminaire

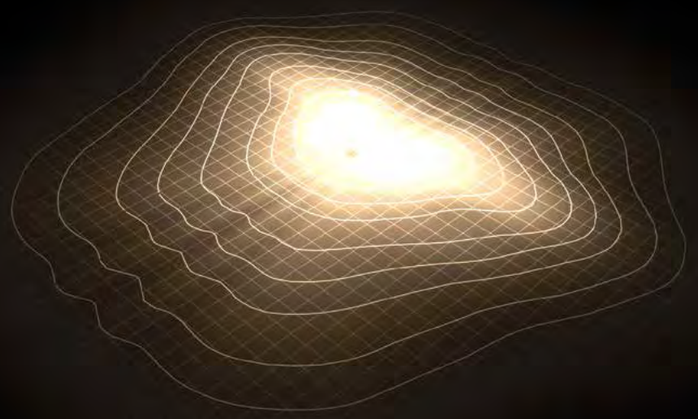
Light output max. 6000lm

Light colour 2700K, 3000K, 4000K

Smart City optional Zhaga interface

Luminaires

asymm. street



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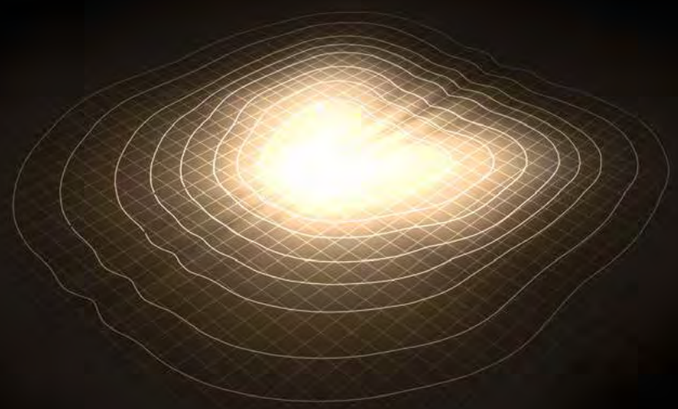

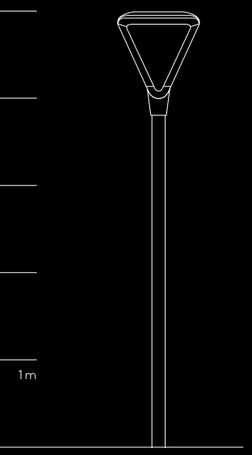

Mistella

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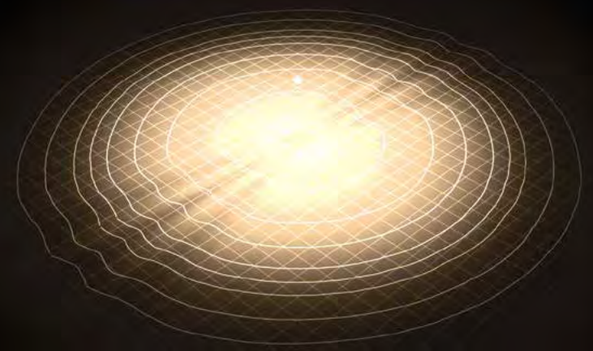


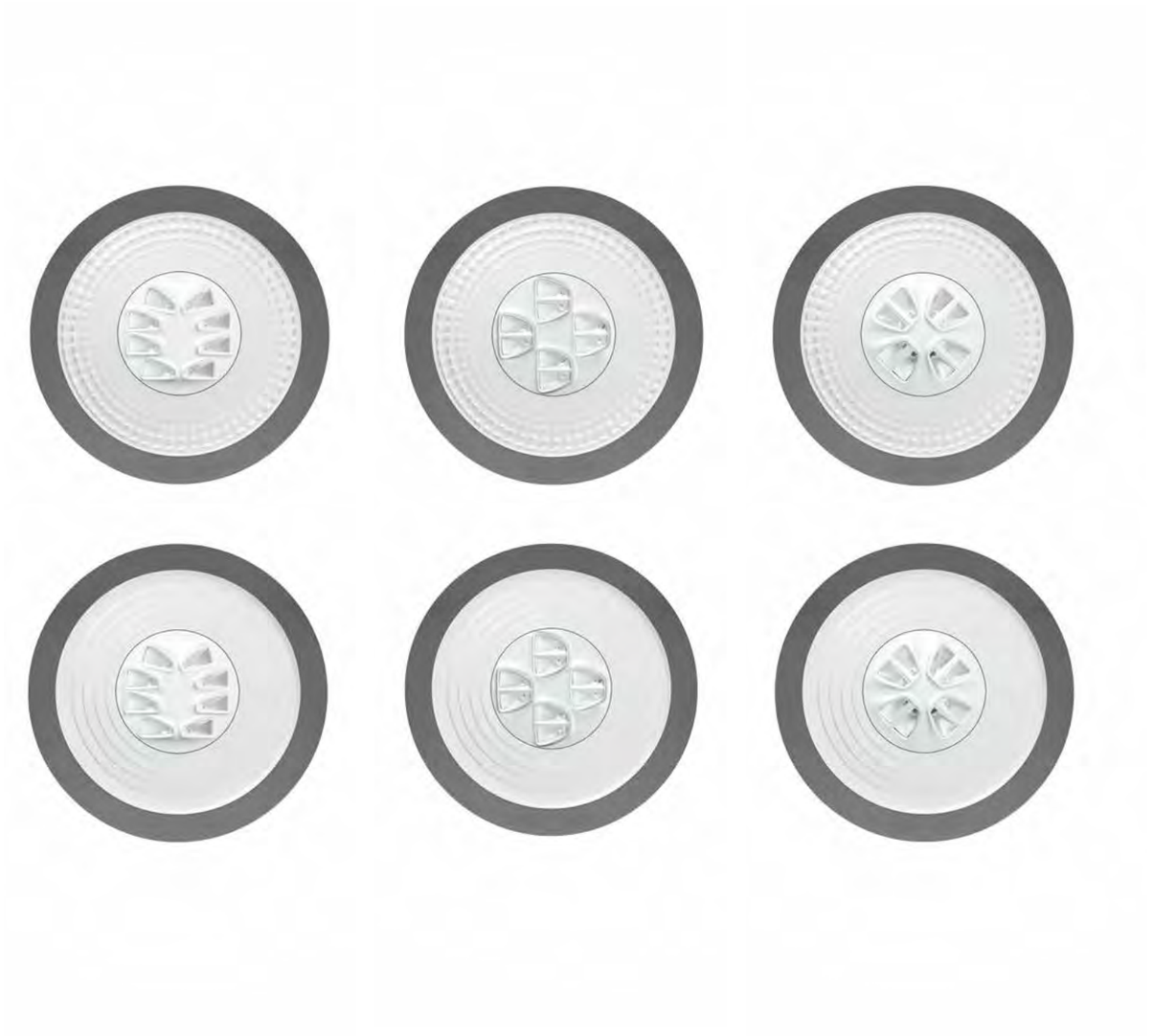
Veiled poisonpie

Fungi form their own kingdom among living things, and play a crucial role in all ecosystems. In woodlands in particular, they build a network of wafer-thin threads of mycelia that that stretch for kilometres. They thus connect other forms of life with each other and enable complex communication and transactional structures, for example between trees.

ASTRO

Experience the fascination of light

Versatility and functionality in its finest form. Like a modern encased gemstone, the Astro's internal reflectors combine efficient technology and a high level of visual comfort with a unique lighting effect. With its timeless appearance and numerous configuration options, the lighting technology and form of the Astro provide a groundbreaking solution for the many requirements of urban spaces. By day it accentuates urban design while at night it creates a magical atmosphere. The Astro is Smart-City-ready, meaning that it has been configured for integration into smart lighting scenarios with the requisite controllers and interfaces.



Unique light effect thanks to two coronas

Astro's light engine is framed by an anodised aluminium form, the corona, which lends the luminaire an extraordinary effect. There are two coronas to choose from: the ring corona gives a concentric light effect while the pillow corona generates a trapezoid structure.

Additional light effects available as an attractive option

The Astro can be equipped with an LED ring around its central light unit for ambient lighting. This gives an additional and highly attractive accentuation and can provide extra orientation for cityscapes: for example by indicating the presence of a socket for electro mobility. The LED ring can be selected in white (3000K) or blue.

Light as an urban impression

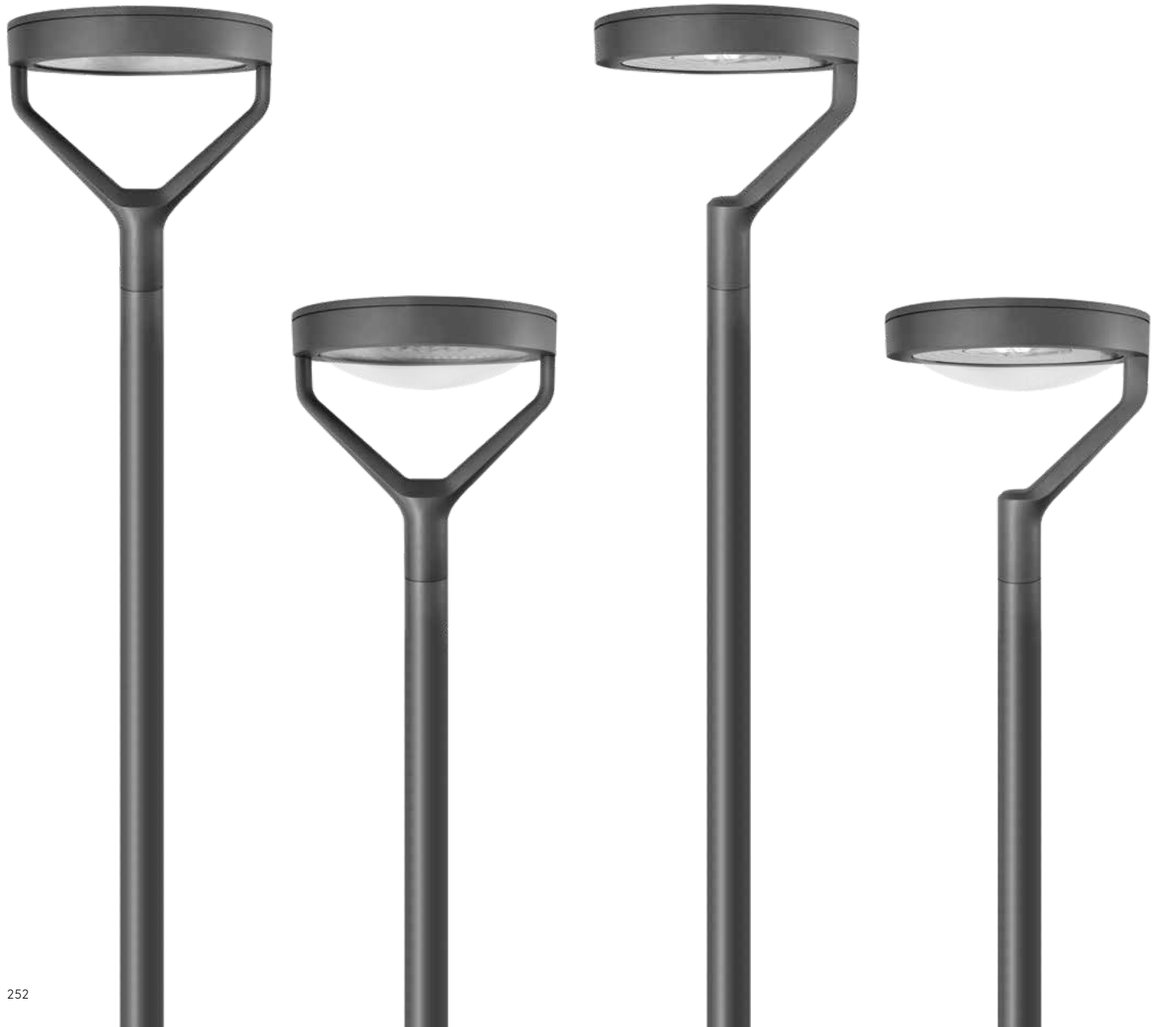
Astro's modular construction means that it can be equipped with various pole connections, light engines and covers coordinated to your specific lighting requirements.

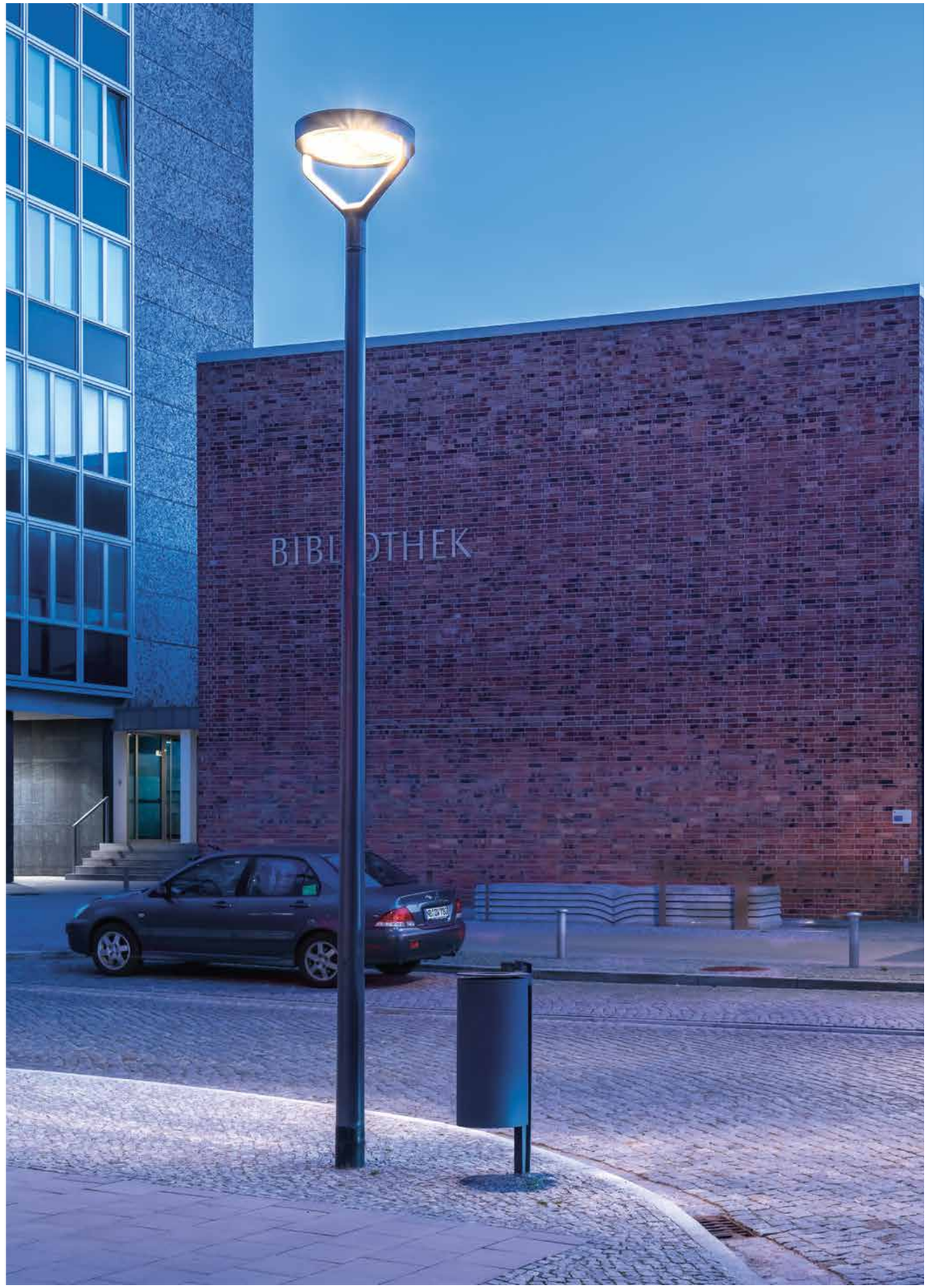
Night Sky

Thanks to the high-precision optics, Astro generates no disruptive light scatter and consequently protects the night sky from light pollution.

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.





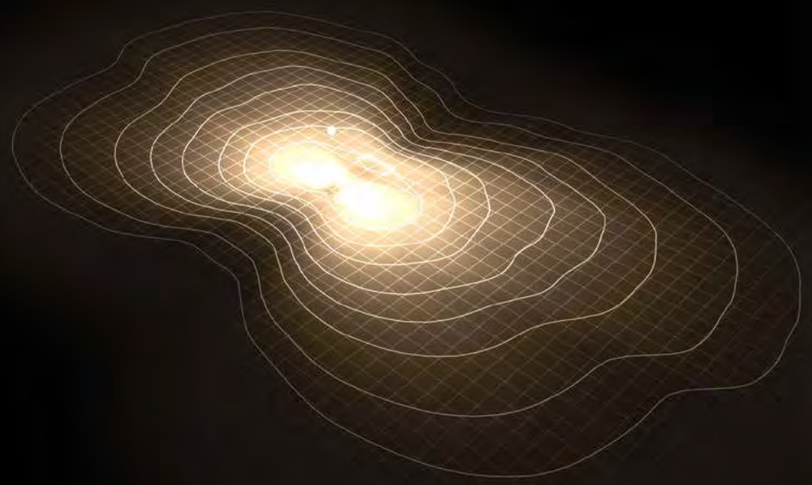
Astro
Pole top luminaire

Light output max. 4500lm

Light colour 2700K, 3000K, 4000K

Smart City optional Zhaga interface

asymm. street



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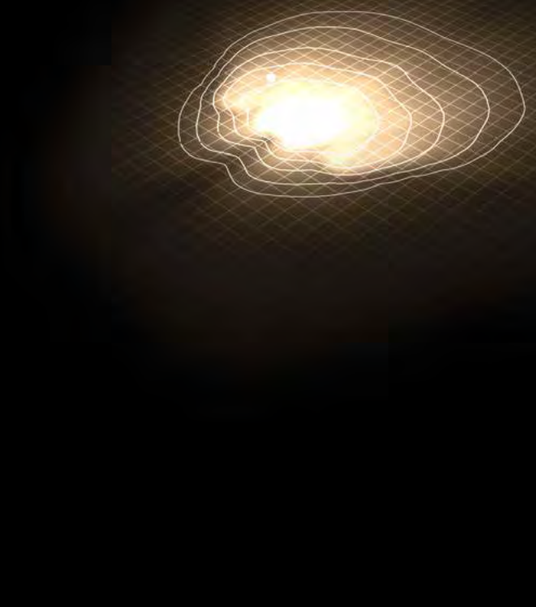

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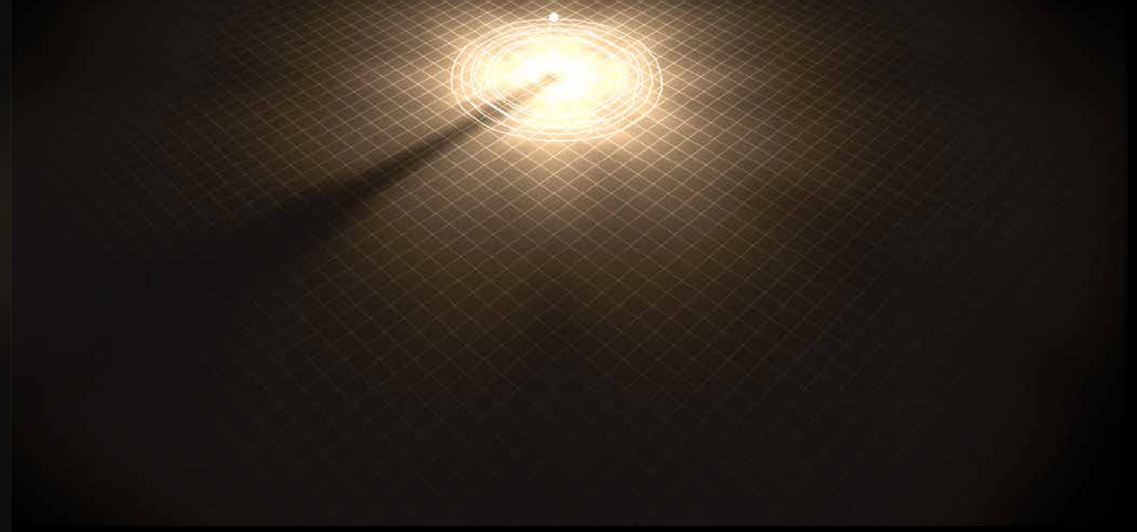
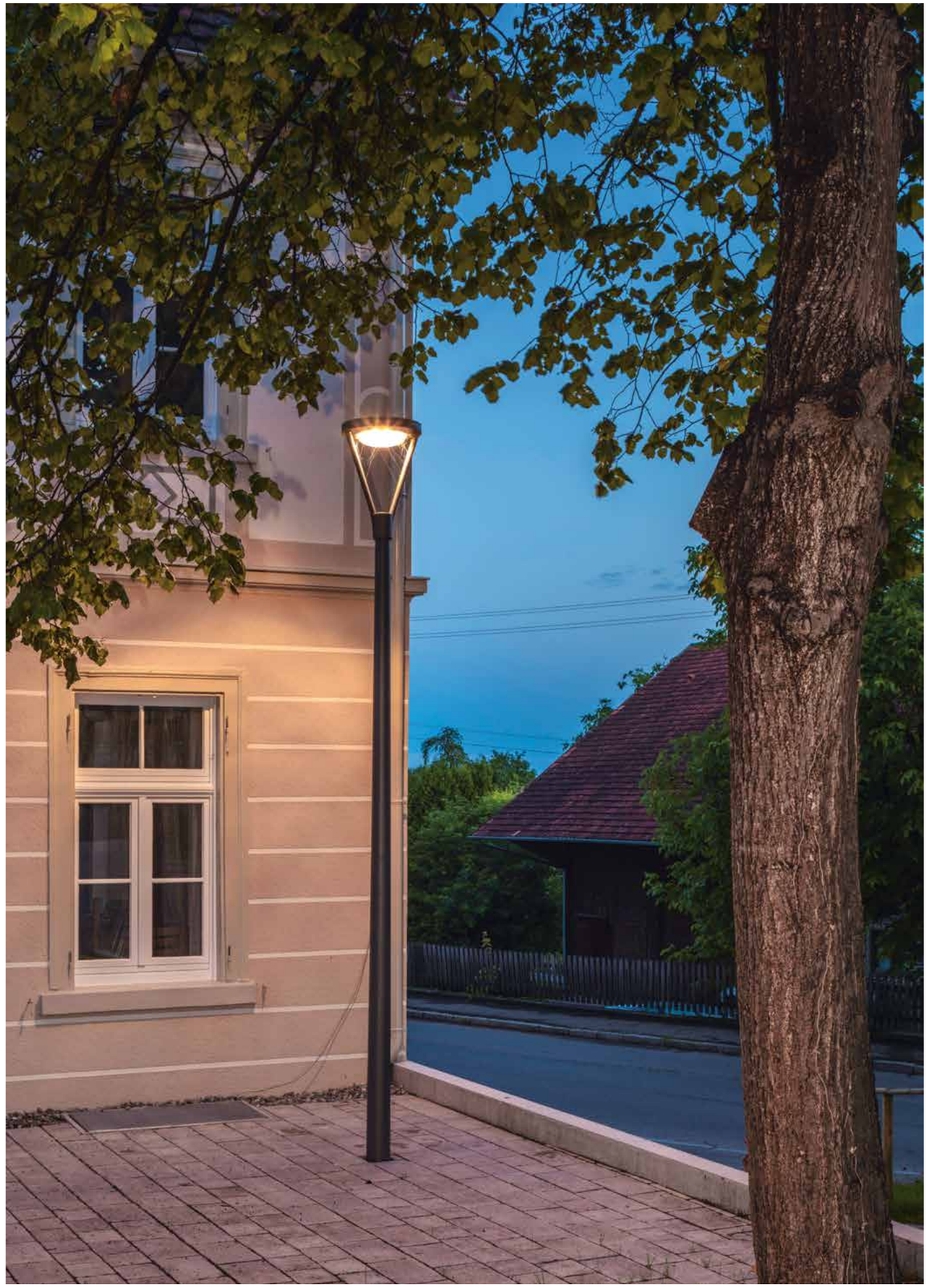
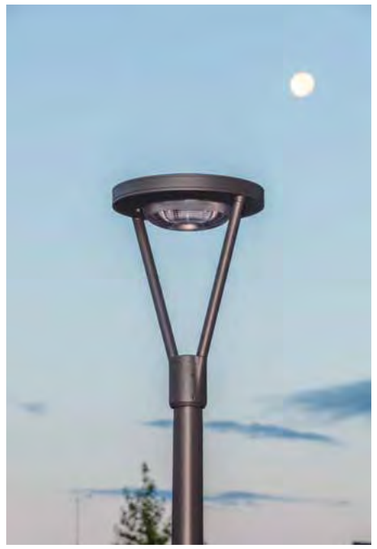


Millipede

The symbolic name is not quite right, although some species of millipede do have up to 380 pairs of legs. The body consists of rings of calcium carbonate with a dark shiny surface. To protect itself, the millipede can curl its body into a circular shape in a split second.

TRIGO





Good lighting can be so simple

Minimalist shape and distinctive substance – with the Trigo, less is quite simply more. The geometrical shape of this luminaire defines its distinctive character and timeless design. The Trigo is incredibly straightforward and can be integrated easily into urban environments. At the heart of the luminaire are our proprietary, premium quality Selux lenses, ensuring harmonious and efficient lighting at all times. Trigo is suitable for a wide range of applications: for 360-degree symmetrical illumination, low-level lighting of squares or linear asymmetrical street lighting. Whether used for residential streets, pedestrian zones or parks, the Trigo is a price-conscious solution that, both functionally and visually, can be integrated into all urban settings.

State-of-the-art lighting technology

The optical unit is a specially developed, self-contained integral system comprising LED, reflector and installation unit. The Trigo is a highly efficient luminaire with an impressive range of variations in light distribution and excellent anti-glare properties, resulting in a high level of visual comfort.

Night Sky

Thanks to the high-precision optics, Trigo generates no disruptive light scatter and consequently protects the night sky from light pollution.

Comfort optics

Time and again, lighting solutions are required that go beyond standard-compliant lighting, e.g. in residential areas where there is a pronounced need for maximum visual comfort. In residential areas, for instance, maximum visual comfort may be required. In such cases, all three light directions are also available in a Comfort version: a special prismatic diffuser with zonal divisions on the material surface which distribute the illumination across the light emitting surface, resulting in a soft and homogeneous effect.

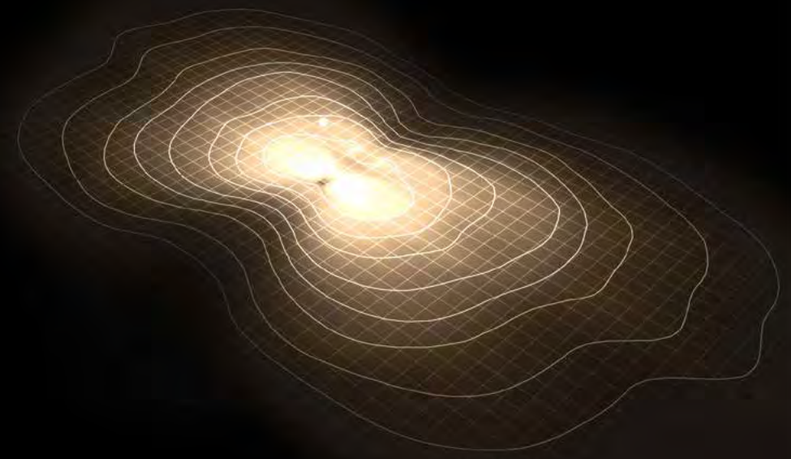
Trigo
Pole top luminaire

Light output max. 4500lm

Light colour 2700K, 3000K, 4000K

Luminaires

asymm. street



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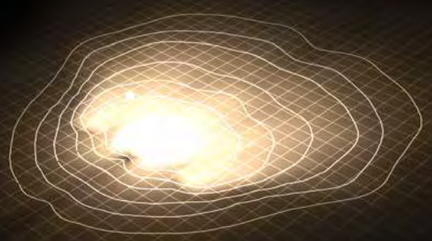
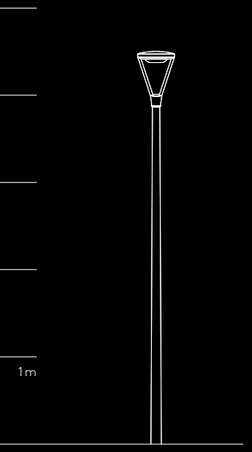
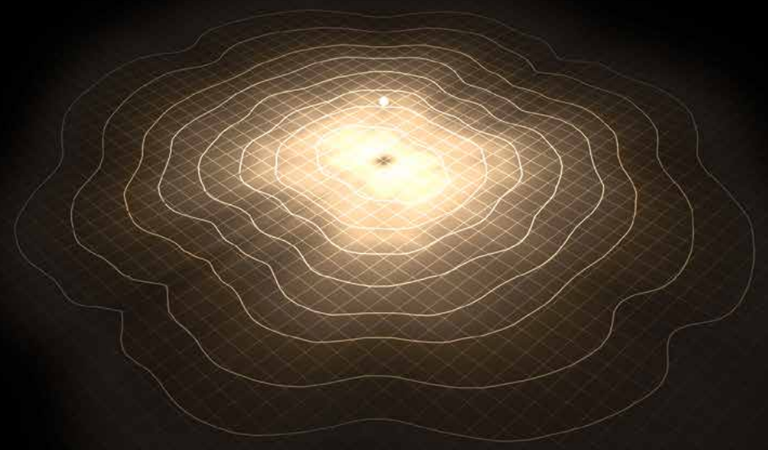




Trigo

symm.



Praying mantis

The praying mantis appears graceful yet strong at
the same time. It can turn its triangular head,
with compound eyes, in all directions for better detection.
The mantis, which is under special protection in Europe,
loves the warmth of the sun.

