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

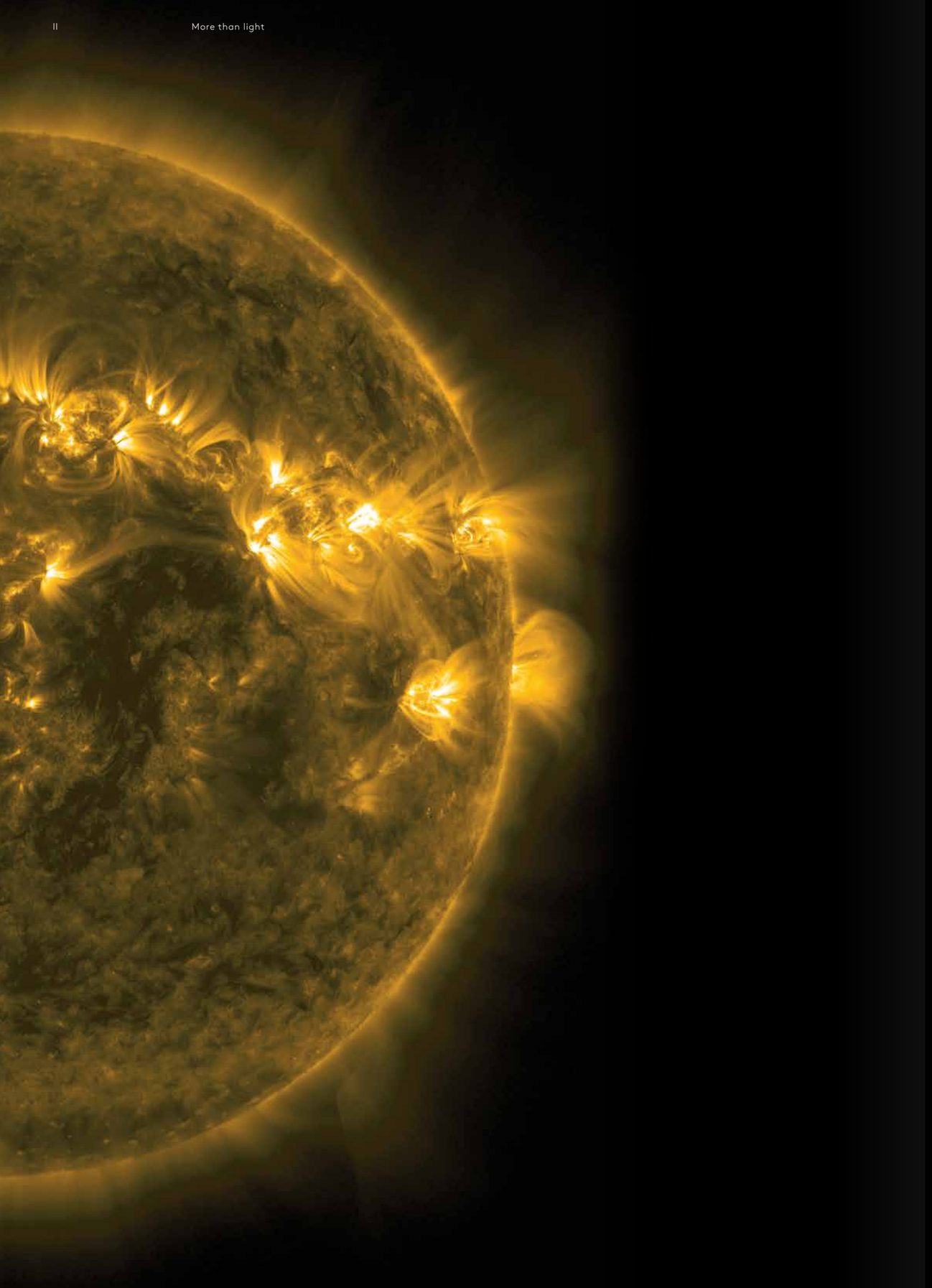
If you look at design classics from the Bauhaus period, for example, you can see a pattern. At the time of their creation, these designs were radical and revolutionary, conceived of a readiness to break with convention and completely rethink solutions.

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.

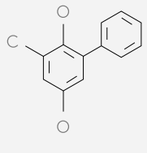
Adaptive lighting

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.

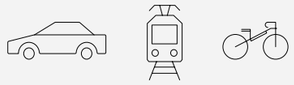
Public WiFi hotspots

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.

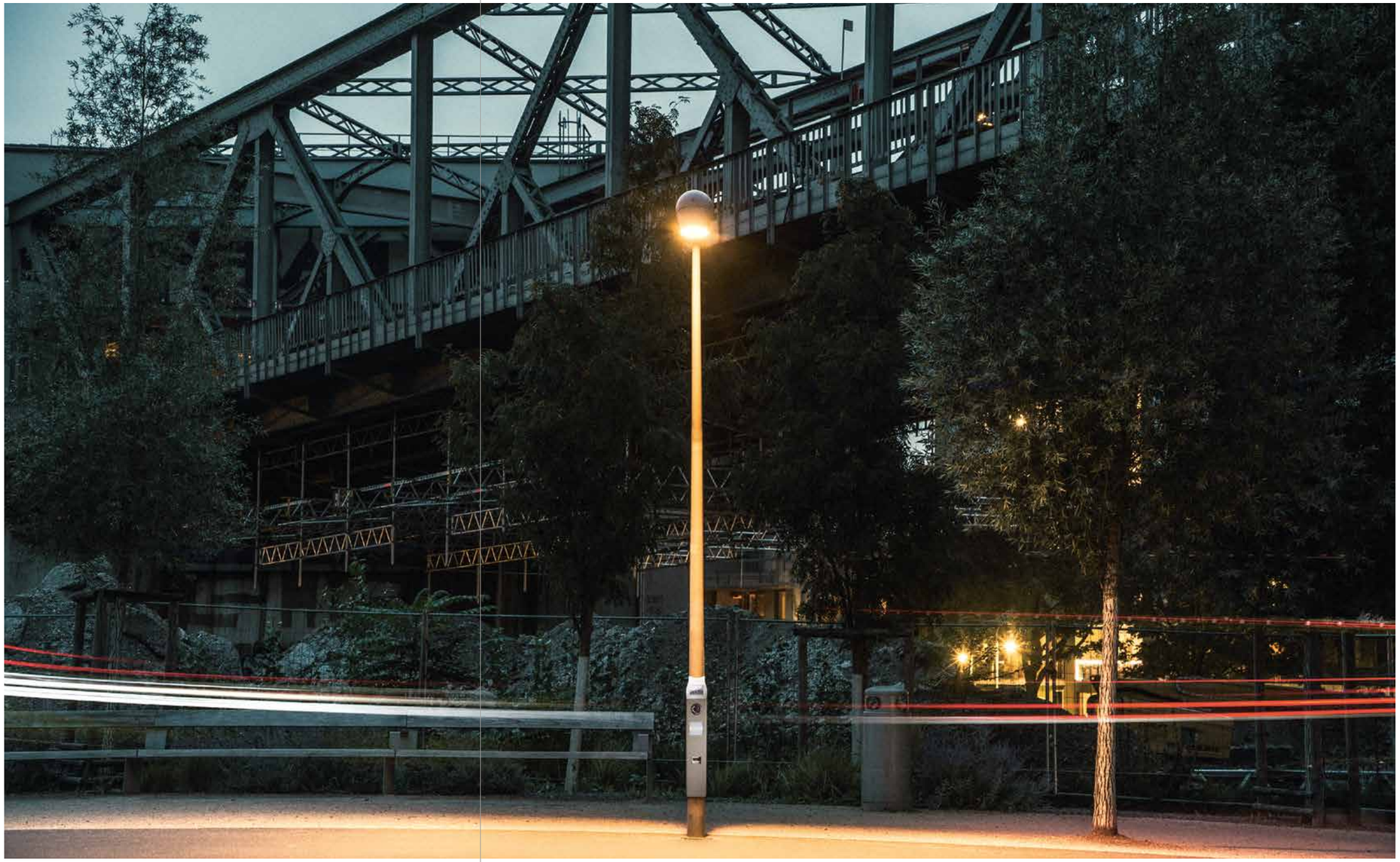
Smart Lighting by Selux follows the principle that rather than being an end in itself, technology is closely connected to life and the needs, expectations and potential of human beings. The modular design of our products makes them perfect for the integration of smart functions. Our profound technical 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.

LUMINAIRES

Tritec Optics
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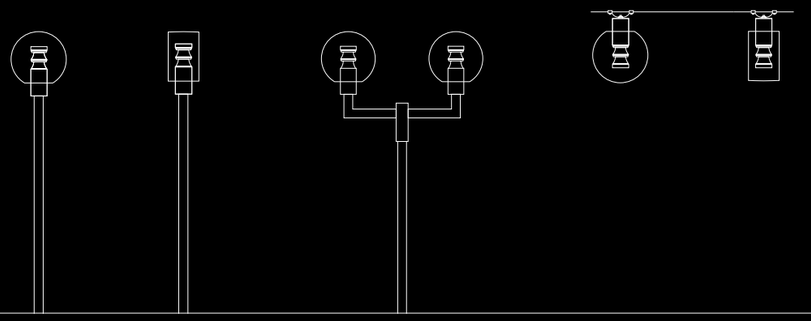

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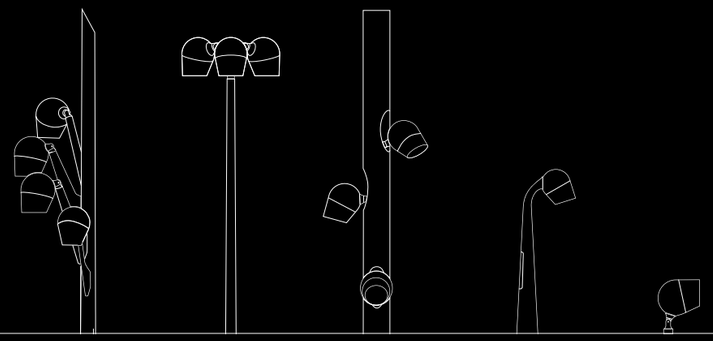

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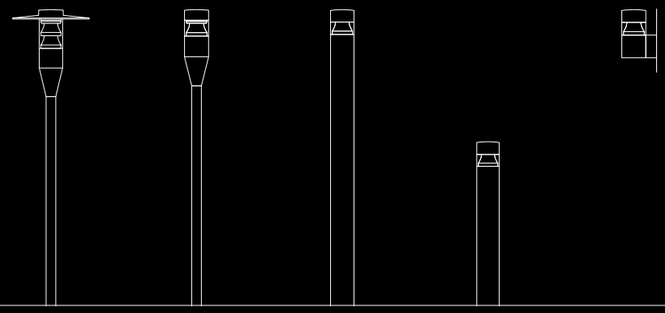

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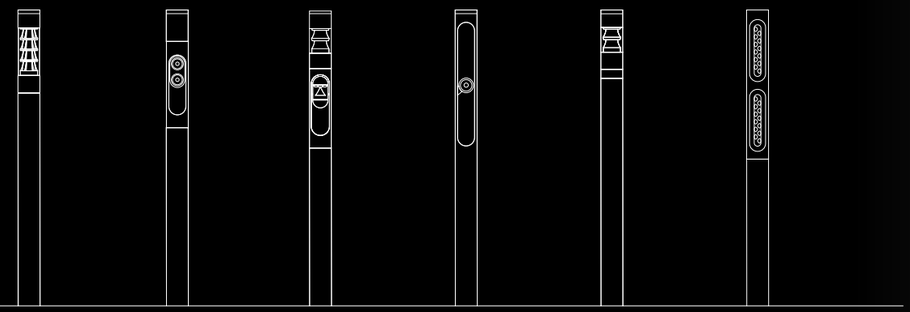

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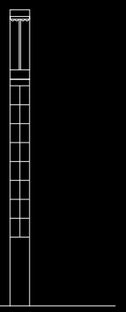

Solar Lukida
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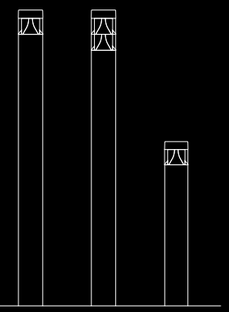

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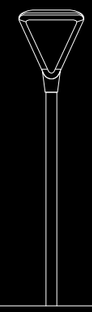

Mistella
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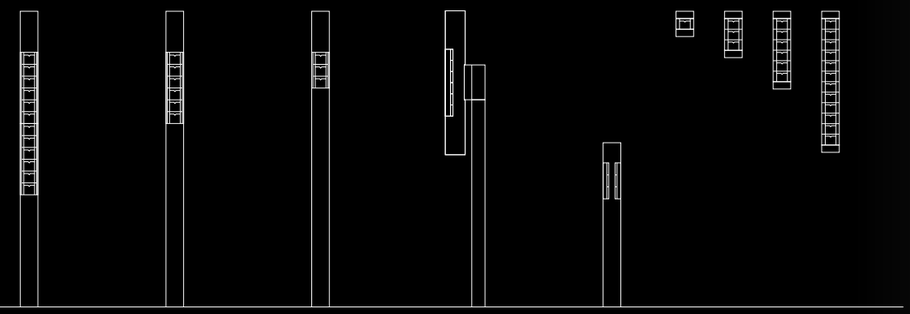

Line
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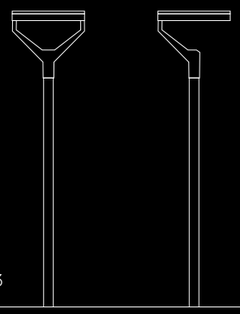

Astro
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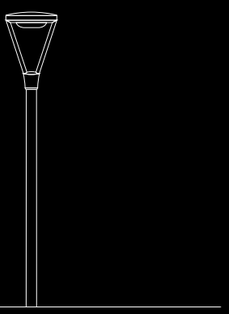

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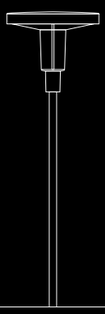

Yloo
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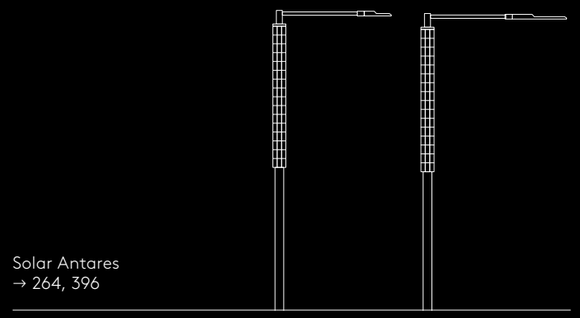

Solar Antares
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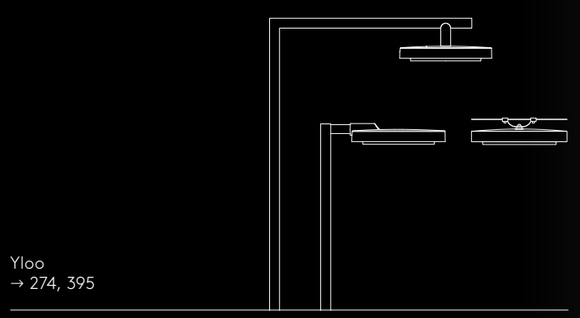

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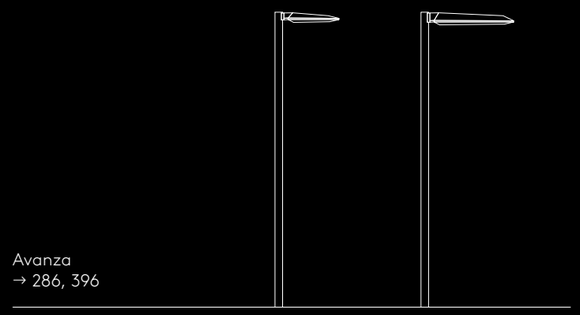

Avanza
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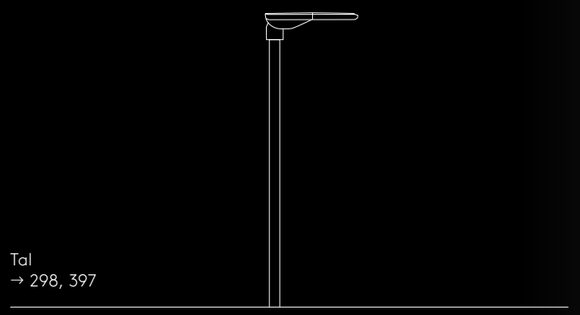

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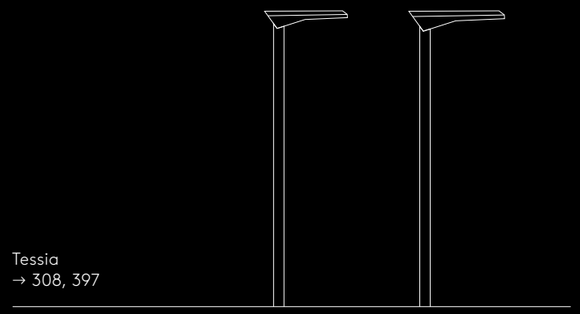

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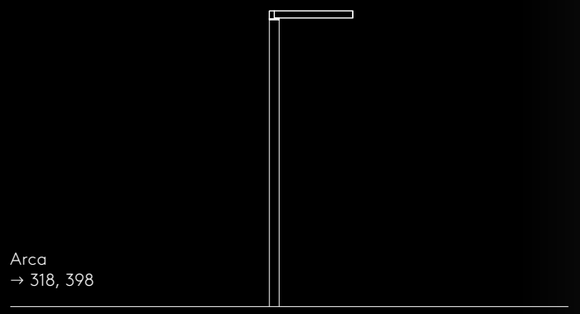

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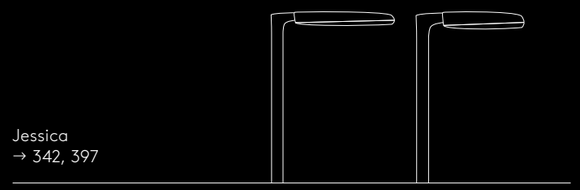
Classics



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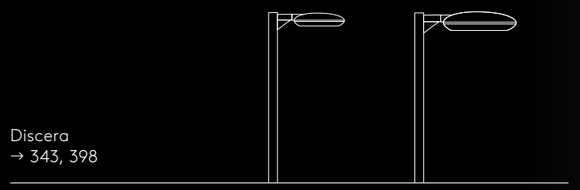

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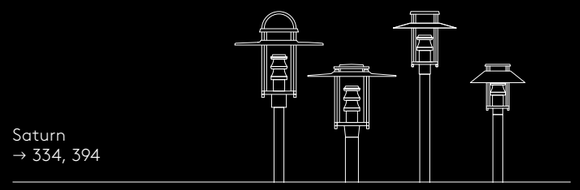

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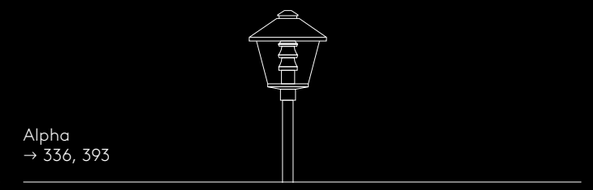

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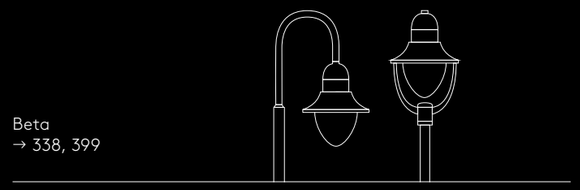

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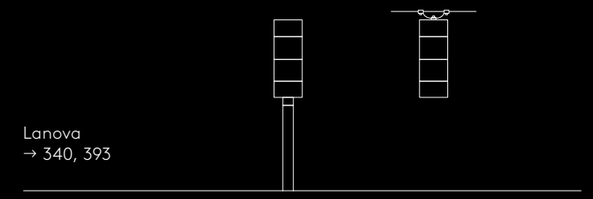

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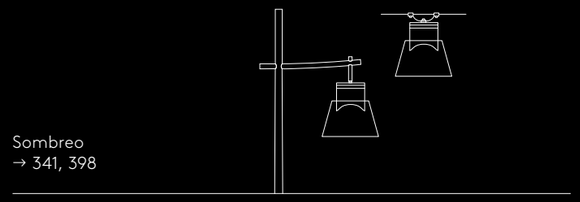

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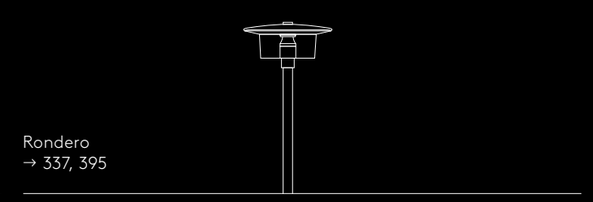

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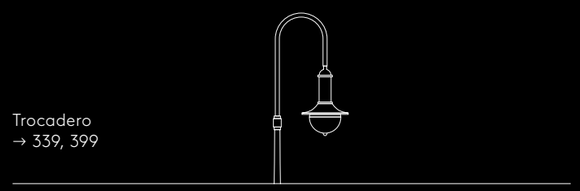

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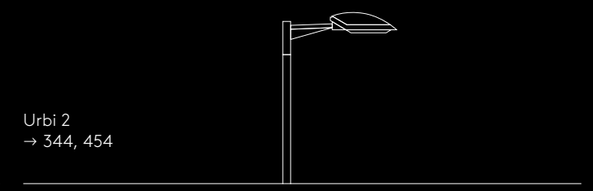

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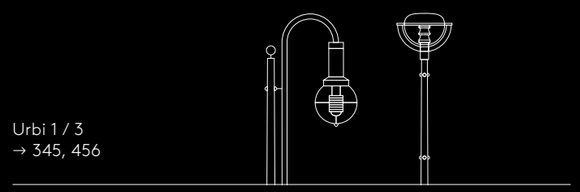

Urbi 1 / 3
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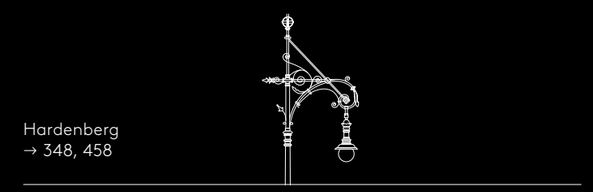

Hardenberg
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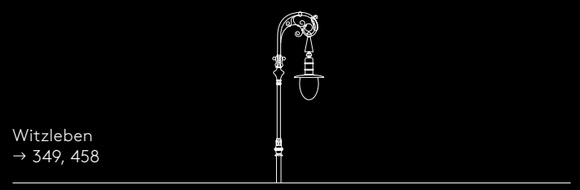

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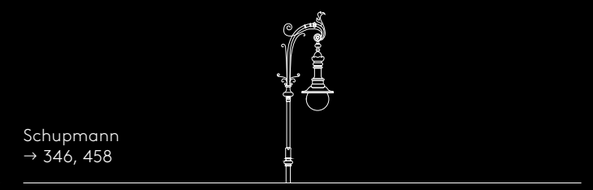


Schupmann
→ 346, 458

Leaf beetle

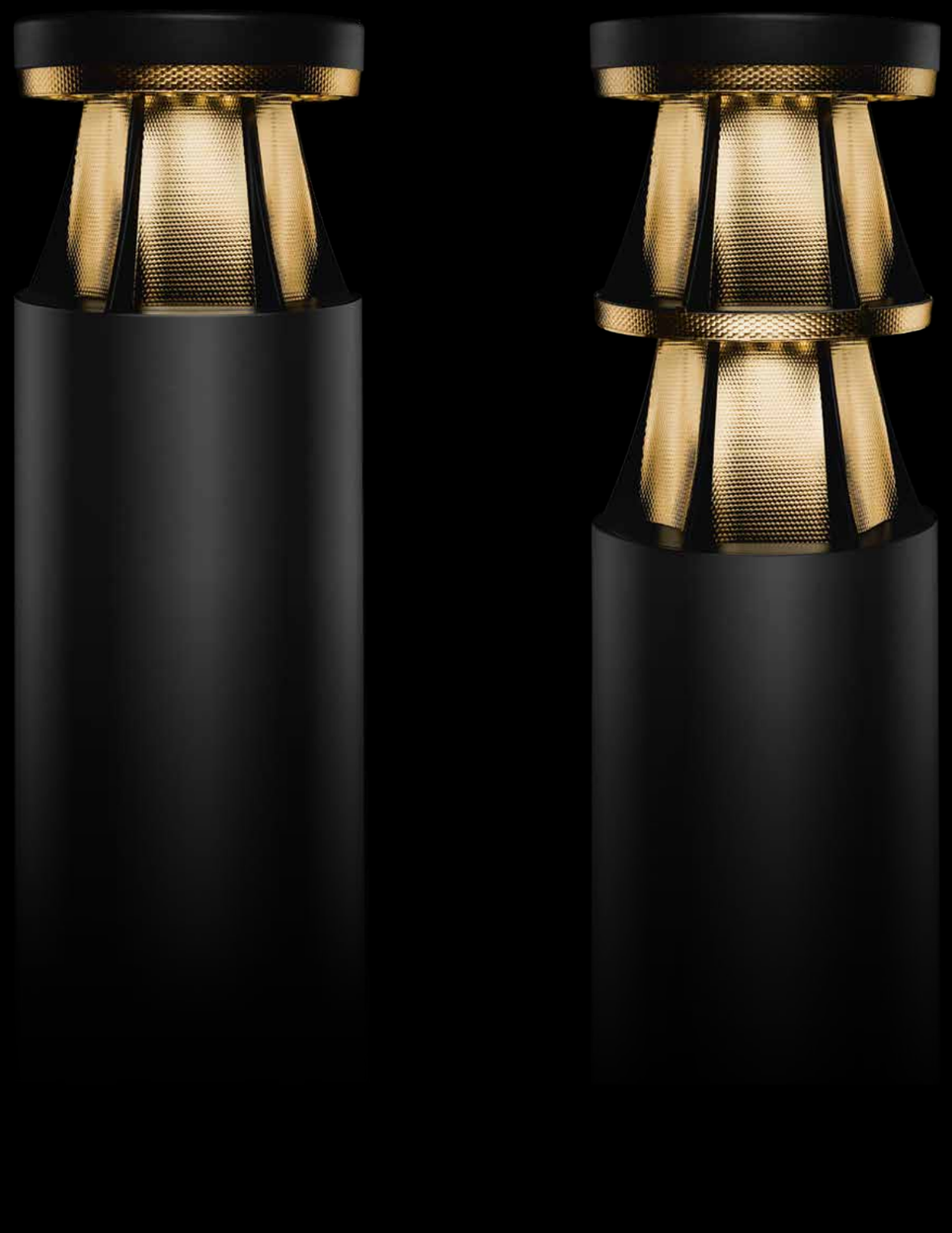
The exoskeleton of some insects is made up of up to 70 layers of chitin that refract and reflect light at different frequencies. This gives many beetles, like the leaf beetle, a metallic look.

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.

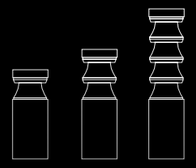
Light colours

- 4000K
- 3000K
- 2700K

Reflector colour

- silver
- gold

Modules



36 Configurations

Tritec S – Sky

Light distribution

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

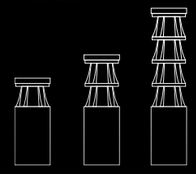
Light colours

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

Reflector colour

- silver
- gold

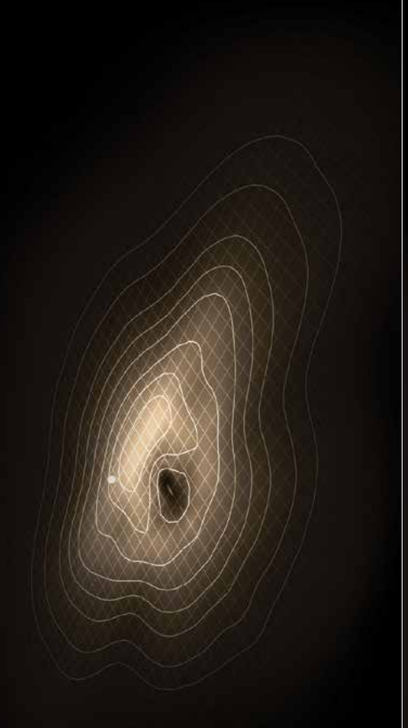
Modules



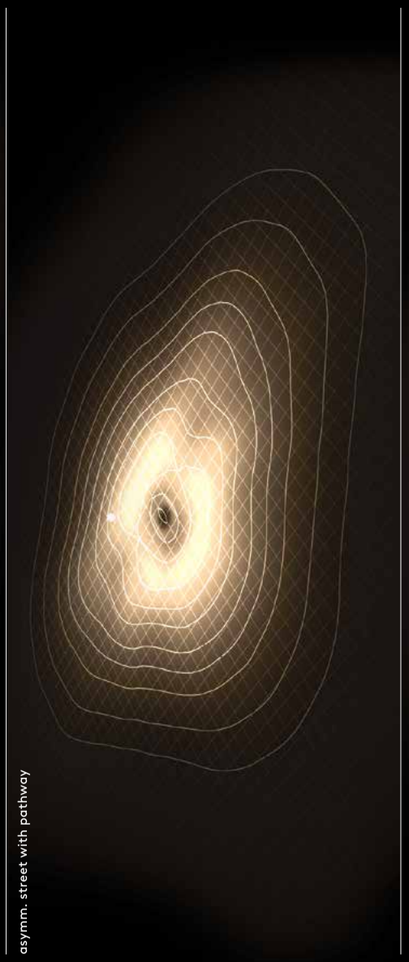
96 Configurations

Tritec A

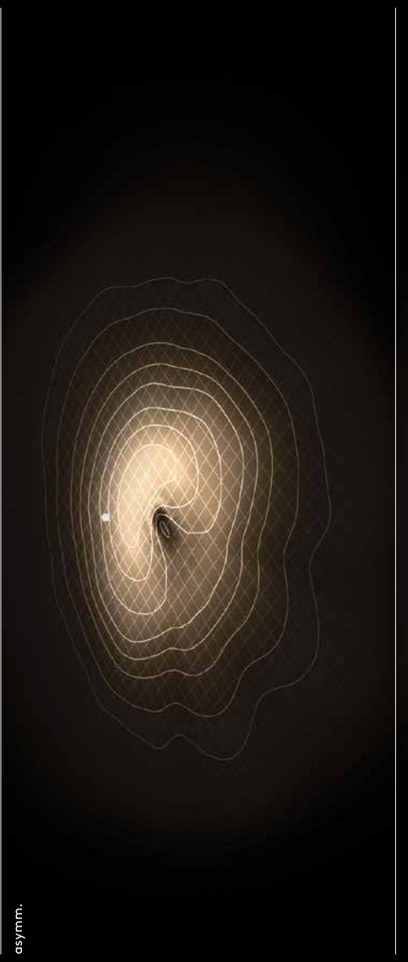
Light output	**max. 7200lm**
Light colour	**2700K, 3000K, 4000K**
Reflector colour	**silver, gold**



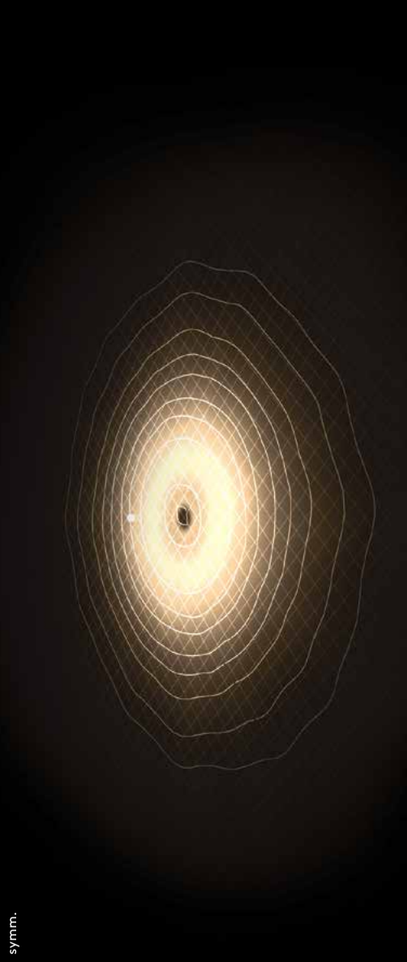
asymm. street



asymm. street with pathway

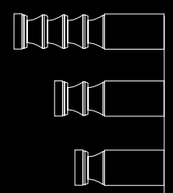


asymm.



symm.

Tritec A



Tritec S

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

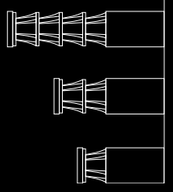
asymm. street

asymm. street with pathway

asymm.

symm.

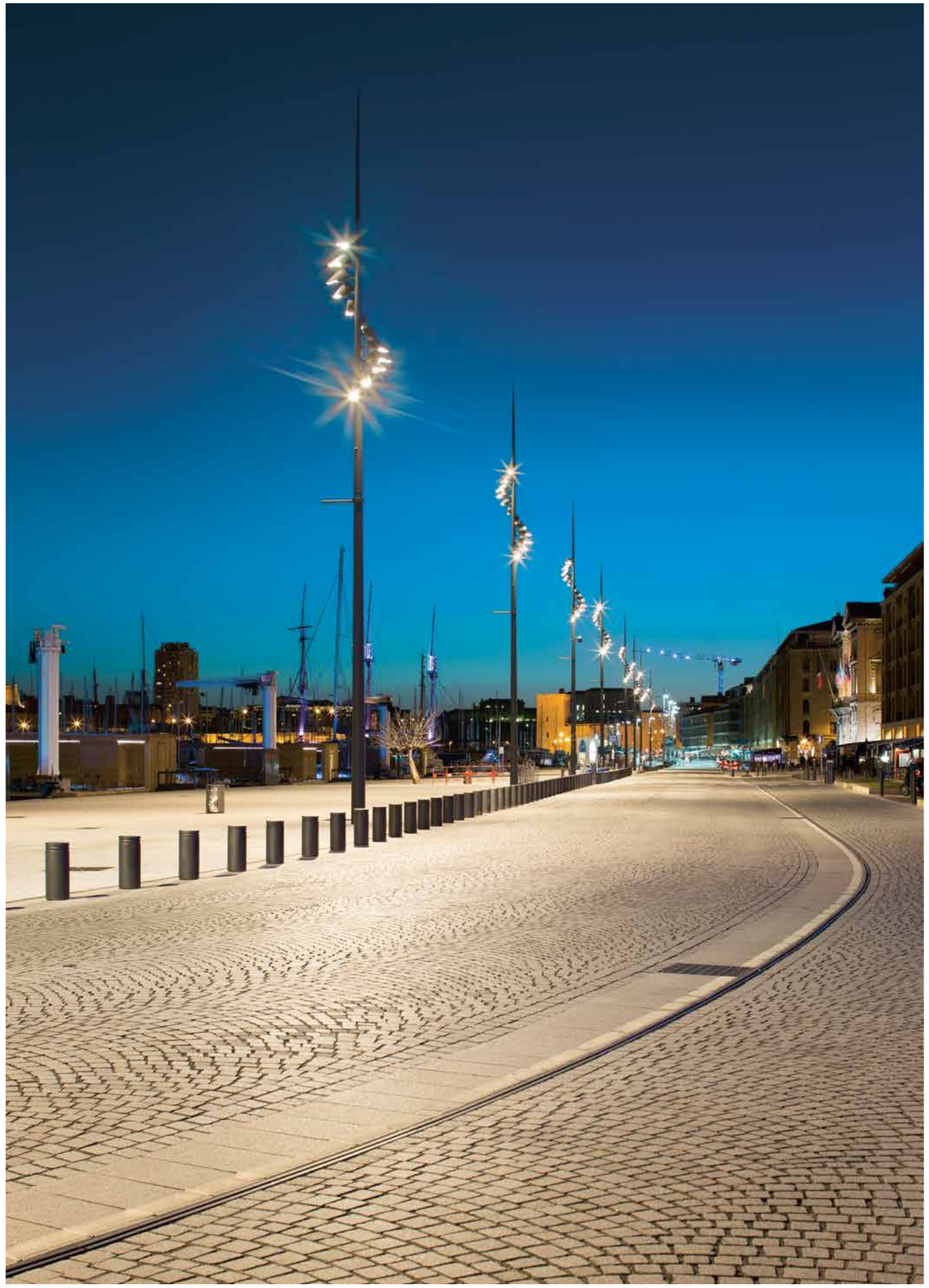
Tritec S



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

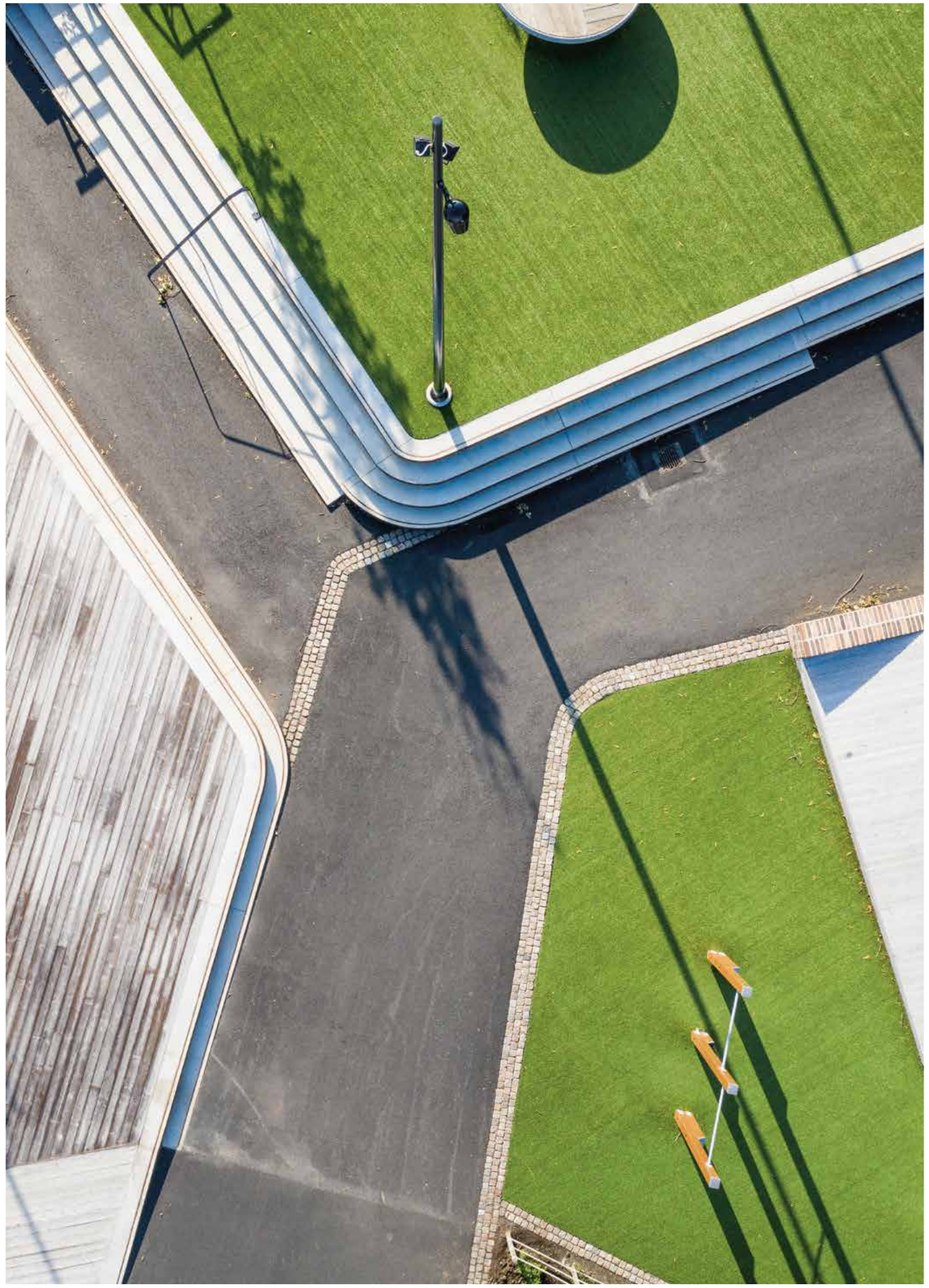
Sanssouci

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

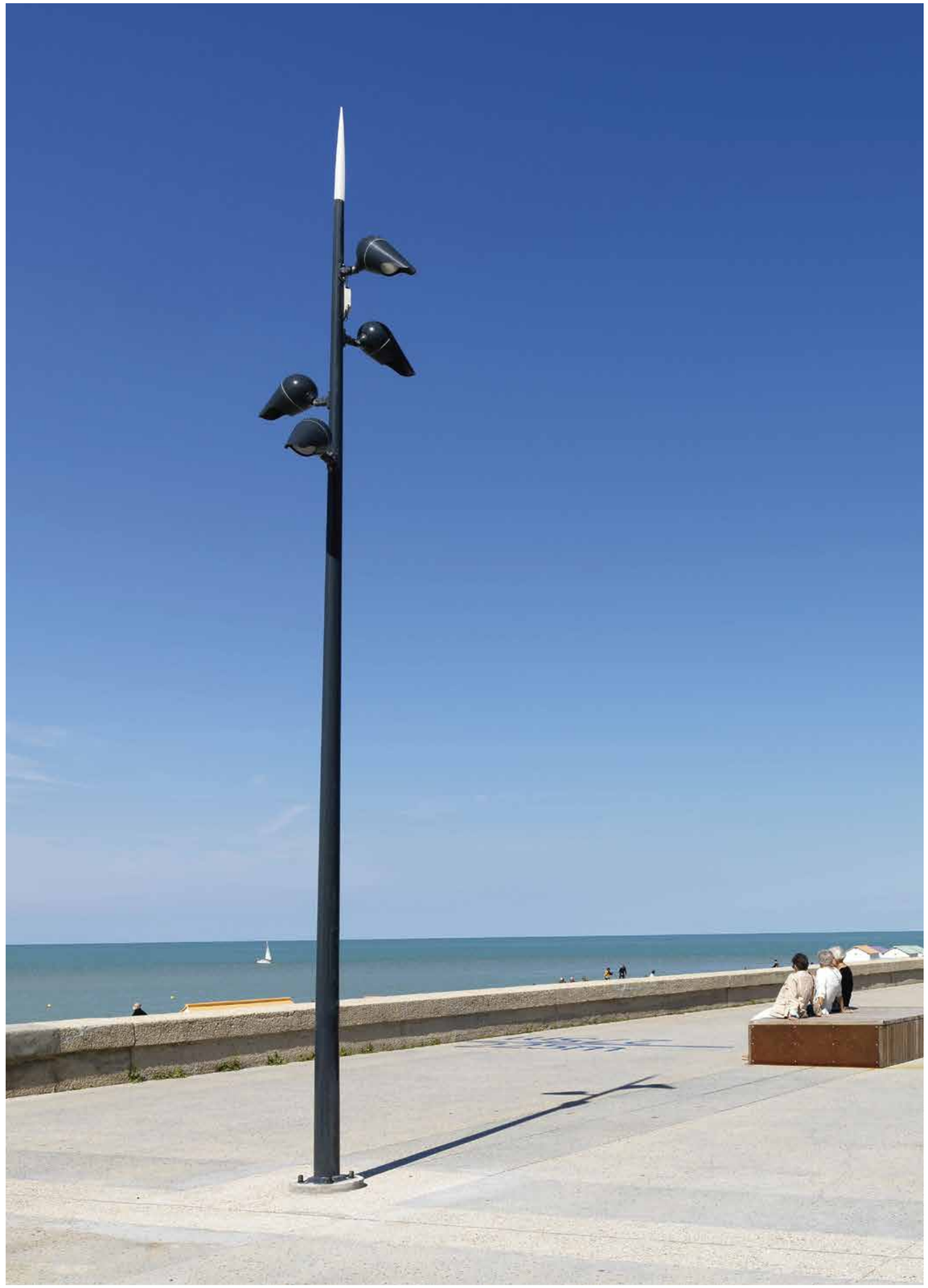
Grande

Audio Speaker

Camera housing

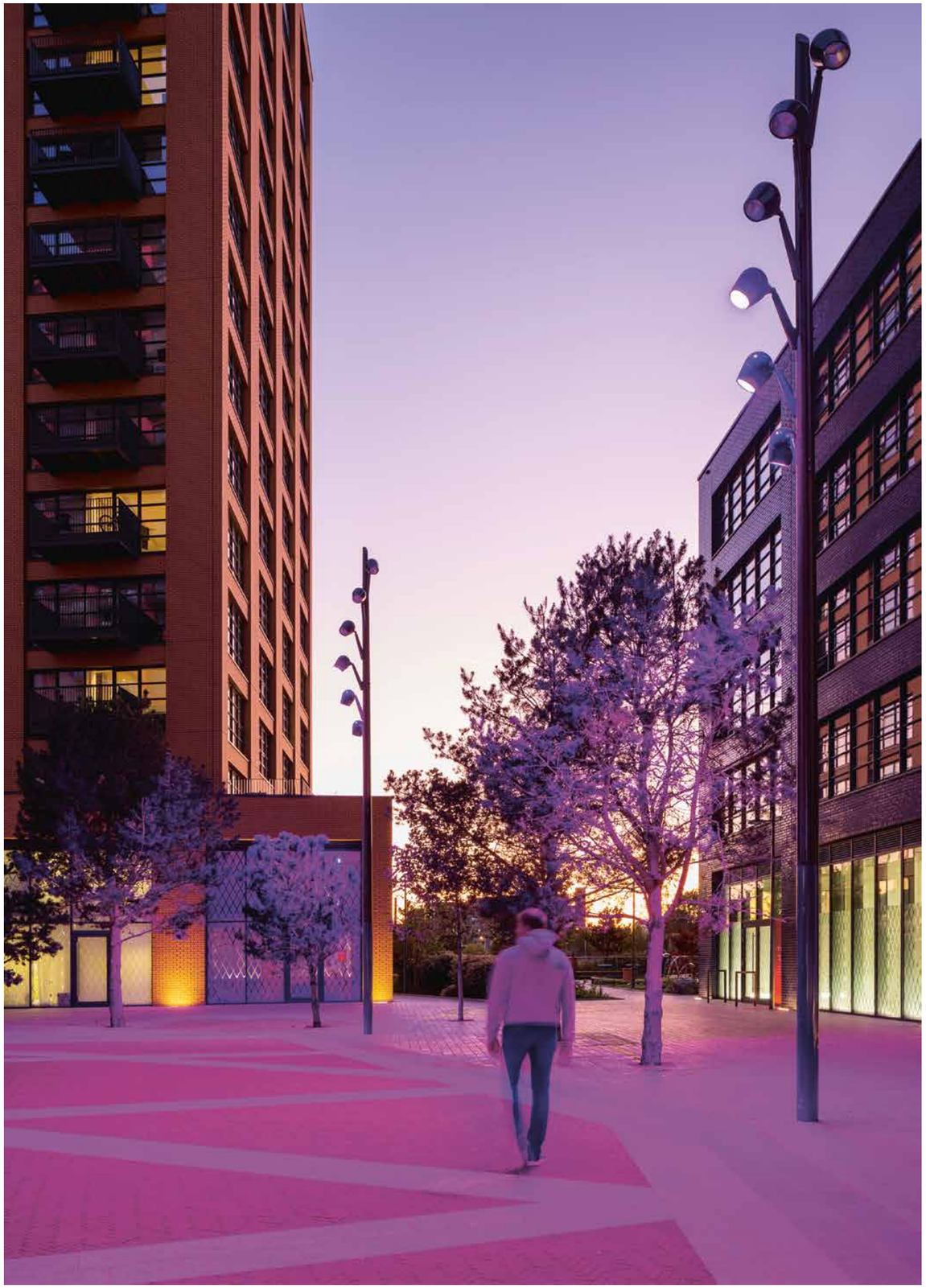
The floral shape of the Olivio provides space for more than just lighting. Sound, video and projections can be incorporated discreetly into individual luminaire configurations too.