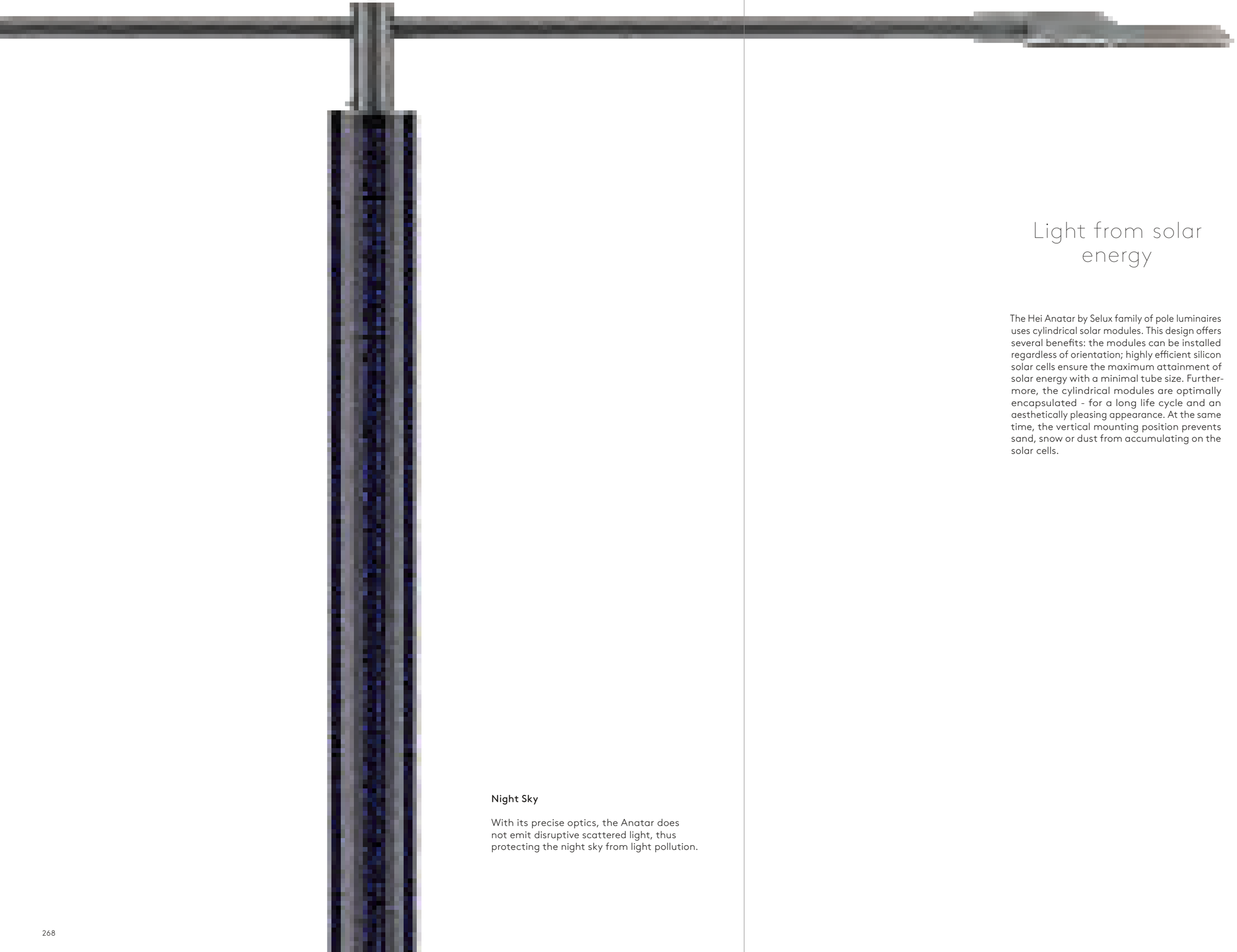
SOLAR

ANA TAR

Off-the-grid and sustainable illumination

Off-the-grid and sustainable illumination for urban spaces, available when required but can take a back seat whenever not necessary. Solar luminaires that generate energy themselves in an environmentally friendly manner and provide light independent of the availability of electricity networks allow for this new way of thinking. Selux Solar luminaires by Hei have a modular structure and are manufactured according to customer requirements for each individual project. Selux Solar luminaires by Hei work entirely autonomously as off-grid solutions: There are no electricity or connection costs, installation is quick and without any disruption to the surroundings. Hybrid solutions that combine battery operation and network connection are also possible. Integrated sensors and smart controllers not only optimise luminous flux and limit energy consumption, but together with efficient optics, they ensure light pollution is by and large reduced. The self-contained luminaires can be interconnected via communication modules and integrated into smart interfaces and applications.

hei by Selux

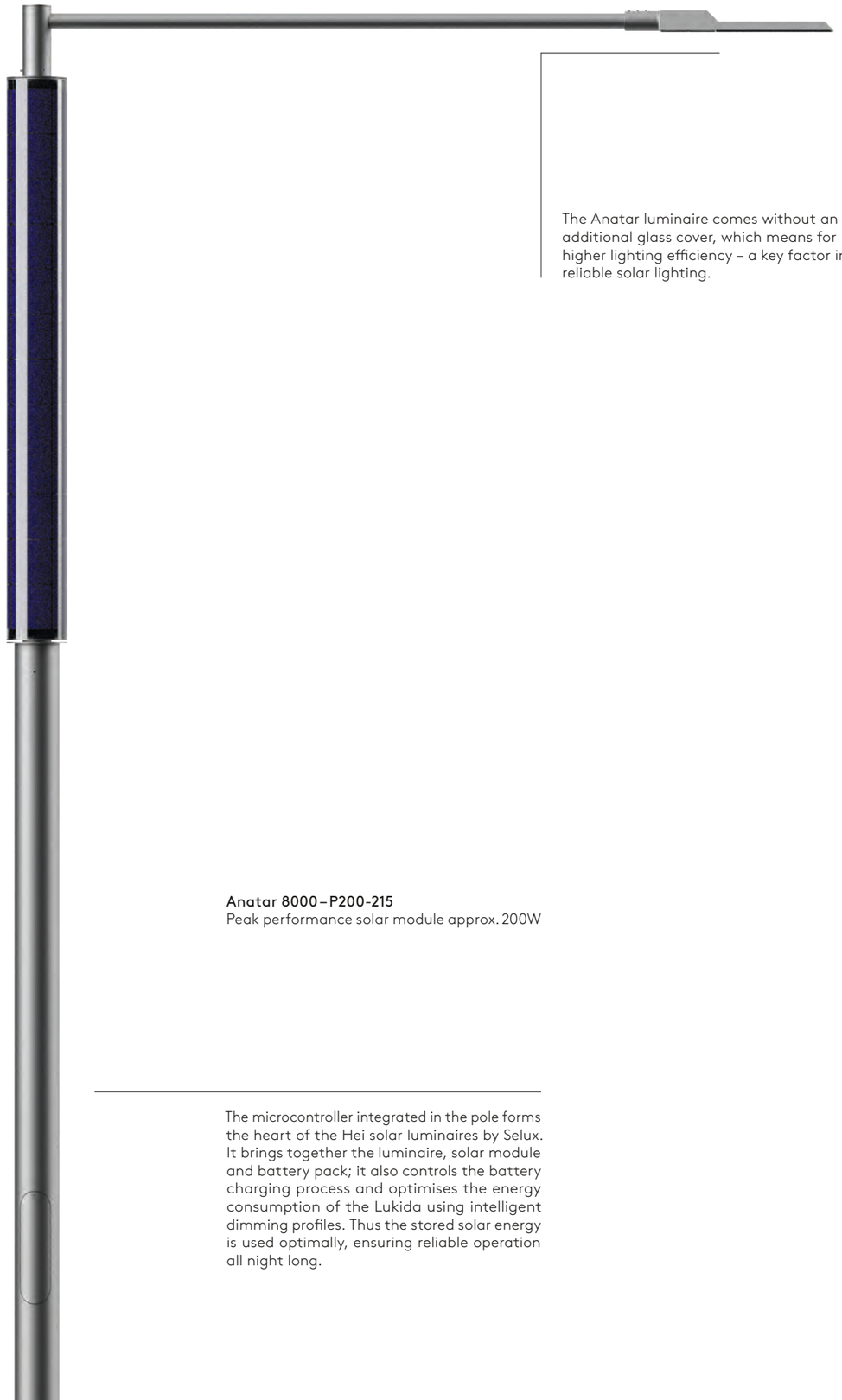


Night Sky

With its precise optics, the Anatar does not emit disruptive scattered light, thus protecting the night sky from light pollution.

Light from solar energy

The Hei Anatar by Selux family of pole luminaires uses cylindrical solar modules. This design offers several benefits: the modules can be installed regardless of orientation; highly efficient silicon solar cells ensure the maximum attainment of solar energy with a minimal tube size. Furthermore, the cylindrical modules are optimally encapsulated - for a long life cycle and an aesthetically pleasing appearance. At the same time, the vertical mounting position prevents sand, snow or dust from accumulating on the solar cells.



The Anatar luminaire comes without an additional glass cover, which means for higher lighting efficiency – a key factor in reliable solar lighting.

Anatar 8000 – P200-215
Peak performance solar module approx. 200W

The microcontroller integrated in the pole forms the heart of the Hei solar luminaires by Selux. It brings together the luminaire, solar module and battery pack; it also controls the battery charging process and optimises the energy consumption of the Lukida using intelligent dimming profiles. Thus the stored solar energy is used optimally, ensuring reliable operation all night long.

Anatar 4000 – P200-215
Peak performance solar module approx. 200W
Ø 215mm

Anatar 4000 – P100-160
Peak performance solar module approx. 100W
Ø 160mm

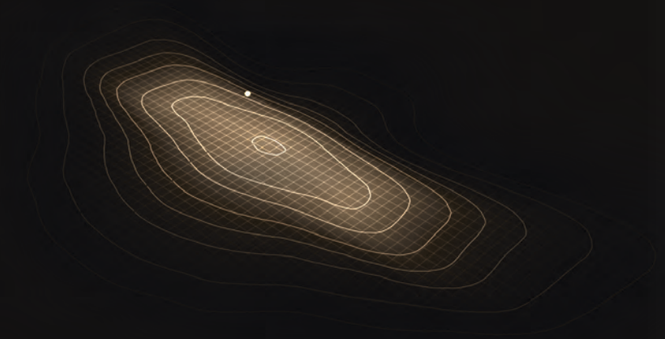
The Hei Anatar by Selux family of solar luminaires consists of various versions of self-sufficient and maintenance-free solar light poles that cover diverse applications in the technical exterior lighting of paths or side streets, for example. The Anatar product toolkit comprises single and double arm poles combined with the Anatar luminaire optics with their impressive efficiency and light distribution: the right choice for environmentally-friendly street lighting, minimal energy requirements and maximum cost savings.

Solar Anatar
Pole luminaire

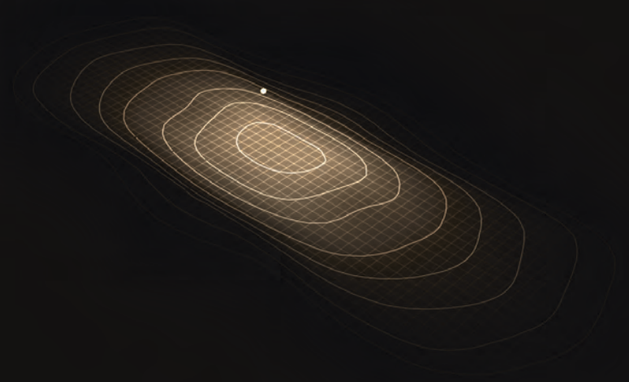
Light output max. 7400lm
Light colour 2700K, 3000K, 4000K

Luminaires

asymm. street with pathway

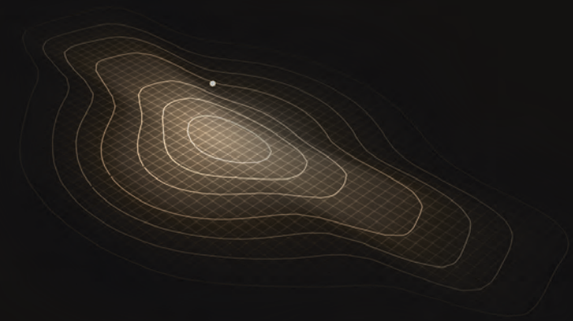


asymm. street



Anatar

asymm. street wide with pathway



Darkling beetle

This beetle measures around two centimetres, and has a glossy black or even white chitin shell. Found in the sandy desert of Namibia, the beetle's strikingly long back legs mean it is excellent at digging, which enables it to protect itself from enemies or the hot sun.

YLOO

Yloo – Elegant, efficient and all-round functional

The circular shape of its luminaire head is the characteristic design feature of Yloo. This makes it a welcome alternative among pole and pendant luminaires for urban spaces. Its precise lighting technology allows for situation-appropriate light distributions and light colours which correspond to the high Selux standard, as does the timeless quality of design details, materials and surfaces. What makes the Yloo particularly attractive is its wide range of designs and mounting options. These make it possible to illuminate urban spaces in all their different forms with a single system: The variants range from post-top luminaires for residential streets, paths or squares to post-top, post-mounted pendant and catenary luminaires for wide streets and large areas. With this system, Yloo supports lighting concepts that strengthen the identity of urban living spaces with an individual, recognisable appearance. The clear, smooth-surfaced design also brings calm to the visual environment. The optics of Yloo direct the light exactly where it is needed, thus protecting the night sky and nature. Zhaga modules integrated on the maintenance-free housing ensure that Smart City applications can be perfectly paired into the luminaires, ex works or retrofitted.

The series for a harmonious look

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.

Night Sky

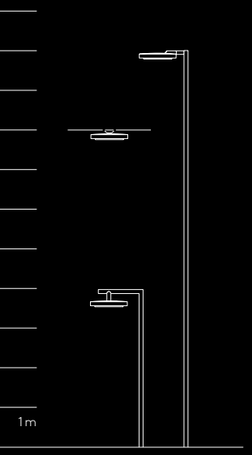
Thanks to the high-precision optics, Yloo generates no disruptive light scatter and consequently protects the night sky from light pollution.

Yloo Lateral, pole pendant and catenary luminaire

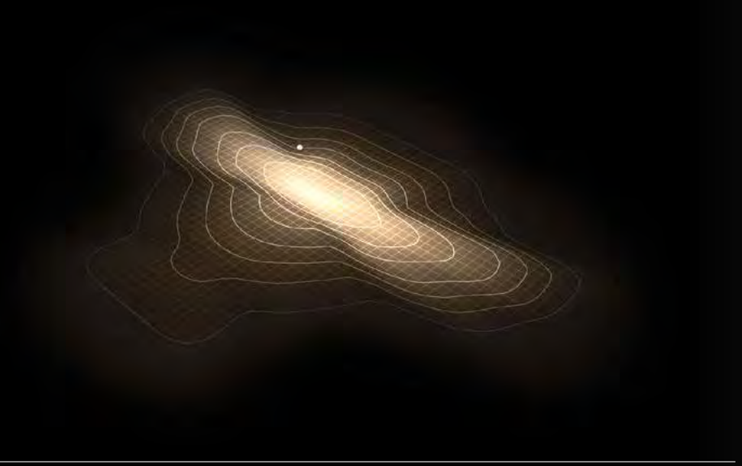
Light output: max. 8000lm

Light colour: 2200K, 2700K, 3000K, 4000K

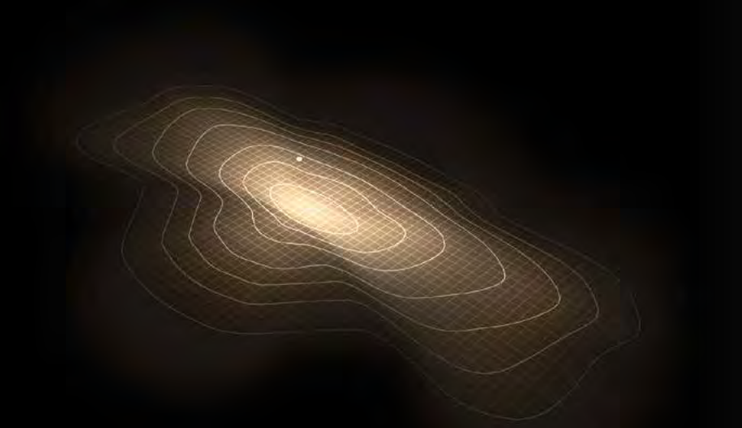
Smart City: optional Zhaga interface



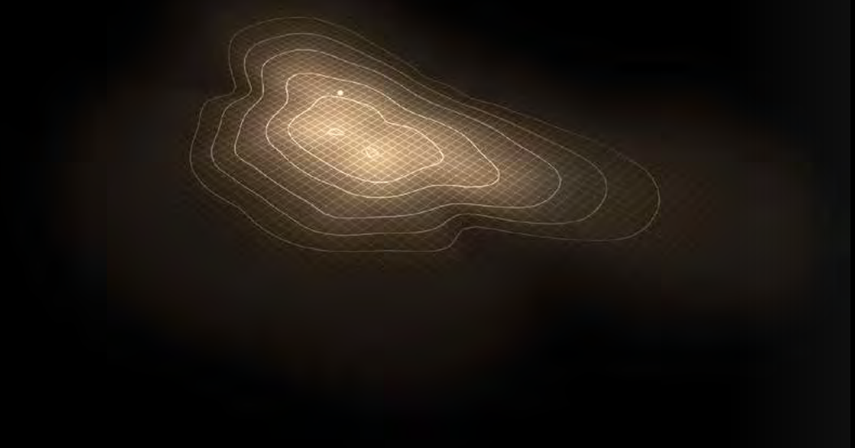
asymm. street narrow – R0



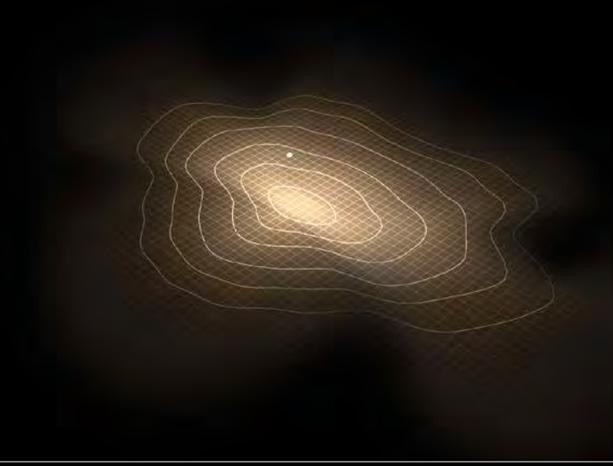
asymm. street standard – R1



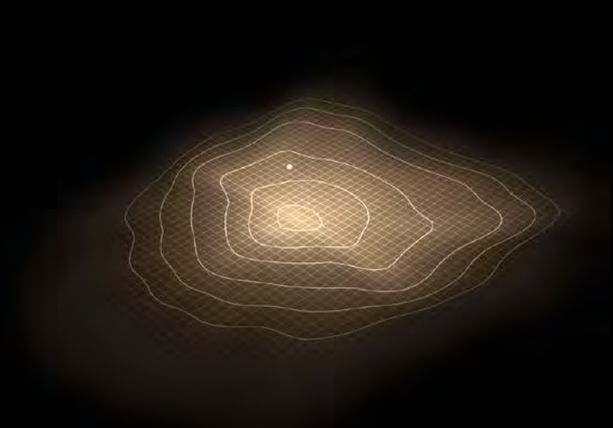
asymm. street wide – R2



asymm. street wide – R3



asymm. street flood – AS2

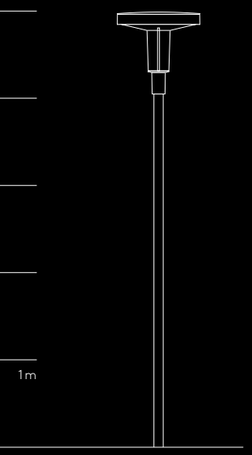


Yloo
Pole top luminaire

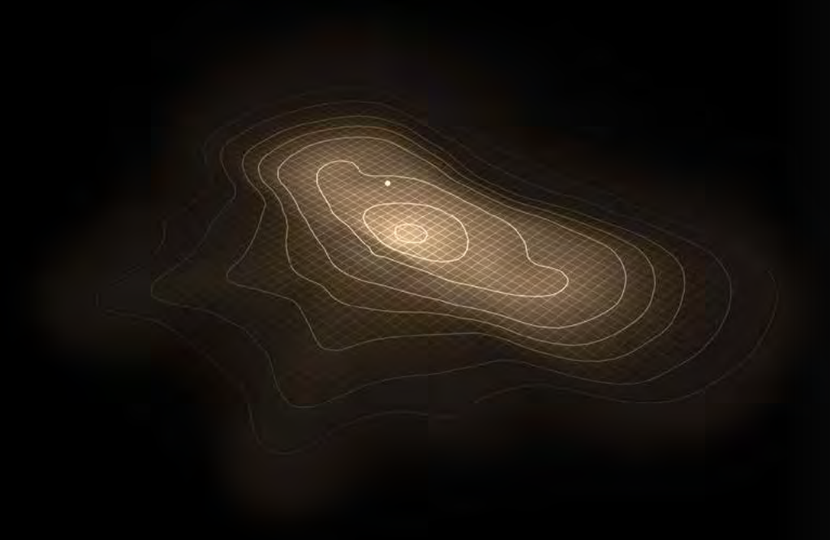
Light output max. 6000lm

Light colour 2200K, 2700K, 3000K, 4000K

Smart City optional Zhaga interface

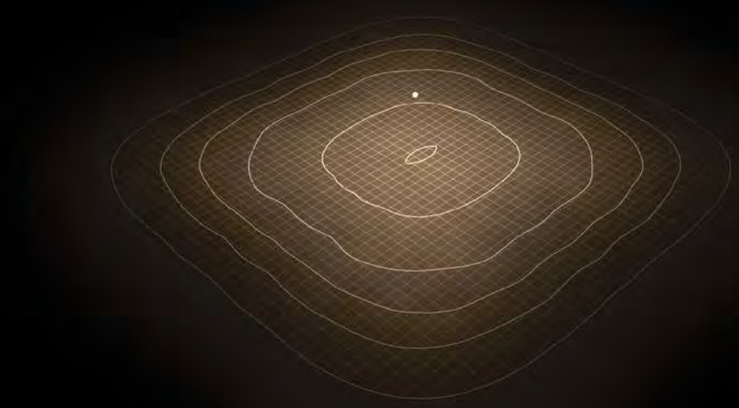


asymm. street standard – R1

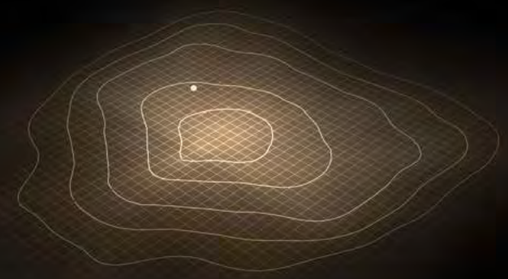


asymm. street narrow – R0

symm.



asymm.



Paris Peacock

This luminous brush-footed butterfly has an exceptionally striking wing colour due to its special surface structure of highly-ordered microscopically small scales. Unlike conventional colours, the butterfly's blue is not the result of light reflection by pigments, but the result from the refraction and scattering of light due to the special nanostructure.

AVA NZA

Avanza - The perfect fusion of technology and design

With two luminaire sizes and various reflector systems, the Avanza family can handle a diverse range of lighting tasks in urban areas. Efficient MidPower LEDs combined with unique freeform reflectors form the basis for high-performance lighting technology. At the same time, LED clusters aligned in the direction of the main light and reflectors coated with high-purity aluminium ensure a high level of lighting efficiency. The design of the Avanza is created from a single cast and, with its clear design language, it lends a stylish touch to roads, squares, pathways and parks. Its key is its outstanding light quality however - naturally conforming to standards but above all harmonious, with soft brightness transitions and adjustable lighting power. With the corresponding control devices and interfaces, the Avanza is also optimally prepared for intelligent lighting concepts in Smart Cities.


KÖHLER

A valuable contribution to the future

Avanza 600

Night Sky

Thanks to the high-precision optics, Avanza generates no disruptive light scatter and consequently protects the night sky from light pollution.

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.

Avanza 450

An attractive appearance that creates a unique look for roads and squares

With a combination of direct light and reflected light, the Avanza attains a high light output with a high level of visual comfort at the same time. The luminaire is fitted with pairs of large-area, free-form reflectors. At the same time, LED clusters aligned in the direction of the main light and reflectors coated with high-purity aluminium ensure a high level of lighting efficiency. Selux Cross-Beam Technology generates harmonious brightness transitions for high visibility and a distinctive look.

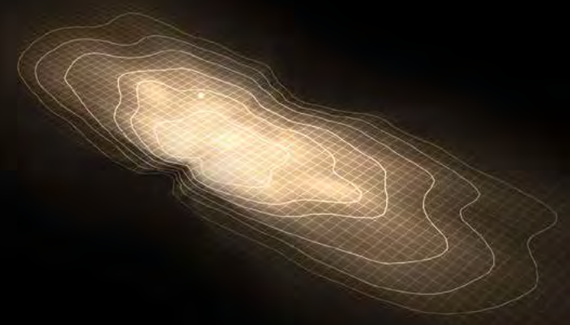
Comfort optics

Time and again, lighting solutions are required that go beyond standard-compliant lighting, e.g. in residential areas where there is a pronounced need for maximum visual comfort. This is especially the case in access-only residential areas with low light point mounting heights and where maximum visual comfort is a particular requirement. This is where the factory-installed Comfort optics come in. Attached directly onto the LED cluster, the luminous areas can be expanded. The result: luminance levels are reduced and visual comfort is enhanced.

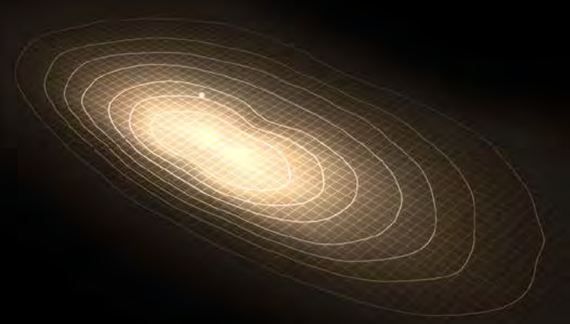
Light output max. 10500lm
Light colour 2700K, 3000K, 4000K
Smart City optional Zhaga interface

Luminaires

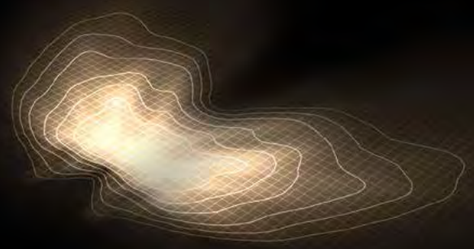
asymm. street

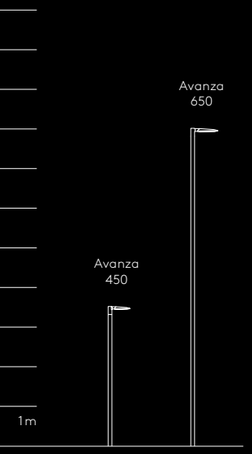


asymm. street Comfort optics



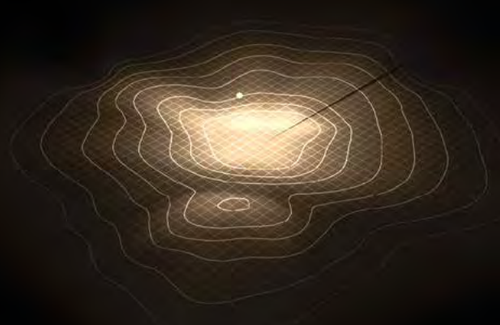
asymm.



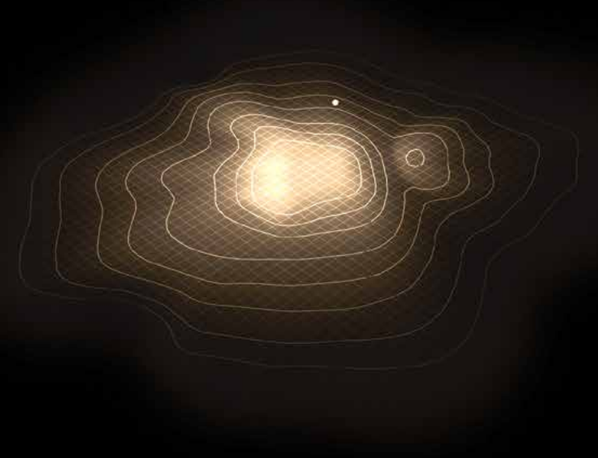


Avanza

pedestrian crossing left



pedestrian crossing right



Grey heron

To target its underwater prey, such as small fish, the grey heron tilts its head vertically at different angles to visually correct for the refraction of light at the interface of air and water.

TAL


HOTEL

Tal – the future is here: sensors for intelligent applications

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.

Night Sky

Thanks to the high-precision optics, Tal generates no disruptive light scatter and consequently protects the night sky from light pollution.

The new Tal pole luminaire by Selux makes decisions about investments in solid, future-proof lighting and design quality in urban spaces easy. Tal constitutes a high-performance, flexible product system for virtually all application areas in technical exterior lighting: it's efficient, versatile and offers an outstanding price/performance ratio. The Tal thus promises affordable lighting in Selux quality, with service guaranteed for generations to come. Developed and manufactured in Germany, with components from the EU: an all-round responsible contribution to a sustainable future.

Flexible, precise, efficient: light for our streets and squares

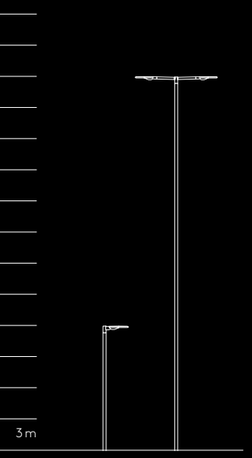
With various light distributions for roads, pedestrian crossings and squares, Tal can provide efficient, standardised illumination of wide stretches of road or intricately shaped open spaces. Freeform-lens optics ensure precision light guidance. Depending on the application, four different performance packages are available, from approx. 4500 – 18 000 lumens.

Tal Pole top and lateral luminaire

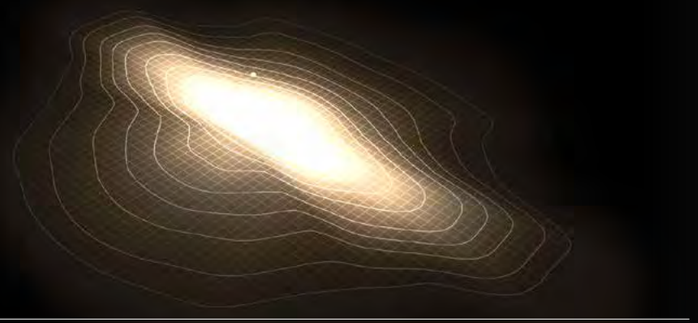
Light output max. 18 000lm

Light colour 2700K, 3000K, 4000K

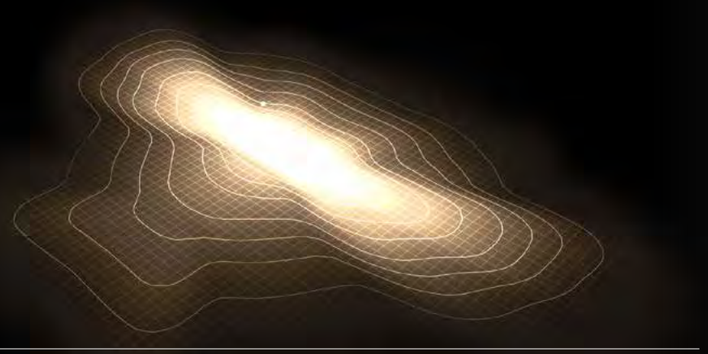
Smart City optional Zhaga interface



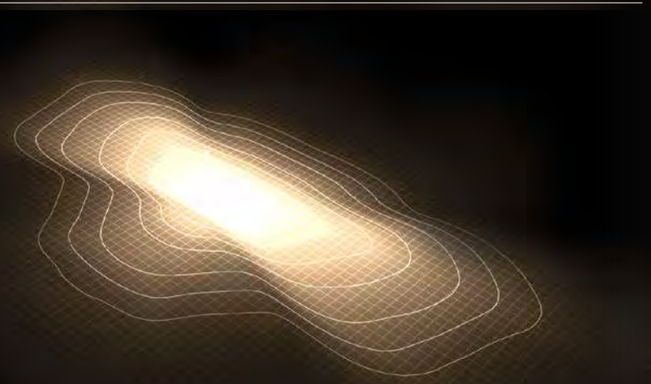
street narrow regular



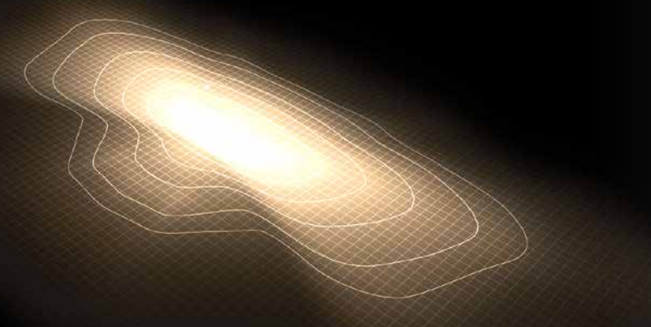
street narrow long



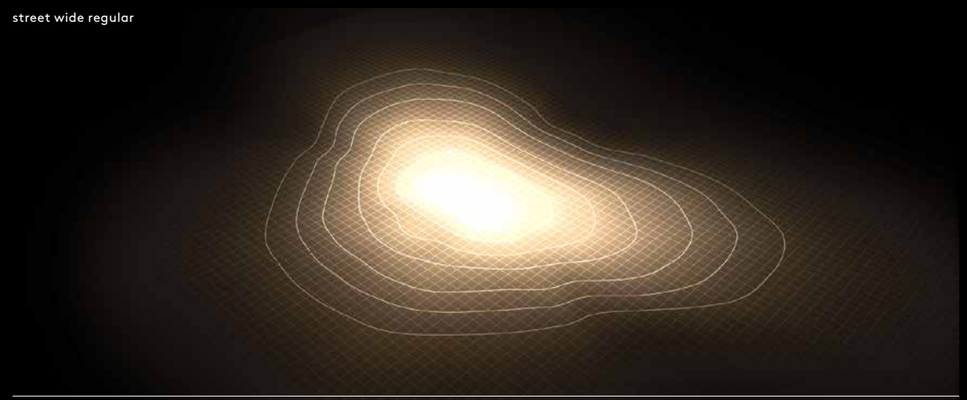
street medium regular



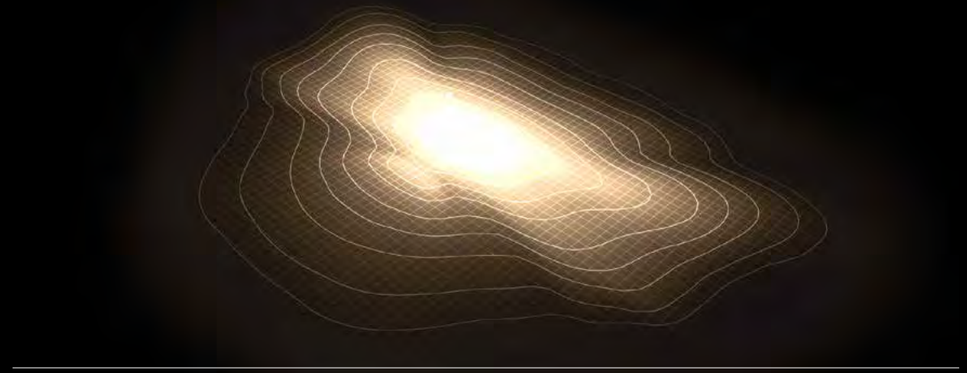
street medium long



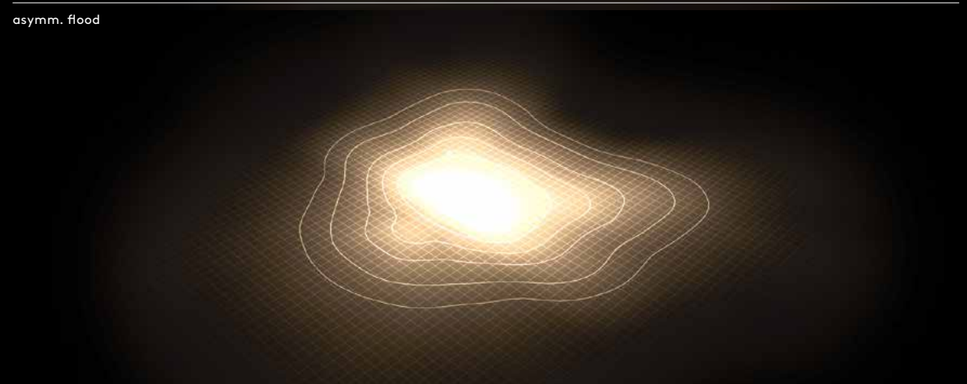
street wide regular



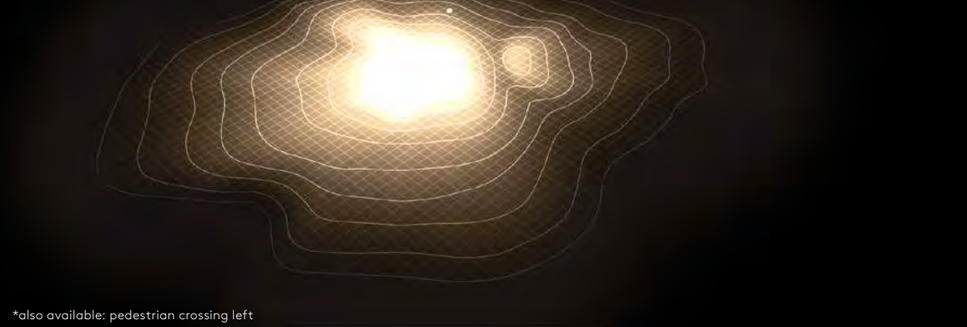
street wide long



asymm. flood



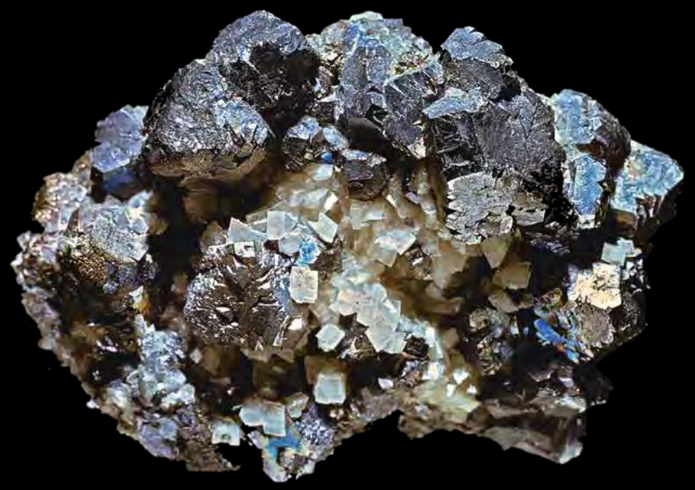
pedestrian crossing right*



*also available: pedestrian crossing left

Galenite

Rarely are geometrical structures in nature so perfectly evident as in galenite. Its blue-grey, shiny crystals are equal in size on all sides and thus form perfect cubes



TESSIA

Tessia
Energy efficiency meets functionality

With good lighting, even in everyday situations in urban areas, cities and municipal councils are sending out a clear signal about the value they place on their citizens. As well as all the functional aspects, this is a key factor in the concept of well-being. The pole-top Tessia is the particularly economical solution for illuminating small and large streets in Selux quality. With it clear and distinctive design, Tessia adapts flexibly to different situations in the urban landscape. Details like the angle-adjustable pole mounting demonstrate the emphasis placed on practical qualities such as ease of mounting and maintenance in the development of Tessia. Thanks to the right operating devices and interfaces, the Tessia is also perfectly prepared for the intelligent lighting concepts of the Smart City.

Diverse variations for maximum quality

With eight efficient, practical light distributions, Tessia can be flexibly adapted to different situations in urban areas.

Optical system

The free-form lens optics of the Tessia guarantee high visual comfort and precise light control. Zhaga-compliant LED modules with different components and performance make it possible to optimally match luminous flux and lifespan to the respective application.

Smart City

Intelligent Smart City functions can be installed via an optional Zhaga interface.

Night Sky

Thanks to the high-precision optics, Tessia generates no disruptive light scatter and consequently protects the night sky from light pollution.

Tessia Pole top and lateral luminaire

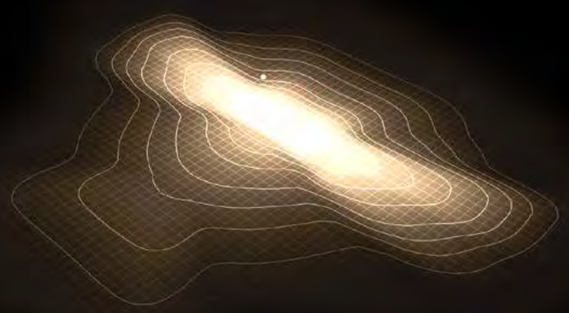
Light output max. 15200lm

Light colour 2700K, 3000K, 4000K

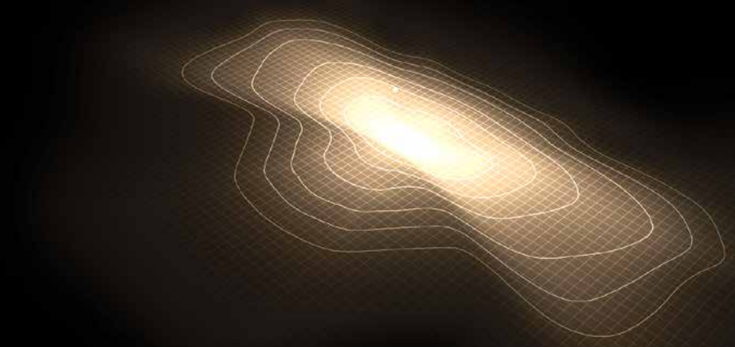
Smart City optional Zhaga interface

Luminaires

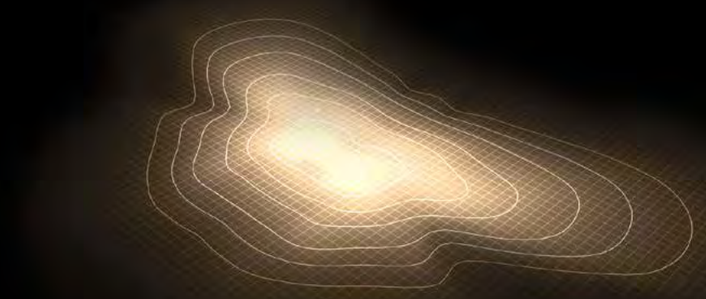
asymm. street narrow – R0



asymm. street standard – R1

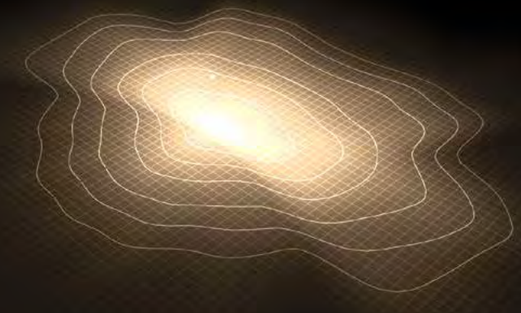


asymm. street wide – R2

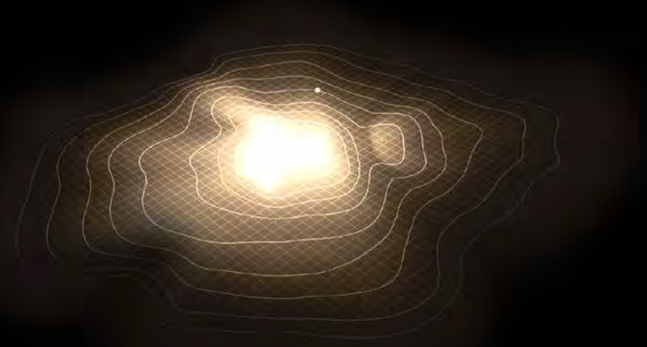


Tessia

asymm. street wide – R3

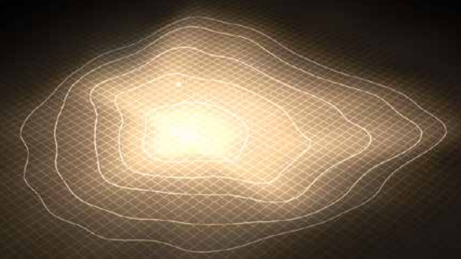


pedestrian crossing right*



*also available: pedestrian crossing left

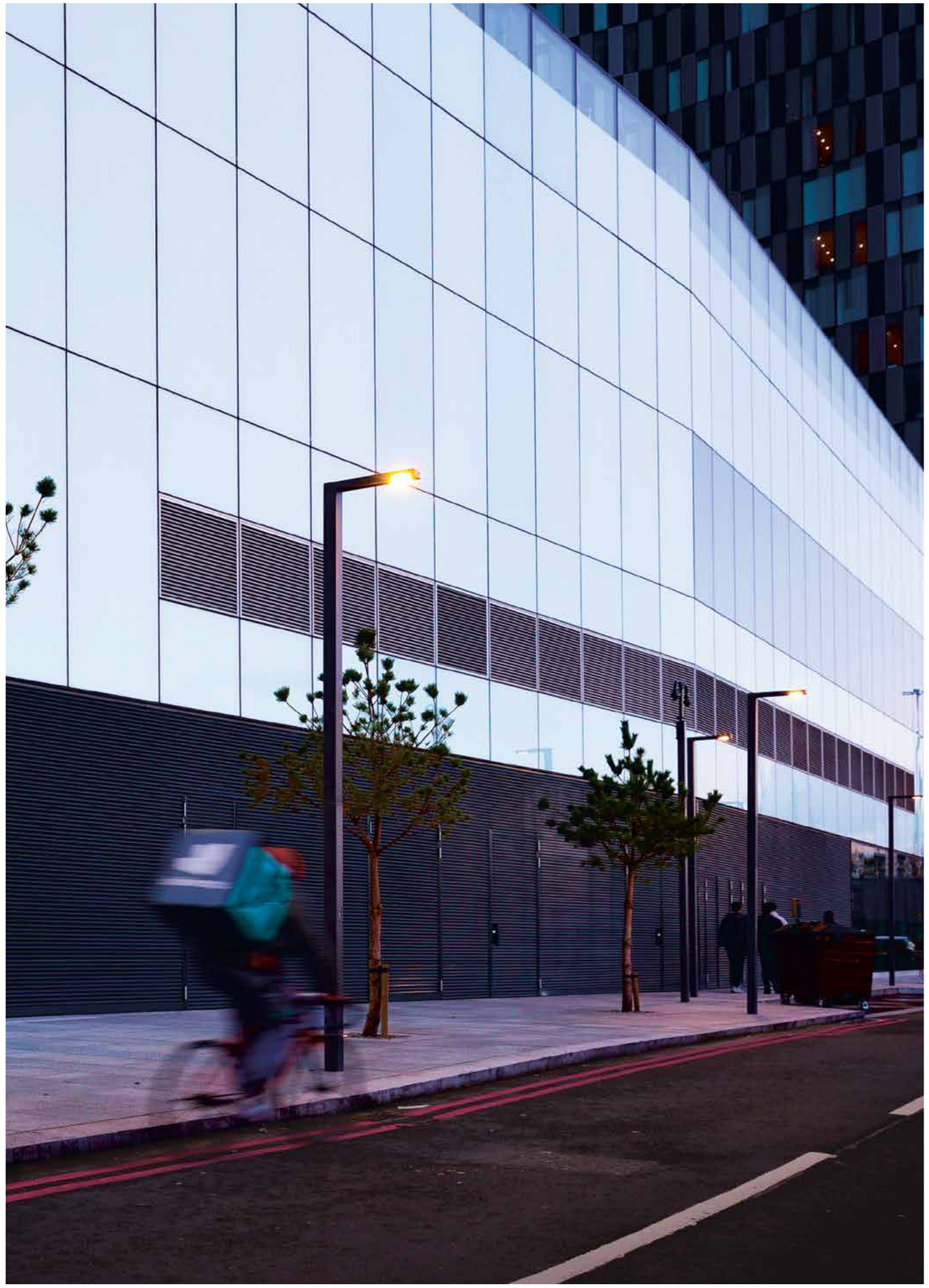
asymm. flood max – AS2



Stalk-eyed fly

These extravagant-looking insects take their name from their characteristic eyes on long stalks. These serve to improve awareness and orientation. The distance between eyes is also factor, however: the male whose eyes are the furthest apart takes over the preferred mating spot.

A R C A



Form in function

The Arca's timeless, discreet design enables it to blend harmoniously into public spaces. It is available in two versions – the Arca Linear and Arca Flex. Its prism reflector technology is specially designed for the Arca and ensures outstanding lighting with excellent light appearance. Both versions are made of premium-quality, durable materials, boast excellent functionality and offer an outstanding price/performance ratio.

Arca Linear

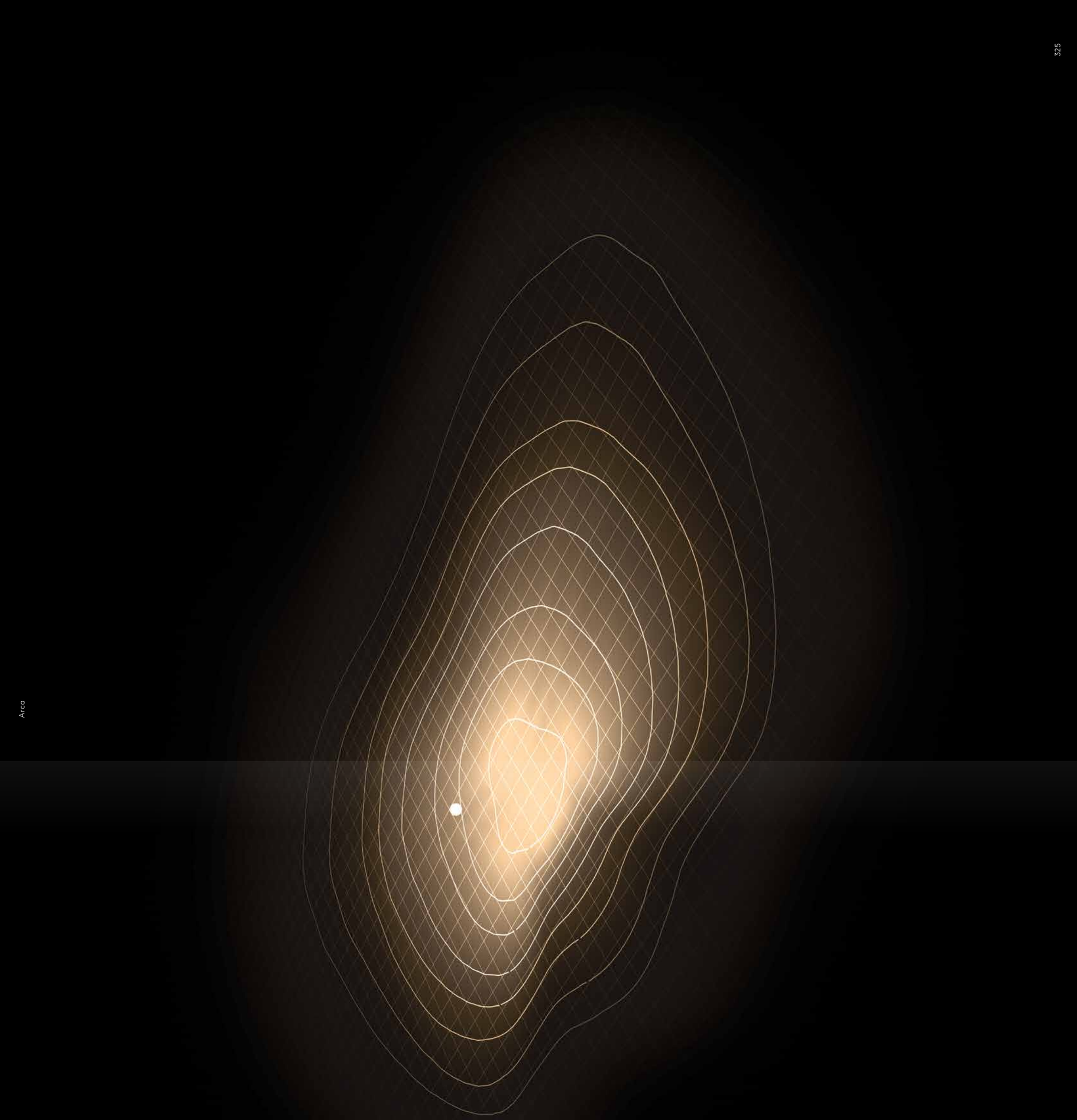
With an impressive design language that harmoniously blends in with any architectural setting, the Arca Linear is a complete pole/luminaire combination with a uniform profile width that constitutes a continuous integrated unit. The system is as sophisticated as it is simple and is available for order in a single or double-arm version.

Arca Flex

The Arca Flex responds easily to your needs. Luminaire and universal adapter form one functional and technically sophisticated unit. Due to its flexible adapter, Arca Flex can be mounted on pole tops, laterally on brackets or on upswept poles. The luminaire head is simple to adjust and can be aligned ± 20° in 5° increments as required.

Night Sky

Thanks to the high-precision optics, Arca generates no disruptive light scatter and consequently protects the night sky from light pollution.



Arca Pole top and lateral luminaire

Light output	max. 2900lm
Light colour	3000K, 4500K

L E D

R E P L A C E M E N T M O D U L E

The city lighting update

Tritec A – Ambiance

With the Tritec Sky and Ambiance as well as the Gen5 module, Selux delivers simple and secure retrofitting options: this is the opportunity to upgrade your city's existing luminaires to state-of-the-art LED technology and enjoy all the benefits of sustainability, energy efficiency and light quality – without busting your budget.

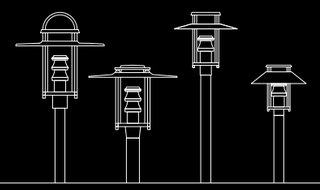
Future-proof Selux LED retrofitting sets

Tritec S – Sky

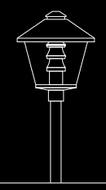
Light for
Generations

Gen5 LED Replacement kit

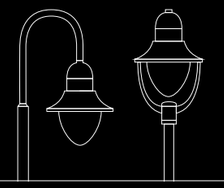
CLASSICS



Saturn → 334



Alpha → 336



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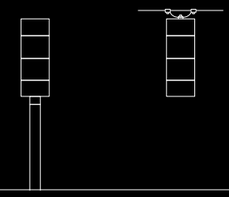
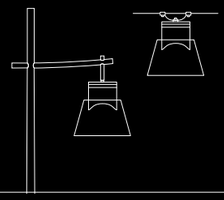
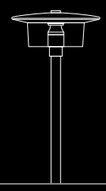


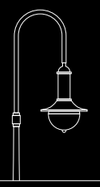
Lanova → 340



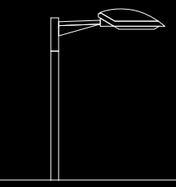
Sombreo → 341



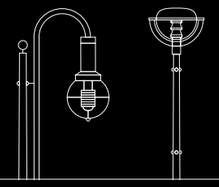
Rondero → 337



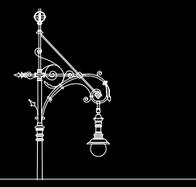
Trocadero → 339



Urbi 2 → 344

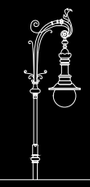


Urbi 1 / 3 → 345

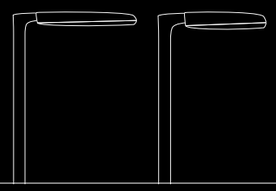


Hardenberg → 348

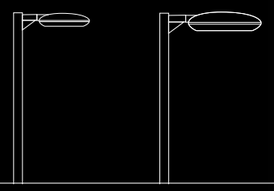
Witzleben → 349



Schupmann → 346



Jessica → 342



Discera → 343

Saturn

The luminaires of the Saturn family are perfect for areas close to residential districts, particularly where there is a need for comfortable light. This is where Saturn luminaires can contribute to a pleasant, residential environment with a feeling of neighbourliness. The Saturn is available in four different design versions so that it is suitable for a wide variety of residential buildings from classical architecture to timeless contemporary styles.

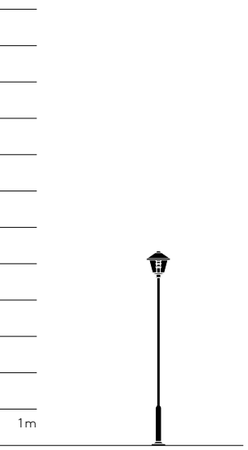
Saturn 1 Saturn 2 Saturn 3 Saturn 4 Poller

Tritec A – Ambiance

Tritec S – Sky

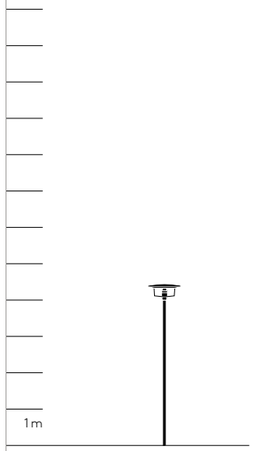
Alpha

Based on early lighting fixtures, the Alpha is a synthesis of classical and contemporary design. The pole-top luminaires are equipped with Tritec Optics technology, enabling light to be directed precisely, glare-free, wherever it is required.



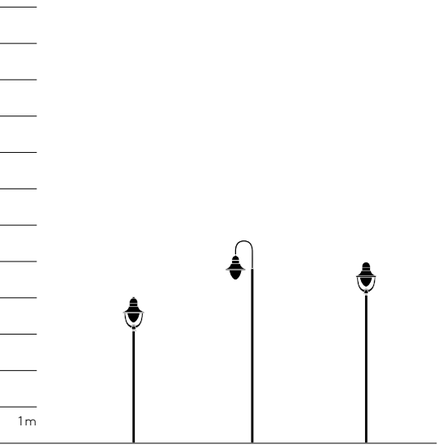
Rondero

The Rondero pole-top luminaire is a modern throw-back to the street lights of Rostock. Several cities and communities are already shining in the light of the Rondero and benefitting from sustainable and efficient LED lighting technology from Selux.



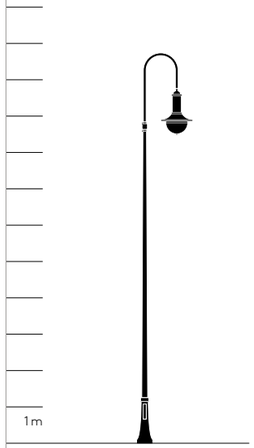
Beta

Beta combines modern lighting technology with classical appeal, its glare-free light virtually transforming streets and squares into cosy locations. A satin-finish diffuser ring at the top end of the luminaire casts soft light onto the luminaire roof – a highly effective detail that defines the luminaire's overall look. A wide selection of poles and arms enable maximum design freedom.



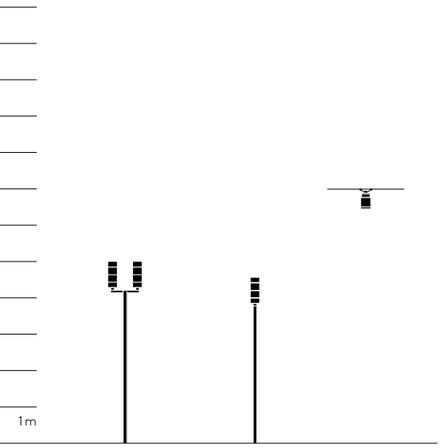
Trocadero

The Trocadero luminaire blends superbly into expansive, highly frequented inner-city areas. As classic pendant candelabra, they are ideal for the lighting of important streets or squares with historical significance.



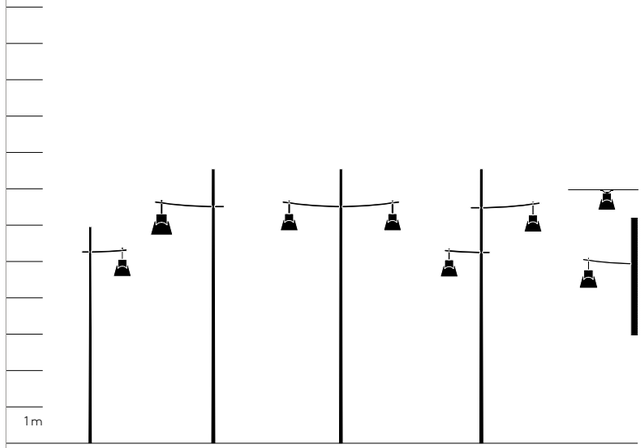
Lanova

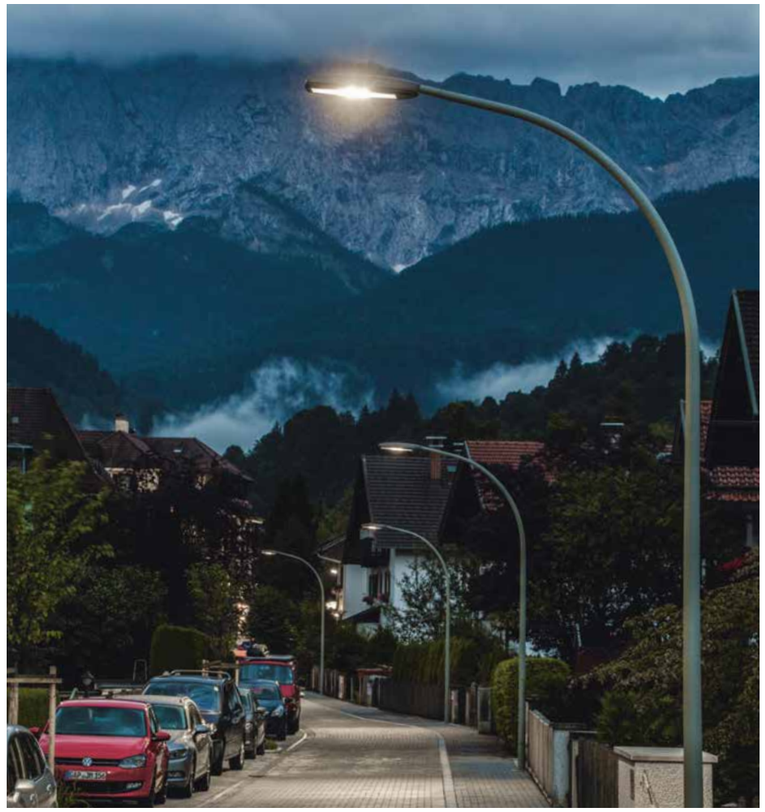
With its appearance of weightlessness, Lanova's elegant glow will illuminate roads, squares or pedestrianised areas. Lanova combines state-of-the-art lighting technology with exclusive materials. Additionally, its optical system ensures both comfortable anti-glare and energy efficient light guidance.



Sombreo

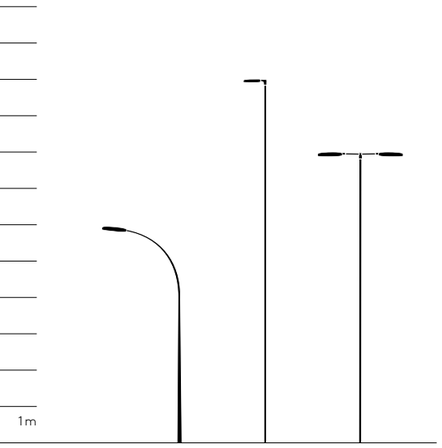
Inspired by the form of a typical residential luminaire, Sombreo acts as a distinctive eye-catcher in urban areas. It is ideal for settings where a particularly pleasant light mood is required. The Sombreo is available in two sizes for single or double fixtures as well as a catenary version.





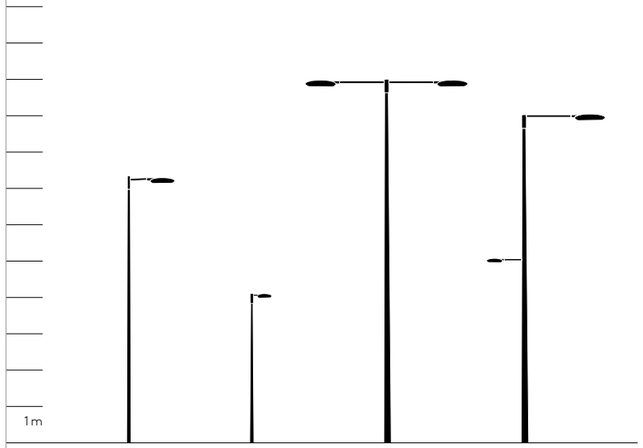
Jessica

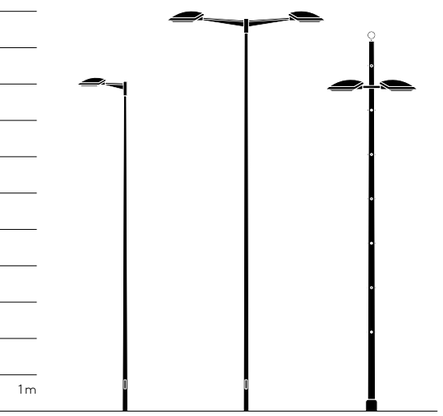
Its discreet, unobtrusive shape enables the Jessica luminaire to blend seamlessly into the architecture of cities or smaller communities. The luminaire family consists of two sizes: the Jessica 600 and the Jessica 800, while the luminaire is also ideally suited for upswept poles. Premium quality technology and materials as well as a robust, solid design are the basis for Jessica's durability.

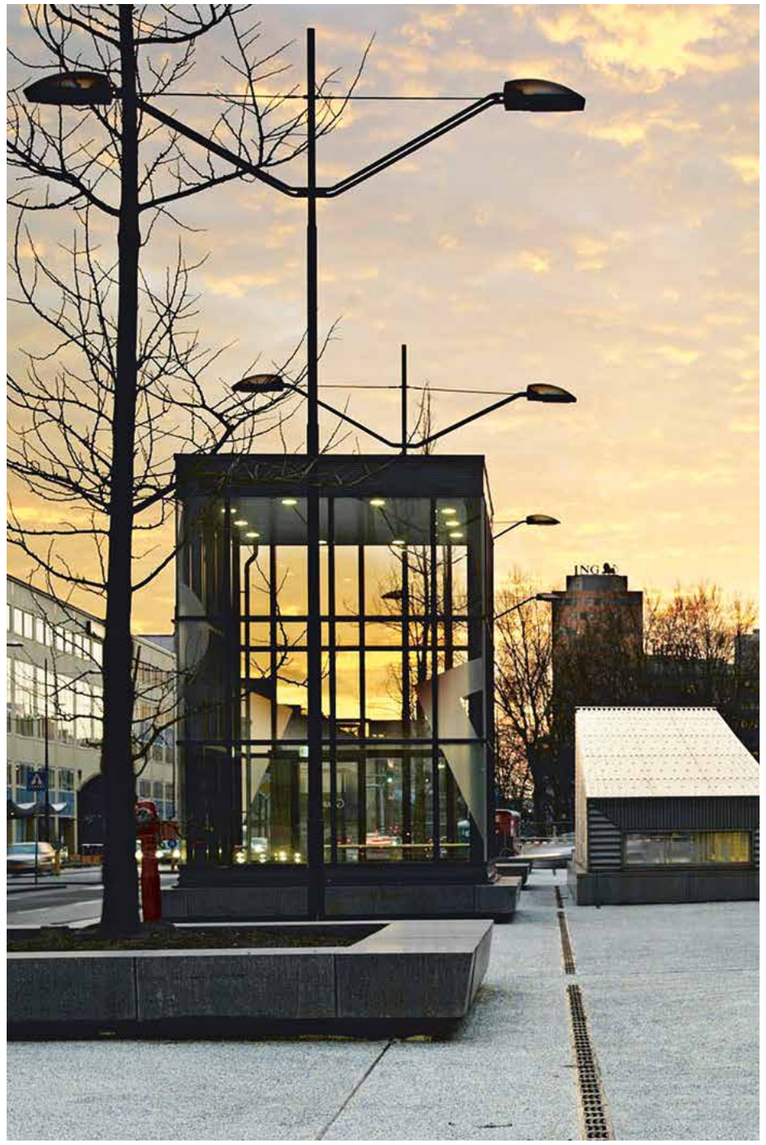


Discera

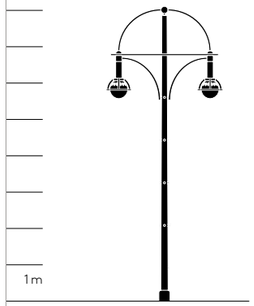
The timeless design of the Discera luminaire creates a calming, well-balanced look. Its intimate appearance enables it to blend harmoniously into all street environments. Discera is available in two sizes: the Discera 400 and 600 – offering optimal visual comfort with maximum energy efficiency.