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

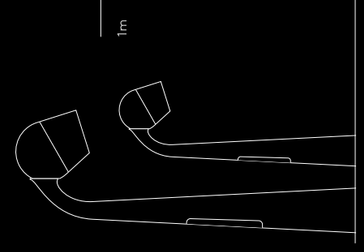
The upscale optics of the Olivio luminaires are based on the perfect combination of LED module and reflector geometry. At the same time, the deep-set light source ensures glare reduction and visual comfort. A wide range of beam angles with precise light distribution is available. The RGBW optics are 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.

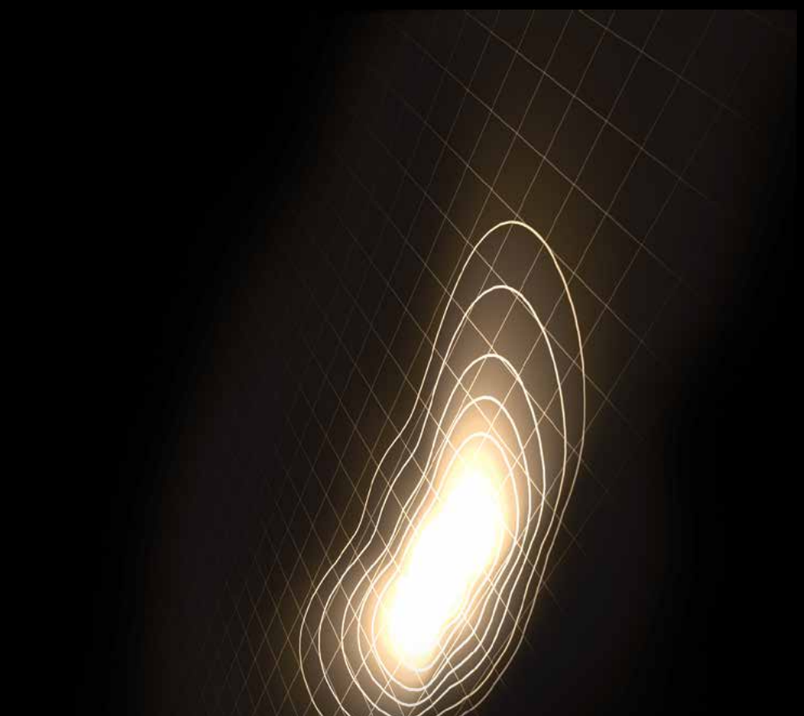
Olivio Gobo
Precise projection for perfect staging

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.

Light output max. 2400lm

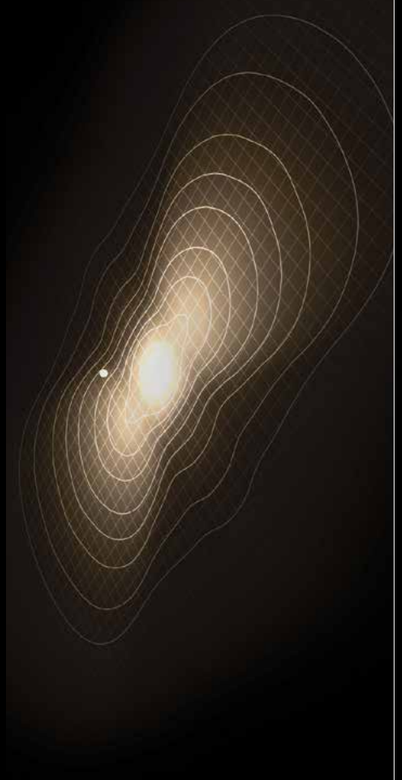
Light colour 2700K, 3000K, 4000K





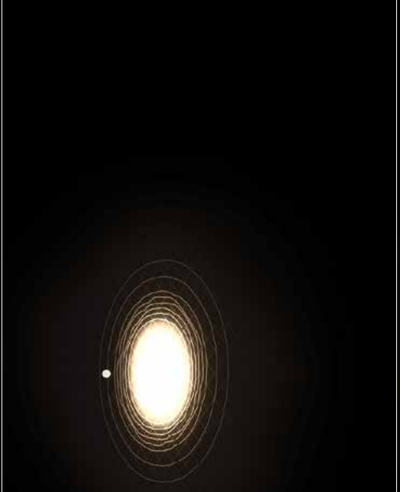
Olivio

asymm. pathway

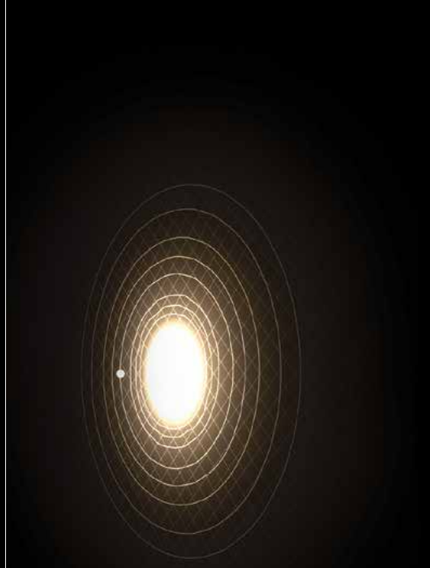


narrow

medium



wide



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

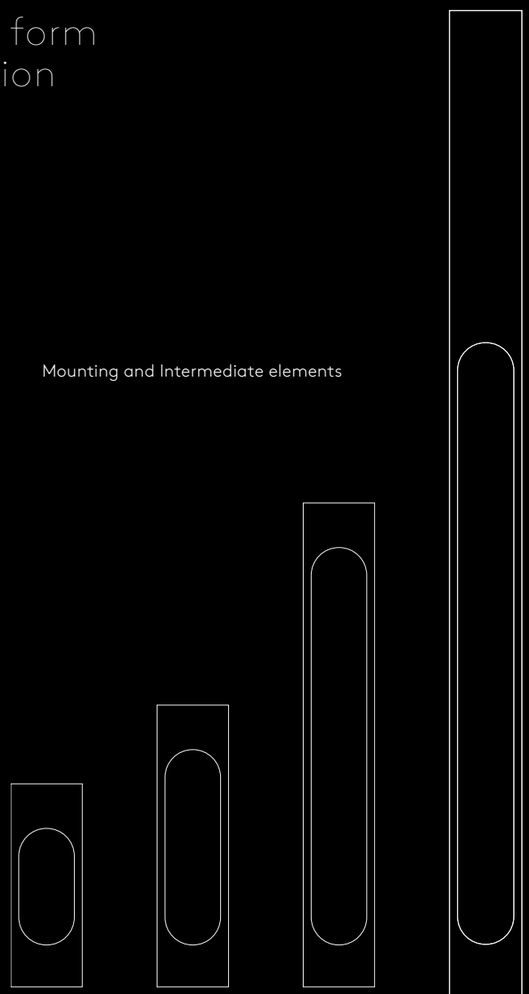
Audio Speaker module
→ 134–135

WiFi housing element
→ 134–135

Charging station
→ 134–135

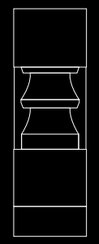
Flexible in form and function

Mounting and Intermediate elements

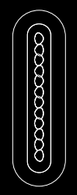


individually configurable

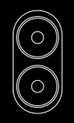
Top element



Façade module

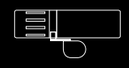


Twinspot module



Pathway module

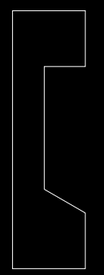
Gobo projector



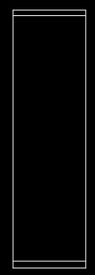
Accent element

Audio Speaker module

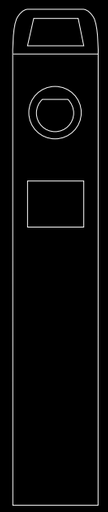
Camera housing element



WiFi housing 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

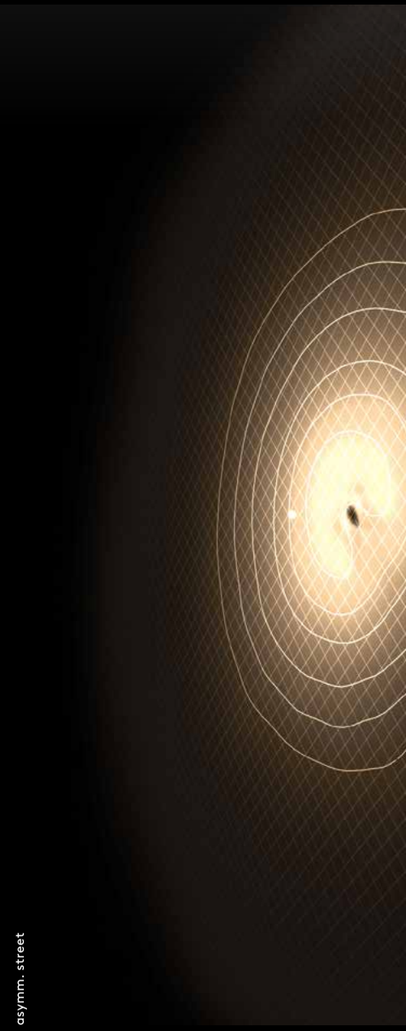
Smart functions combined with the basic lighting function enable the Lif to become a key element in consistently designed, networked Smart Cities. Smart modules also allow all kinds of sensors to be integrated in the Lif.

Lif Gobo
Precise projection for perfect staging

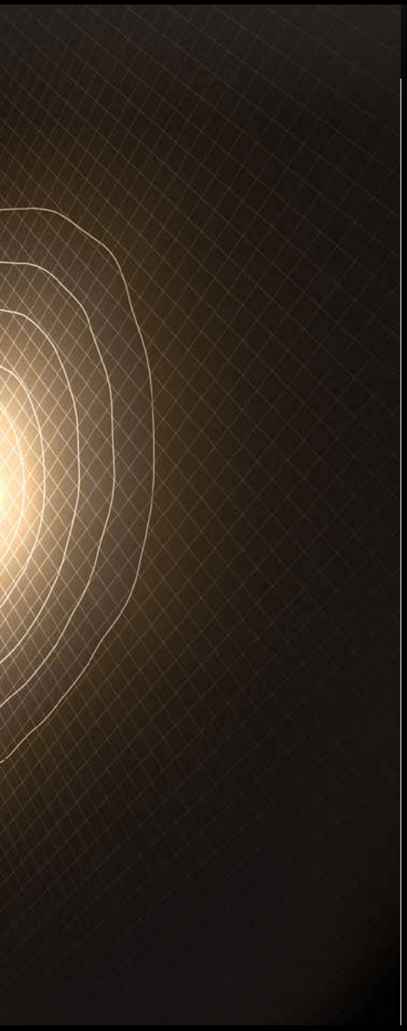
The Lif Gobo projector complements the series of light modules as a professional event, marketing and highlighting tool for the light columns. Lasered glass gobos within the luminaire allow any desired graphic to be projected precisely and with sharp contours – from classic white light projections, to 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.

III Lif Top element with Tritec A

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



asymm. street

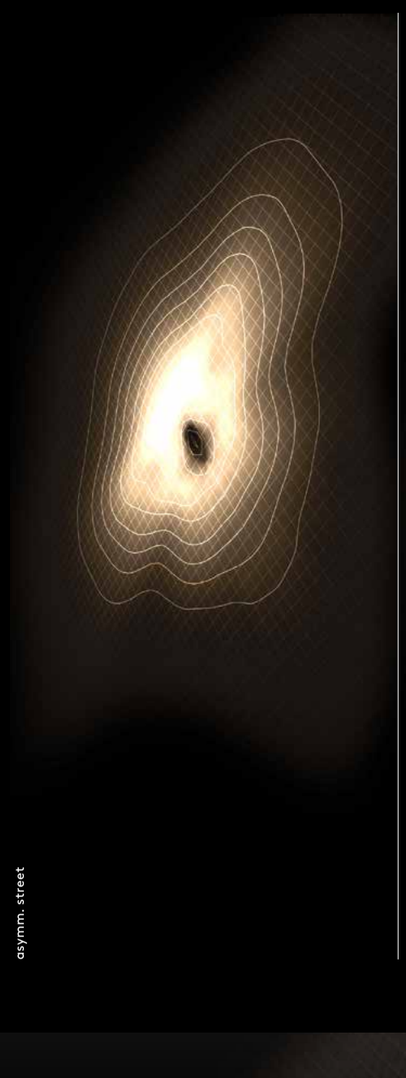


symm.

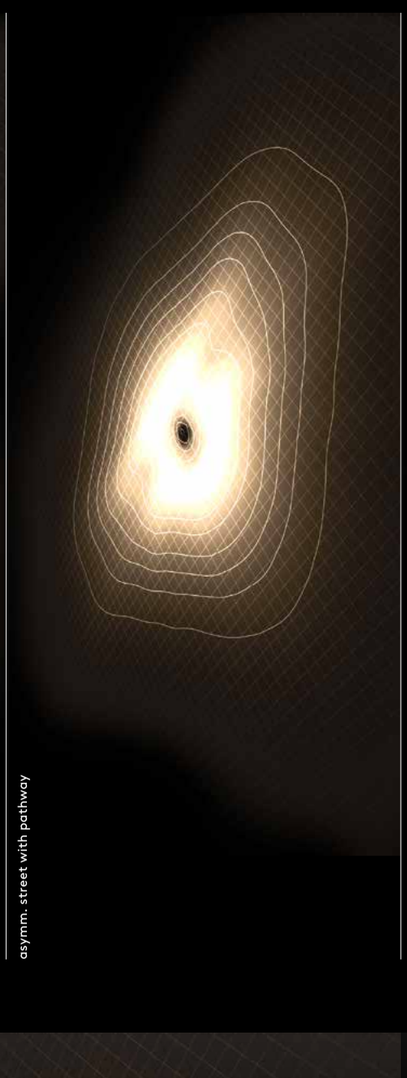
Tritec A

Lif Top element with Tritec S

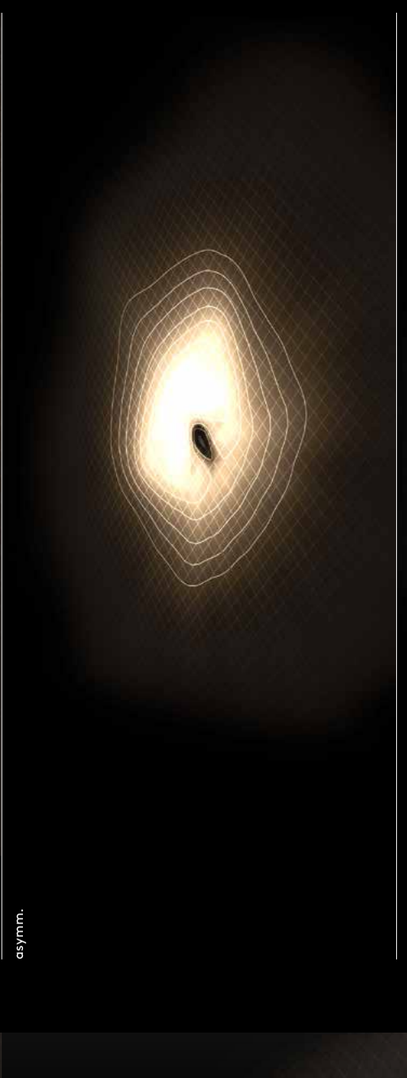
Light output	**max. 7200lm**
Light colour	**2200K, 2700K, 3000K, 4000K**
Reflector colour	**silver, gold**
Smart City	**optional Zhaga interface**



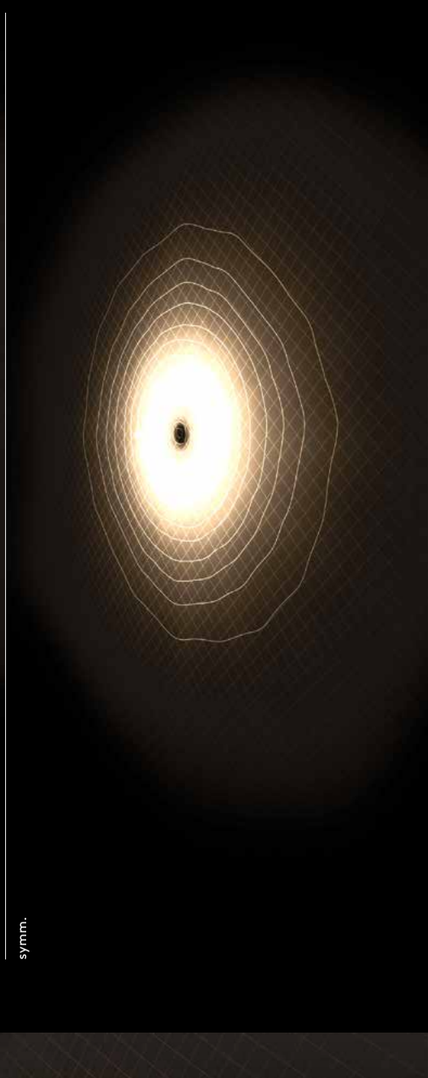
asymm. street



asymm. street with pathway

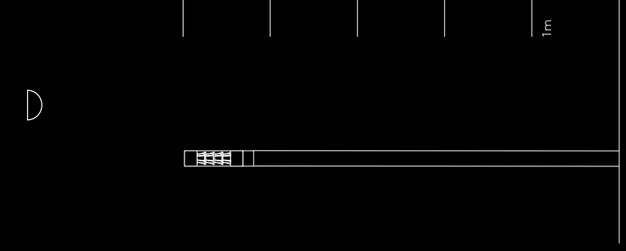


asymm.



symm.

Tritec S

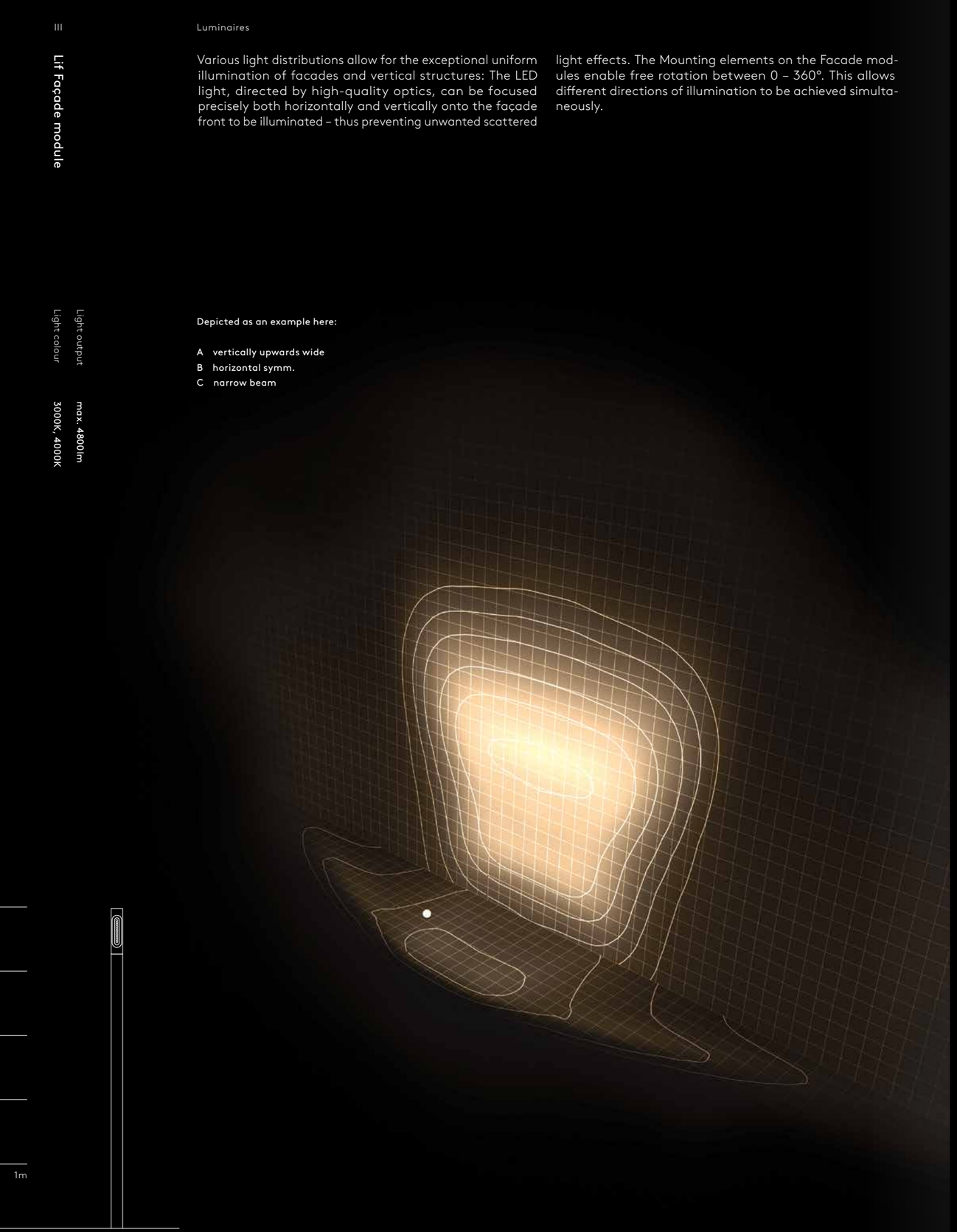


Various light distributions allow for the exceptional uniform illumination of facades and vertical structures: The LED light, directed by high-quality optics, can be focused precisely both horizontally and vertically onto the façade front to be illuminated – thus preventing unwanted scattered light effects.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

Depicted as an example here:

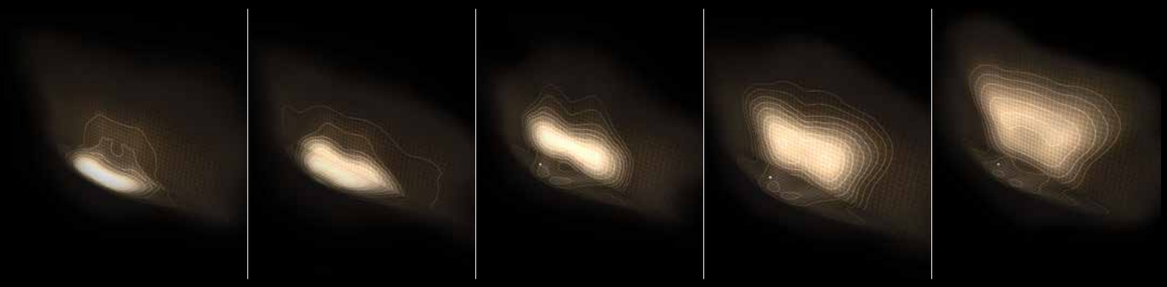
A vertically upwards wide
B horizontal symm.
C narrow beam