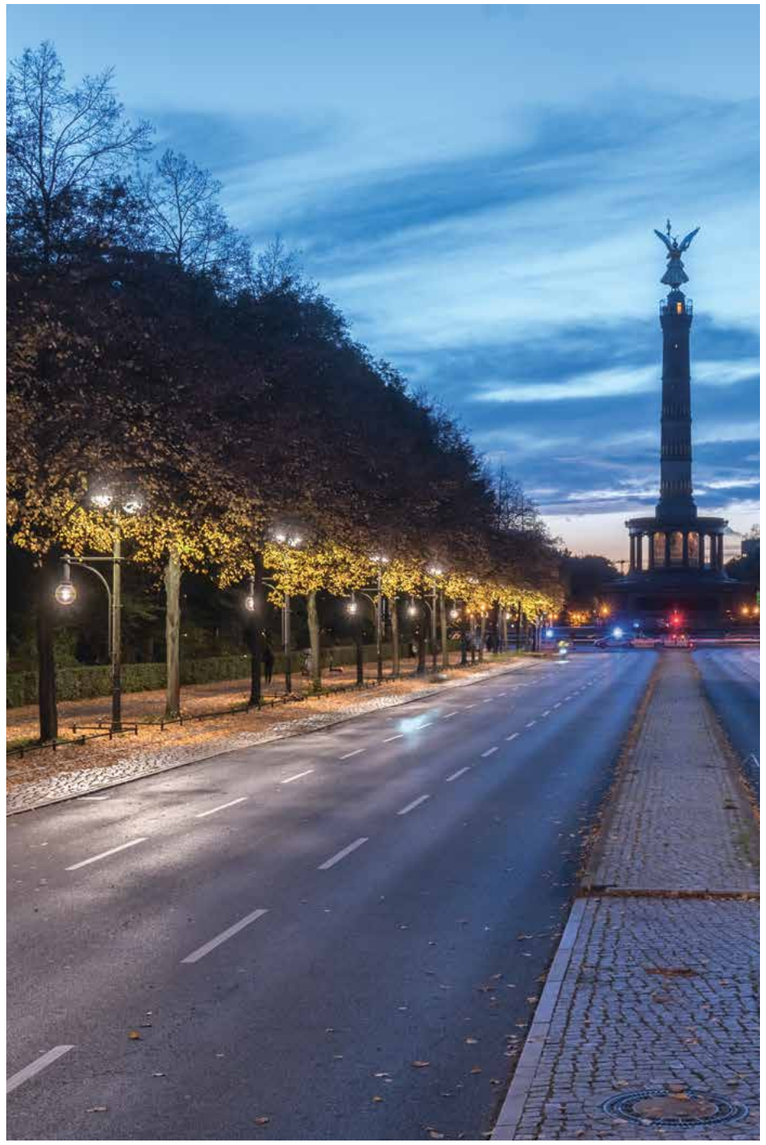






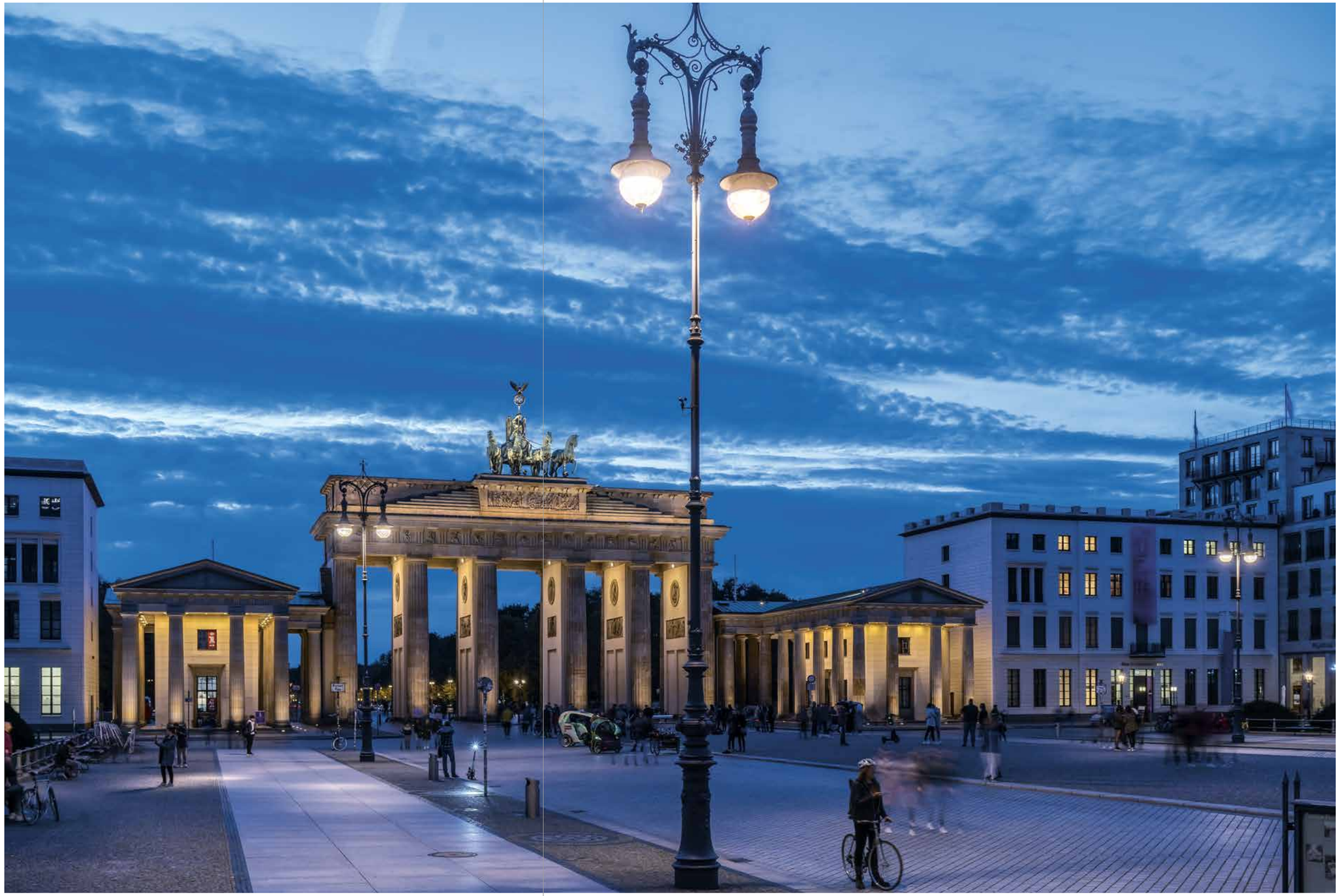
Urbi 2





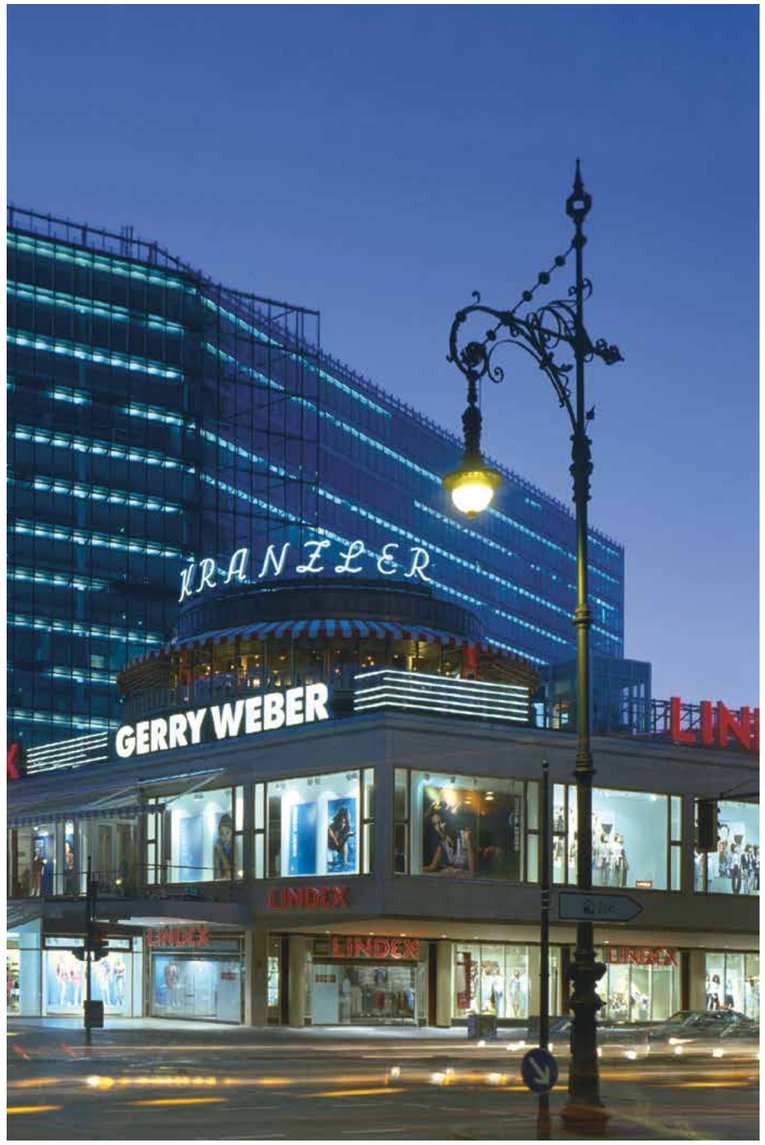
Urbi 1/3

Urbi cleverly combines outstanding lighting with traffic guidance elements and other street furnishings. Road signs, traffic lights or waste paper baskets can be mounted on its light poles. At the same time, the number of individual mounting brackets is reduced to enhance visual attractiveness. With this sophisticated system, Urbi ensures a high level of standardised design quality in urban spaces. All three design lines – whether they are gently rounded, soberly straight-lined or minimally ornate – are highly impressive due to their timeless style and classical design



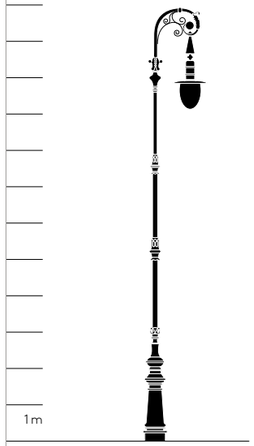
Schupmann Fixture

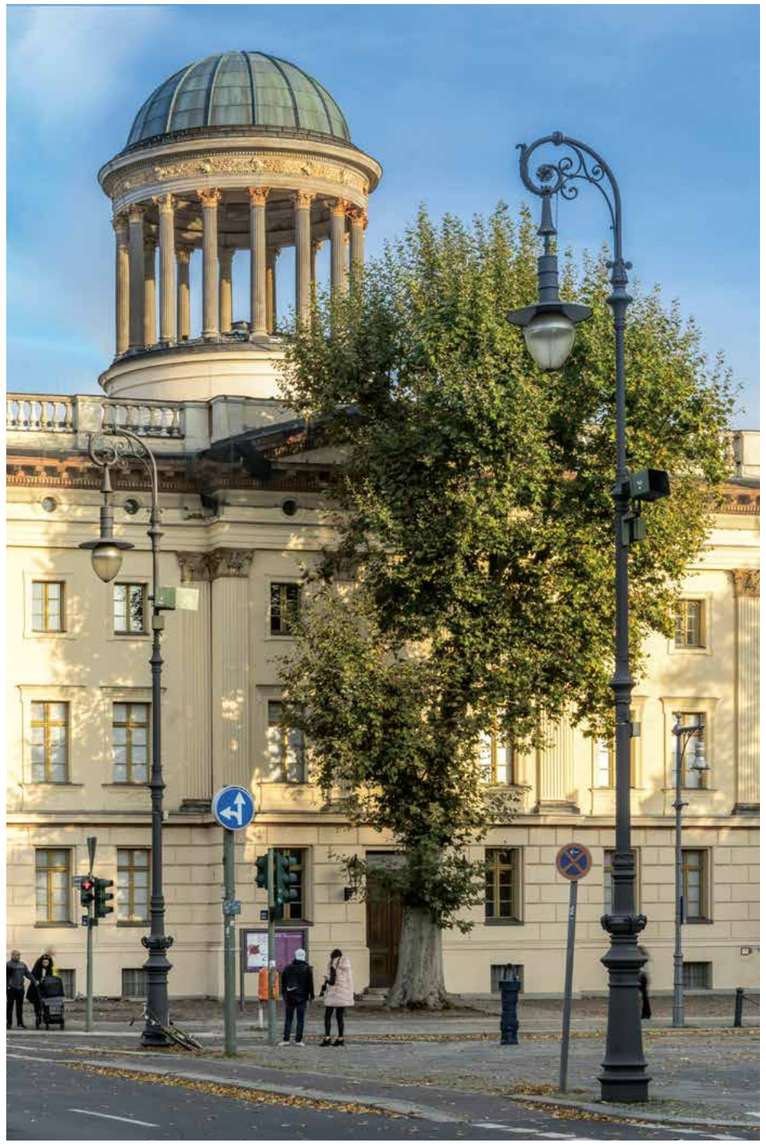
This is a faithful replica of the historical Berlin Schupmann fixture incorporating modern lighting technology. The original design by Ludwig Schupmann was installed in 1888 between Pariser Platz and Spandauer Straße in Berlin.



Hardenberg fixture

A highly decorative Wilhelmian lantern was the archetype for this 14 m high replica of the historical Berlin Hardenberg lantern. Casting moulds faithful to the original were prepared based on the last actual archetypes as well as surviving positive models made from wood were recreated. New Hardenberg lanterns can also be found in Krefeld, Amsterdam and Singapore.





Witzleben fixture

The prototype for the Witzleben fixture was a luminaire located on Luisenplatz in Berlin at the start of the 20th century. The shape of its column, its horizontal and vertical structure and the way it opens up urban space in an upward direction matches that of historical architecture. As well as creating an historical effect, the fixtures also meets the high requirements of modern lighting technology, allowing for particularly wide offset spacing between luminaires.

CUSTOM LIGHTING

Individual luminaires for unique locations

When light, luminaires and surroundings are in harmony, it results in locations with a unique atmosphere. For many years now, collaborating with planners and designers to develop unique lighting solutions and products that are individual in terms of how they work and look has been one of the strengths of Selux.

Olivio Nano

High-performance lighting technology in a miniaturised package: extra compact luminaire heads like the Olivio Nano offer new scope for creativity in the design of individual lighting solutions in the urban landscape. The organic form of the Olivio in the Nano size also conveys a sense of liveliness and naturalness – matching the flexible, glare-free light distributed over many light points of such multifunctional columns and poles.

Lif hourglass
Saint-Etienne, France

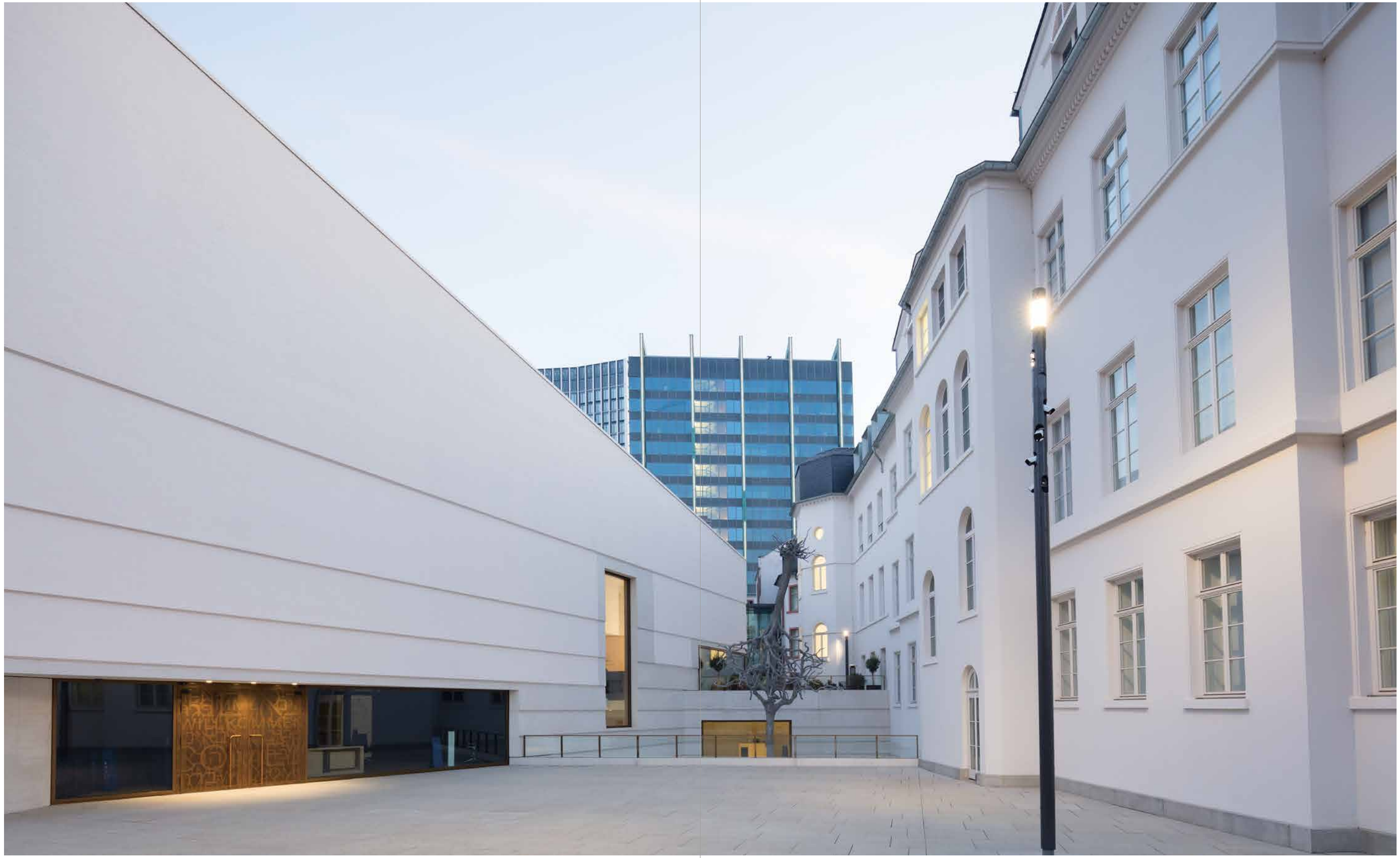
Unique, attractive yet highly practical. At stops on the T3 tram line in Saint-Etienne, hour glasses of light illustrate when the next tram is due to arrive. This design by the Cobalt Lumière design agency has been integrated into modified Lif light columns by Selux. The Lif is already in use at other locations in the city. As a system luminaire it is ideal for implementing smart, networked solutions such as this, which enhance both the quality of life of citizens and their relationship with the city.

Lif with floral sleeves
Rue Félix Faure, Cannes, France

In the redesigned Rue Félix Faure, a pedestrianised street in the heart of this famous Côte d'Azur resort, the planners of Agence Lumière have used the Lif light column to install multifunctional lighting technology with optional added smart functions. Customised details enable the columns to blend inconspicuously into the historic urban setting. A bespoke bronze shade as well as backlit sleeves in a floral pattern around the base of the pole lend them an unmistakably Mediterranean flavour.

Multi-functional light column
Hafenpromenade, Hamburg, Germany

The distinctive architecture of this new harbour promenade has been designed by the Zaha Hadid architects' bureau. When darkness falls, it is roused to life by light - guided light emphasises the staircases, the appearance of which is inspired by washouts in the sand. The inclined LED light poles, which discreetly illuminate the upper part of the harbour promenade, conjure up maritime associations – a tailor-made solution developed by Selux together with Schlotfeld Licht.

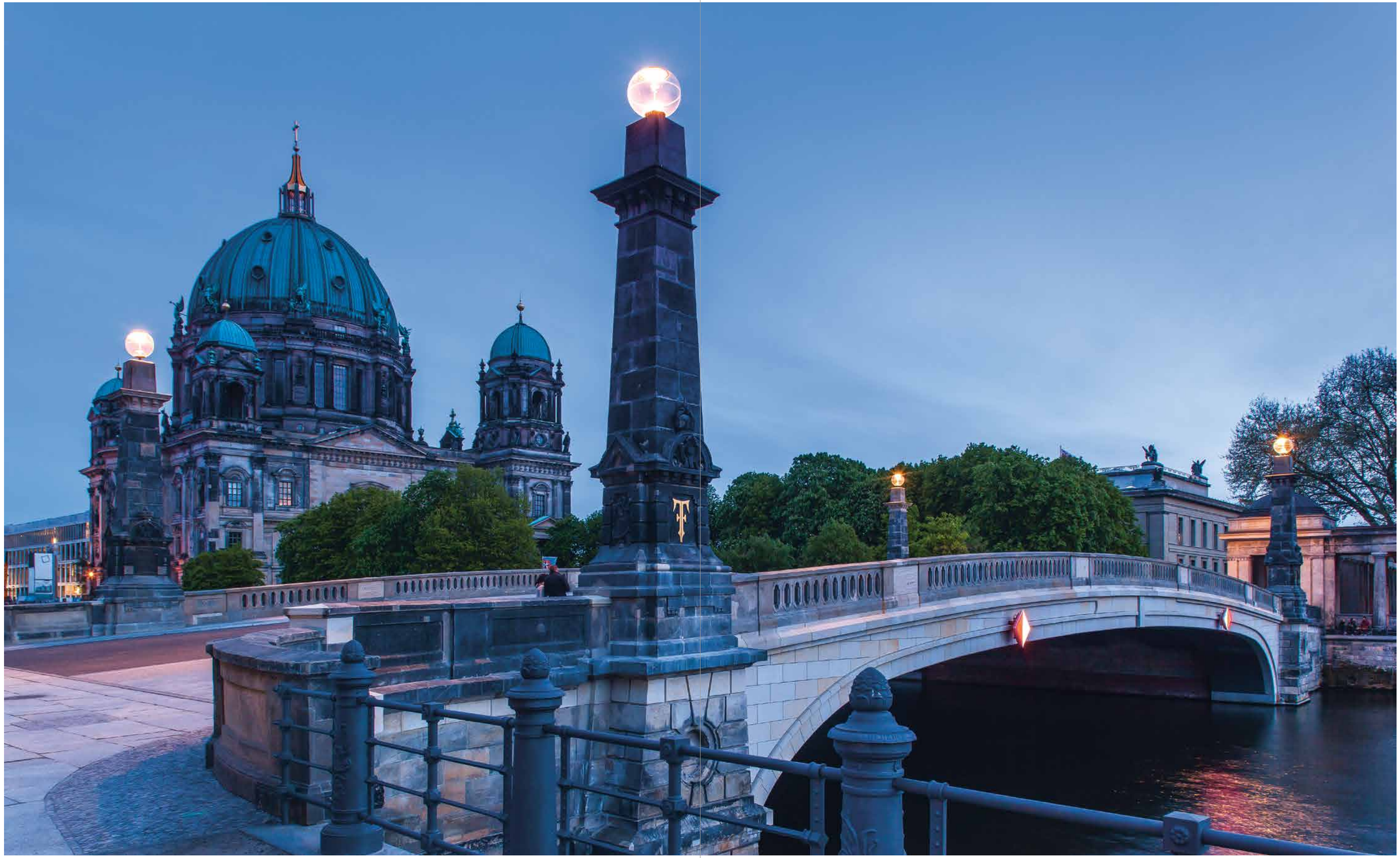


Lif
Jewish Museum, Frankfurt, Germany

In addition to the historical Rothschild Palais, which has housed the Jewish Museum in Frankfurt since 1988, in October 2020 a modern extension was opened for Jewish and present. At the intersection of old and new, a large forecourt was created, adorned by an 11-metre high tree sculpture by Ariel Schlesinger. Lif light columns set the stage for the new museum forecourt with inviting light, with integrated and adjustable cameras providing an additional important function.

Shoebox-shaped luminaire
Puma, Herzogenaurach, Germany

The famous red shoebox with the elegant big cat design was the source of inspiration for the architecture of the PUMA HQ building and the lighting design of its outdoor area. Specially developed single and double pole-top luminaires illuminate the roadway and the carpark of this building complex. The rectangular luminaire head in the shape of a half-open shoebox creates an accentuating effect from afar so that the light becomes part of the sports article manufacturer's corporate design.



Spherical lights for the Friedrichsbrücke bridge
Berlin, Germany

Overlooking the River Spree and Berlin's Museum Island, the Friedrichsbrücke is today one of the city's most romantic locations for declarations of love. After this listed bridge was rebuilt and widened, new lighting was installed on its sandstone obelisks. Based on the historic context provided by the Museum Island, the four spherical LED luminaires bathe the Friedrichsbrücke in glareless light without any disruption to pedestrians or the boats passing below.

Cosy luminaires
Graf-de-Chardonnet-Platz, Kelsterbach
Bad Kelsterbach, Germany

This square is at the centre of a new residential and industrial area in Kelsterbach near Frankfurt. The lighting concept, with its 6 to 8 metre Cosy light poles, lend an individual atmosphere to the urban setting. The modular luminaire family developed specifically for the project combines the relaxing design of a free-standing luminaire with state-of-the-art lighting technology and outstanding flexibility.

Replica luminaires
Karl-Marx-Allee, Berlin, Germany

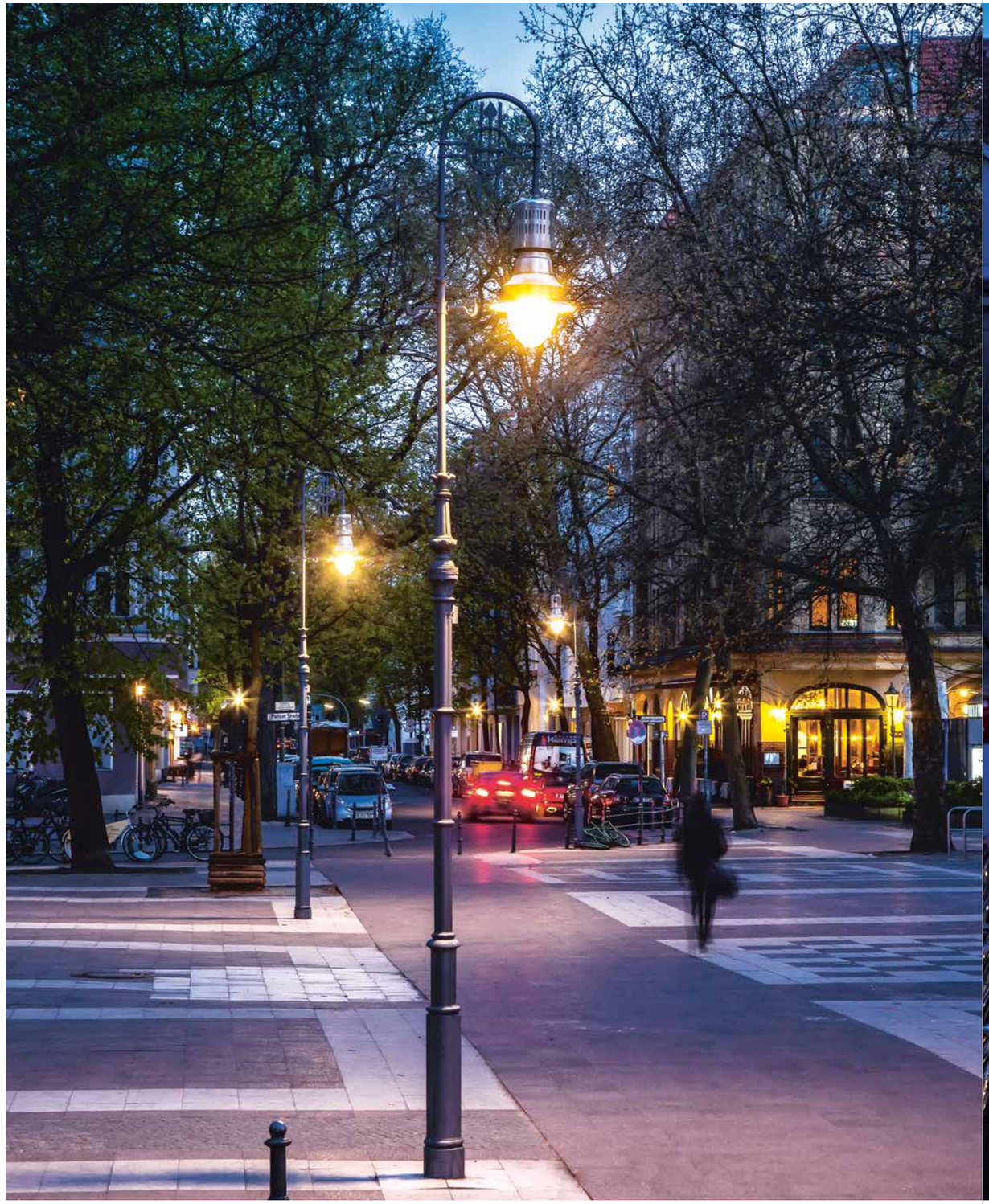
After almost 60 years, 39 faithful replicas of the former East German luminaires have been restored to the urban landscape of the Karl-Marx-Allee. Their 15.5-metre hexagonal light poles are a reminder of times almost left behind. Contemporary lighting technology has brought the exceptional lighting design of the 1960s back to life.

Grachten lights
Amsterdam, Netherlands

For illumination of the Amsterdam Grachten and the adjacent historic old town, Selux produced faithful copies of the original crown and knight lanterns with efficient LED technology. In both types of luminaires, a golden, faceted secondary reflector with asymmetrical light distribution ensures glareless light in a relaxing warm white colour.

Gas replacement lanterns
Neues Palais, Potsdam, Germany

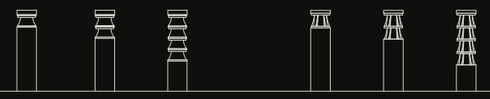
In the protected grounds of this historic park, Selux replaced the historic gas lanterns with replicas using LED gear trays that are faithful to the original. In terms of both appearance and light colour, they are difficult to distinguish from the lanterns they replaced. At the same time, light quality and energy efficiency have improved significantly – with less maintenance required too.



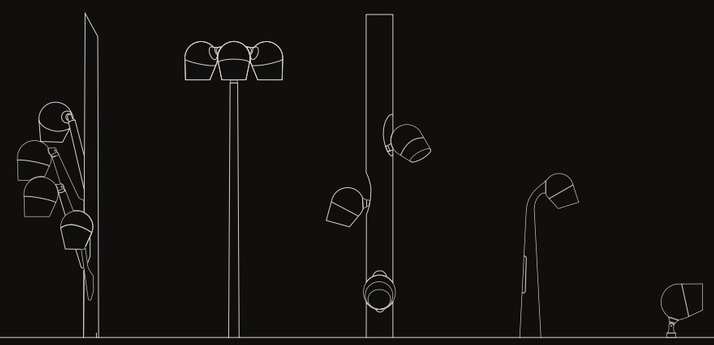
Gas replacement lanterns
Berlin, Germany

In residential neighbourhoods in Berlin and other European cities, gas lanterns are associated with warm and comfortable lighting. Their poor energy efficiency was a threat to their romanticism however. Using energy-saving, low-maintenance LED replacements, it has been possible to conserve both their memory and highly distinctive effect.