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



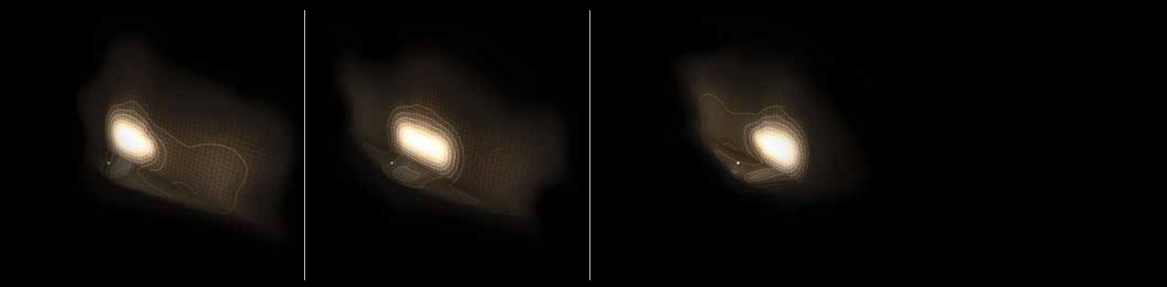
Selectable illumination character parameters

A Vertical from downwards to upwards



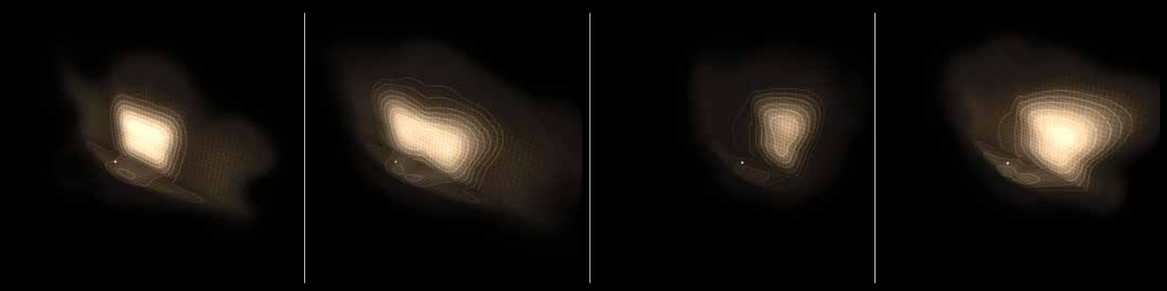
downwards near | directed downwards | parallel concentrated | medium upward offset | flood upward offset

B Horizontal left-directed, symmetrical or right-directed



asymm. left | symm. | asymm. right

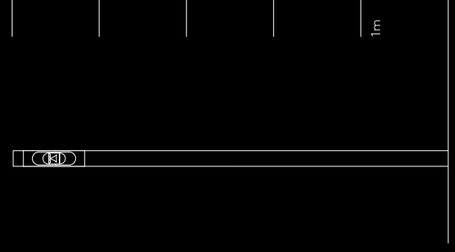
C Horizontal narrow or wide



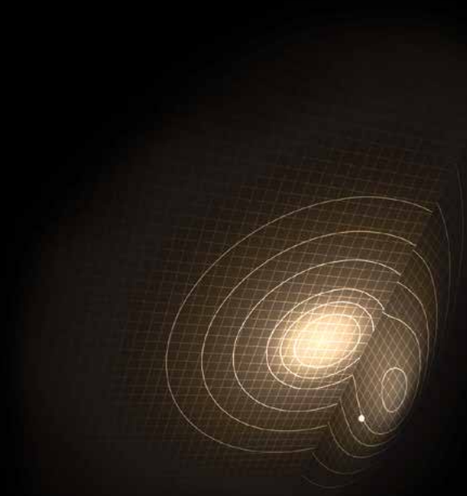
symm. narrow | symm. wide | asymm. narrow | asymm. wide

Lif Pathway module

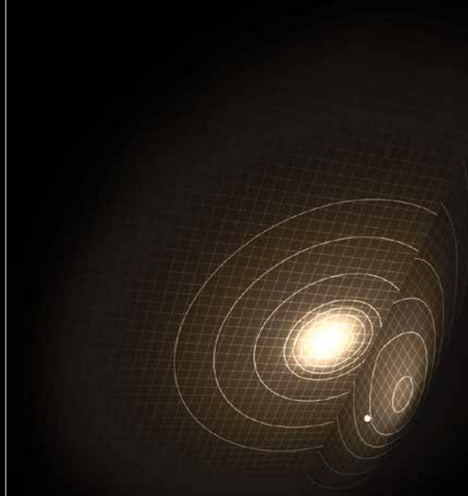
Light output **max. 1800lm**
Light colour **3000K, 4000K**



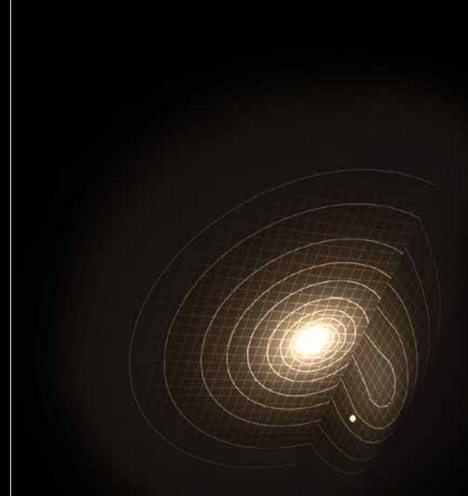
Medium



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.

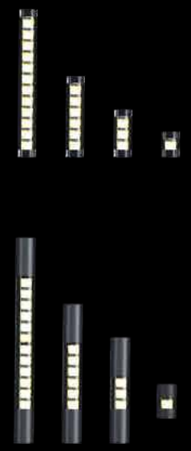
The precision optics prevent light pollution and illuminate residential spaces with respect to nature. Zhaga-compliant interfaces diversifies the abilities of the Line, enabling it to connect with intelligent Smart City options. The Line supports individual lighting concepts not just in its diversity 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.

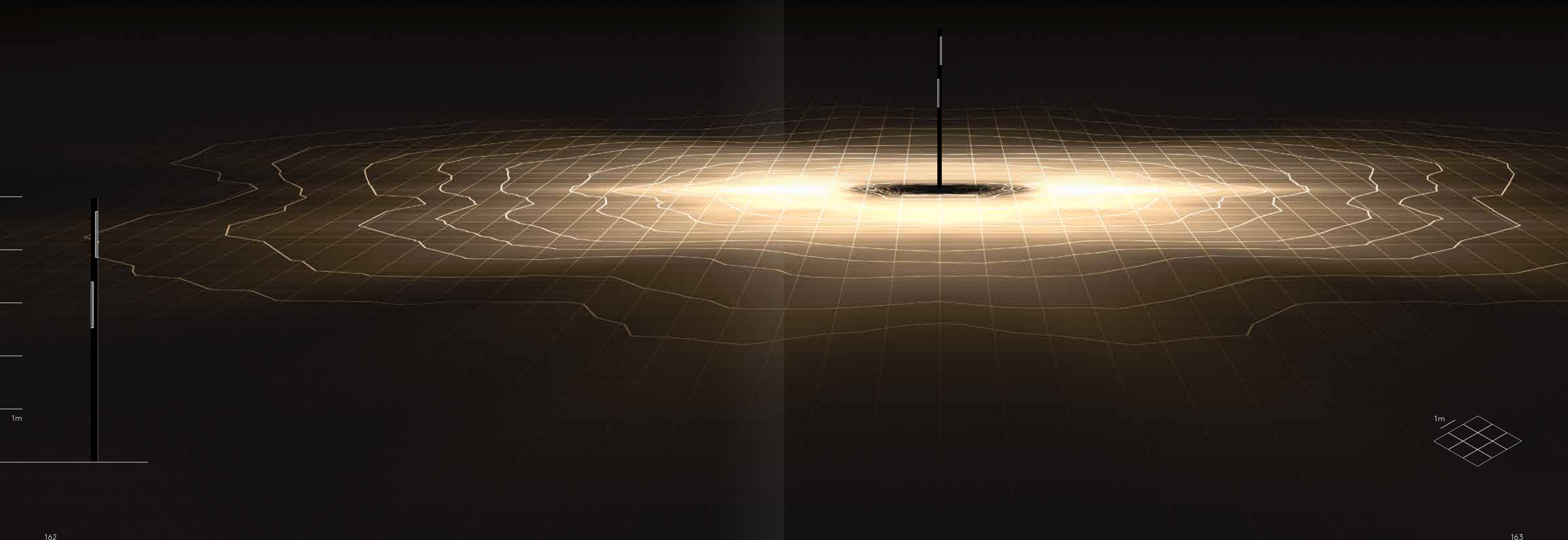
Night Sky

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

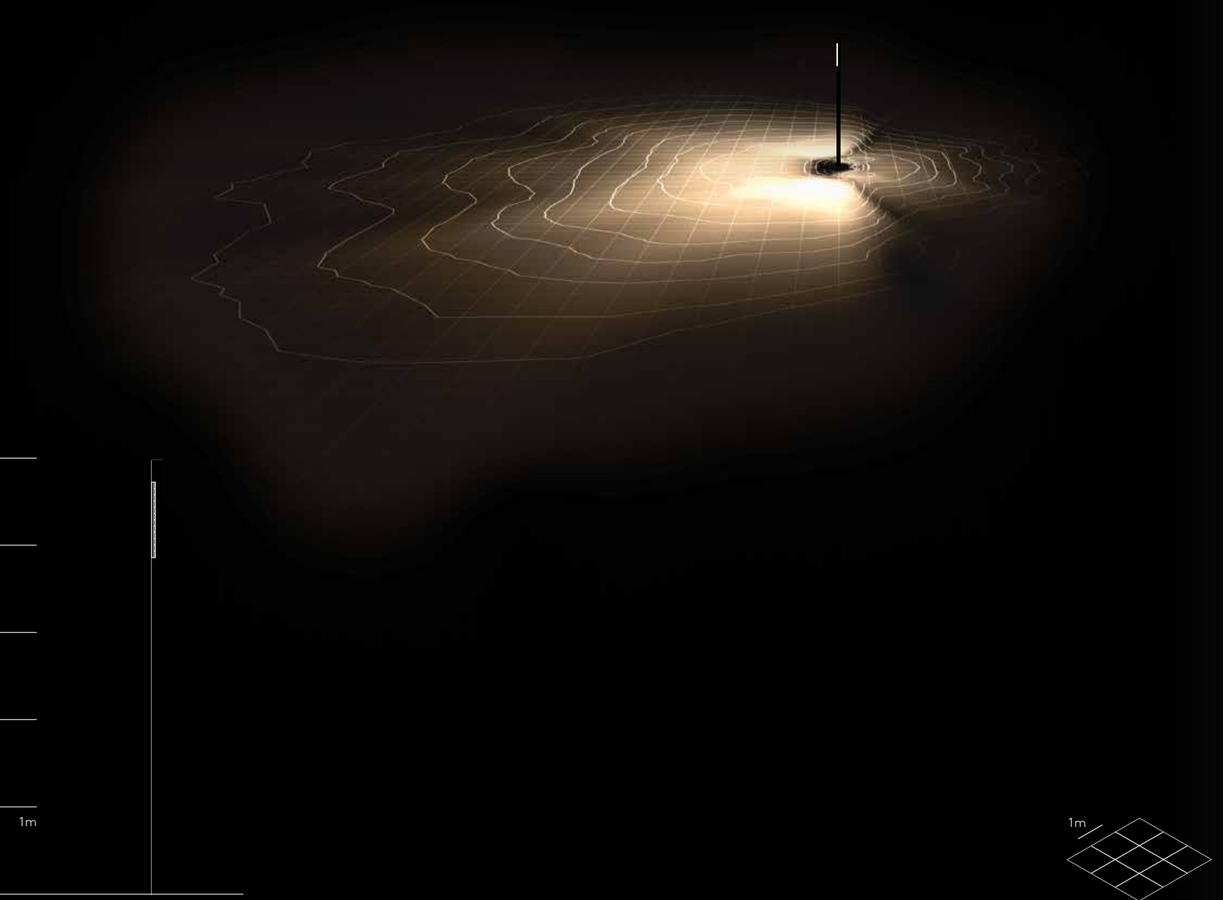
Combining two optics in a column creates symmetric illumination.



Combines multiple functions

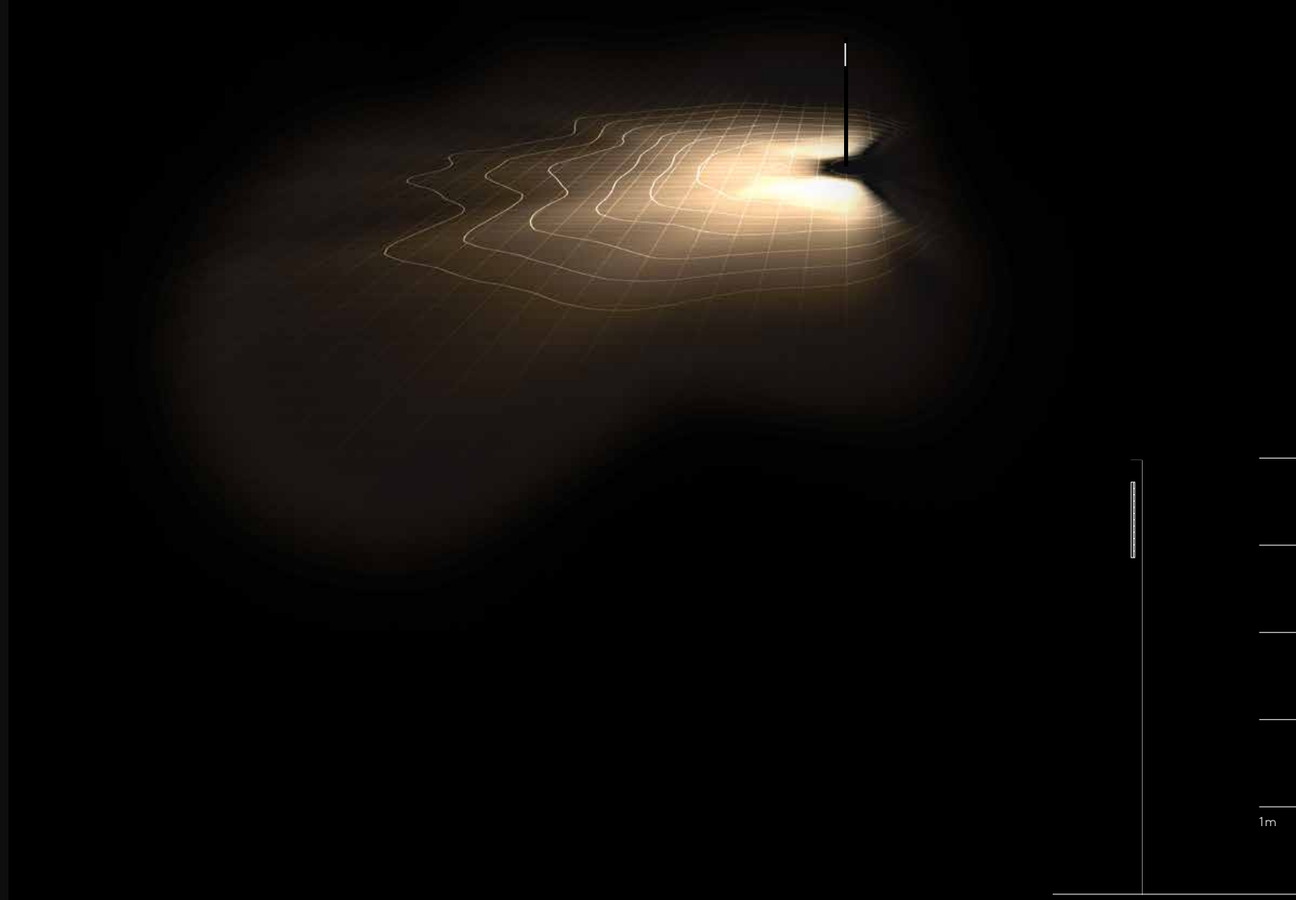
Asymmetric + pathway

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

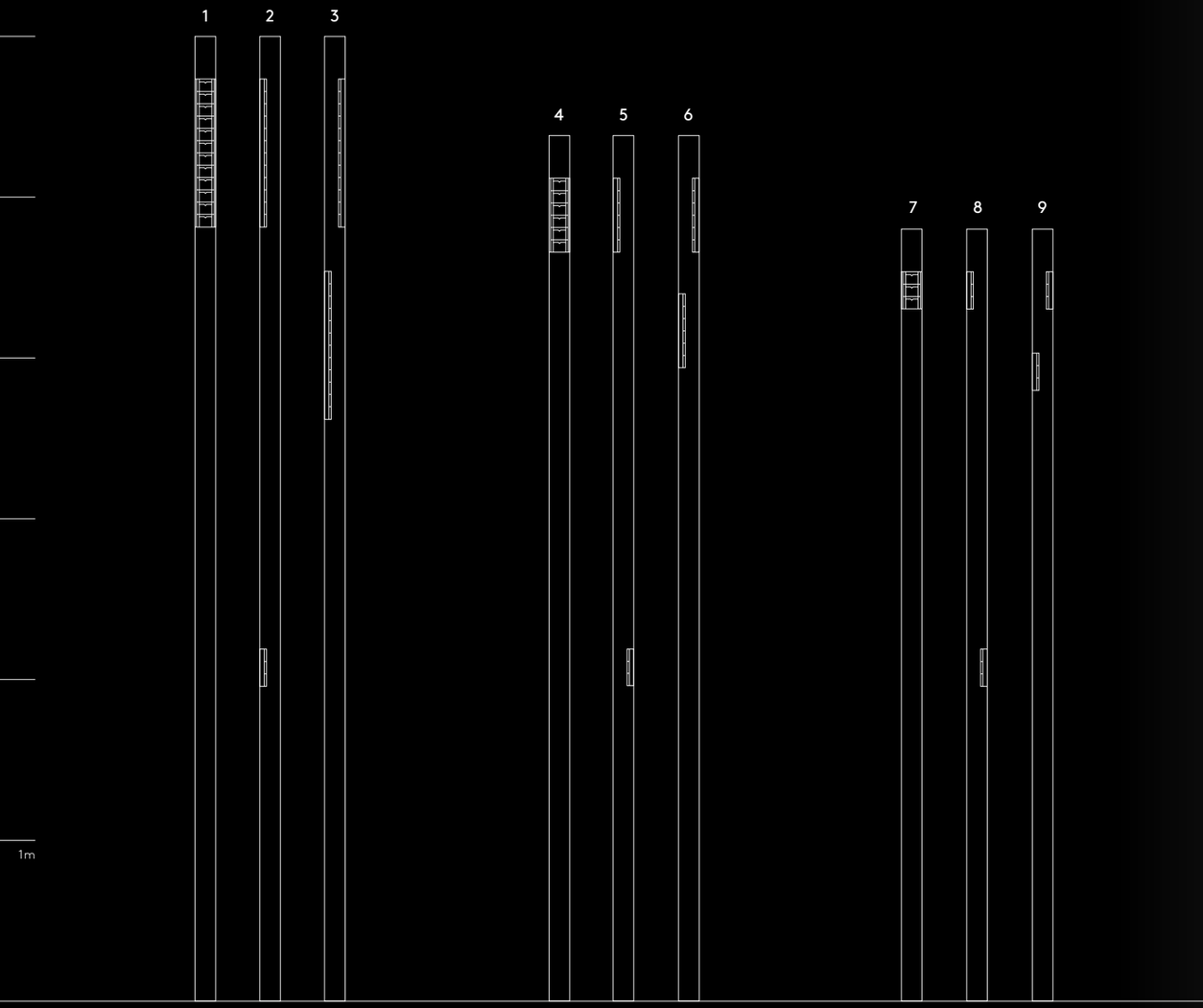
Wall-mounted and bollard luminaires for lighting to envelop buildings

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

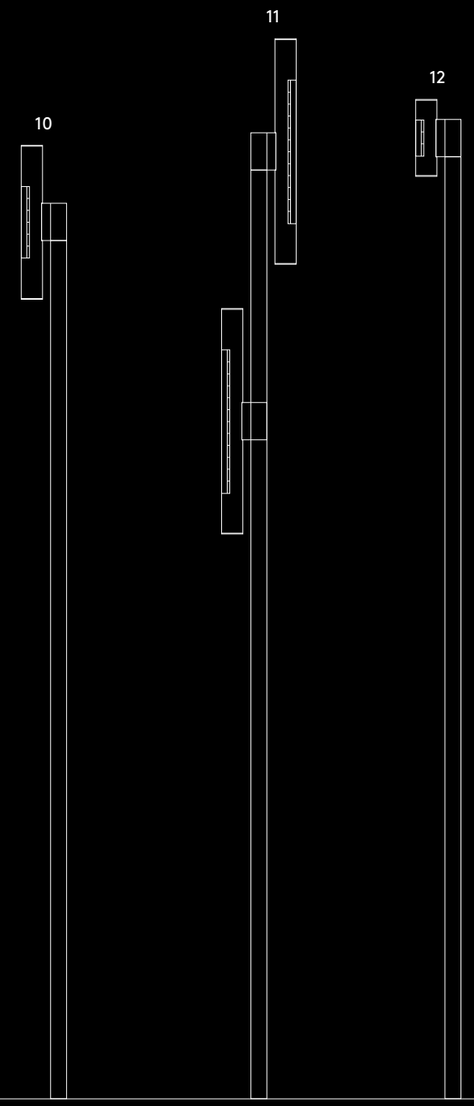


1 asymmetric – M12
2 asymmetric plus pathway – M12 + M3
3 aymmetric – M12 + M12

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

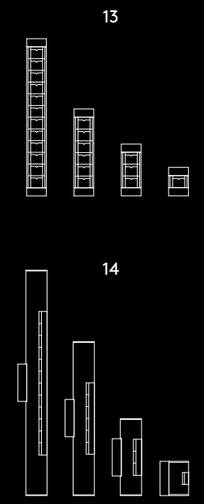
7 asymmetric – M3
8 asymmetric plus pathway – M3 + M3
9 symmetric – M3 + M3

Pole luminaires



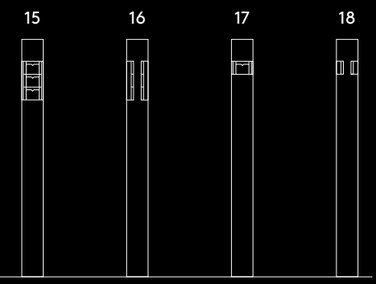
10 asymmetric – M6 pole top
11 asymmetric – M12 pole top + M12 Lateral
12 asymmetric – M3 pole top