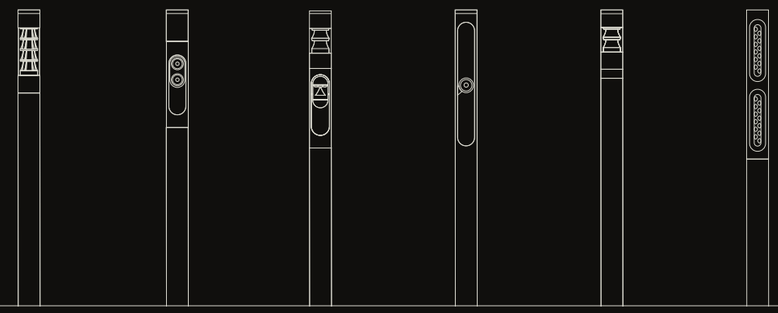
APPENDIX



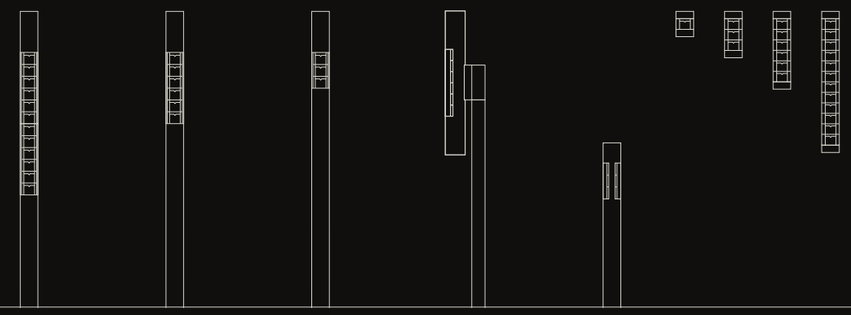
Tritec Optics
→ 72, 402



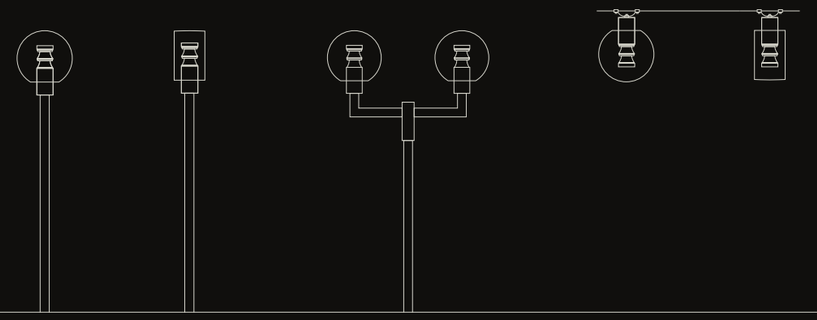
Olivio
→ 84, 384



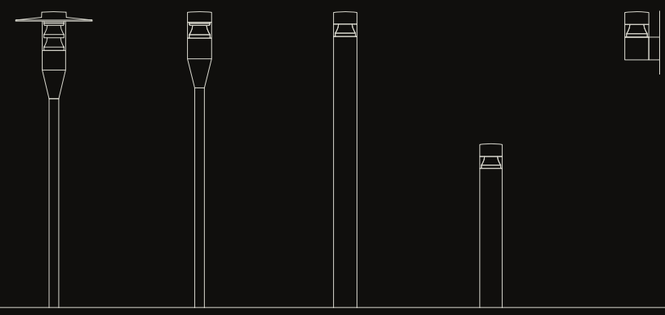
Lif
→ 114, 386



Line
→ 144, 388

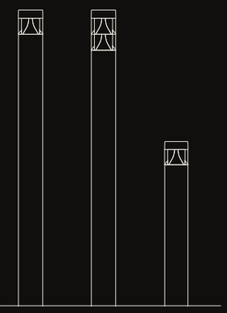


Aira
→ 216, 392



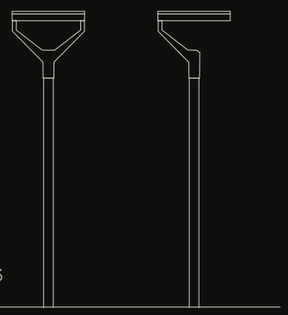
Elo
→ 200, 391

Solar Lukida
→ 182, 390

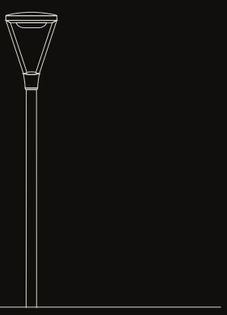


Inula
→ 192, 390

Mistella
→ 236, 392



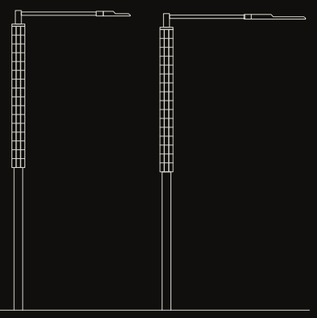
Astro
→ 246, 393



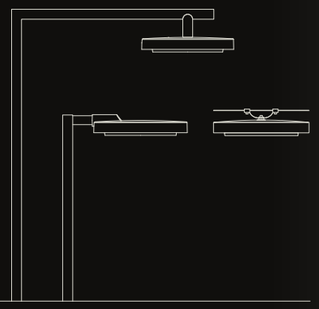
Trigo
→ 256, 393

Yloo
→ 274, 395

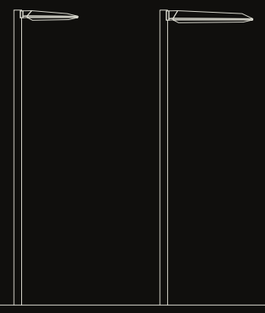
Solar Anatar
→ 264, 396



Ylloo
→ 274, 395

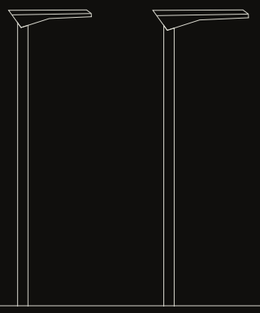


Avanza
→ 286, 396



Tal
→ 298, 397

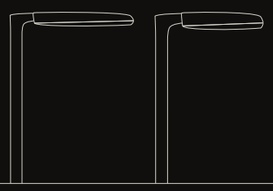
Tessia
→ 308, 397



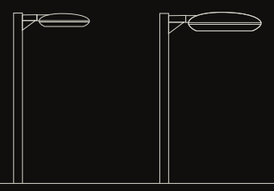
Arca
→ 318, 398

Classics

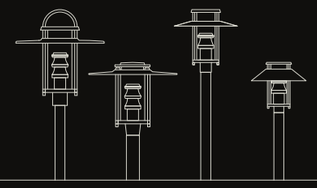
Jessica
→ 342, 397



Discera
→ 343, 398

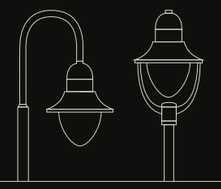


Saturn
→ 334, 394

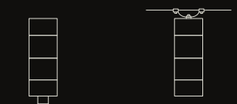


Alpha
→ 336, 393

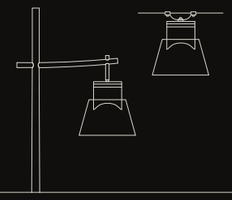
Beta
→ 338, 399



Lanova
→ 340, 393



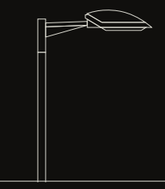
Sombreo
→ 341, 398



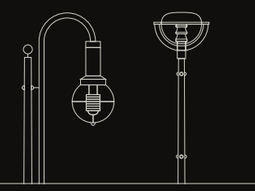
Rondero
→ 337, 395

Trocadero
→ 339, 399

Urbi 2
→ 344, 454



Urbi 1 / 3
→ 345, 456

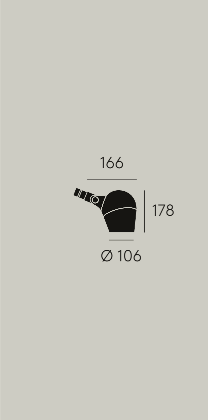


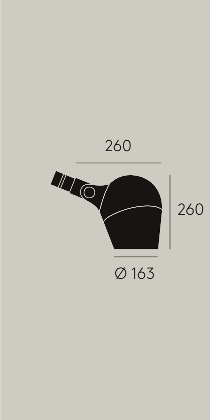
Hardenberg
→ 348, 458

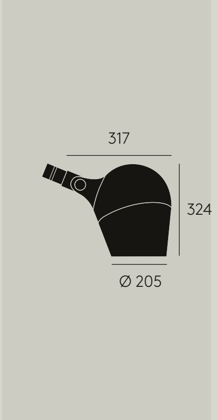
Witzleben
→ 349, 458

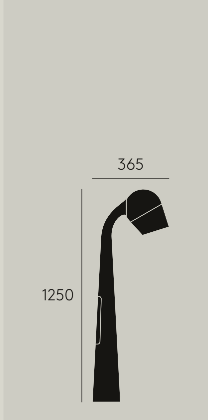
Schupmann
→ 346, 458

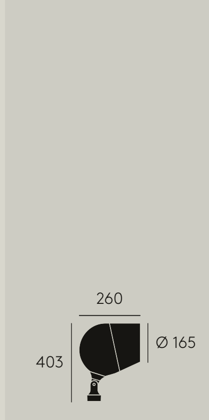
Technical information

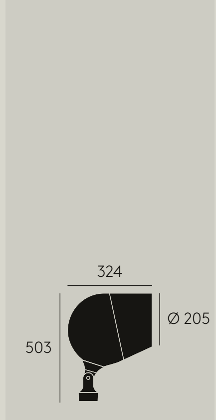








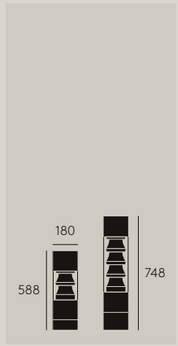


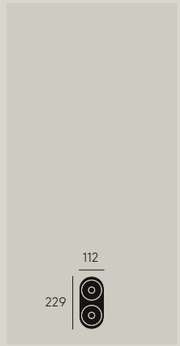


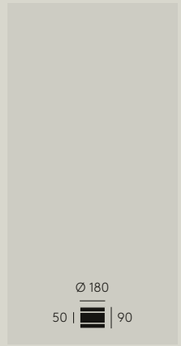
Olivio

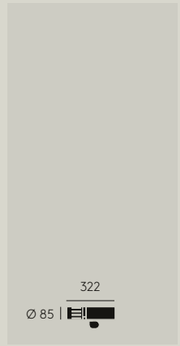
Model	Olivio Piccolo	Olivio Medio	Olivio Grande	Olivio Piccolo Bollard	Olivio Medio Bollard	Olivio Universal Piccolo surface-mounted
Light colour	2700K 3000K 4000K RGBW	2700K 3000K 4000K RGBW	2700K 3000K 4000K RGBW	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K RGBW
Light output (max.)	1800lm	3000lm	4500lm	1500lm	2400lm	1800lm
CRI	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80
Light distribution	· asymm. street · narrow · medium · wide	· asymm. street · narrow · medium · wide	· asymm. street · narrow · medium · wide	asymm. pathway	asymm. pathway	· narrow · medium · wide
Recommended heights	· Sistema up to 8000mm · Floracion up to 8000mm	· Sistema: up to 12 000mm · Floracion: up to 12 000mm · Candelabra: 3500 and 4500mm	· Sistema: up to 12 000mm · Floracion: up to 12 000mm · Candelabra: 3500 and 4500mm	1000mm	1250mm	
Description	· reflector optics · die-cast aluminium · adjustable head joint, 20°–195°, ±180° rotatable · flat safety glass	· reflector optics · die-cast aluminium · adjustable head joint, 20°–195°, ±180° rotatable · flat safety glass	· reflector optics · die-cast aluminium · adjustable head joint, 20°–195°, ±180° rotatable · flat safety glass	· reflector optics in combination with prisma-tic cover disc · die-cast aluminium · prismatic glass	· reflector optics in combination with prisma-tic cover disc · die-cast aluminium · prismatic glass	· reflector optics · die-cast aluminium · adjustable head joint, 20°–195°, ±180° rotatable · flat safety glass
Connection	can be combined with Olivio Sistema and Floracion poles and brackets	can be combined with Olivio Sistema, Floracion and Candelabra poles and brackets	can be combined with Olivio Sistema, Floracion and Candelabra poles a nd brackets			surface or buried base mounted fitting
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT
Labels	· IP67 · Protection Class II, optional I · CE	· IP67 · Protection Class II, optional I · CE	· IP67 · Protection Class II, optional I · CE	· IP67 · Protection Class II, optional I · CE	· IP67 · Protection Class II, optional I · CE	· IP67 · Protection Class I · CE

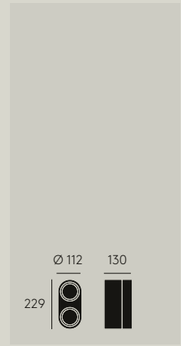
Model	Olivio Universal Medio surface-mounted	Olivio Universal Grande surface-mounted	Olivio Grande Gobo	Olivio Grande Camera housing element	Olivio Audio Speaker
Light colour	2700K 3000K 4000K RGBW	2700K 3000K 4000K RGBW	6500K		
Light output (max.)	3000lm	4500lm			
CRI	≥ 80	≥ 80			
Light distribution	· narrow · medium · wide	· narrow · medium · wide	· telephoto lens (150mm) · standard lens (85mm) · wide lens (63mm) · extra wide lens (45mm)		
Recommended heights			3500–12 000mm	3500–12 000mm	3500–12 000mm
Description	· reflector optics · die-cast aluminium · adjustable head joint, 20°–195°, ±180° rotatable · flat safety glass	· reflector optics · die-cast aluminium · adjustable head joint, 20°–95°, ±180° rotatable · flat safety glass	· for projection of images like graphics, logos and text · die-cast aluminium · adjustable head joint, 20°– 195°, ±180° rotatable · flat safety glass	· for cameras up to Ø150mm adapter plates for selected cameras of Axis, Bosch and Eneo available, other models / manufacturers on request · adjustable head joint, 20°–195°, ±180° rotatable	· saltwater resistant full range 8 Ohm audio speaker for Olivio Piccolo, 4 Ohm for Olivio Grande and Medio · adjustable head joint, 20°–195°, ±180° rotatable · suitable for electroacous-tic systems (ELS) via 100V transmission technology
Connection	surface or buried base mounted fitting	surface or buried base mounted fitting	can be combined with Olivio Sistema, Floracion and Candelabra poles and brackets	can be combined with Olivio Sistema, Floracion and Candelabra poles and brackets	can be combined with Oli-vio Sistema, Floracion and Candelabra poles and bra-ckets
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	DALI		
Labels	· IP67 · Protection Class I · CE	· IP67 · Protection Class I · CE	· IP67 · Protection Class II, optional I · CE	CE	· IP65 · CE

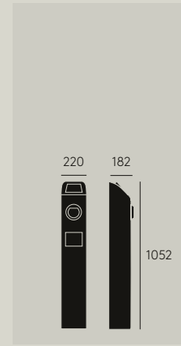












	Lif									Charging station
Model	Lif Top element	Lif Pathway module	Lif Twinspot module	Lif Facade module		Lif Accent element	Lif Gobo	Lif Camera housing element	Lif Audio Speaker module	Lif WiFi housing element	Charging station
Light colour	2200K* 2700K 3000K 4000K	3000K 4000K	3000K 4000K	3000K 4000K		RGB	6500K				
Light output (max.)	7200lm	1800lm	3600lm	4800lm							
CRI	≥80 ≥70 at 2200K	≥80	≥80	≥80							
Light distribution	· asymm. street · asymm. street with pathway* · asymm.* · symm.	asymm. street	· spot · semi spot · medium	vertical beam: · parallel concentrated · medium upward offset · flood upward offset · downwards near · directed downwards	horizontal beam: · symm. wide · symm. narrow · asymm. wide left or right · asymm. narrow left or right		· telephoto lens (150mm) · standard lens (85mm) · wide lens (63mm) · extra wide lens (45mm)				
Recommended heights	3500–8000mm	3500–8000mm	3500–8000mm	3500–8000mm		3500–8000mm	3500–8000mm	3500–8000mm	3500–8000mm	3500–8000mm	· top edge: approx. 1400mm · lower edge: approx. 350mm
Description	· for the illumination of paths and squares · Tritec optics A or S · gold or silver coloured · double or quadruple · die-cast aluminium · PMMA	· for the illumination of paths · free-form lens optics in combination with reflector optics · die-cast aluminium · PMMA	· for spotlighting of objects · Lens optics · die-cast aluminium · safety glass with polished edges · ± 45° tiltable, ± 60° rotatable	· for illumination of facades, vertical structures or horizontal areas · secondary reflector optics · die-cast aluminium · safety glass with polished edges		· for ambient lighting · aluminium housing with opal diffuser · for use in a Lif mounting element	· for projection of images like graphics, logos and text · die-cast aluminium · safety glass	· applicable for dome cameras up to Ø150mm · adapter plates for selected cameras of Axis, Bosch and Eneo available, other models/manufacturers on request · freely rotatable between 360° · galvanized steel housing	· saltwater resistant full range 8Ohm audio speaker · housing die-cast aluminium · suitable for electroacoustic systems (ELS) via 100V transmission technology	· for the reception of on-site WiFi antennas / access point · on-site router is placed in the pole (2nd door necessary) · easy maintenance · aluminum body with black PMMA cover	· AC charging station for electric vehicles · up to 22kW charging power · ISO 15118 · Communication (Plug & Charge) · full compliance with calibration laws · compatible with numerous smart city applications
Connection	as the topmost element on the column	for use in a Lif mounting element	for use in a Lif mounting element	for use in a Lif mounting element		as the topmost element on or within the column	for use in a Lif mounting element	· can be stacked on top of one another and installed as required rotation between 0–360° · as a column termination or below the Top element	for use in a Lif mounting element	· as the topmost element on or within the column · can be used within or as termination of the light column	· for use on Lif columns · available for all Selux poles
Controls	· DALI · Fixed setting · dynamic · CLT · Zhaga interface	· DALI · Fixed setting · dynamic · CLT	· DALI · Fixed setting · dynamic · CLT	· DALI · Fixed setting · dynamic · CLT		DALI	· DALI · Fixed setting · dynamic · CLT				
Labels	· IP65 · Protection Class II, optional I · CE · ENEC 05	· IP65 · Protection Class II, optional I · CE · ENEC 05	· IP65 · Protection Class II, optional I · CE · ENEC 05	· IP65 · Protection Class II, optional I · CE · ENEC 05		· IP65 · Protection Class II, optional I · CE · ENEC 05	· IP54 · CE	CE	· IP65 · CE	· IP65 · CE	· IP54 · CE

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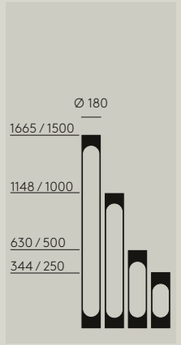
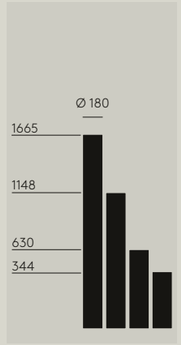
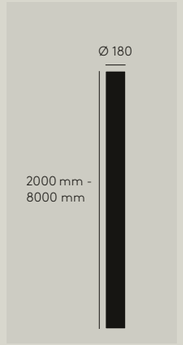
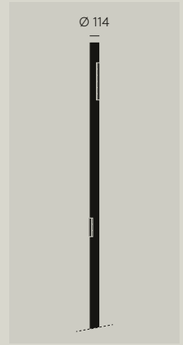
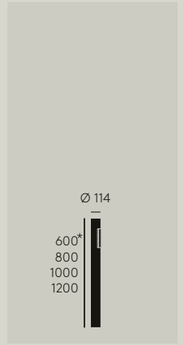
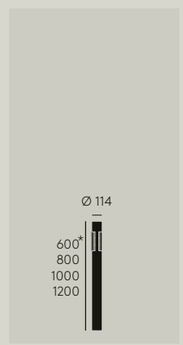


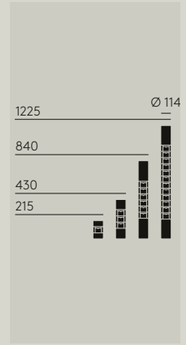


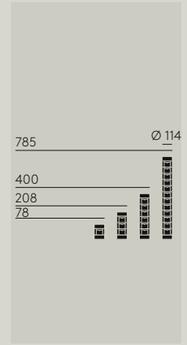


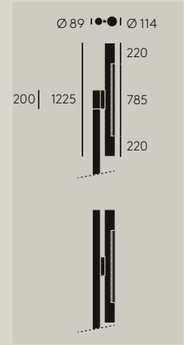








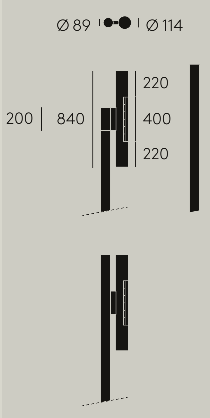


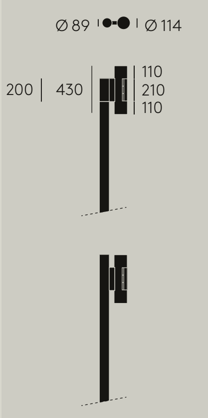


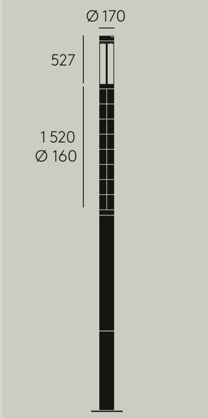
Line

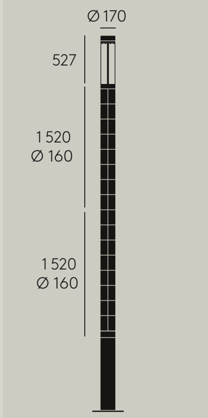
Model	Lif Mounting element	Lif Intermediate element	Pole Base element	Line Light column asymm. street	Line Light column asymm. street + pathway	Line Light column symm.	Line Bollard asymm.	Line Bollard symm.	Line Wall surface	Line Wall recessed	Line Pole top and lateral
Light colour				2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K
Light output (max.)				6000lm	7500lm	12000lm	1500lm	3000lm	6000lm	6000lm	6000lm
CRI				≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K
Light distribution				· asymm. wide · asymm. medium S · asymm. S	· asymm. street + pathway (combination of standard light distributions: asymm. wide, medium S, asymm. S)	· symm. (combination of standard light distributions: asymm. wide, asymm. medium S, asymm. S)	· asymm. wide · asymm. medium S	· symm. (combination of standard light distributions: asymm. wide, asymm. medium S)	· asymm. wide · asymm. medium S · asymm. S	· asymm. wide · asymm. medium S · asymm. S	· asymm. wide · asymm. medium S · asymm. S
Recommended heights				3000–7000mm	3000–7000mm	3000–7000mm	· 800mm · 1000mm · 1200mm	· 800mm · 1000mm · 1200mm			3000–7000mm
Description	· for the mounting of Lif components or as a design element · available in four sizes · aluminium extruded profile with aluminium die-cast terminations · profile cover made of PC (included separately)	· for the mounting of additional hardware · including pole door · available in four sizes · steel	· the columns are manufactured taking in to account individually tailored basic element bodies · this means that even for different configurations equal column heights can be guaranteed · optional with up to 3 doors	· one reflector optic · M12, M6, M3 · gold or silver reflector · optional Comfort optics · steel · clear cover	· two reflector optics · Street: M12, M6, M3 · pathway: M3 · gold or silver reflector · optional Comfort optics · steel · clear cover	· two reflector optics · M12, M6, M3 · gold or silver reflector · optional Comfort optics · steel · clear cover	· one reflector optic · M3, M1 · gold or silver reflector · steel · clear cover	· two reflector optics · M3, M1 · gold or silver reflector · steel · clear cover	· reflector optics · M12, M6, M3, M1 · gold or silver reflector · optional Comfort optics · aluminium · clear cover	· reflector optics · M12, M6, M3, M1 · gold or silver reflector · optional Comfort optics · aluminium · clear cover	· M12 reflector optics · gold or silver reflector · optional Comfort optics · aluminium · clear cover
Connection	can be stacked on top of one another and installed as required rotation between 0°–360°	can be stacked on top of one another and installed as required rotation between 0°–360°	with flange plate	pole with buried base or flange plate	pole with buried base or flange plate	pole with buried base or flange plate					· for pole spigot Ø60mm · for pole spigot Ø76mm
Controls				· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface
Labels	CE	CE	CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE

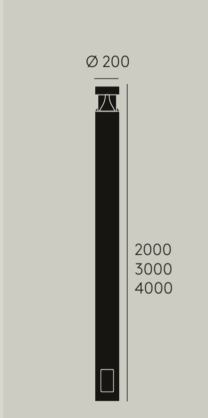
*with M1 module

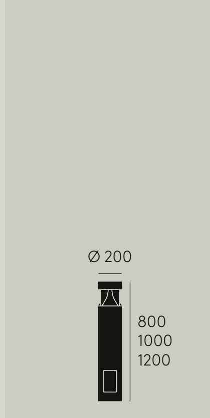


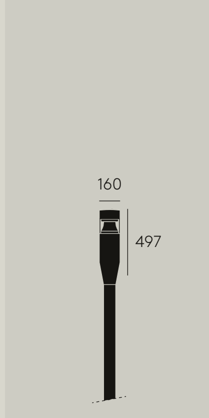


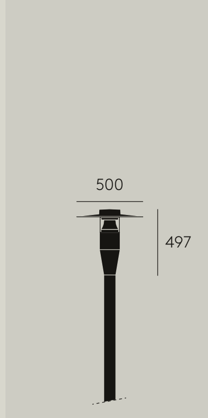


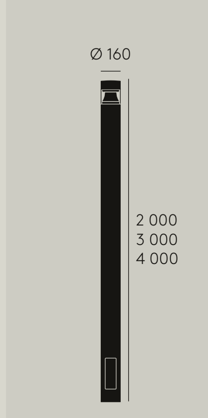


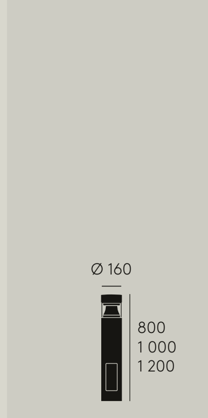


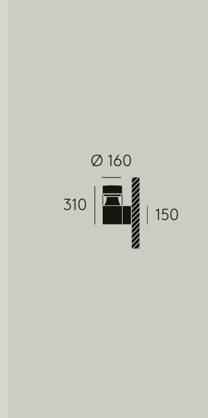






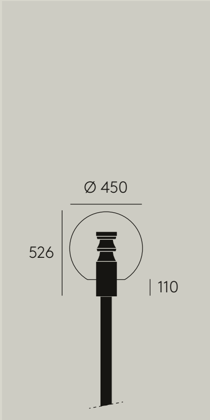


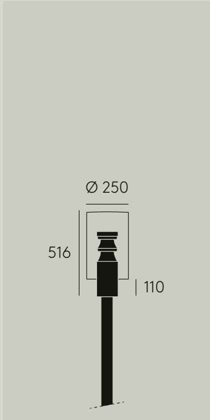


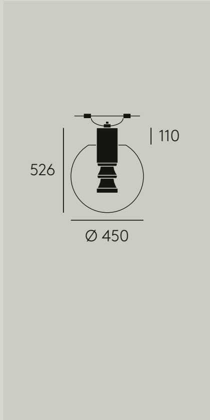


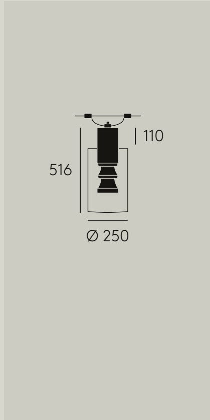
			Solar Lukida		Inula		Elo				
Model	Line M6 Pole top and lateral	Line M3 Pole top and lateral	Lukida 4000 P100-160 Solar-Light column	Lukida 4000 P200-160 Solar-Light column	Inula Light column	Inula Bollard	Elo Pure Pole top	Elo Shape Pole top	Elo Light column	Elo Bollard	Elo Wall
Light colour	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K
Light output (max.)	3000lm	1500lm	3600lm	3600lm	6000lm	2100lm	5400lm – Tritec A 4200lm – Tritec S	5400lm – Tritec A 4200lm – Tritec S	5400lm – Tritec A 4200lm – Tritec S	1500lm – Tritec A 2400lm – Tritec S	2400lm – Tritec A 1500lm – Tritec S
CRI	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 70 ≥ 80 at 2700K	≥ 70 ≥ 80 at 2700K	≥ 80	≥ 80	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K
Light distribution	· asymm. wide · asymm. medium S · asymm. S	· asymm. wide · asymm. medium S · asymm. S	· asymm. street · asymm. street and pathway · symm. · symm. long	· asymm. street · asymm. street and pathway · symm. · symm. long	· asymm. pathway 2Q · symm. 4Q	· asymm. 2Q · asymm. 1Q · symm. 4Q	· asymm. pathway · asymm. street with pathway* · asymm.* · symm.	· asymm. pathway · asymm. street with pathway* · asymm.* · symm.	· asymm. pathway · asymm. street with pathway* · asymm.* · symm.	· asymm. pathway · symm.	asymm.
Recommended heights	3000–6000mm	3000–5000mm	4000–6000mm	5000–8000mm	2000–4000mm	· 800mm · 1000mm · 1200mm	3500–4500mm	3500–4500mm	2000–4000mm	· 800mm · 1000mm · 1200mm	· 800mm · 1000mm · 1200mm
Description	· M6 reflector optics · gold or silver reflector · optional Comfort optics · Aluminium · clear cover	· M3 reflector optics · gold or silver reflector · optional Comfort optics · Aluminium · clear cover	· freeform lens optics · aluminium luminaire head · PMMA moulded body · Solar module, cylindrical, single, Ø160mm, · peak power up to 115W · lead battery integrated in pole, other battery types on request · hybrid feature optional · pole in different lengths	· free-form lens optics · aluminium luminaire head · PMMA moulded body · Solar module, cylindrical, double, Ø160mm, · peak power up to 230W · lead battery integrated in pole, other battery types on request · hybrid feature optional · pole in different lengths	· PMMA freeform-lens optics, single or double · light engine die-cast aluminium · column tube aluminium	· PMMA freeform lens optics · light engine die-cast aluminium · bollard tube aluminium	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser · column tube steel, galvanised	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser · column tube steel, galvanised	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser · steel wall bracket
Connection	· for pole spigot Ø60mm · for pole spigot Ø76mm	· for pole spigot Ø60mm · for pole spigot Ø76mm	pole with buried base or flange plate	pole with buried base or flange plate	pole with buried base or flange plate		· for pole spigot Ø60mm · for pole spigot Ø76mm	· for pole spigot Ø60mm · for pole spigot Ø76mm	pole with buried base or flange plate		
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· integrated microcontroller for efficient use of solar energy · with intelligent dimming profiles · optional motion detector · optional integration in Smart City systems via interface	· integrated microcontroller for efficient use of solar energy · with intelligent dimming profiles · optional motion detector · optional integration in Smart City systems via interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT
Labels	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · CE	· IP65 · CE	· IP66 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE	· IP66 · IK10 · Protection Class II, optional I · CE · ENEC 05	· IP66 · IK10 · Protection Class II, optional I · CE · ENEC 05	· IP66 · IK10 · Protection Class II, optional I · CE · ENEC 05	· IP66 · IK10 · Protection Class II, optional I · CE · ENEC 05	· IP65 · IK10 · Protection Class II, optional I · CE · ENEC 05

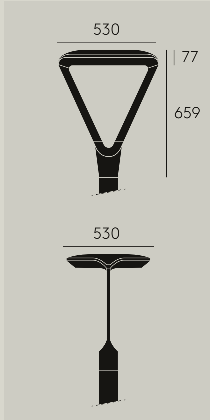
* Tritec S





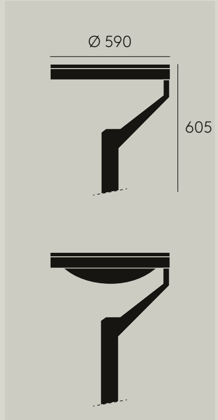


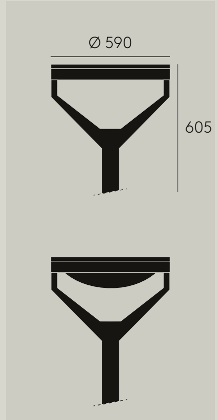


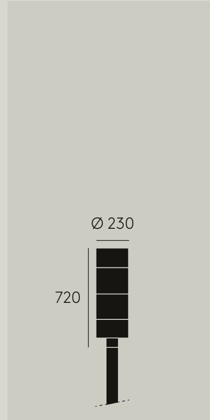


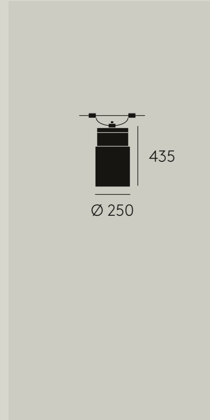
	Aira				Mistella
Model	Aira Sphere Pole top	Aira Cylinder Pole top	Aira Sphere Catenary	Aira Cylinder Catenary	Mistella Pole top
Light colour	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K
Light output (max.)	5400lm – Tritec A 4500lm – Tritec S	5400lm – Tritec A 4500lm – Tritec S	5400lm	5400lm	6000lm
CRI	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80 ≥70 at 2200K	≥80	≥80
Light distribution	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street · asymm. street with pathway · symm.	· asymm. street · asymm. street with pathway · symm.	· asymm. street · asymm. · symm.
Recommended heights	3500–5000mm	3500–5000mm	3500–5000mm	3500–5000mm	3500–5000mm
Description	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PMMA diffuser	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PMMA diffuser	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PMMA diffuser	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PMMA diffuser	· Gen 5 silicone lenses · die-cast aluminium
Connection	· for pole spigot Ø60mm · for pole spigot Ø76mm	· for pole spigot Ø60mm · for pole spigot Ø76mm	catenary suspension with adjustable tilt and orientation	catenary suspension with adjustable tilt and orientation	· for pole spigot Ø60mm · for pole spigot Ø76mm
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface
Labels	· IP65 · IK07 · Protection Class II, optional I · CE	· IP65 · IK08 · Protection Class II, optional I · CE	· IP65 · IK07 · Protection Class II, optional I · CE	· IP65 · IK08 · Protection Class II, optional I · CE	· IP65 · IK09 · Protection Class II, optional I · CE