Wall-recessed and surface-mounted luminaires



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

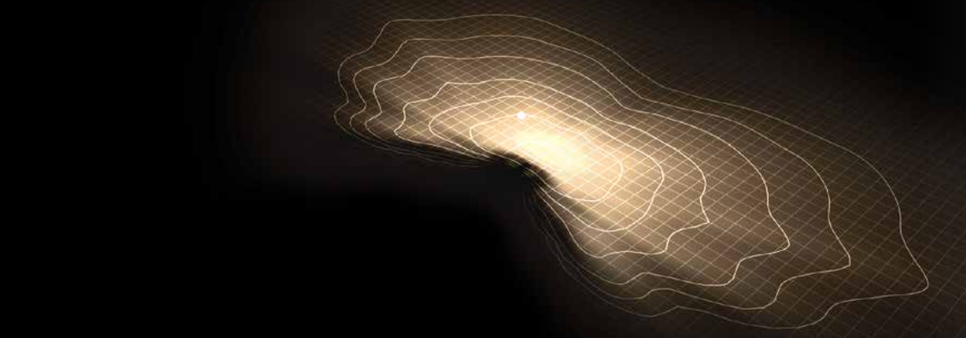
Bollards



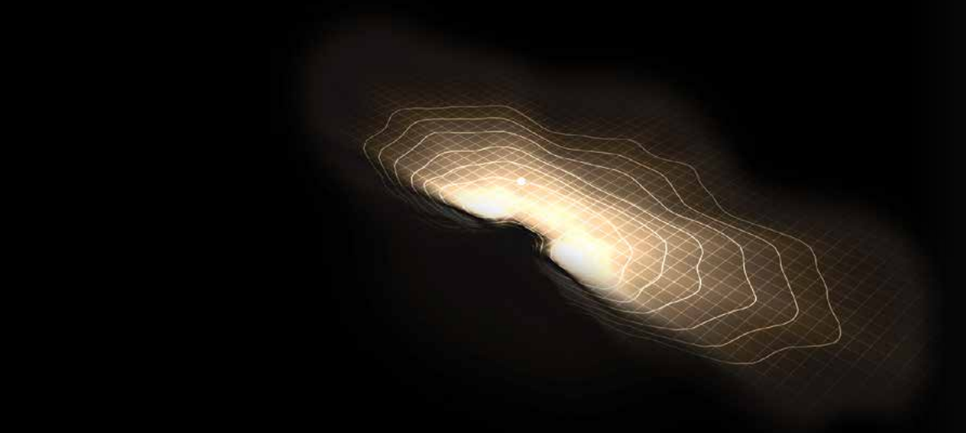
15 asymmetric – M3
16 symmetric – M3 + M3
17 asymmetric – M1
18 symmetric – M1 + M1

Luminaires

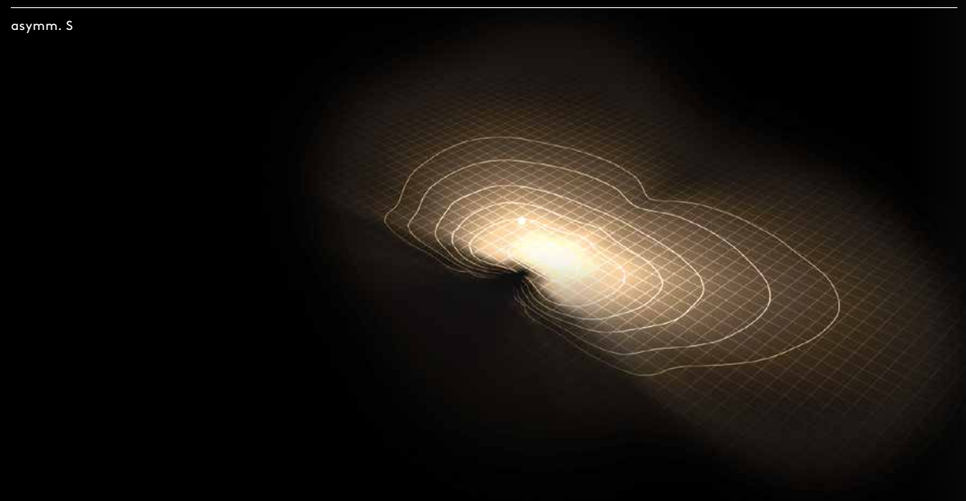
asymm. wide

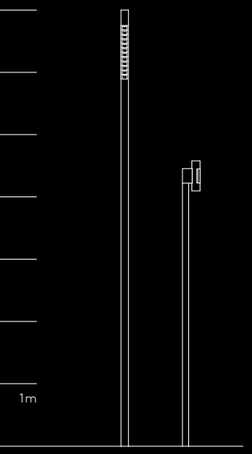


asymm. medium S



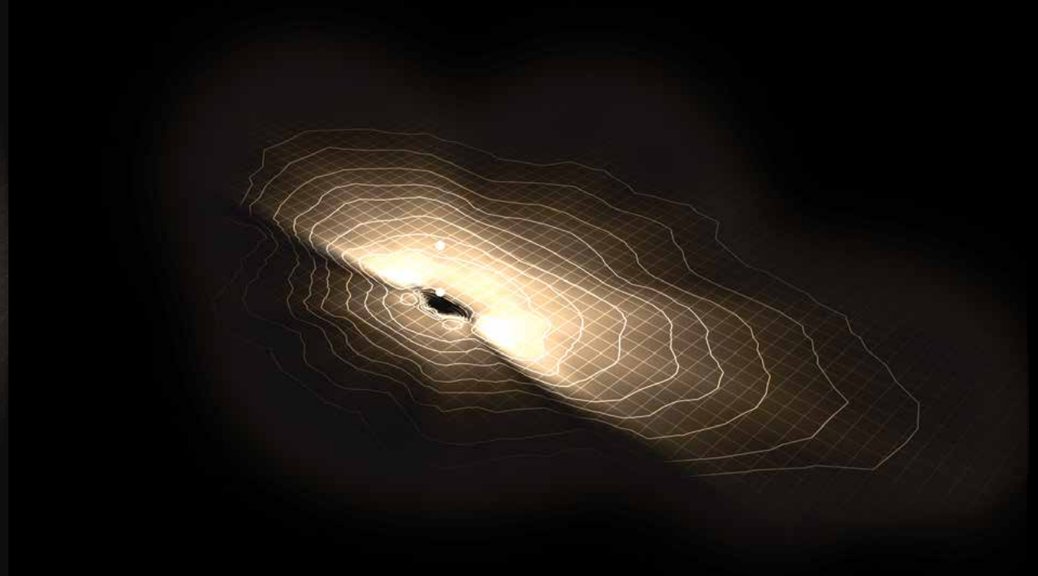
asymm. S





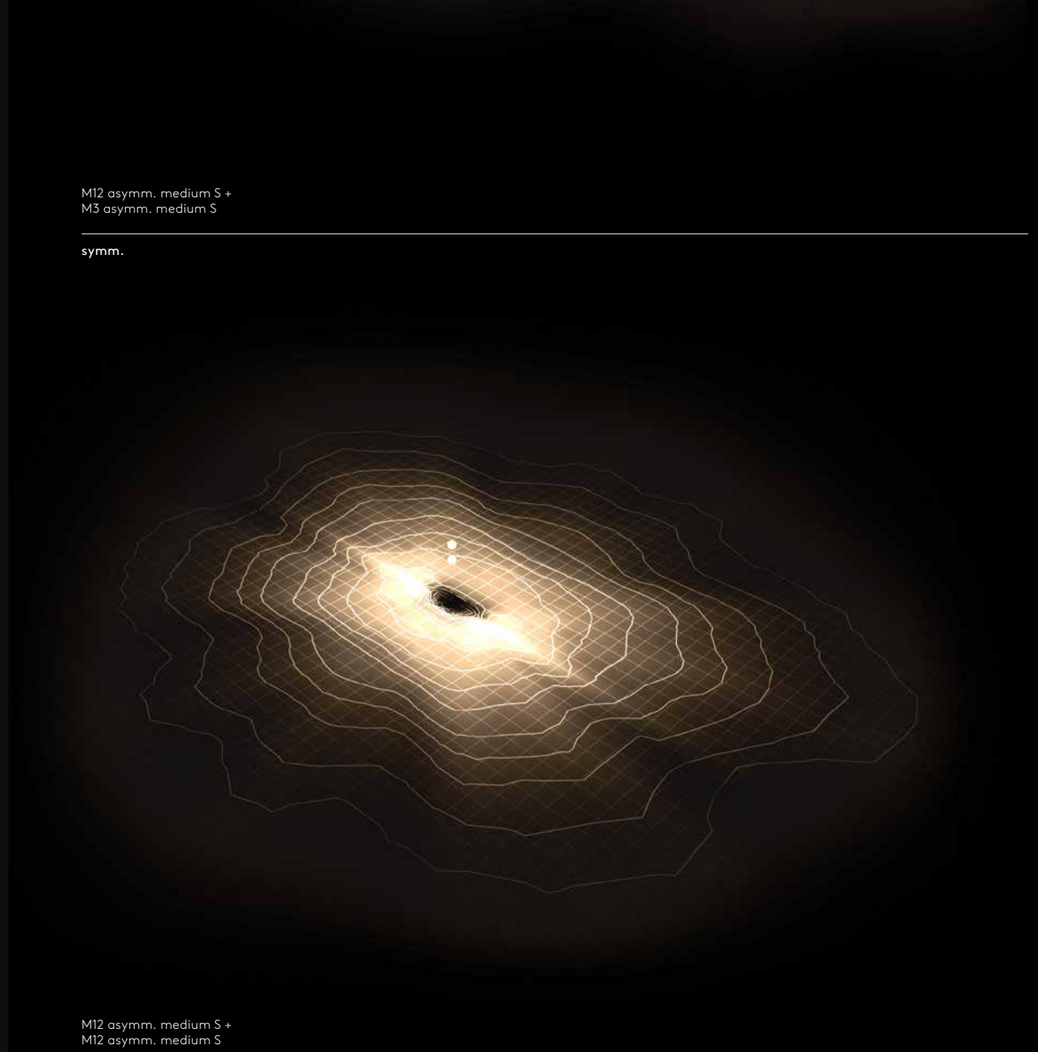
Line

asymm. street + pathway

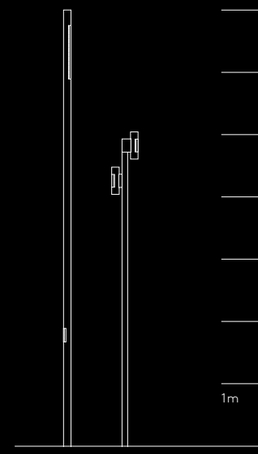


M12 asymm. medium S +
M3 asymm. medium S

symm.



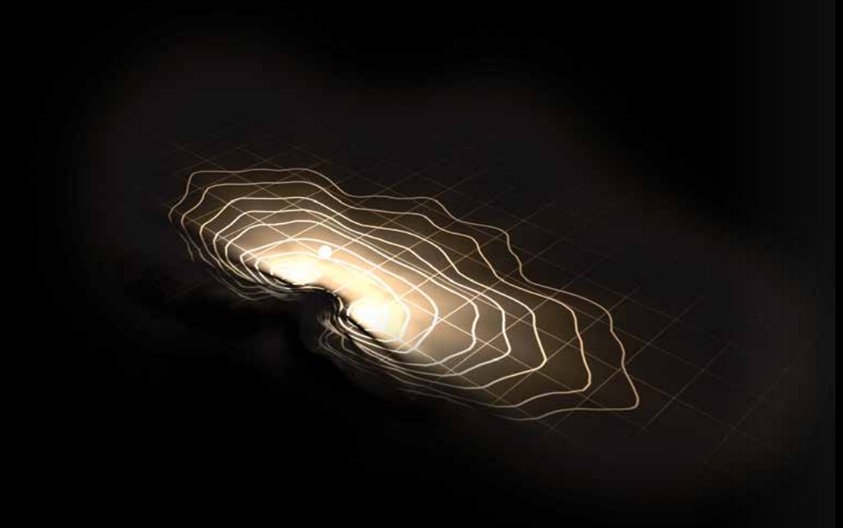
M12 asymm. medium S +
M12 asymm. medium S



Line with two optics

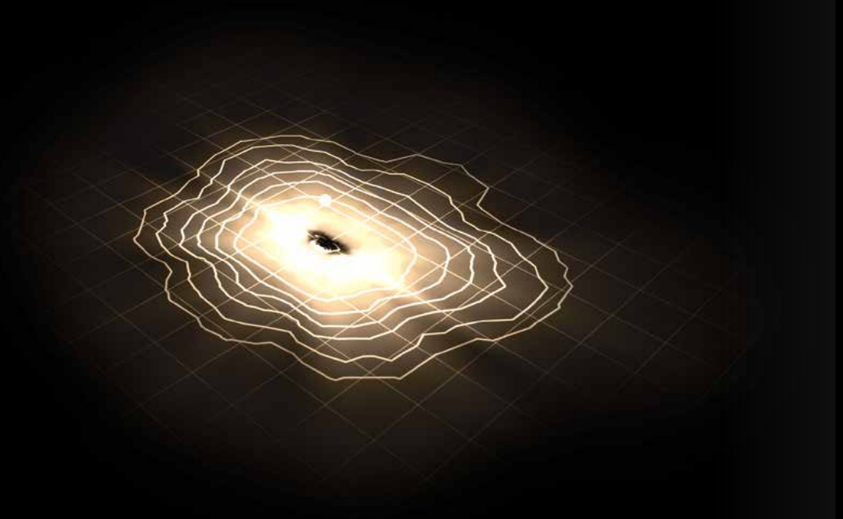
Light output	max. 7000lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface

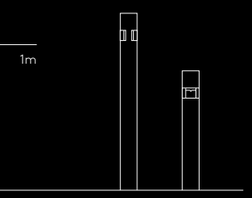
asymm. pathway



M3 asymm. medium S

symm. pathway





M3 asymm. medium S +
M3 asymm. medium S

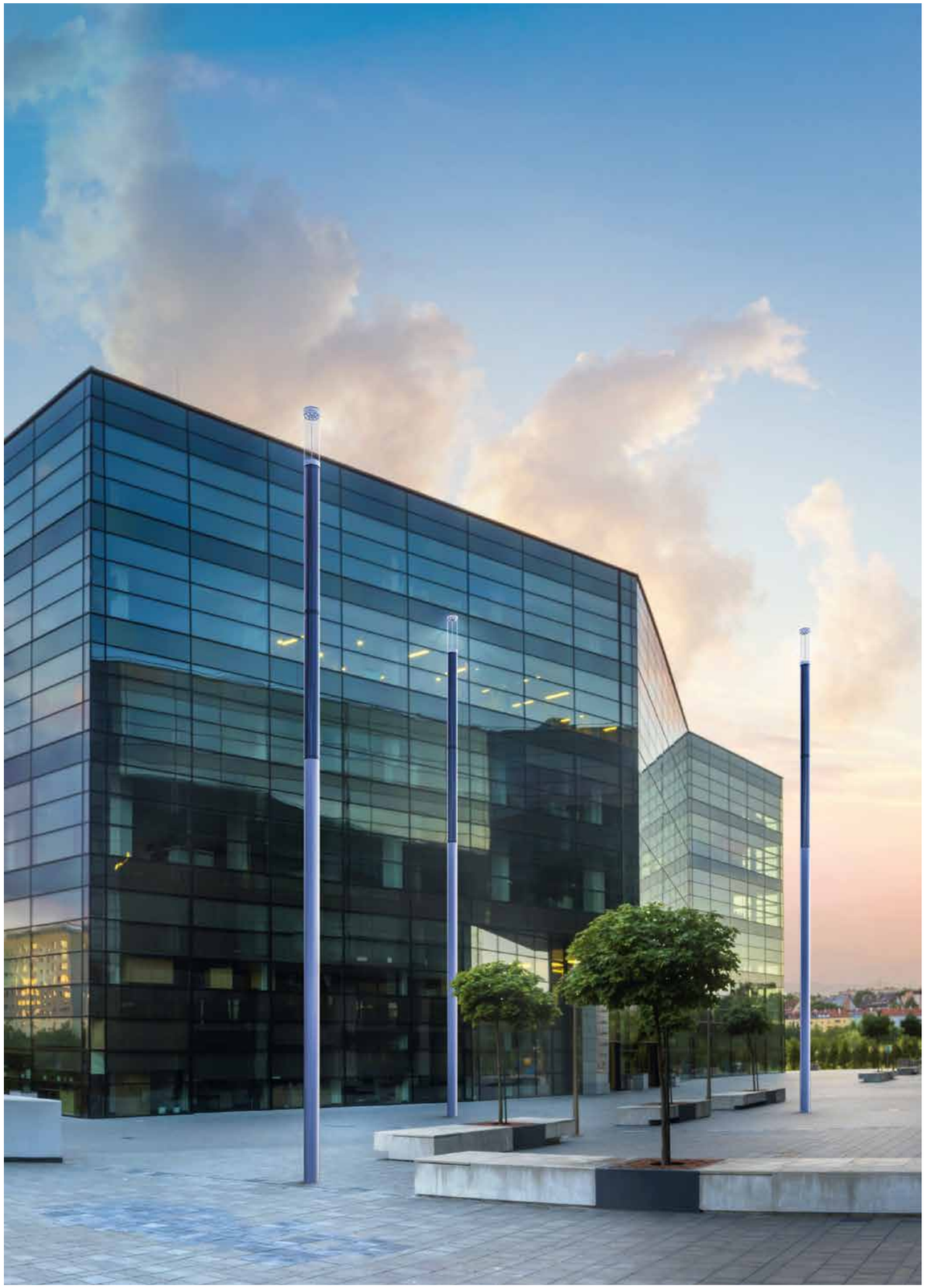
Light output	max. 2100lm
Light colour	2200K, 2700K, 3000K, 4000K
Reflector colour	silver, gold
Smart City	optional Zhaga interface

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

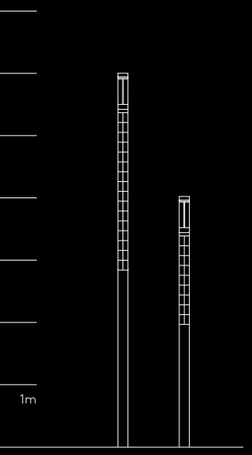
Light colour 2700K, 3000K, 4000K

Light output max. 3600lm

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

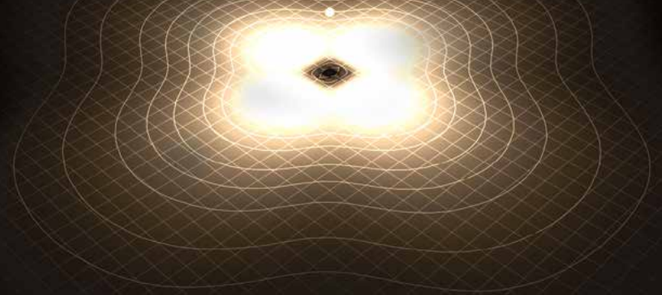
The Inula light column can be fitted with one or two modules depending on the demand for luminous flux or strength of illumination.

Inula
Light column

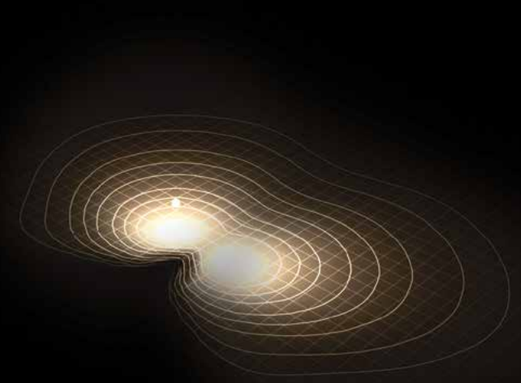
Light output max. 6000lm
Light colour 2700K, 3000K, 4000K

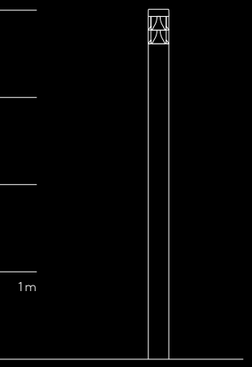
Luminaires

symm. 4Q



asymm. pathway 2Q



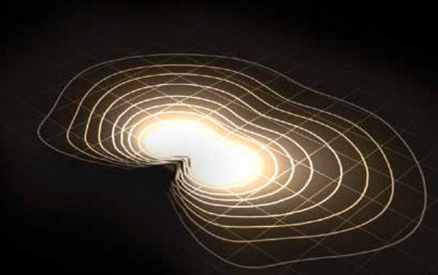


Inula

symm. 4Q

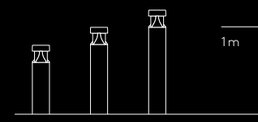
asymm. 1Q

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

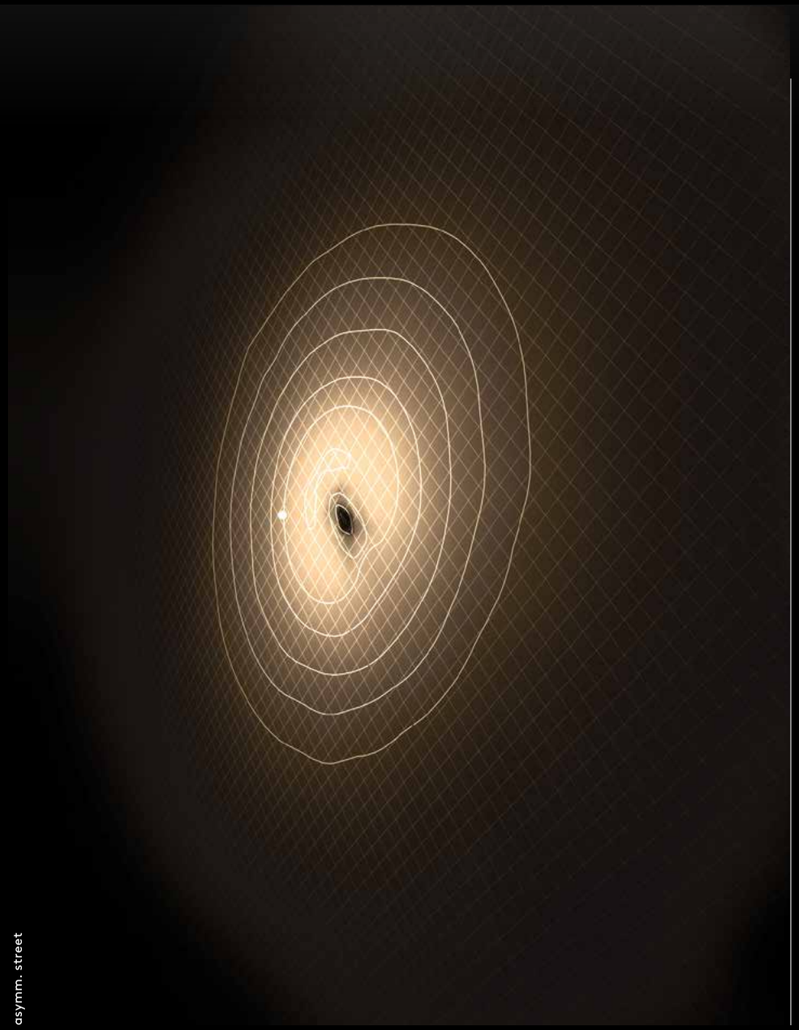
Atmosphere for urban quality of life

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.

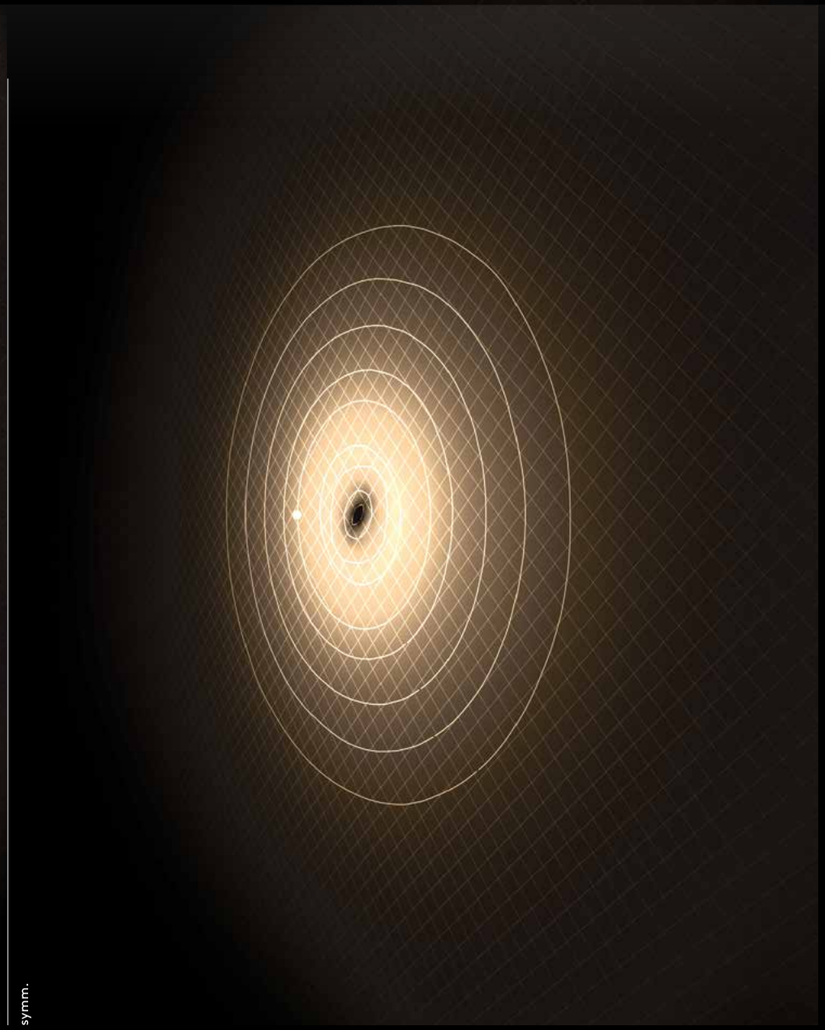
Elo Pole top luminaire and Light column with Tritec A

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

asymm. street



symm.

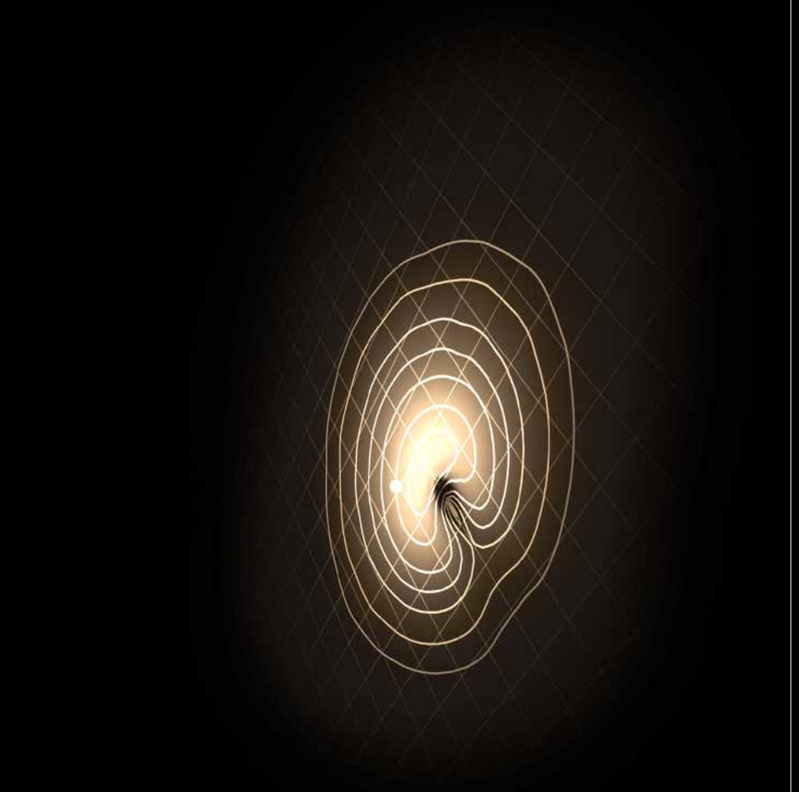


Tritec A

Elo Bollard with Tritec A

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

asymm. pathway



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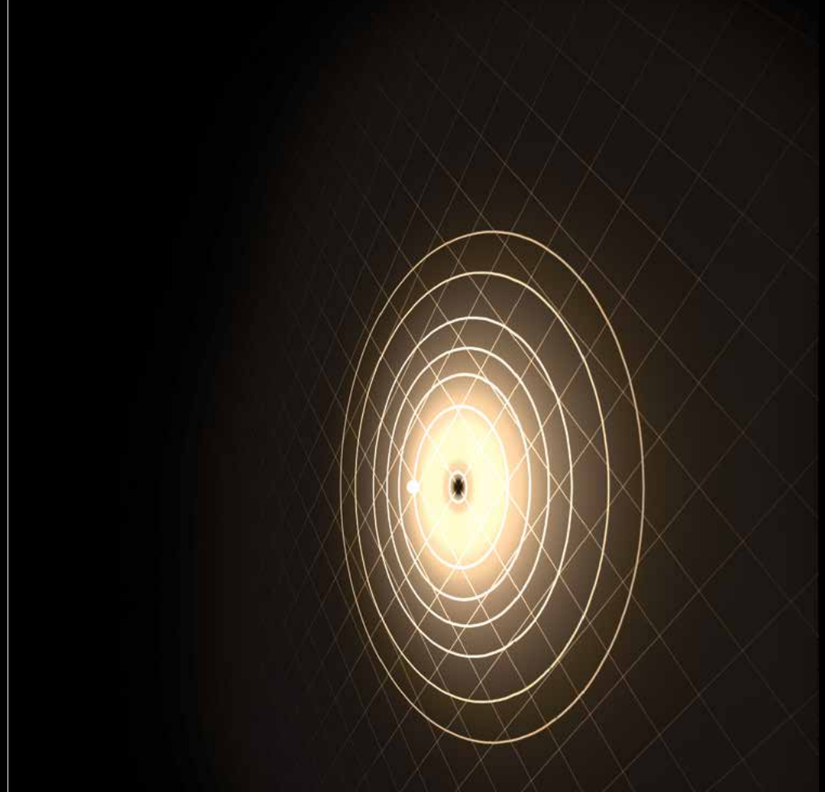
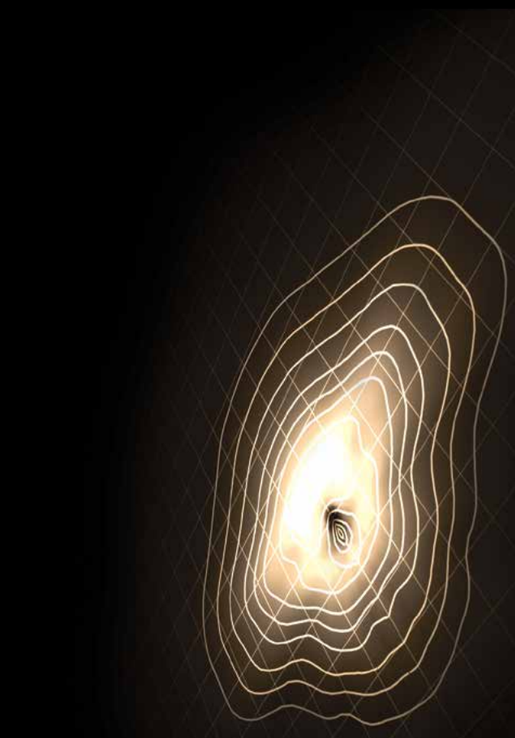


Tritec A

Elo Bollard with Tritec S

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



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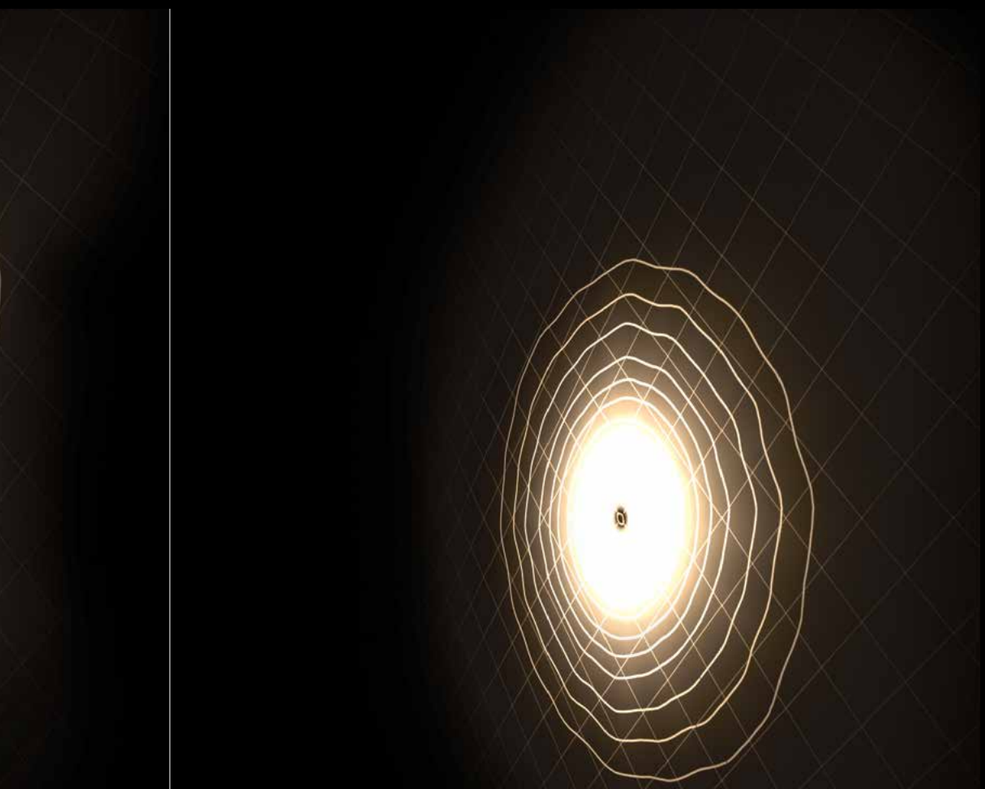
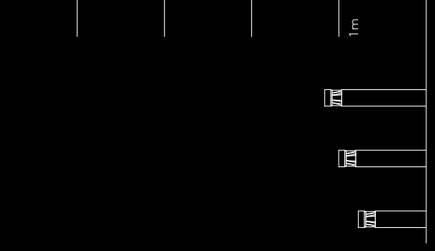
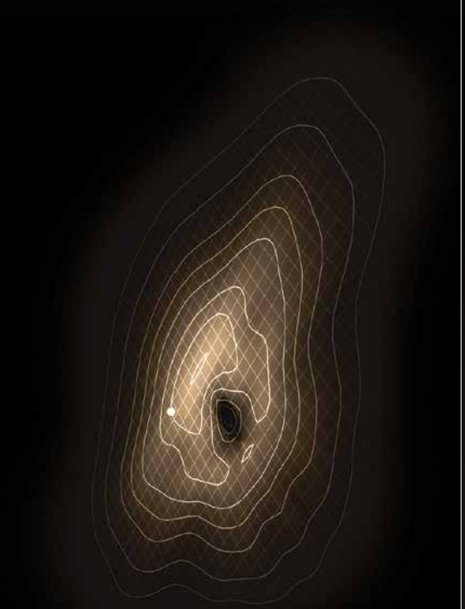


Tritec S

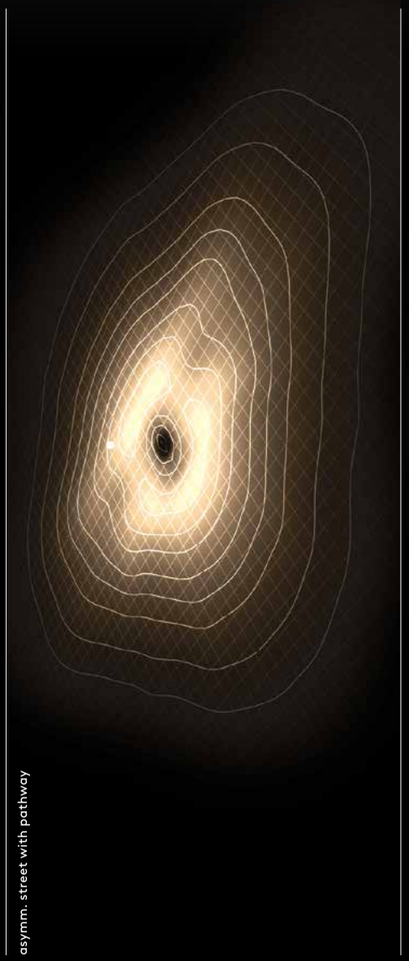


Elo Pole top luminaire and Light column with Tritec S

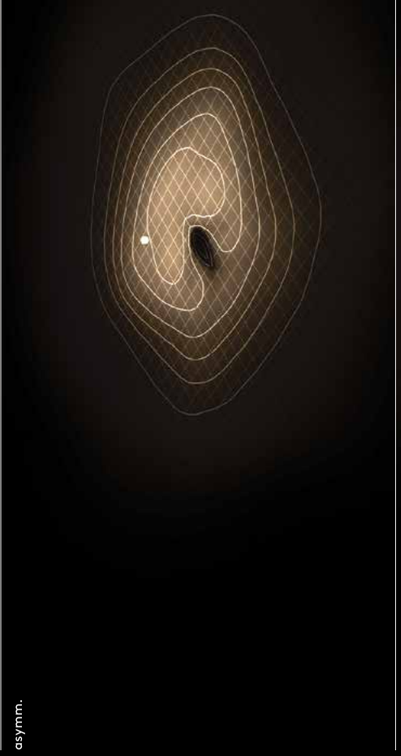
Light output	**max. 4200lm**
Light colour	**2200K, 2700K, 3000K, 4000K**
Reflector colour	**silver, gold**



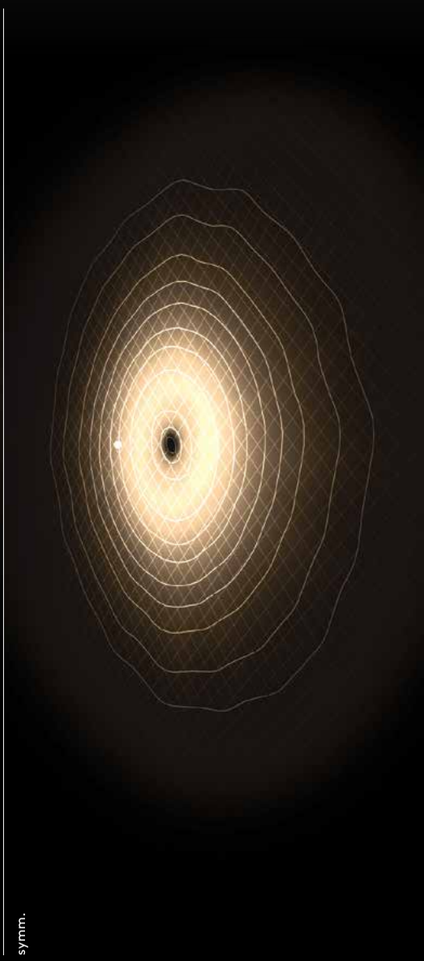
asymm. street



asymm. street with pathway

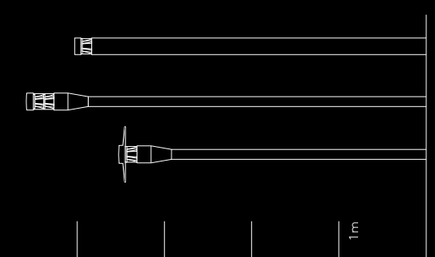


asymm.



symm.

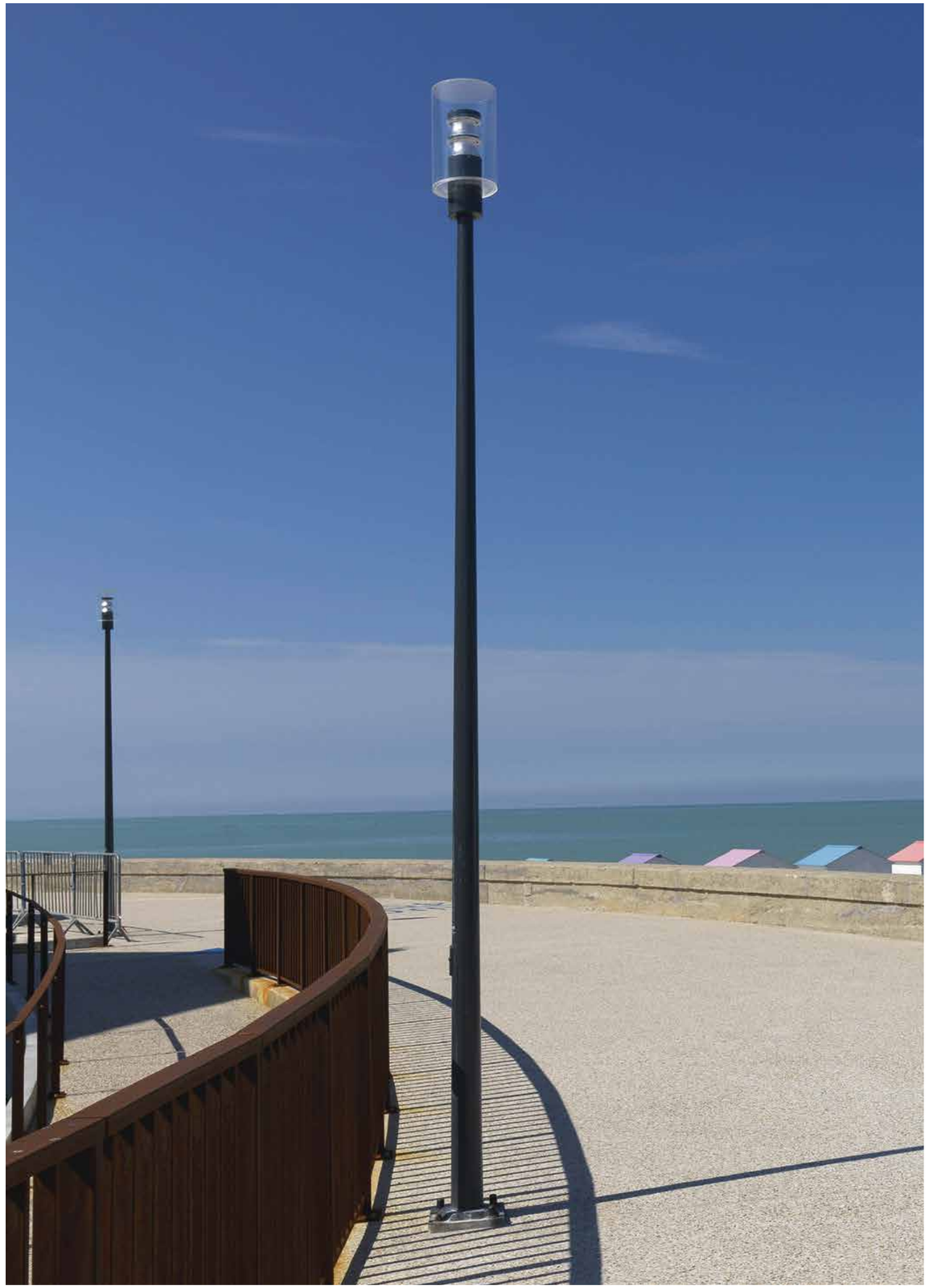
Tritec S



Dandelion

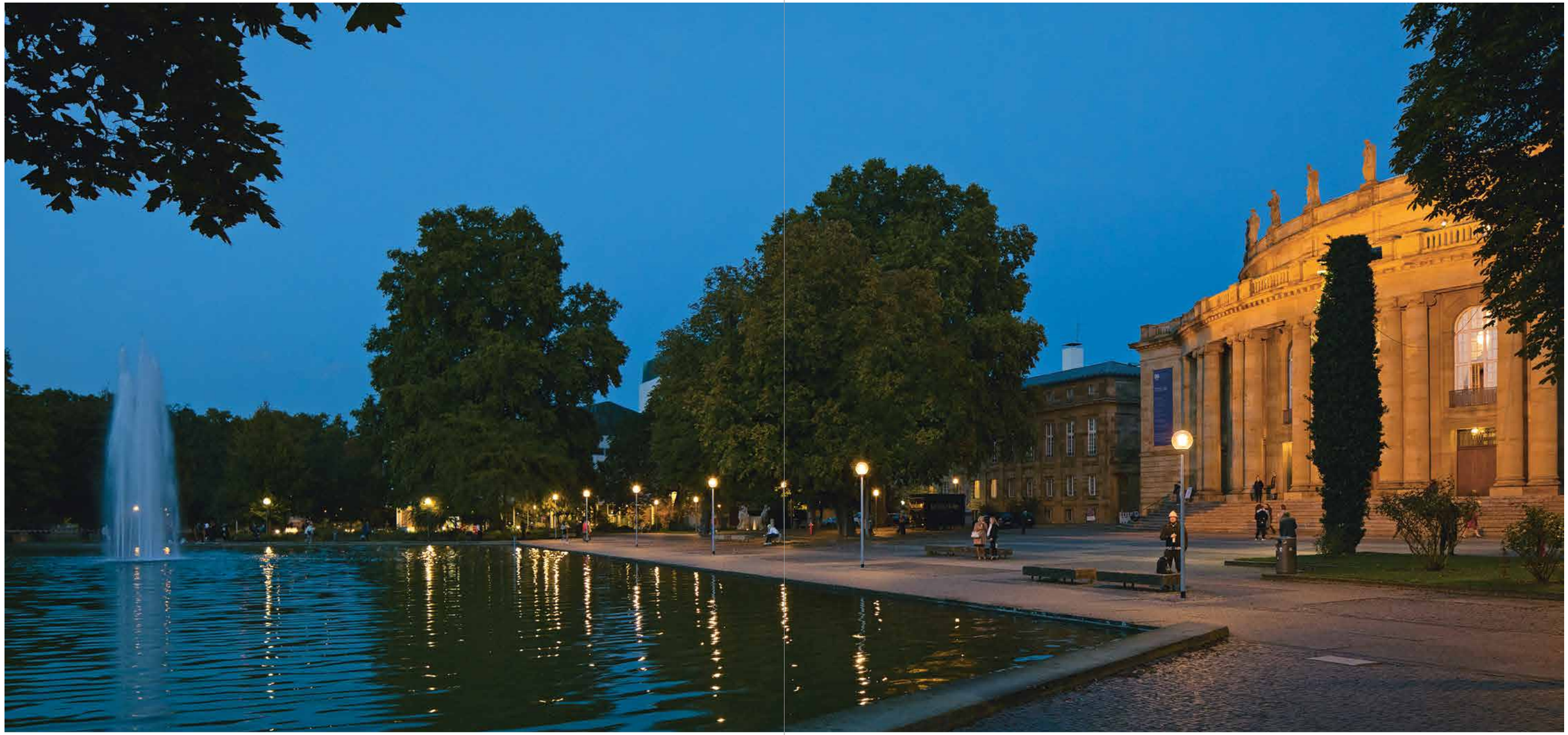
Although the umbrella of each individual dandelion seed is 90 percent open, it functions more effectively than a closed structure. The reason: the open structure creates the finest air turbulence and thus a suction effect that makes the seeds fly even further than has long been thought.