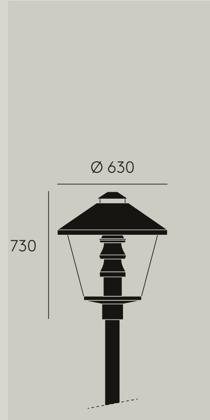
* Tritec S





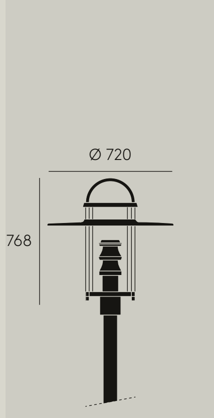


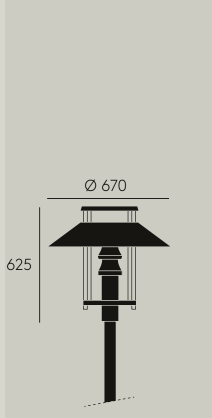


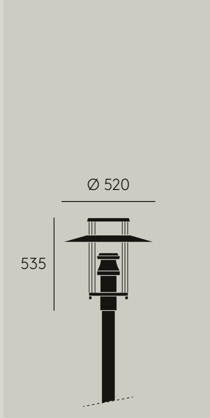


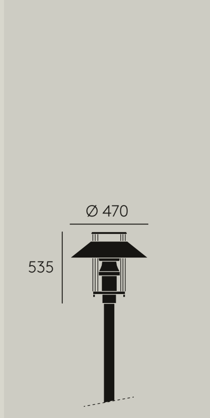
	Astro		Trigo	Lanova		Alpha
Model	Astro 1 Pole top	Astro 2 Pole top	Trigo Pole top	Lanova 230 Pole top	Lanova 250 Catenary	Alpha Pole top
Light colour	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	3000K 4000K	3000K 4000K	2200K* 2700K 3000K 4000K
Light output (max.)	4500lm	4500lm	4500lm	3300lm	3300lm	5400lm – Tritec A 4500lm – Tritec S
CRI	≥80	≥80	≥80	≥80	≥80	≥80 ≥70 at 2200K
Light distribution	· asymm. street · asymm. · symm.	· asymm. street · asymm. · symm.	· asymm. street · asymm. · symm.	· asymm. street · asymm. · symm.	· asymm. street · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.
Recommended heights	3500–5000mm	3500–5000mm	3500–4500mm	4000–5000mm	4000–5000mm	3500–4500mm
Description	· reflector optics · die-cast aluminium · ring or pillow corona · flat glass or clear convex PMMA diffuser	· reflector optics · die-cast aluminium · ring or pillow corona · flat glass or clear convex PMMA diffuser	· reflector optics · die-cast aluminium · PMMA diffuser	· reflector optics · die-cast aluminium · partly satin finished PMMA diffuser	· reflector optics · die-cast aluminium · clear PMMA diffuser with opal cover	· Tritec optics A or S · gold or silver reflector · single or double · die-cast aluminium · clear PC diffuser
Connection	· for pole spigot Ø60mm · for pole spigot Ø76mm	· for pole spigot Ø60mm · for pole spigot Ø76mm	· for pole spigot Ø60mm · for pole spigot Ø76mm	for pole spigot Ø76mm	catenary suspension with adjustable tilt and orienta-tion	for pole spigot Ø90mm
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT
Labels	· IP66 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · IK09 · Protection Class II, optional I · CE

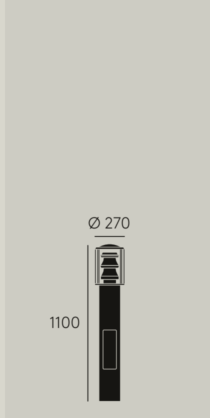
* Tritec S

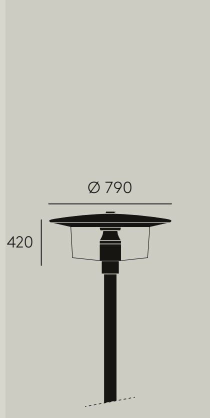


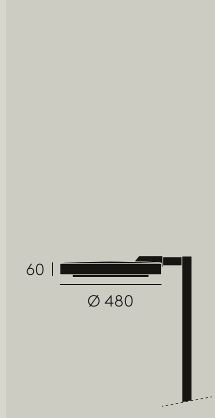


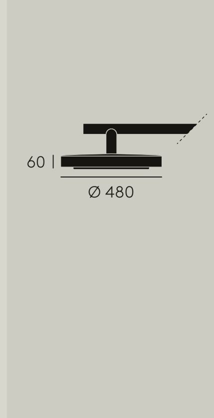


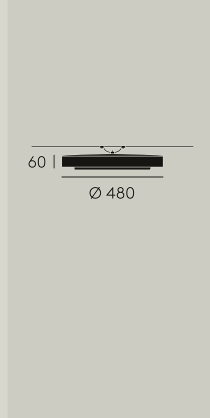


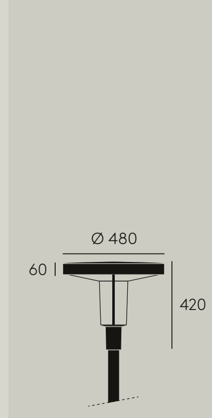












	Saturn					Rondero	Yloo			
Model	Saturn 1 Pole top	Saturn 2 Pole top	Saturn 3 Pole top	Saturn 4 Pole top	Saturn Bollard	Rondero Pole top	Yloo Lateral	Yloo Pendant	Yloo Catenary	Yloo Pole top
Light colour	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K* 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K	2200K 2700K 3000K 4000K
Light output (max.)	5400lm – Tritec A 4500lm – Tritec S	5400lm – Tritec A 4500lm – Tritec S	5400lm – Tritec A 4500lm – Tritec S	5400lm – Tritec A 4500lm – Tritec S	1500lm – Tritec A 2400lm – Tritec S	5400lm – Tritec A 4500lm – Tritec S	8000lm	8000lm	8000lm	6000lm
CRI	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80 ≥ 70 at 2200K	≥ 80	≥ 80	≥ 80	≥ 80
Light distribution	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. pathway · symm.	· asymm. street · asymm. street with pathway* · asymm.* · symm.	· asymm. street narrow · asymm. street standard · asymm. street wide · asymm. Flood	· asymm. street narrow asymm. street standard · asymm. street wide · asymm. Flood	· asymm. street narrow · asymm. street standard · asymm. street wide · asymm. Flood	· asymm. street standard · asymm. street narrow · asymm. · symm.
Recommended heights	3500–4500mm	3500–4500mm	3500–4500mm	3500–4500mm	1100mm	4000–4500mm	4000–10000 mm	4000–10 000mm	4000–10 000mm	3500–5000mm
Description	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· Tritec optics A or S · gold or silver reflector · single or double · aluminium top shade · clear PC diffuser · aluminium fasteners · aluminium cast fitter	· free-form lens optics · die-cast aluminium · safety glass – anti-reflex coated	· free-form lens optics · die-cast aluminium · safety glass – anti-reflex coated	· free-form lens optics · die-cast aluminium · safety glass – anti-reflex coated	· free-form lens optics · die-cast aluminium · safety glass – anti-reflex coated
Connection	for pole spigot Ø90mm	for pole spigot Ø90mm	for pole spigot Ø76mm	for pole spigot Ø76mm		for pole spigot Ø76mm	for bracket spigot Ø60mm	for Yloo pole pendant bracket	catenary suspension with adjustable tilt and orientation	· for pole spigot Ø60mm · for pole spigot Ø76mm
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixwert · HNS · dynamisch · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixwert · HNS · dynamisch · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixwert · HNS · dynamisch · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixwert · HNS · dynamisch · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface
Labels	· IP65 · IK10 · Protection Class II, optional I · CE	· IP65 · IK10 · Protection Class II, optional I · CE	· IP65 · IK10 · Protection Class II, optional I · CE	· IP65 · IK10 · Protection Class II, optional I · CE	· IP54 · IK10 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE	· IP66 · Protection Class II, optional I · CE

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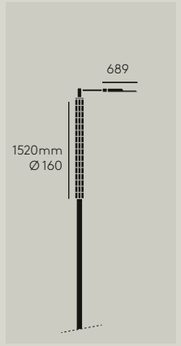
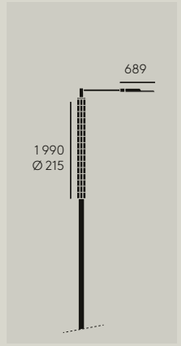
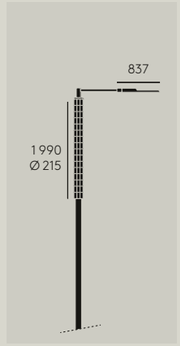
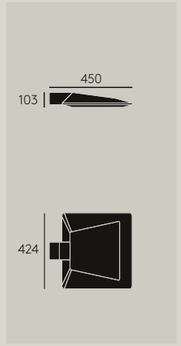
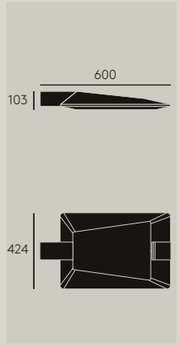


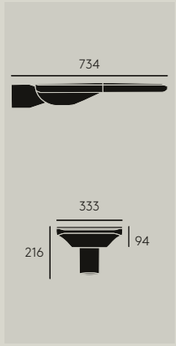


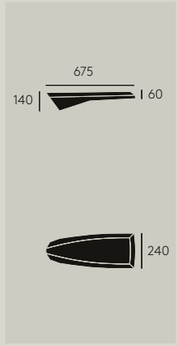


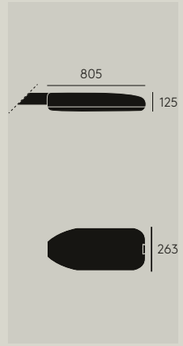




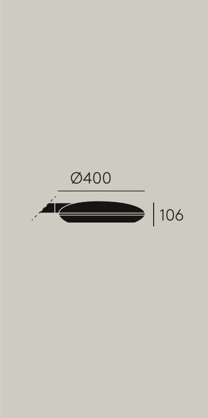
	Solar Anatar			Avanza	
Model	Anatar 4000 P100-160	Anatar 4000 P200-215	Anatar 8000 P200-215	Avanza 450 Lateral	Avanza 600 Lateral
Light colour	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K
Light output (max.)	3700lm	3700lm	7400lm	5100lm	10500lm
CRI	≥ 70 ≥ 80 at 2700K	≥ 70 ≥ 80 at 2700K	≥ 70 ≥ 80 at 2700K	≥ 70 ≥ 80 at 2700K	≥ 70 ≥ 80 at 2700K
Light distribution	· asymm. street · asymm. street with pathway · asymm. street wide with pathway	· asymm. street · asymm. street with pathway · asymm. street wide with pathway	· asymm. street · asymm. street with pathway · asymm. street wide with pathway	· asymm. street · asymm. street Comfort Optic · asymm.	· asymm. street · asymm. street Comfort Optic · asymm. · pedestrian crossing left · pedestrian crossing right
Recommended heights	4000–6000mm	5000–8000mm	5000–8000mm	3500–5000mm	5000–8000mm
Description	· free-form lens optics · aluminium luminaire head · PMMA moulded body · Solar module, cylindrical, single, Ø160mm, peak power up to 115W · lead battery integrated in pole, · other battery types on request · optional hybrid function · pole and brackets in different lengths	· free-form lens optics · aluminium luminaire head · PMMA moulded body · Solar module, cylindrical, single, Ø215mm, peak power up to 230W · lead battery integrated in pole, other battery types on request · optional hybrid function · pole and brackets in different lengths	· free-form lens optics · aluminium luminaire head · PMMA moulded body · Solar module, cylindrical, single, Ø215mm, peak power up to 230W · lead battery integrated in pole, other battery types on request · optional hybrid function · pole and brackets in different lengths	· cross-beam-reflector optics · die-cast aluminium · safety glass	· cross-beam-reflector optics · die-cast aluminium · safety glass
Connection	pole with buried base or flange plate	pole with buried base or flange plate	pole with buried base or flange plate	· for bracket spigot Ø60mm · with pole top adapter: for pole spigot Ø60mm for pole spigot Ø76mm	· for bracket spigot Ø60mm · with pole top adapter: for pole spigot Ø60mm for pole spigot Ø76mm
Controls	· integrated microcontroller for efficient use of solar energy · with intelligent dimming profiles · optional motion detector · optional integration in Smart City systems via interface	· integrated microcontroller for efficient use of solar energy · with intelligent dimming profiles · optional motion detector · optional integration in Smart City systems via interface	· integrated microcontroller for efficient use of solar energy · with intelligent dimming profiles · optional motion detector · optional integration in Smart City systems via interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface
Labels	· IP65 · CE	· IP65 · CE	· IP65 · CE	· IP66 · IK10 · Protection Class II, optional I · CE	· IP66 · IK10 · Protection Class II, optional I · CE

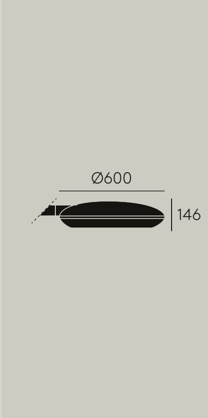


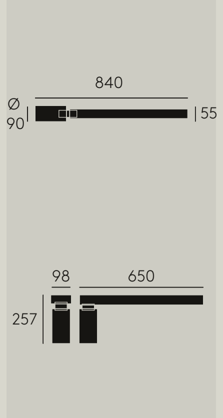


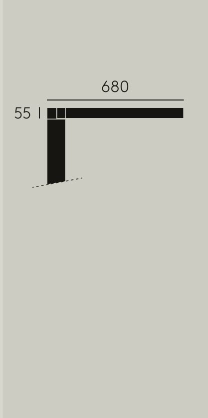


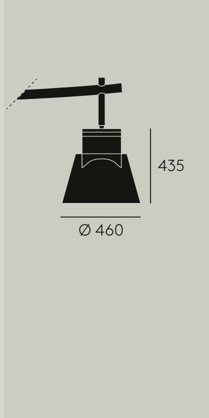
	Tal	Tessia		Jessica	
Model	Tal Pole top and lateral	Tessia 550 Pole top and lateral	Tessia 650 Pole top and lateral	Jessica 600 Lateral	Jessica 800 Lateral
Light colour	2700K 3000K 4000K	2700K 3000K 4000K	2700K 3000K 4000K	3000K 4000K	3000K 4000K
Light output (max.)	18000lm	9300lm	15200lm	6800lm	10200lm
CRI	≥ 70 ≥ 80 at 2700K	≥ 70	≥ 70	≥ 70	≥ 70
Light distribution	· street narrow regular · street narrow long · street medium regular · street medium long · street wide regular · street wide long · street wide upsweep pole · asymm. flood · pedestrian crossing left · pedestrian crossing right	· asymm. street narrow · asymm. street Standard · asymm. street breit · asymm. Flood max · pedestrian crossing left · pedestrian crossing right	· asymm. street narrow · asymm. street Standard · asymm. street breit · asymm. Flood max · pedestrian crossing left · pedestrian crossing right	asymm. street	asymm. street
Recommended heights	4000–12000mm	4000–10000mm	6000–14000mm	6000–10000mm	6000–8000mm
Description	· free-form lens optics · die-cast aluminium · safety glass	· free-form lens optics · die-cast aluminium · safety glass	· free-form lens optics · die-cast aluminium · safety glass	· free-form lens optics · die-cast aluminium · safety glass	· free-form lens optics · die-cast aluminium · prismatic glass
Connection	· including universal pole flange for lateral and pole-top attachment for spigot 60 and 76mm · pole flange adjustable from 15° to -5° in 2.5° increments	· including universal pole flange for lateral and pole-top attachment for spigot 60 and 76mm · pole flange adjustable from 15° to -5° in 2.5° increments	· including universal pole flange for lateral and pole-top attachment for spigot 60 and 76mm · pole flange adjustable from 15° to -5° in 2.5° increments	for bracket spigot Ø60mm	for bracket spigot Ø42mm
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT · prepared and ready for a wide range of Smart City applications · Zhaga interface	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · CLT
Labels	· IP66 · IK09 · Protection Class II, optional I · CE · ENEC	· IP66 · IK08 · Protection Class II, optional I · CE	· IP66 · IK08 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE · ENEC 05

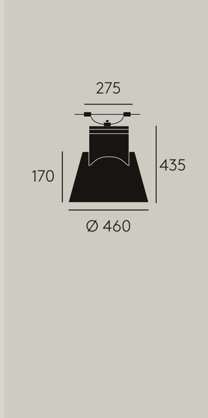


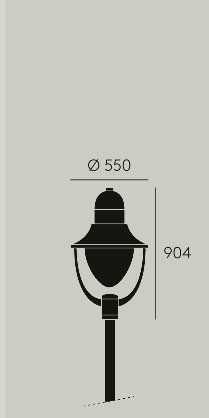


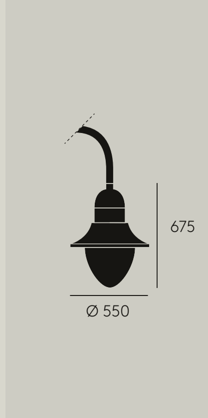


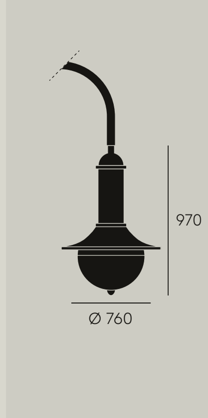










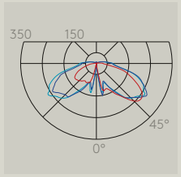


	Discera		Arca		Sombreo		Beta		Trocadero
Model	Discera 400 Lateral	Discera 600 Lateral	Arca Flex Pole top and lateral	Arca Linear Light column	Sombreo 230 Pole pendant	Sombreo 230 Catenary	Beta Lantern	Beta Pendant	Trocadero 760 Pendant
Light colour	3000K 4000K	3000K 4000K	3000K 4500K	3000K 4500K	3000K 4000K	3000K 4000K	3000K 4000K	3000K 4000K	2700K 3000K 4000K
Light output (max.)	5100lm	10 000lm	2900lm	2900lm	3300lm	3300lm	7200lm	7200lm	10 200lm
CRI	≥ 70	≥ 70	≥ 80	≥ 80	≥ 80	≥ 80	≥ 70	≥ 70	≥ 80
Light distribution	asymm. street	asymm. street	asymm. street	asymm. street	· asymm. street · symm.	· asymm. street · symm.	asymm. street	asymm. street	· asymm. street · asymm. street wide · asymm.
Recommended heights	3500–5000mm	6000–8000mm	3000–4500mm	4500mm	4000–5000mm	4000–5000mm	3500–4500mm	4000–5000mm	6000–8000mm
Description	· free-form lens optics · die-cast aluminium · flat safety glass	· free-form lens optics · die-cast aluminium · flat safety glass	· prismatic glass · universal adapter for lateral mounting, pole-top or upswept pole assembly · adjustable ± 20° in 5° increments	· prismatic glass · die-cast aluminium · single or double	· reflector optics · aluminium casting · clear PMMA diffuser	· reflector optics · aluminium casting · clear PMMA diffuser	· free-form lens optics · aluminium top shade · pearl PC diffuser · die-cast aluminium brackets	· free-form lens optics · aluminium top shade · pearl PC diffuser · die-cast aluminium brackets	· Gen 5 silicone lenses · aluminium housing · aluminium top shade · pearl PC diffuser
Connection	for bracket spigot Ø 42mm	for bracket spigot Ø 60mm	· for Ø 60mm and Ø 76mm pole top or lateral mounting · for Ø 42mm and Ø 60mm upswept pole	Lateral luminaire including pole	for Sombreo poles and brackets	catenary suspension with adjustable tilt and orientation	for pole spigot Ø 76mm	for curved tubular steel arms with 1" metric luminaire connection	for curved tubular steel arm with 1" metric thread
Controls	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT	· DALI · Fixed setting · HNS · dynamic · AmpDim · CLT
Labels	· IP66 · IK09/IK10 · Protection Class II, optional I · CE	· IP66 · IK09/IK10 · Protection Class II, optional I · CE	· IP 66 · IK08 · Protection Class II, optional I · CE	· IP66 · IK08 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE	· IP65 · IK10 · Protection Class II, optional I · CE	· IP65 · IK10 · Protection Class II, optional I · CE	· IP65 · Protection Class II, optional I · CE

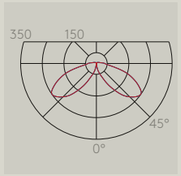
Polar diagrams

Tritec Optics

Tritec A



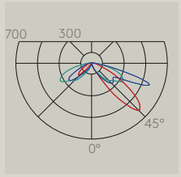
asymm. street



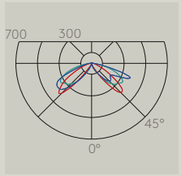
symm.

asymm.

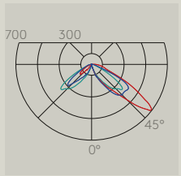
Tritec S



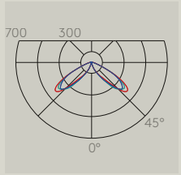
asymm. street



asymm. street with pathway



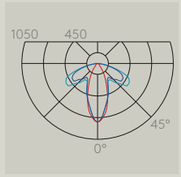
asymm.



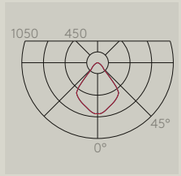
symm.

Olivio

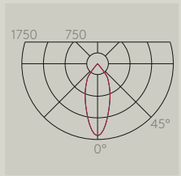
Olivio Grande



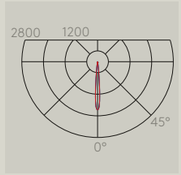
asymm. street



wide

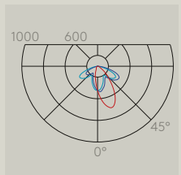


medium



narrow

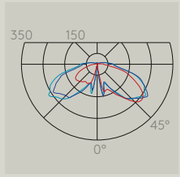
Olivio Bollard



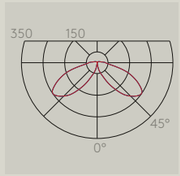
asymm. pathway

Lif

Top element with Tritec A

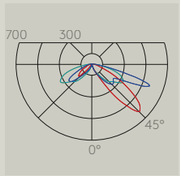


asymm. street

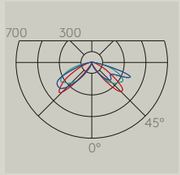


symm.

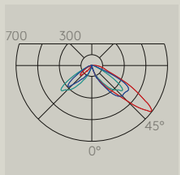
Tritec S



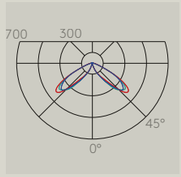
asymm. street



asymm. street with pathway

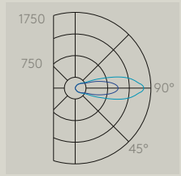


asymm.

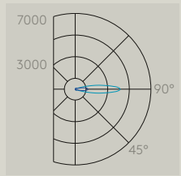


symm.

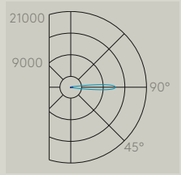
Lif Twinspot module



medium

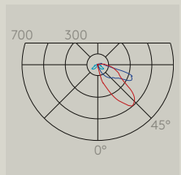


semi spot



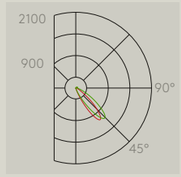
spot

Lif Pathway module

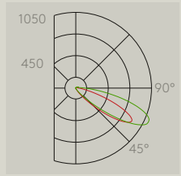


asymm. street

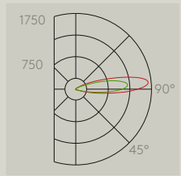
Lif Facade module



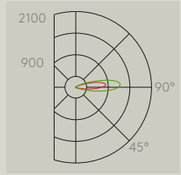
vertical downwards near, horizontal symm. wide beam



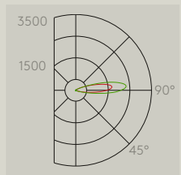
vertical directed downwards, horizontal symm. wide beam



vertical parallel concentrated, horizontal symm. narrow beam



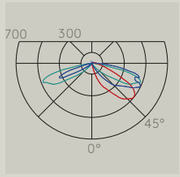
vertical parallel concentrated, horizontal symm. wide beam



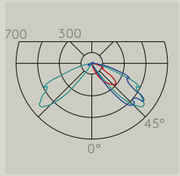
vertical parallel concentrated, horizontal asymm. narrow beam left

Line

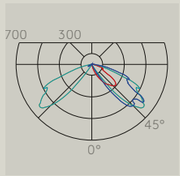
Line Light column



asymm. wide

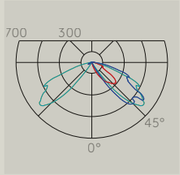


asymm. medium S



asymm. S

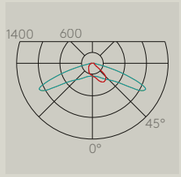
Line Bollard



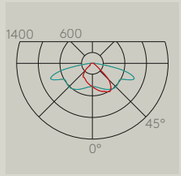
asymm. pathway S

asymm. 4Q

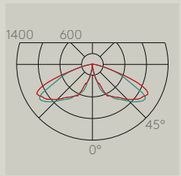
Lukida



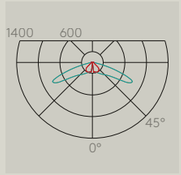
asymm. street



asymm. street with pathway



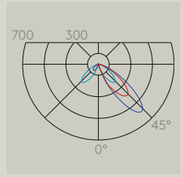
symm.



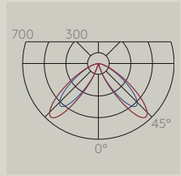
symm. long

Inula

Inula Light column

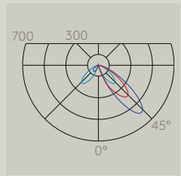


asymm. pathway 2Q

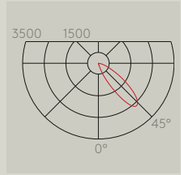


symm. 4Q

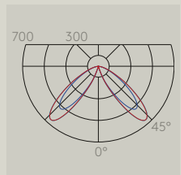
Inula Bollard



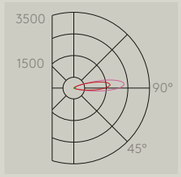
asymm. pathway 2Q



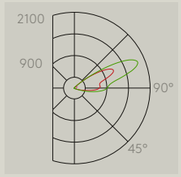
asymm. 1Q



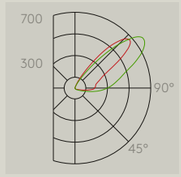
symm. 4Q



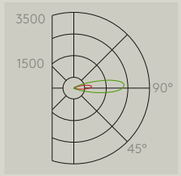
vertical parallel concentrated, horizontal asymm. narrow beam right



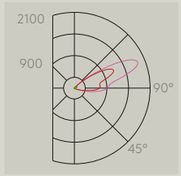
vertical medium upward offset, horizontal asymm. narrow beam left



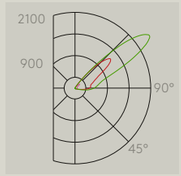
vertical flood upward offset, horizontal symm. wide beam



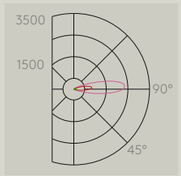
vertical parallel horizontal asymm. wide beam left



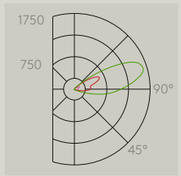
vertical medium upward offset, horizontal asymm. narrow beam right



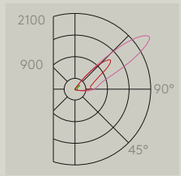
vertical flood upward offset, horizontal asymm. narrow beam left



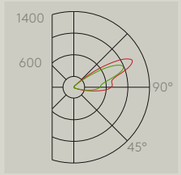
vertical parallel concentrated, horizontal asymm. wide beam right



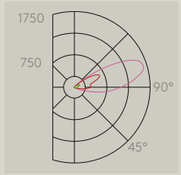
vertical medium upward offset, horizontal asymm. wide beam left



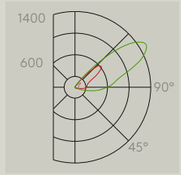
vertical flood upward offset, horizontal asymm. narrow beam right



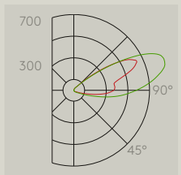
vertical medium upward offset, horizontal symm. narrow beam



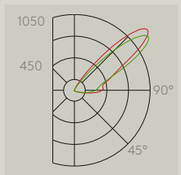
vertical medium upward offset, horizontal asymm. wide beam right



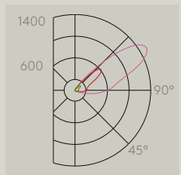
vertical flood upward offset, horizontal asymm. wide beam left



vertical medium upward offset, horizontal symm. wide beam



vertical flood upward offset, horizontal symm. narrow beam

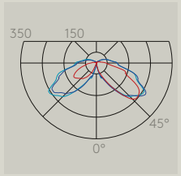


vertical flood upward offset, horizontal asymm. wide beam right

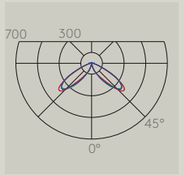
C60 - C240 C15 - C195 C120 - C300 C0 - C180 C90 - C270

Elo

Elo Pole top with Tritec A

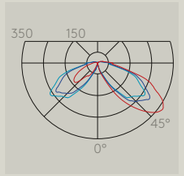


asymm. street

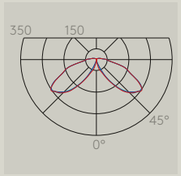


symm.

Elo Wall

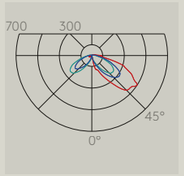


asymm.



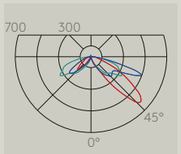
symm.

Bollards with Tritec A

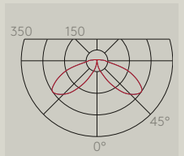


asymm. pathway

Pole top with Tritec S

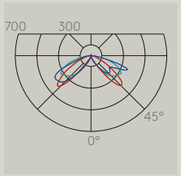


asymm. street

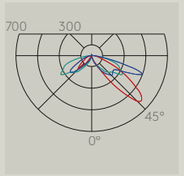


symm.

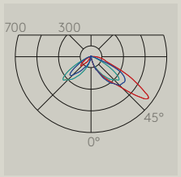
Bollard with Tritec S



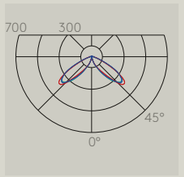
asymm. street with pathway



asymm. pathway



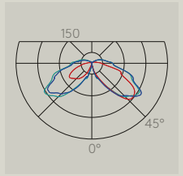
asymm.



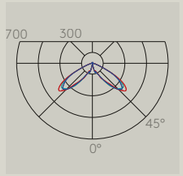
symm.

Aira

Aira Pole top with Tritec A

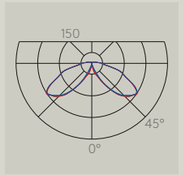


asymm. street

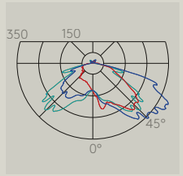


symm.

Aira Catenary with Tritec A

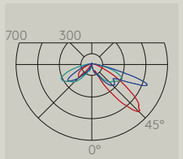


symm.

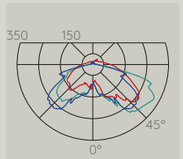


asymm. street

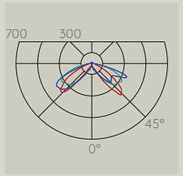
Aira Pole top with Tritec S



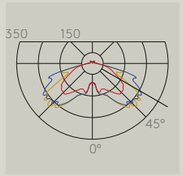
asymm. street



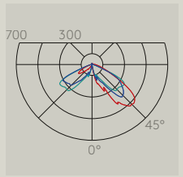
asymm. street with pathway



asymm. street with pathway



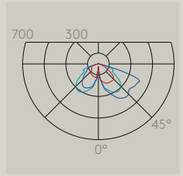
symm.



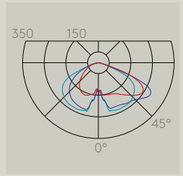
asymm.

Mistella

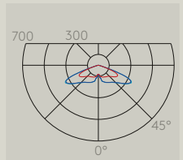
Mistella



asymm. street



asymm.

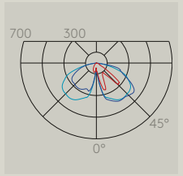


symm.

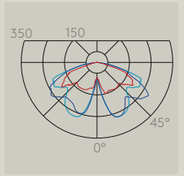
C60 - C240 C15 - C195 C120 - C300 C0 - C180 C90 - C270

Astro

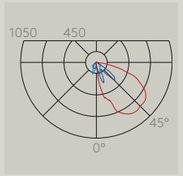
Astro 1 Flat glass



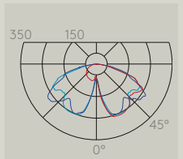
asymm. street



symm.

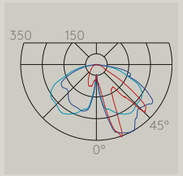


asymm.

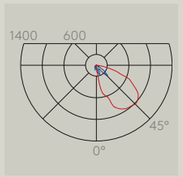


symm.

Astro 2 Flat glass



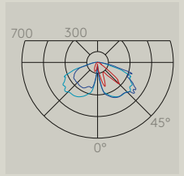
asymm. street



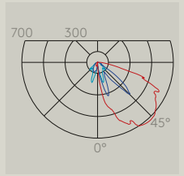
asymm.

Trigo

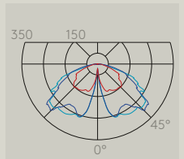
Trigo



asymm. street



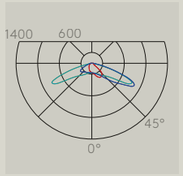
asymm.



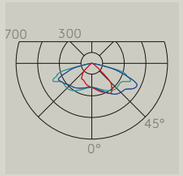
symm.

Anatar

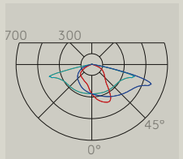
Anatar



asymm. street



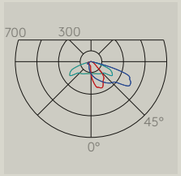
asymm. street with pathway



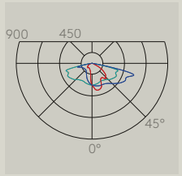
asymm. street wide with pathway

Yloo

Yloo Pole

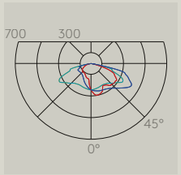


asymm. street narrow – R0

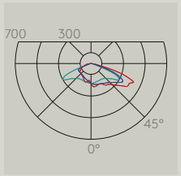


asymm. street
standard – R1

asymm. street wide – R2

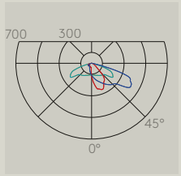


asymm. street wide – R3

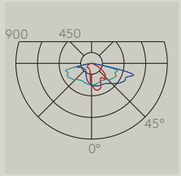


asymm. flood max – AS2

Yloo Lateral

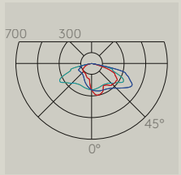


asymm. street narrow – R0

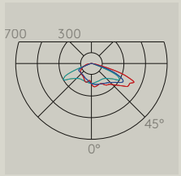


asymm. street
standard – R1

asymm. street wide – R2

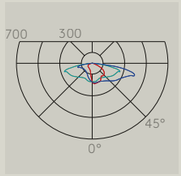


asymm. street wide – R3

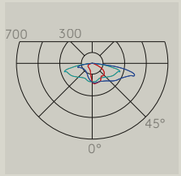


asymm. flood max – AS2

Yloo Pole top

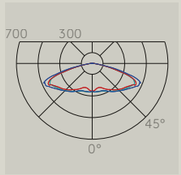


asymm. street narrow – R0



asymm. street wide – R2

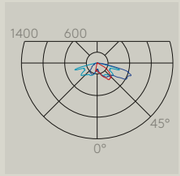
asymm.



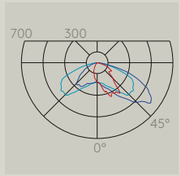
symm.

Avanza

Avanza 600

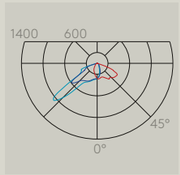


asymm. street

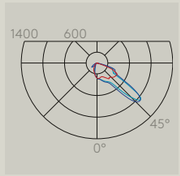


asymm. street
Comfort Optics

asymm.

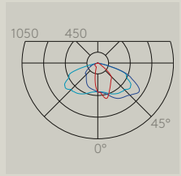


pedestrian crossing left

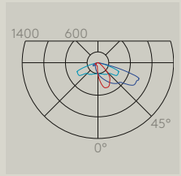


pedestrian crossing right

Tal

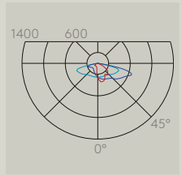


Street narrow regular

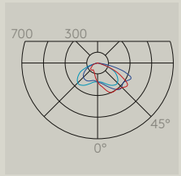


street narrow long

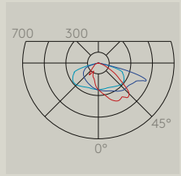
Street medium regular



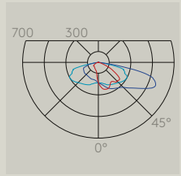
Street medium long



Street medium regular

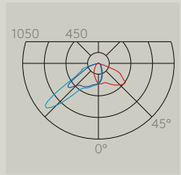


street wide long

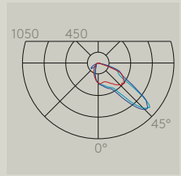


street wide upsweep pole

asymm. flood



pedestrian crossing left

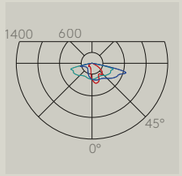


pedestrian crossing right

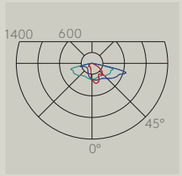
C60 - C240 C15 - C195 C120 - C300 C0 - C180 C90 - C270

Tessia

Tessia 650

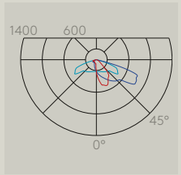


asymm. street narrow – R0

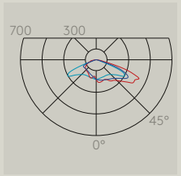


asymm. street
standard – R1

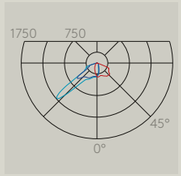
asymm. street wide – R2



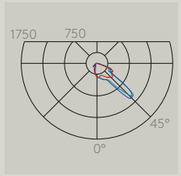
asymm.street wide – R3



asymm. flood max – AS2



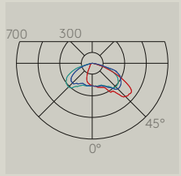
pedestrian crossing left



pedestrian crossing right

Arca

Arca Flex and Linear



asymm. street

Application areas

Product overview according to application

Product family	Building surface → 413	Lighting close to buildings → 415	Facade illumination → 417	Public areas → 419	Residential areas → 421	Public roads → 423
Olivio	●	●	●	●	●	○
Lif	○	○	●	●	●	○
Line	●	●	○	●	●	●
Solar Lukida	○	○	○	●	●	○
Inula	○	●	○	●	●	○
Elo	●	●	○	●	●	○
Aira	○	○	○	●	●	○
Mistella	○	○	○	●	●	○
Astro	○	○	○	●	●	○
Trigo	○	○	○	●	●	○
Solar Anatar	○	○	○	●	●	●
Yloo	○	○	○	●	●	●
Avanza	●	○	○	●	●	●
Arca	●	○	○	●	●	○
Tal	●	○	○	●	●	●

Product family	Building surface → 413	Lighting close to buildings → 415	Facade illumination → 417	Public areas → 419	Residential areas → 421	Public roads → 423
Tessia	●	○	○	●	●	●
Jessica	○	○	○	○	●	●
Discera	●	○	○	○	●	●
Lanova	○	○	○	●	●	○
Sombreo	●	○	○	●	●	●
Alpha	○	○	○	●	●	○
Saturn	○	○	○	●	●	○
Rondero	○	○	○	●	●	○
Beta	○	○	○	●	●	●
Trocadero	○	○	○	●	●	●
Urbi 2	○	○	○	○	●	●
Urbi 1/3	○	○	○	●	●	●
Schupmann	○	○	○	●	●	●
Hardenberg	○	○	○	●	●	●
Witzleben	○	○	○	●	●	●

1

2

3

4

Building surface

Line
Surface-mounted/
recessed luminaires
→ 144
← Figure 1

Olivio
Surface-mounted
→ 84
← Figure 2, 3, 4

Elo
Surface-mounted
→ 200

Avanza
Surface-mounted
→ 286

Tal
Surface-mounted
→ 298

Tessia
Surface-mounted
→ 308

Arca
Surface-mounted
→ 318

Discera
Surface-mounted
→ 343

Sombreo
Surface-mounted
→ 341

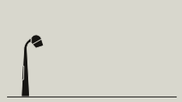
Lighting close to buildings

1

2

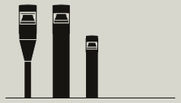
3

4

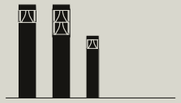


Olivio
Bollard
→ 84
← Figure 4

Line
Bollard and
Light column
→ 144
← Figure 3



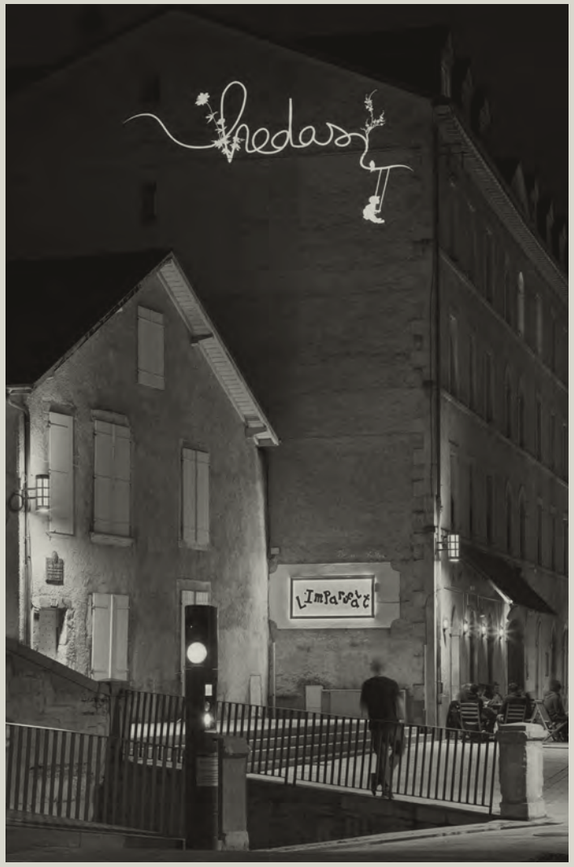
Elo
Bollard and
Light column
→ 200
← Figure 2



Inula
Bollard and
Light column
→ 192
← Figure 1

1

2



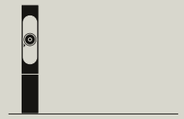
3

4

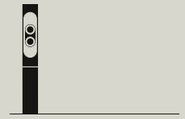
Facade illumination

Olivio Spot
→ 84

Olivio Gobo
→ 84
← Figure 2, 3, 4



Lif Gobo
→ 114
← Figure 1



Lif Twinspot
→ 114

1

3

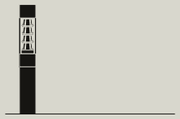
4

2

5

Public areas

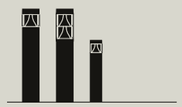
Olivio
→ 84



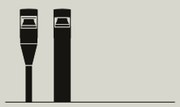
Lif
→ 114
← Figure 4

Line
→ 144
← Figure 3

Solar Lukida
→ 182

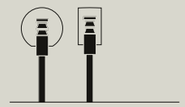


Inula
→ 192
← Figure 2



Elo
→ 200
← Figure 5

Lanova
→ 340

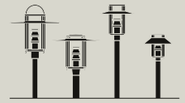


Aira
→ 216

Mistella
→ 236

Astro
→ 246
← Figure 1

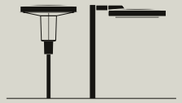
Trigo
→ 256



Saturn
→ 334

Alpha
→ 336

Rondero
→ 337

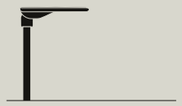


Yloo
→ 274

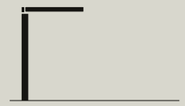
Solar Anatar
→ 264

Avanza
→ 286

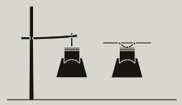
Tessia
→ 308



Tal
→ 298



Arca
→ 318



Sombreo
→ 341

Beta
→ 338

Trocadero
→ 339

Urbi 1/3
→ 456

Hardenberg
→ 458

Witzleben
→ 458

Schupmann
→ 458

1

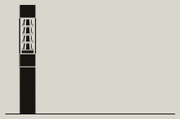
2

3

4

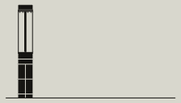
Residential areas

Olivio
→ 84

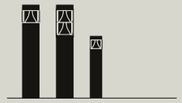


Lif
→ 114
← Figure 4

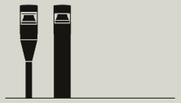
Line
→ 144
← Figure 2



Solar Lukida
→ 182

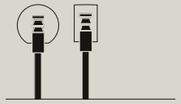


Inula
→ 192
← Figure 1



Elo
→ 200
← Figure 3

Lanova
→ 340

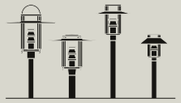


Aira
→ 216

Mistella
→ 236

Astro
→ 246
← Figure 4

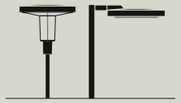
Trigo
→ 256



Saturn
→ 334

Alpha
→ 336

Rondero
→ 337

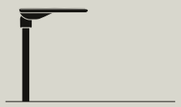


Yloo
→ 274

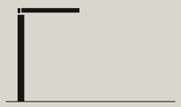
Solar Anatar
→ 264

Avanza
→ 286
← Figure 2

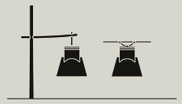
Tessia
→ 308



Tal
→ 308



Arca
→ 318



Sombreo
→ 341

Beta
→ 338

Trocadero
→ 339

Urbi 1/3
→ 345

1

2

3

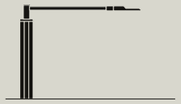
4

5

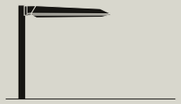
Public roads

Line
→ 144
← Figure 5

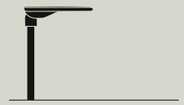
Yloo
→ 274



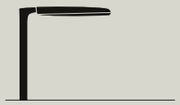
Anatar Solar
→ 445



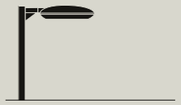
Avanza
→ 286
← Figure 1



Tal
→ 298
← Figure 4



Jessica
→ 342
← Figure 4



Discera
→ 343
← Figure 2

Sombreo
→ 341

Beta
→ 338

Trocadero
→ 339

Urbi 2
→ 454

Urbi 1
→ 456

Urbi 3
→ 457

Schupmann
→ 458

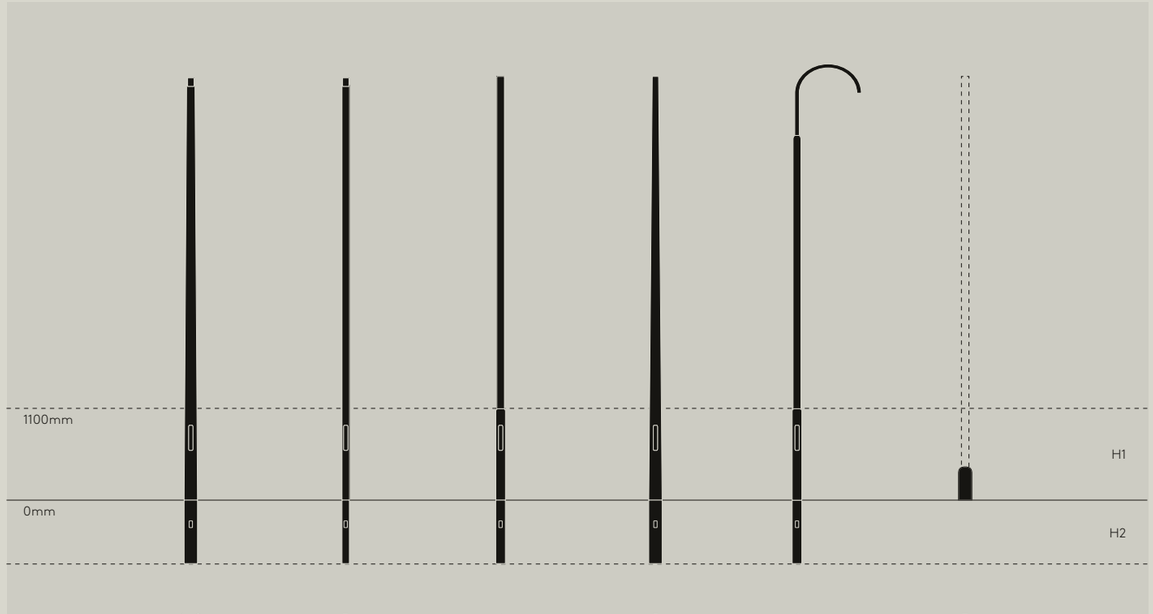
Hardenberg
→ 458

Witzleben
→ 458

Poles + Brackets

Standard poles

All poles are manufactured with an integrated buried base made from hot galvanised steel and with a cable feed that includes edge cut protection and a pole opening with door.



Design poles

1 Conical pole Ø101mm, spigot Ø76mm scattered welding seam
H1: 4500mm H2: 800mm
H1: 6000mm H2: 1000mm
H1: 8000mm H2: 1200mm

2 Conical pole Ø90mm, spigot Ø76mm scattered welding seam
H1: 4500mm H2: 800mm

3 Cylindrical pole Ø101mm, spigot Ø76mm scattered welding seam
H1: 4500mm H2: 800mm

Stepped poles with a swaged joint

4 Stepped cylindrical pole with a swaged joint Ø76/114mm
H1: 4000mm H2: 600mm
H1: 4500mm H2: 600mm
H1: 5000mm H2: 600mm
H1: 6000mm H2: 800mm

Conical poles

5 Conical pole, spigot Ø76mm
H1: 4000mm H2: 800mm
H1: 4500mm H2: 800mm
H1: 5000mm H2: 800mm
H1: 6000mm H2: 1000mm
H1: 8000mm H2: 1200mm
H1: 10000mm H2: 1500mm

Curved arm pole

6 Curved arm pole Ø48/76/114mm
spigot 1"
H1: 4750mm H2: 800mm
H1: 5250mm H2: 800mm

Accessories

7 Base cover to resist corrosion
made from steel or reinforced plastic

Set of anti-sink plates

Second pole opening
including edge cut protection

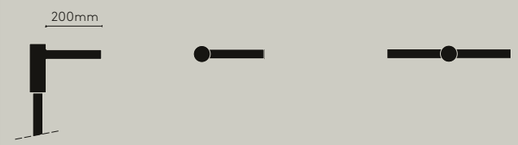
IP54 fuse box
IP54 · 2 × 5 × 16mm² · for loop in-and-out wiring

Powder coating
Selux graphite or special finish

Brackets

All brackets are made from hot galvanised steel and powder coated Selux graphite or special finish. Two lengths of brackets are available.

Short brackets



	single	double 180°		
Spigot Ø (mm)	**60**	**60**	**76**	**76**
Pole top Ø (mm)	**60**	**42**	**60**	**42**

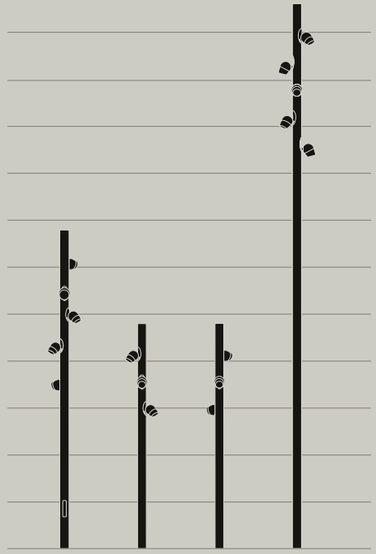
Long brackets

	single	double 180°	double 90°	triple	quadruple
Spigot Ø (mm)	**76**	**76**			
Pole top Ø (mm)	**60**	**42**			

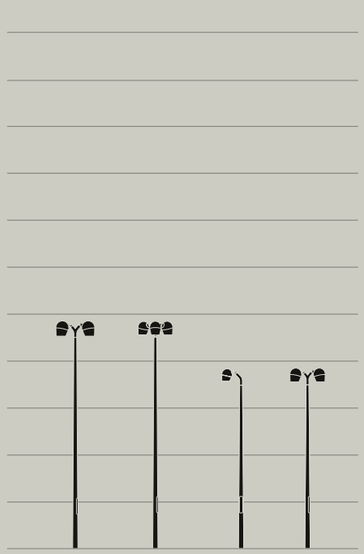
Olivio poles

Sistema

Floracion



Candelabra



Olivio Sistema pole – steel

conical pole made from hot galvanised steel, powder coated, IP54 fuse box for on-site assembly, flush-mounted pole door with door lock

Height: 5000–12 000mm
Colour: Selux graphite or special finish
Mounting: screwed on a concrete foundation or buried base

Olivio Sistema pole – wood

made from pine wood according to DIN EN 14080, conical pole, steel pole base, powder coated, screwed on a concrete foundation or buried base for assembly, IP54 fuse box for on-site assembly

Height: 5000–12 000mm
Colour: · six different wood colours
· seven different colours
(plint/end cap/inlay/luminaire)

Olivio Floracion pole – steel

Cylindrical pole made from hot galvanised steel, powder coated, IP54 fuse box for on-site assembly, flush-mounted pole door with door lock

with mounting plate
Height: 5000–12 000mm
Diameter: Ø 219mm
Colour: Selux graphite or special finish
Inlay colour: matte white or otherwise specified
Mounting: screwed on a concrete foundation or buried base

Olivio Floracion pole – wood

made from pine wood according to DIN EN 14080, conical or cylindrical, steel pole base, powder coated, screwed on a concrete foundation or buried base for assembly

Height: cylindcrical 5000–7000mm
conical 6000–12 000mm
Diameter: cylindcrical 220mm
Colour: · six different wood colours
· seven different colours
(plint/end cap/inlay/luminaire)

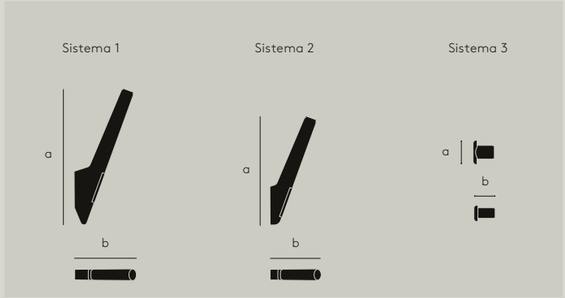
Olivio Candelabra pole – steel

conical pole made from hot galvanised steel, powder coated, IP54 fuse box for on-site assembly, flush-mounted pole door with door lock

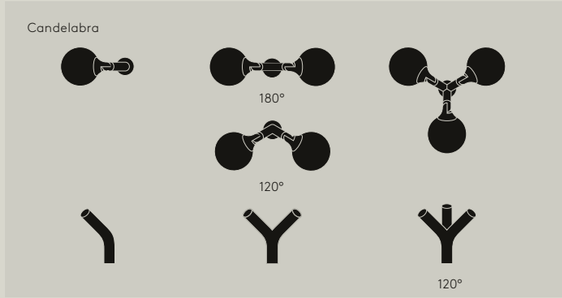
Height: 3500 or 4500mm
Colour: Selux graphite or special finish
Mounting: screwed on a concrete foundation or buried base

Olivio brackets

Pole brackets

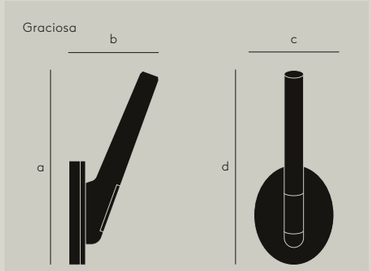


	a	b
Sistema 1	629mm	275mm
Sistema 2	507mm	214mm
Sistema 3	115mm 115mm	65mm (Piccolo) 80mm (Grande, Medio)



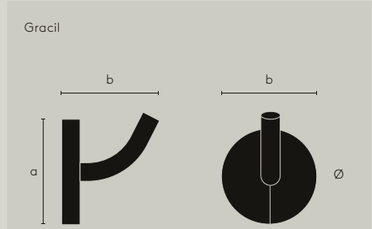
Pole and bracket are supplied as one unit.

Wall brackets



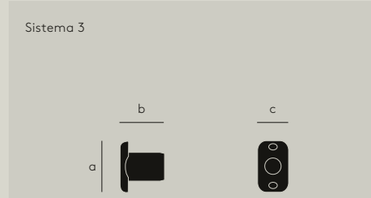
Die-cast aluminium

Grande & Medio	a: 565mm c: 240mm	b: 263mm d: 300mm



Die-cast aluminium

Grande	a: 283mm, b: 255mm, Ø 271mm		
Medio	a: 57mm, b: 255mm, Ø 218mm		
Piccolo	a: 151mm, b: 197mm, Ø 92mm		



Die-cast aluminium

Grande & Medio	a: 115mm	b: 80mm	c: 60mm
Piccolo	a: 115mm	b: 65mm	c: 60mm

Family overview

Family

Olivio

Sistema

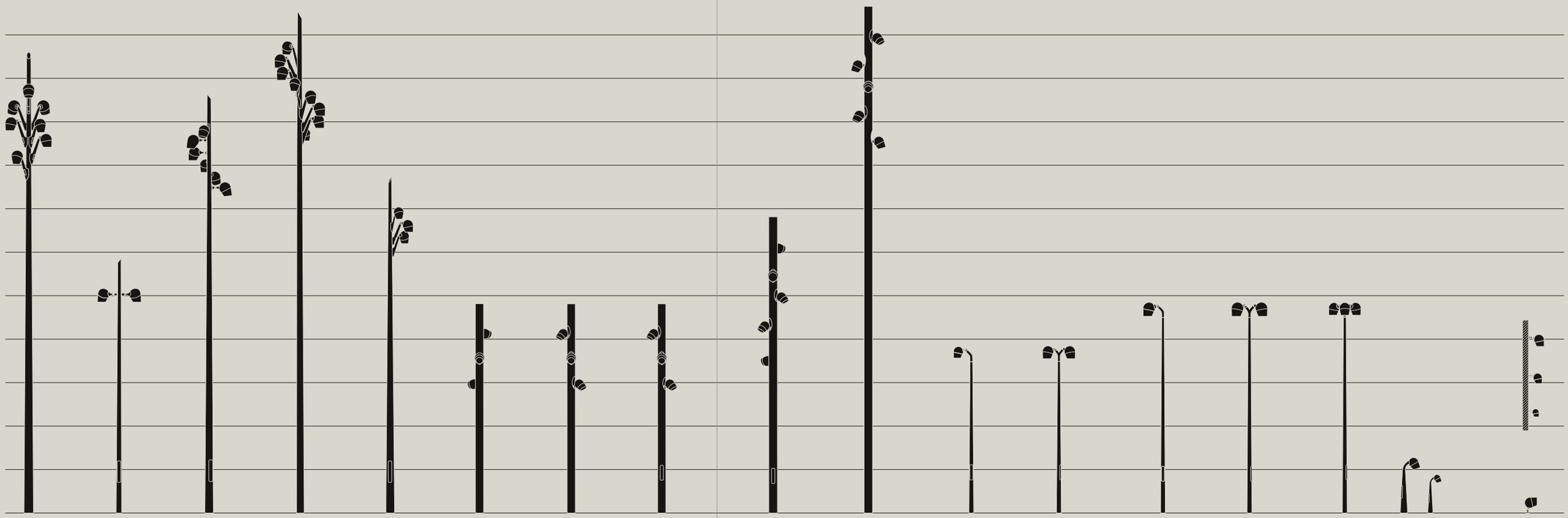
Floracion

Candelabra

Bollards

Universal

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m



Family

Lif

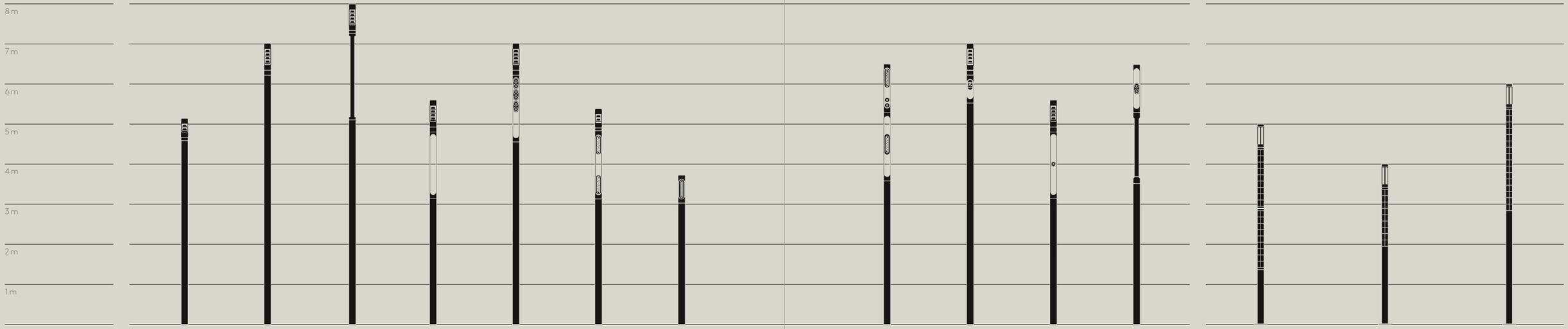
Multifunctional light column for façade, path,
square or accent lighting

Solar Lukida

Lukida 4000
P200-160

Lukida 4000
P100-160

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m



Family

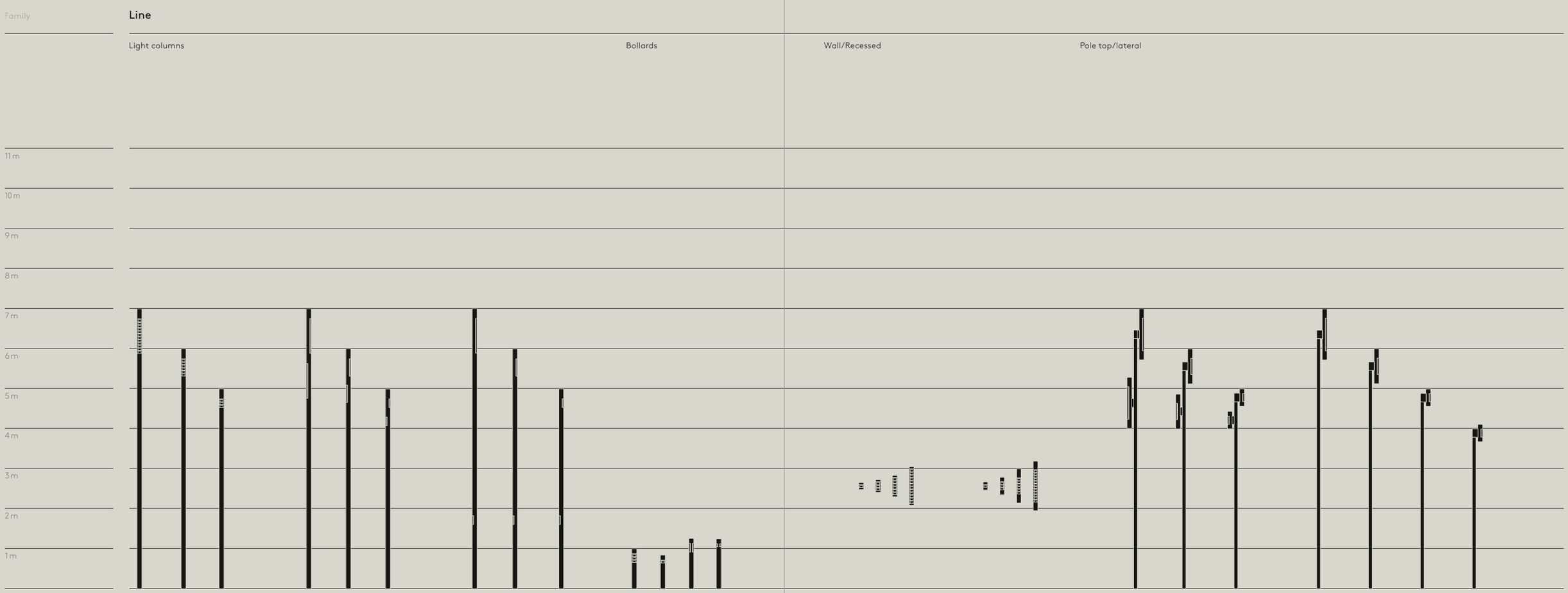
Line

Light columns

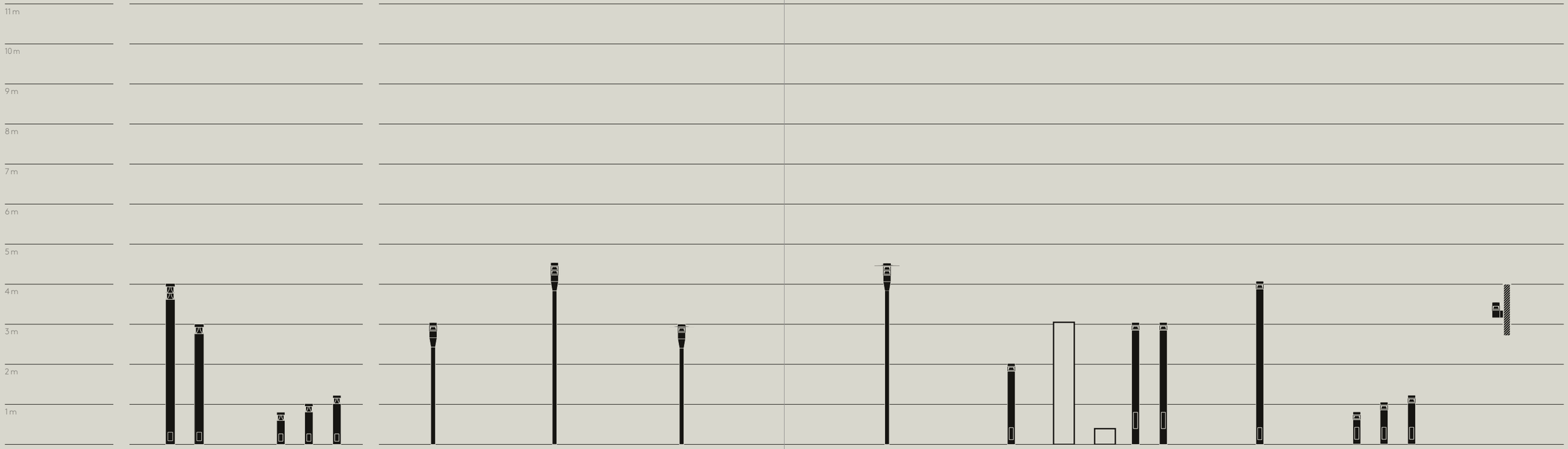
Bollards

Wall/Recessed

Pole top/lateral



Family	Inula		Elo					
	Inula Column	Inula Bollard	Pure Pole top	Shape Pole top	Light column		Bollard	Wall