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

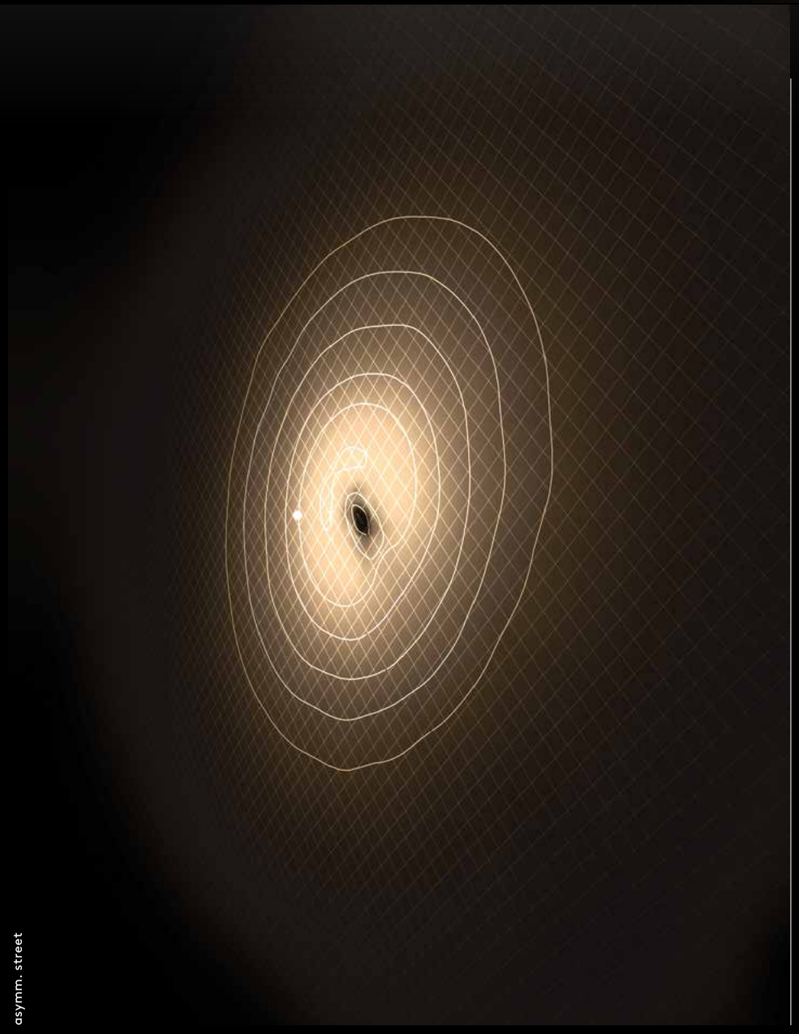
Lighting with Tritec Sky makes every urban space sensual and distinctive. The optics bring individual details like shapes, colours and textures to life by using the exact quantity of light required, without impairing the beauty of the environment, stars or night sky.

Smart City

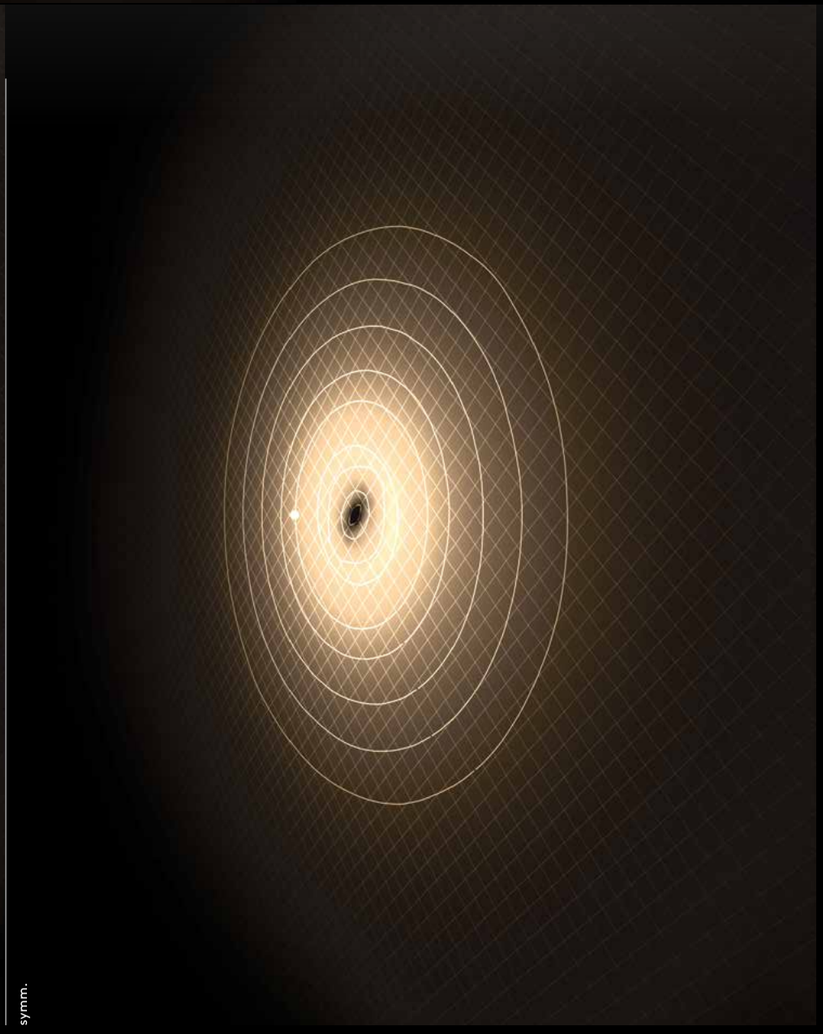
As if created for the Smart City
The transparent diffuser lets in radio signals, allowing smart functions to be invisibly integrated in the Tritec module, for example via a Zhaga interface.

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



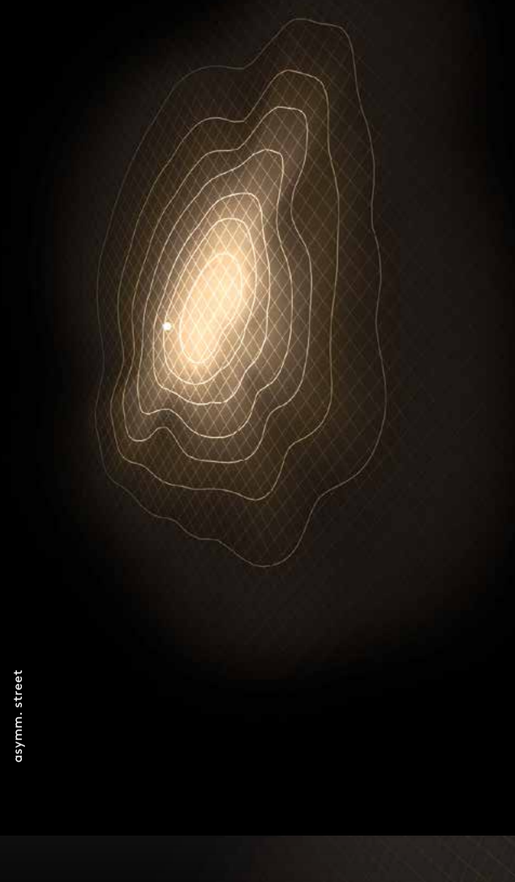
asymm. street



symm.

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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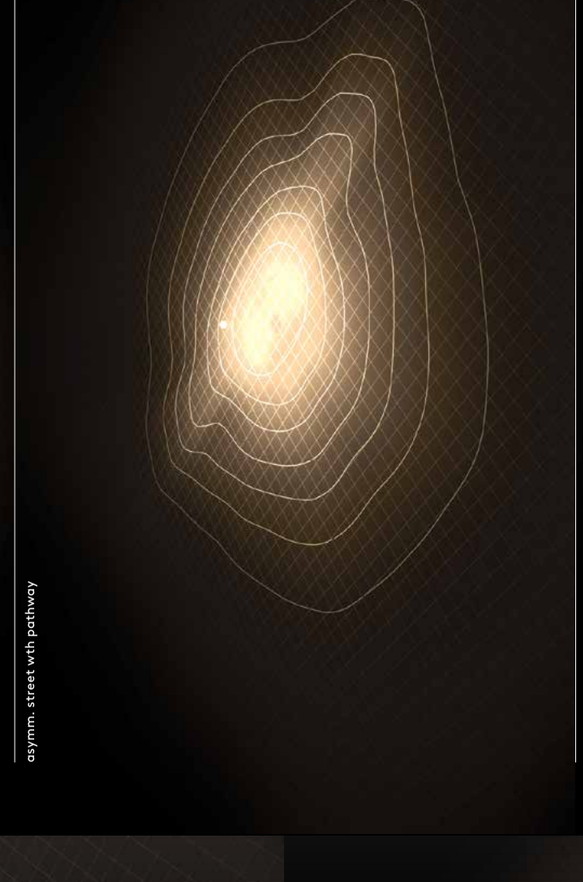
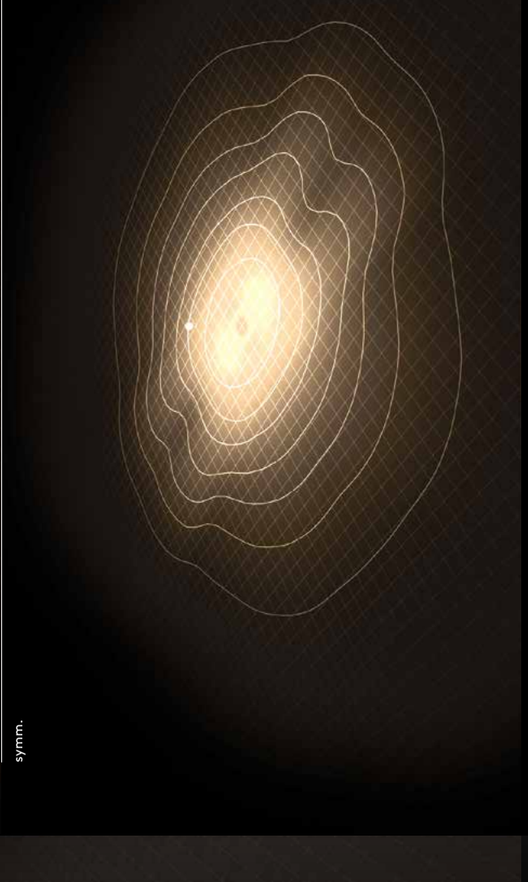


asymm. street wth pathway



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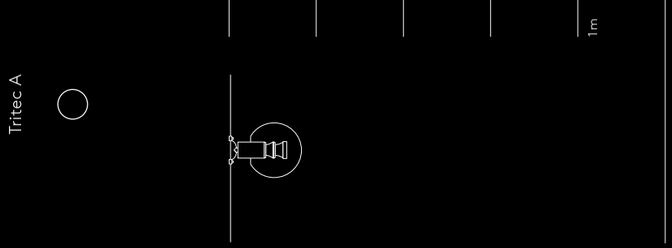
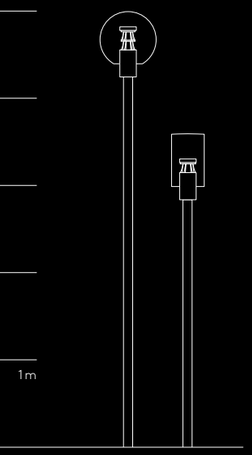


Aira Catenary luminaire with Tritec A

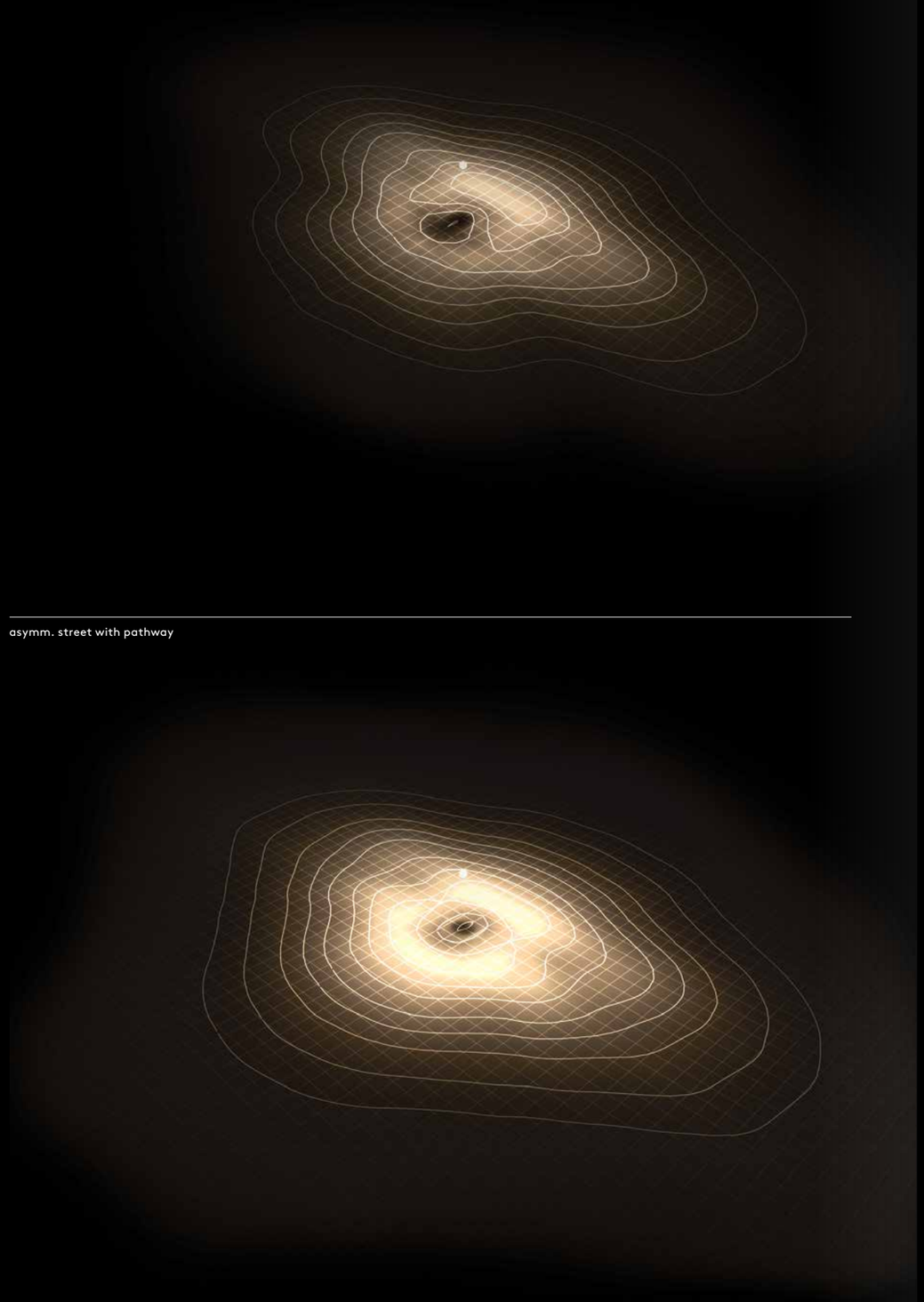
Light output max. 4500lm
Light colour 2200K, 2700K, 3000K, 4000K
Reflector colour silver, gold
Smart City optional Zhaga interface

Tritec S



Luminaires

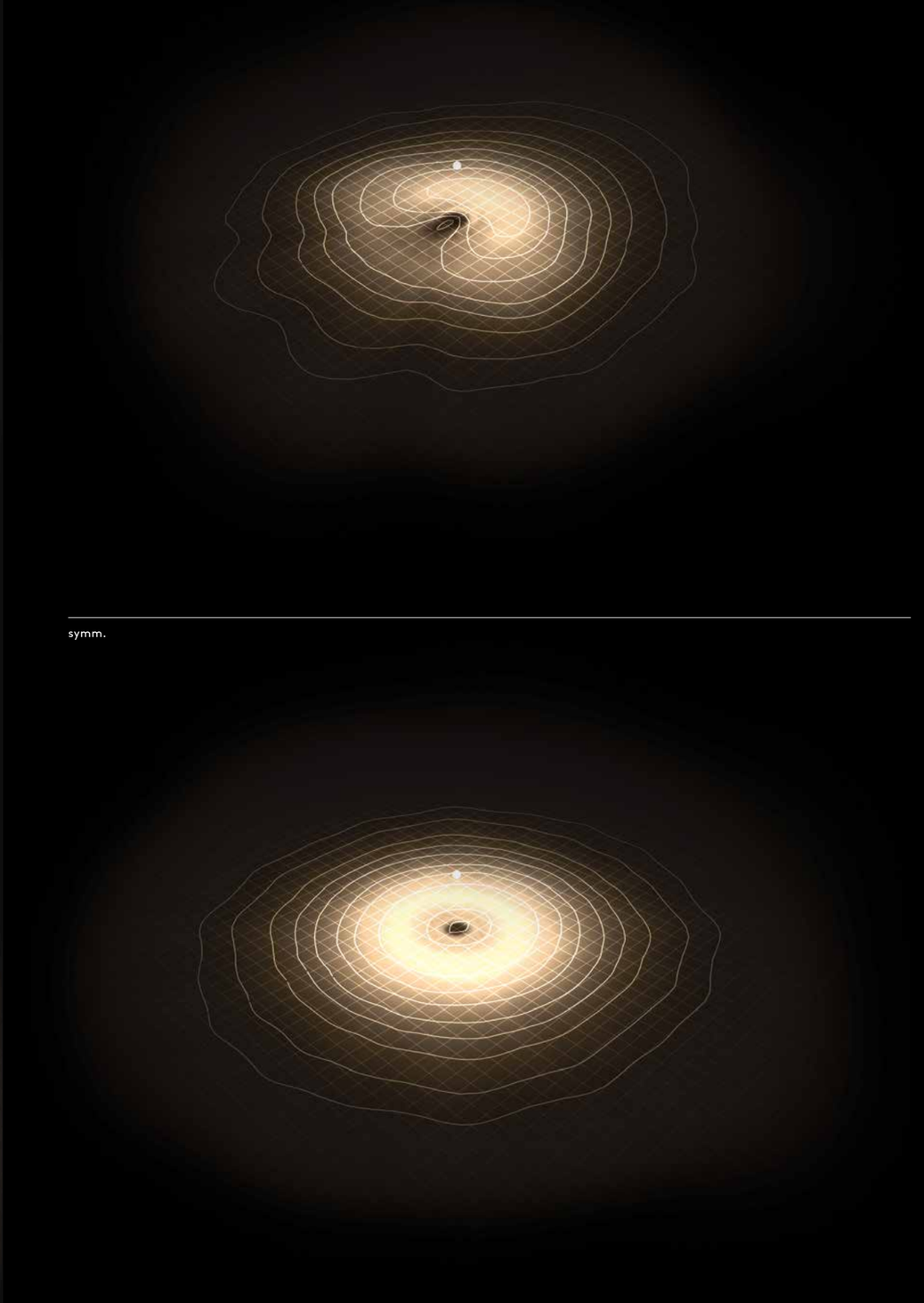
asymm. street



asymm. street with pathway

Aira

asymm.



symm.

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

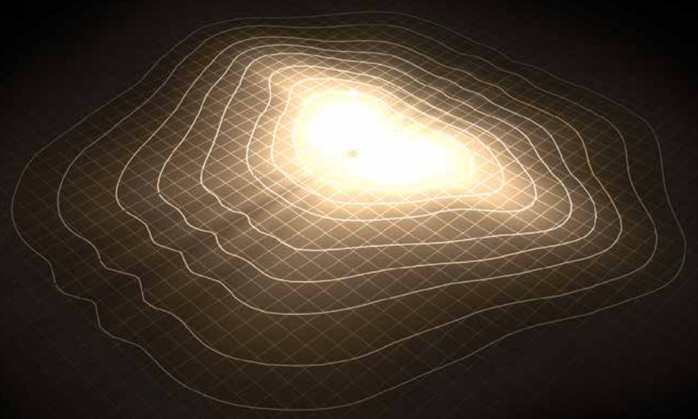
Light output max. 6000lm

Light colour 2700K, 3000K, 4000K

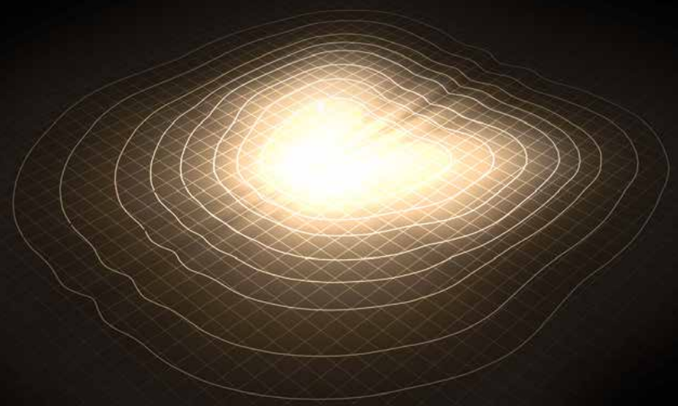
Smart City optional Zhaga interface

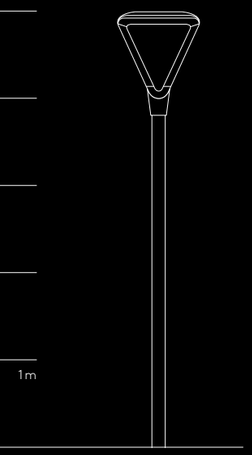
Luminaires

asymm. street



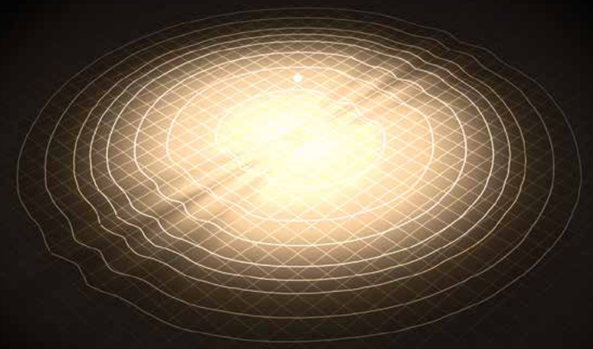
asymm.





Mistella

symm.