Family

Aira

Aira Sphere
Pole top

Aira Cylinder
Pole top

Aira Sphere
Arcade

Aira Sphere
Catenary

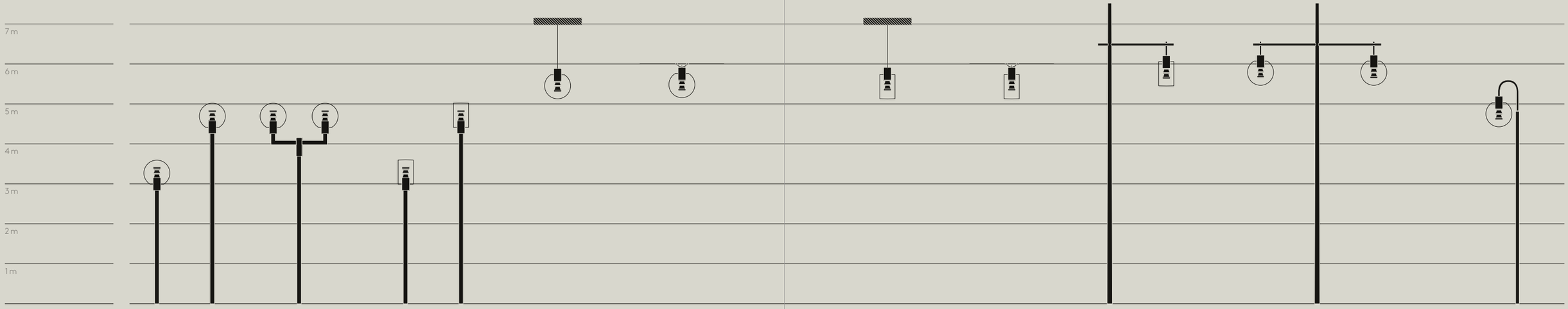
Aira Cylinder
Arcade

Aira Cylinder
Catenary

Aira Cylinder
Pendant

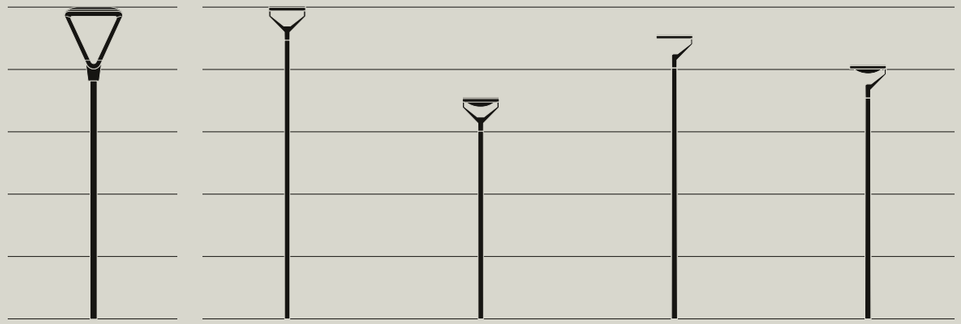
Aira Sphere
Pendant

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m



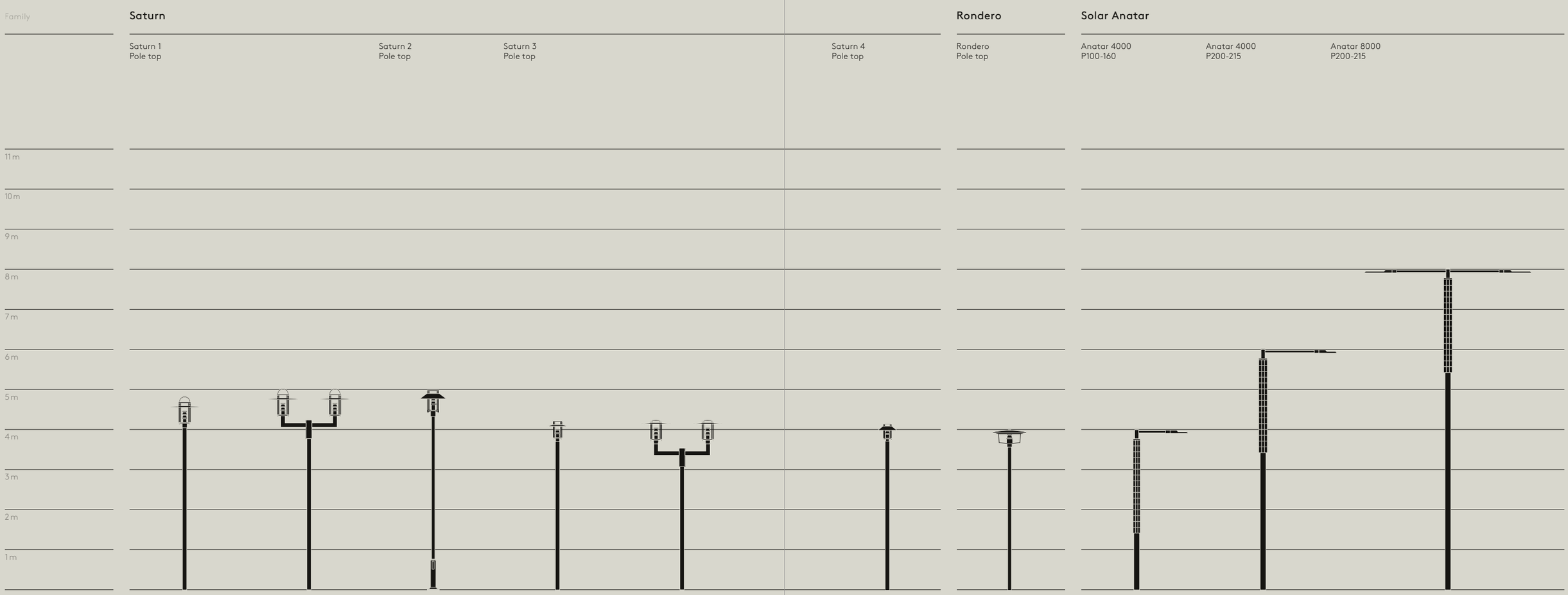
Family	Mistella	Astro		
	Mistella Pole top	Astro 2 Pole top		Astro 1 Pole top

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m



Trigo	Lanova		Alpha
Trigo Pole top	Lanova 230 Pole top	Lanova 250 Pendant	Alpha Pole top

Family	Saturn				Rondero	Solar Anatar		
	Saturn 1 Pole top	Saturn 2 Pole top	Saturn 3 Pole top	Saturn 4 Pole top	Rondero Pole top	Anatar 4000 P100-160	Anatar 4000 P200-215	Anatar 8000 P200-215



Family

Yloo

Pole | Pendant | Catenary | Pole top

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m

Avanza

Avanza 450
Pole top/lateral

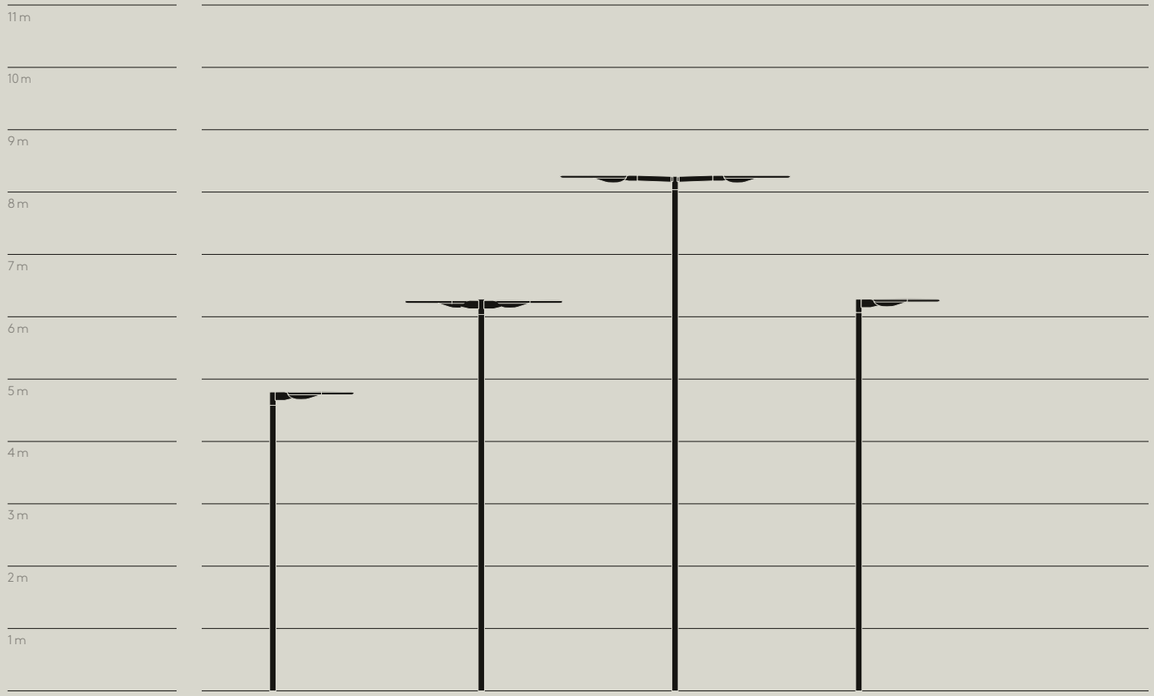
Avanza 450
Avanza 600

Avanza 600
Pole top/lateral

Family

Tal

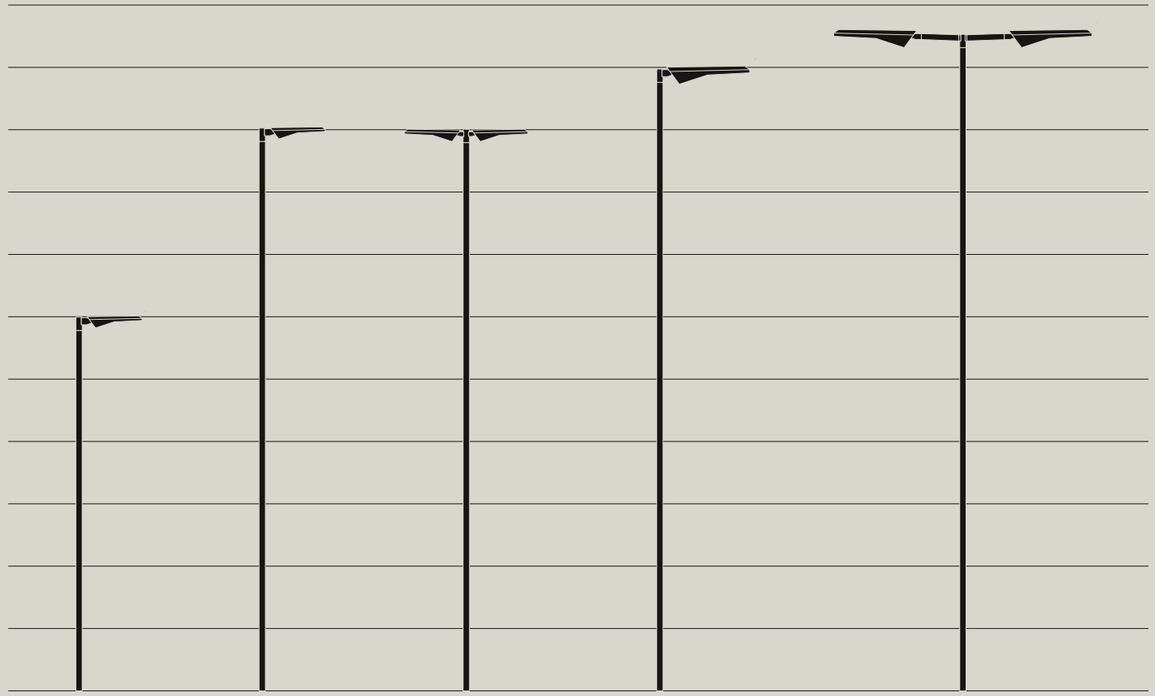
Tal
Pole top/lateral



Tessia

Tessia 550
Pole top/lateral

Tessia 650
Pole top/lateral



Family

Jessica

Jessica 600

Jessica 800

Discera

Discera 400

Discera 600

Family

Arca

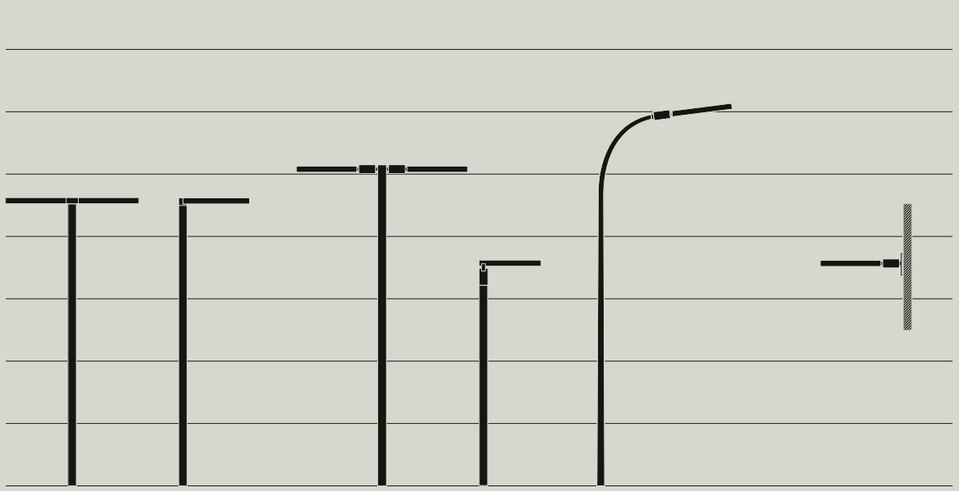
Arca Linear
Pole

Arca Flex
Pole top/lateral

Arca Flex
Upswept pole

Arca Flex Wall

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m

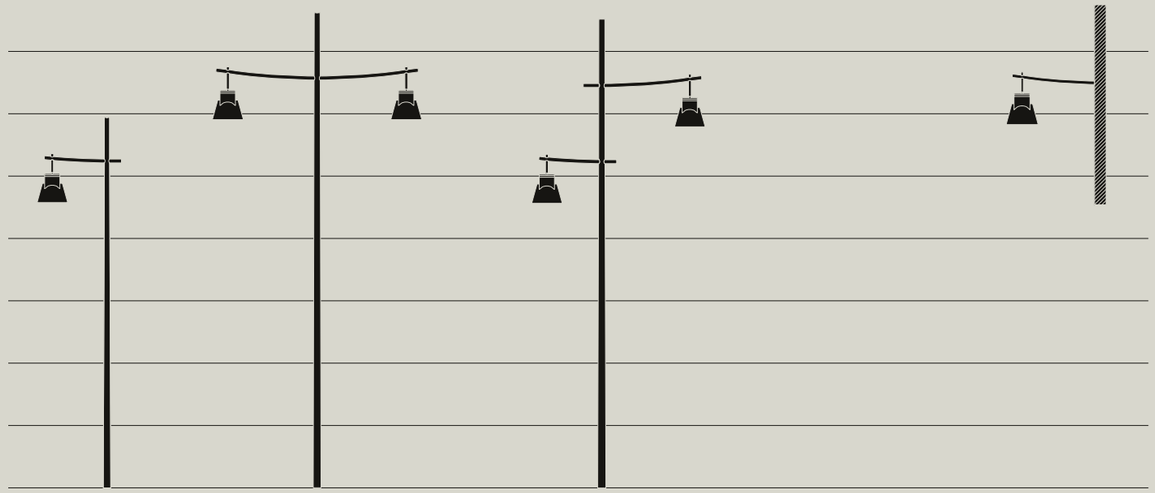


Sombreo

Pole

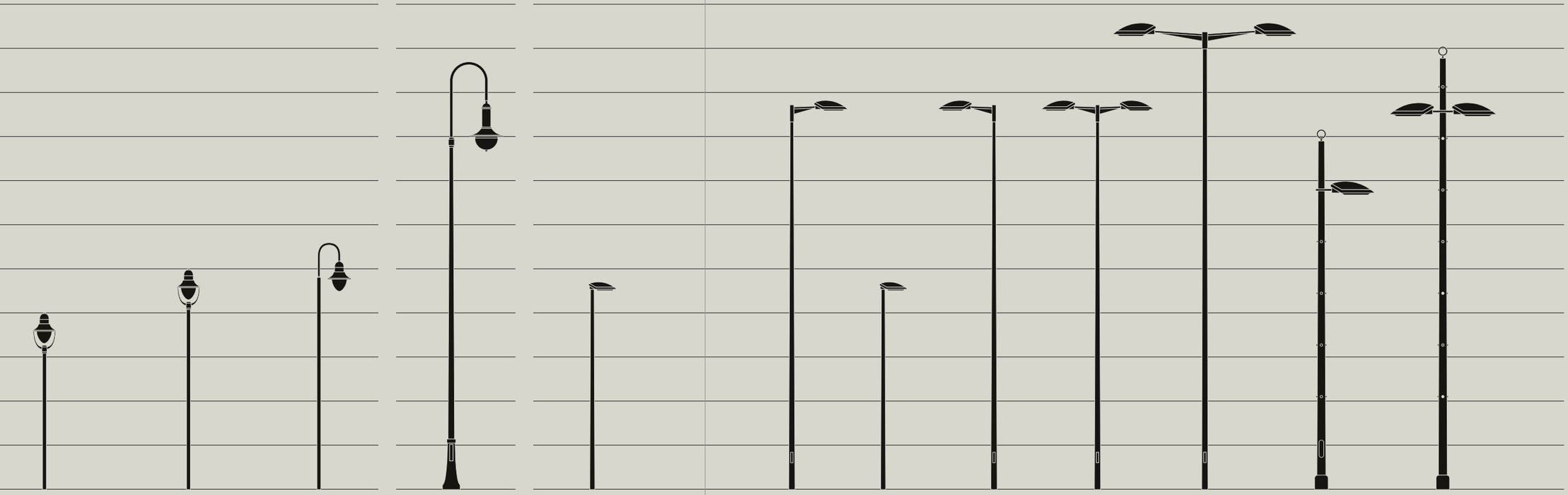
Catenary

Wall



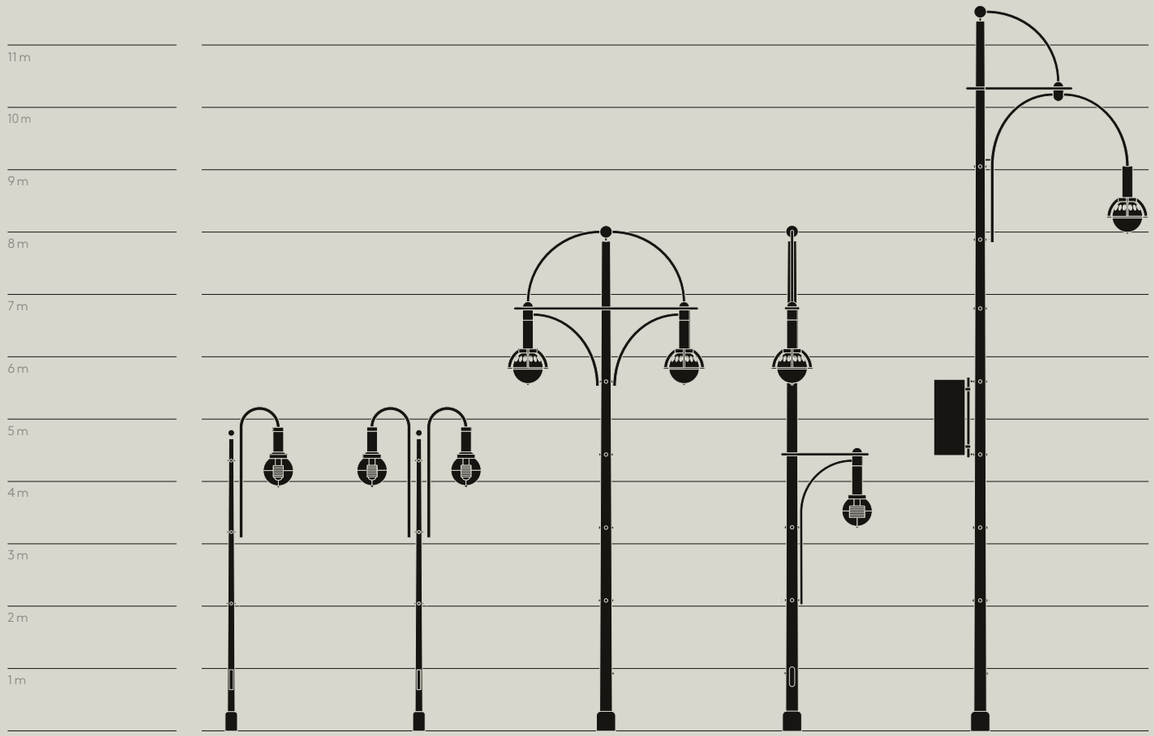
Family	Beta		Trocadero	Urbi 2
	Pole top	Pendant	Trocadero 760 Pendant	Lighting system

11 m
10 m
9 m
8 m
7 m
6 m
5 m
4 m
3 m
2 m
1 m

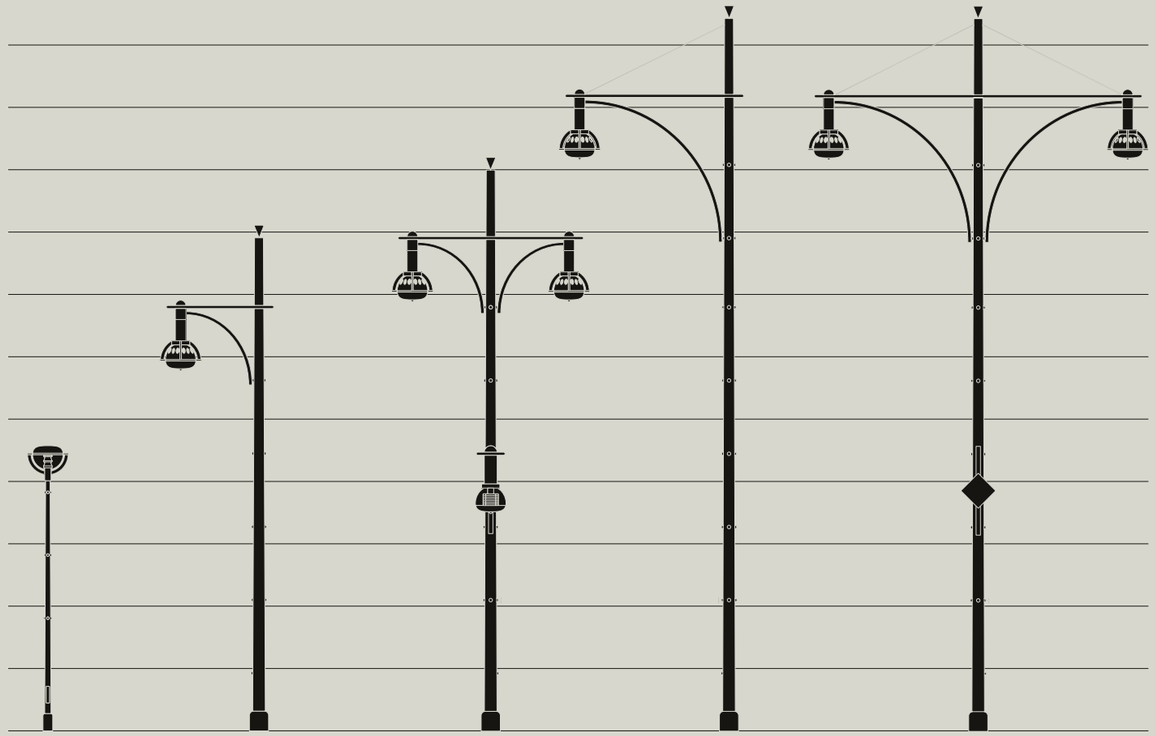


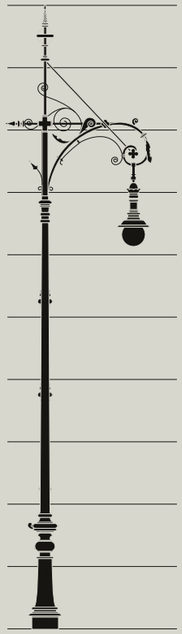
Family

Urbi 1



Urbi 3

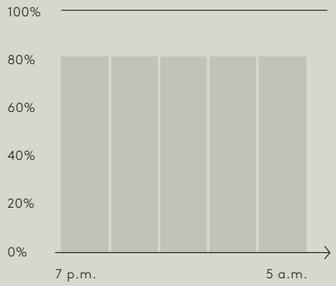


Family	Schupmann	Hardenberg	Witzleben
11 m			
10 m			
9 m			
8 m			
7 m			
6 m			
5 m			
4 m			
3 m			
2 m			
1 m			

Light controls

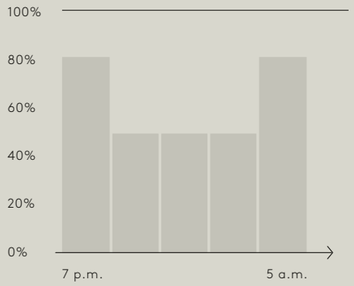
For minimal energy consumption: The control unit.

Selux LED luminaires can be switched and dimmed via different interfaces. Intelligent controls allow for an adequate, individual and precise light composition. The user-orientated control sustainably reduces power consumption and optimises the CO_2 footprint.



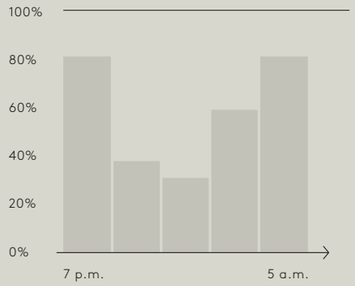
Fixed setting – Constant low-energy operation

In this operating mode the luminaire is not run at full power but maintained at a constant lower power setting. The power setting can be adjusted to meet site requirements.



Phase controlled night-time switching – Switchable low-energy operation

In the case of phase controlled night-time switching the luminaire can be switched between two power settings. The two power settings can be configured as required.

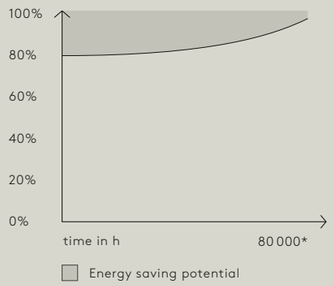


Dynamic – Low-energy operation with up to five dimming settings

The dynamic control enables low power operation of the luminaire at up to five different values. Power levels are programmed individually for each luminaire in the factory.

CLT – Constant Lumen Technology

Conventional street lights are often overdimensioned to ensure lighting consistently conforms to standards despite loss of luminous flux. This overdimensioning of light output results in both increased energy consumption and increased luminance at the time of installation. The use of CLT ensures a constant lumen output of the luminaire over the course of its lifetime. The degradation of the LEDs are maintained by readjustment of power. This makes for additional benefits on the lifetime of the LED. In this way potential for savings is maximised by means of an ideally configured lighting system.



Safety

	Solid objects	Water
IP20	solid objects > 12mm	no protection
IP40	solid objects > 1mm	no protection
IP44	solid objects > 1mm	protected against sprays
IP50	dust-proof, protected against harmful deposits	no protection
IP54	dust-proof, protected against harmful deposits	protected against sprays
IP65	dust-proof	protected against jets of water
IP66	dust-proof	protected against powerful jets of water
IP67	dust-proof	protected against effects of temporary immersion in water

Protective Rating with respect to the ingress of solid objects and water in accordance with EN 60 598. · Selux luminaires are generally rated as IP65.

Protection classes

Protection class I
Luminaires with connection for earth conductor. The terminal is marked accordingly.

Protection class II
Luminaires constructed with protective insulation. The luminaire is marked accordingly.

Protection class I optional protection class II
Luminaires are generally supplied with protection class I, optional with protection class II.

Protection class II optional protection class I
Luminaires are generally supplied with protection class II, optional with protection class I.

IK
Classifications according to external mechanical loads according to EN 50102. Impact categories from IK02 (0.2J) for standard luminaires and IK04 (0.5J) for road and pathway luminaires. Further information is available on request.

ENEC
The ENEC certificate of every luminaire can be found on the respective data sheet.

General information

Materials
All of our luminaires are made of tough, durable materials that can withstand standard mechanical loads and are resistant to corrosion.

Electrical safety
Selux luminaires are manufactured in accordance with the regulations laid down in the DIN EN 60598 (VDE 0711) European standard. The most important luminaire series are marked ENEC. Our laboratory facilities allow us to carry out the relevant initial testing procedures. Our laboratory is equipped to carry out all tests in accordance with DIN EN 60598.

Operating conditions
All luminaires are designed for operation at 230 V – 50 Hz. Other voltages and frequencies are available on request.

Light distribution curves and isolux curves
The selux website provides product data sheets for each famiily of luminaires. Polar light distribution curves give you a quick overview of the photometric data of any given luminaire. Light distribution curves (LDC) are also available for downloading in LDT or IES format.
All photometric data meet agreed standards and are based on measurements obtained for original luminaires on our calibrated goniophotometer.

ISO 9001 and ISO 14001
All companies in the Selux Group are ISO 9001 and ISO 14001 certified for the development, manufacture and distribution of Selux standard, custom designed and project related luminaires.

Colours

Category 1

Selux graphite

Black matt
TIGER 059

Category 2

Grey & black colours

Jet black
RAL 9005

Anthracite grey
RAL 7016

Graphite grey
RAL 7024

Iron grey
RAL 7011

Aluminium

Grey aluminium
RAL 9007

White aluminium
RAL 9006

White

Pure white
RAL 9010

Traffic white
RAL 9016

Colours

Pine green
RAL 6009

Moss green
RAL 6005

Sapphire blue
RAL 5003

Wine red
RAL 3005

Pearl varnishes

Pearled dark grey
DB 703

Pearled silver grey
DB 702

White aluminium
Perl DB 701

Special colours, seawater and salt air durable coating on request. RAL 9005 (jet black) and RAL 9006 (white aluminium) are in gloss level 30% (surface satin finish), all other RAL colours are in gloss level 60% (silky gloss finish).
Deviations in colour and gloss level are due to printing.

Line
Special colours

Sand

Clay

Concrete grey

Olivio Wood
Special luminaire colours

Liverpool

Sanssouci

Versailles

Olivio Wood
Wooden pole finish

Redwood

Canadian brown

Cool
Scandinavian

Himalaya grey

Rocky Mountain
grey

Teneriffa grey

About Selux

Every day light moves us to experience the new, time and time again. We at Selux are convinced that good light contributes to quality of life. Our global team with around 450 employees looks forward to helping you to create exceptional lighting projects and making our urban spaces more sustainable and attractive.

Imprint

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