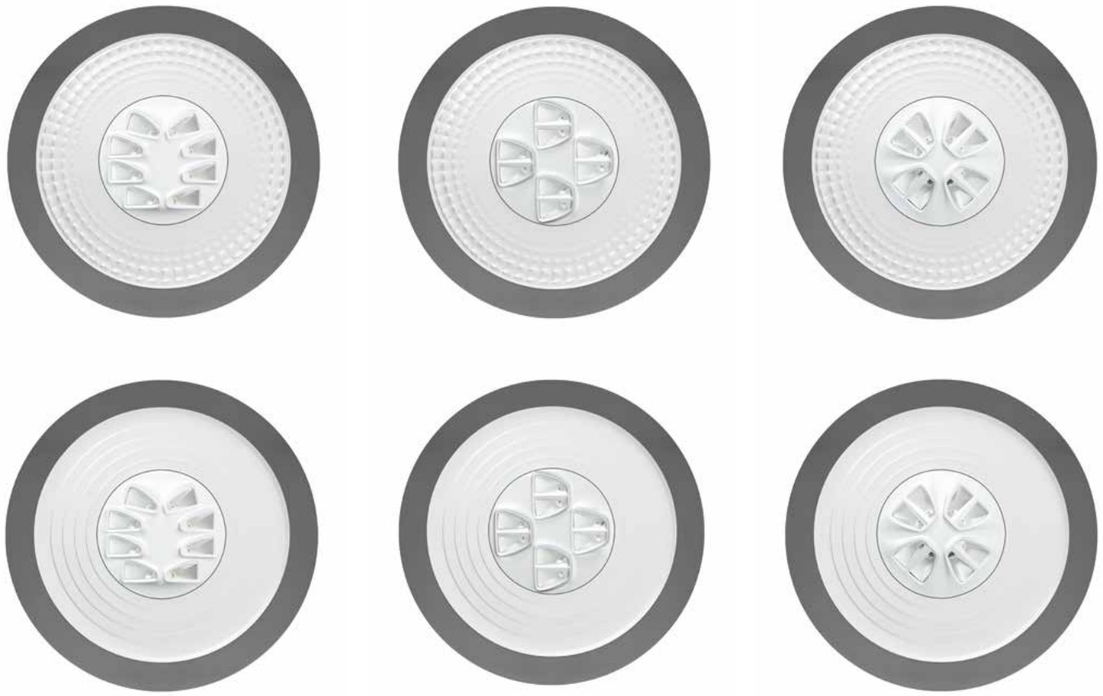
Veiled poisonpie

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

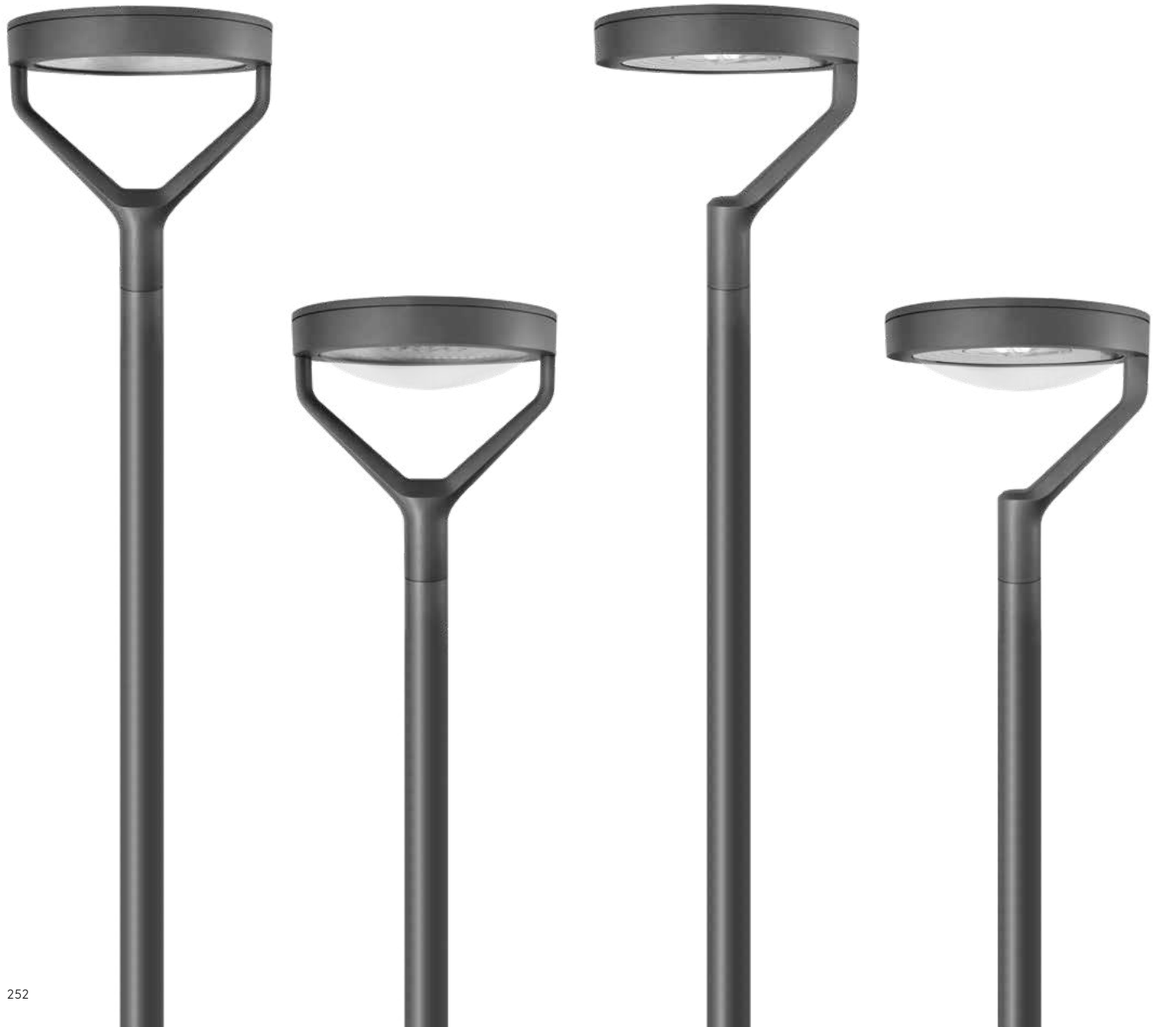
Astro's modular construction means that it can be equipped with various pole connections, light engines and covers coordinated to your specific lighting requirements.

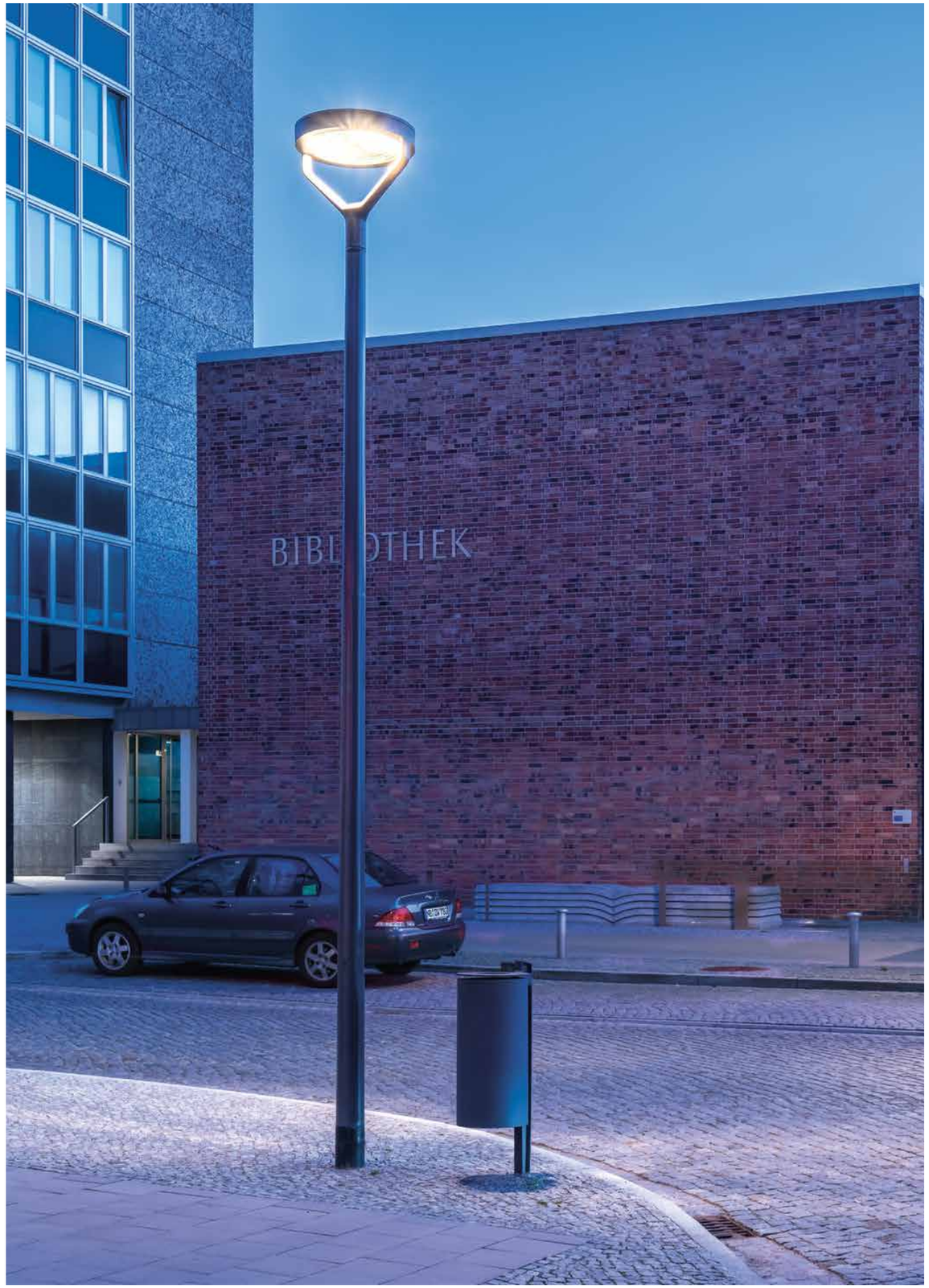
Night Sky

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

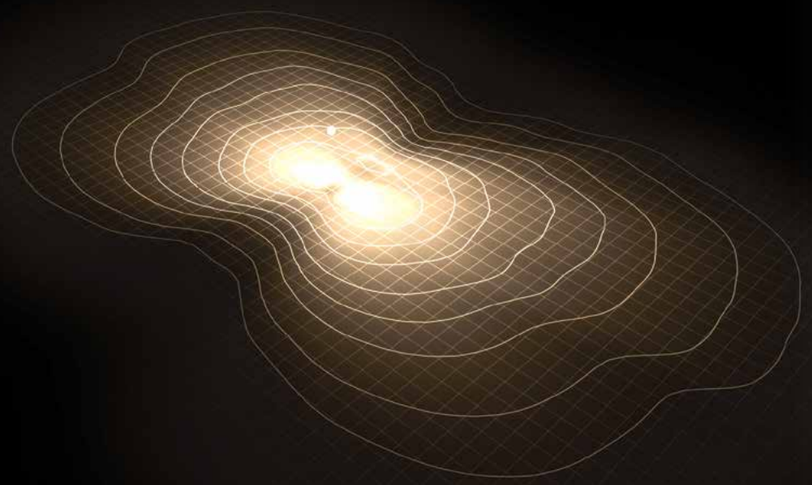
Light output max. 4500lm

Light colour 2700K, 3000K, 4000K

Smart City optional Zhaga interface

Luminaires

asymm. street



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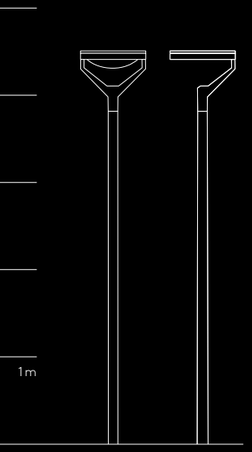
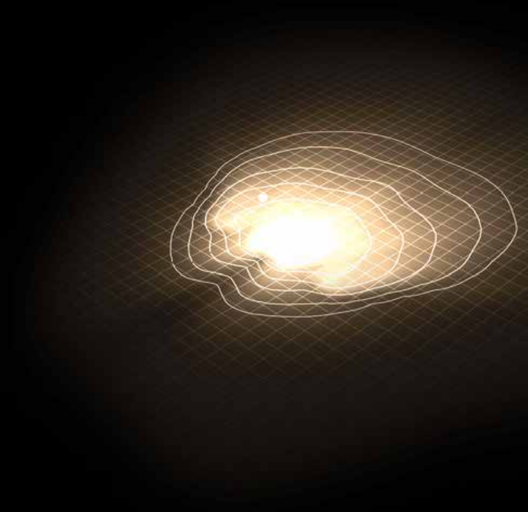
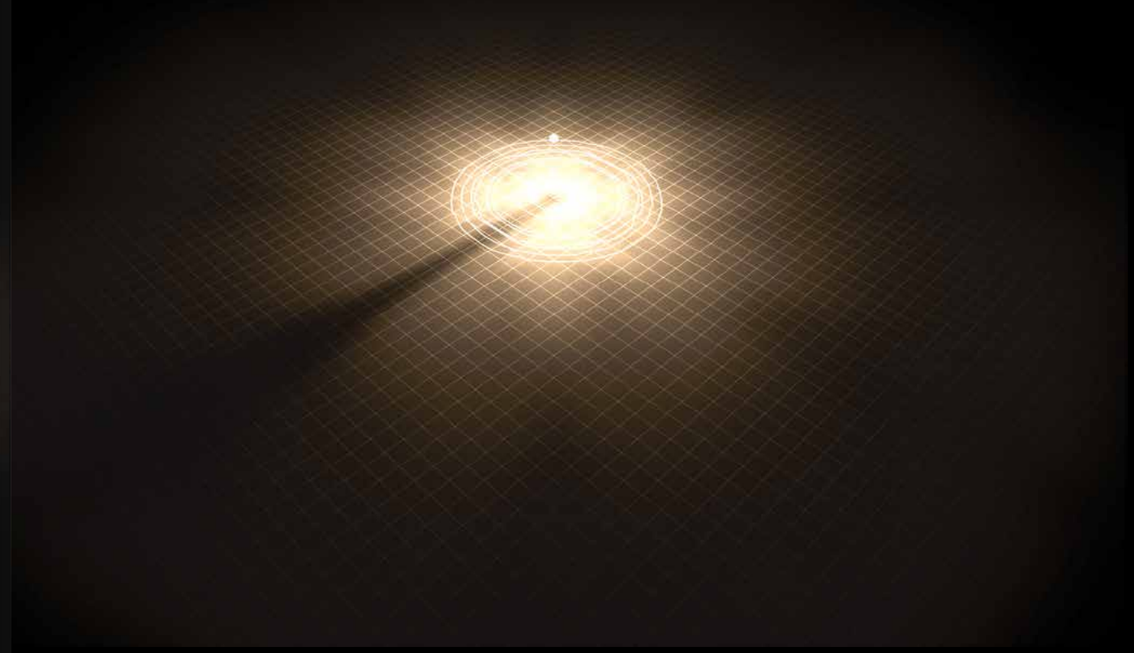




Astro

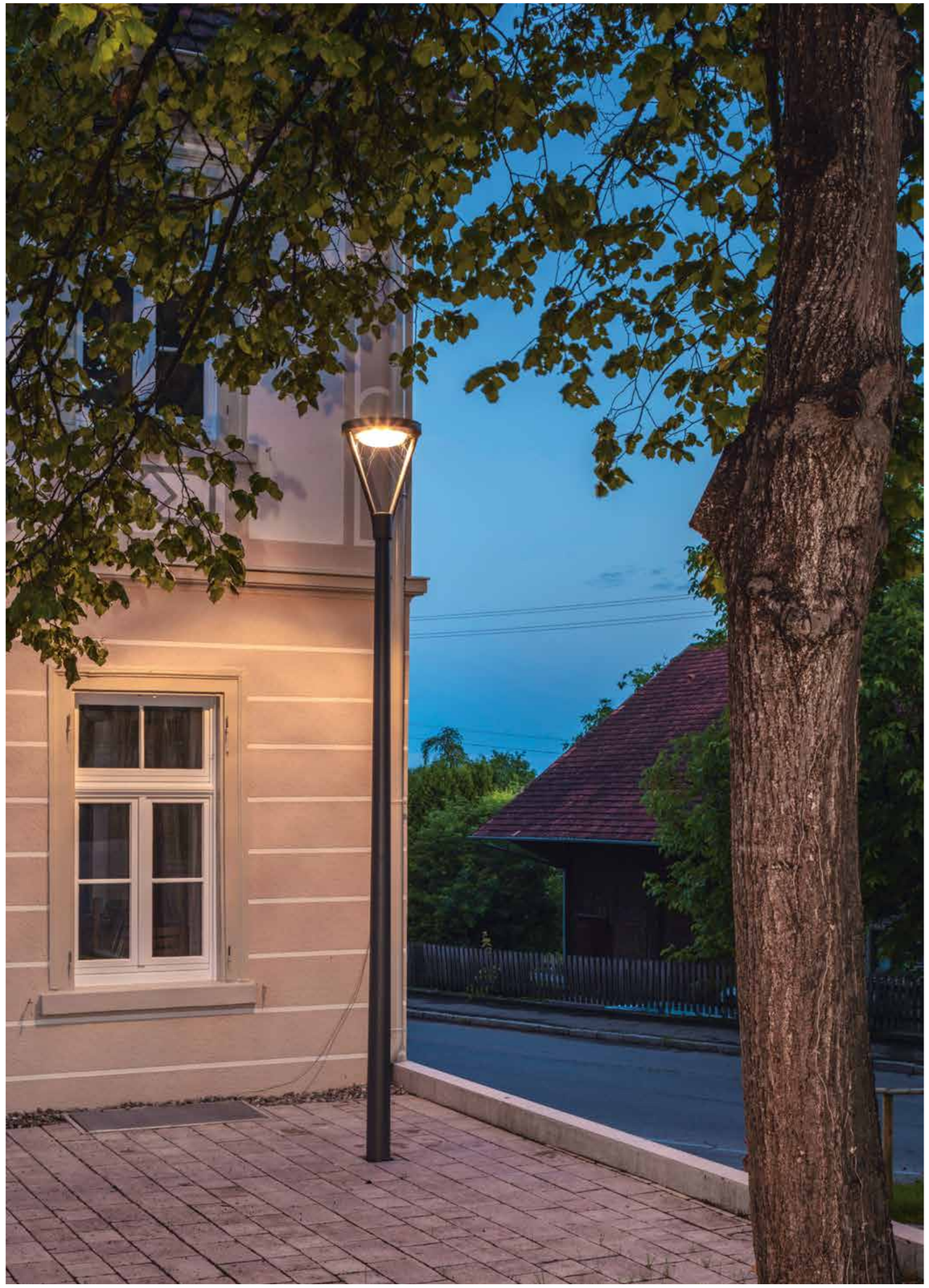
symm.



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

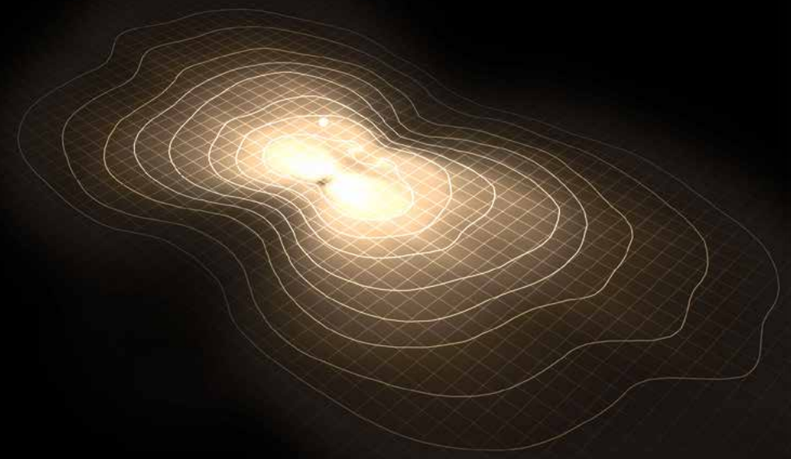
Time and again, lighting solutions are required that go beyond standard-compliant lighting, e.g. in residential areas where there is a pronounced need for maximum visual comfort. In residential areas, for instance, maximum visual comfort may be required. In such cases, all three light directions are 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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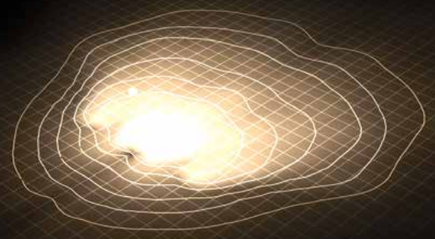
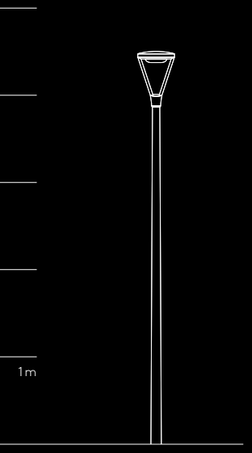
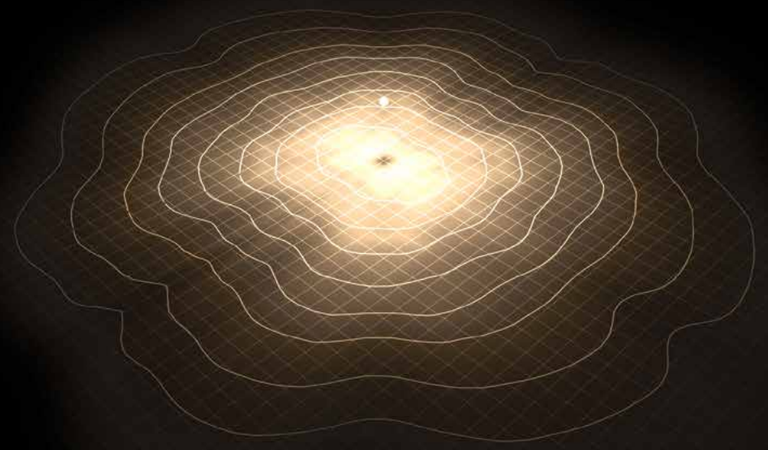




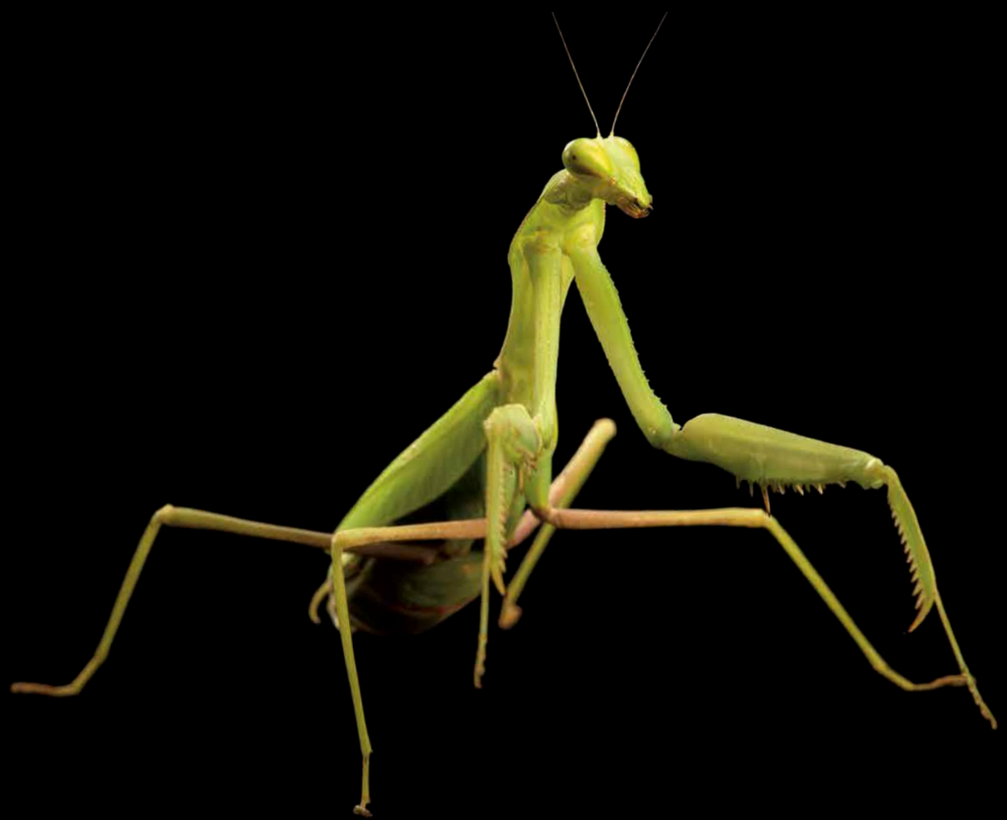
Trigo

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

ANT ARES

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 Antares does not emit disruptive scattered light, thus protecting the night sky from light pollution.

Light from solar energy

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

Antares 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.

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

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

The Hei Antares 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 Antares product toolkit comprises single and double arm poles combined with the Antares luminaire optics with their impressive efficiency and light distribution: the right choice for environmentally-friendly street lighting, minimal energy requirements and maximum cost savings.

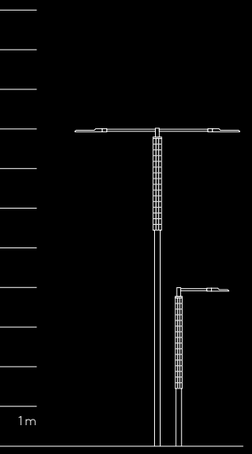
Solar Antares
Pole luminaire

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

Luminaires

asymm. street with pathway

asymm. street

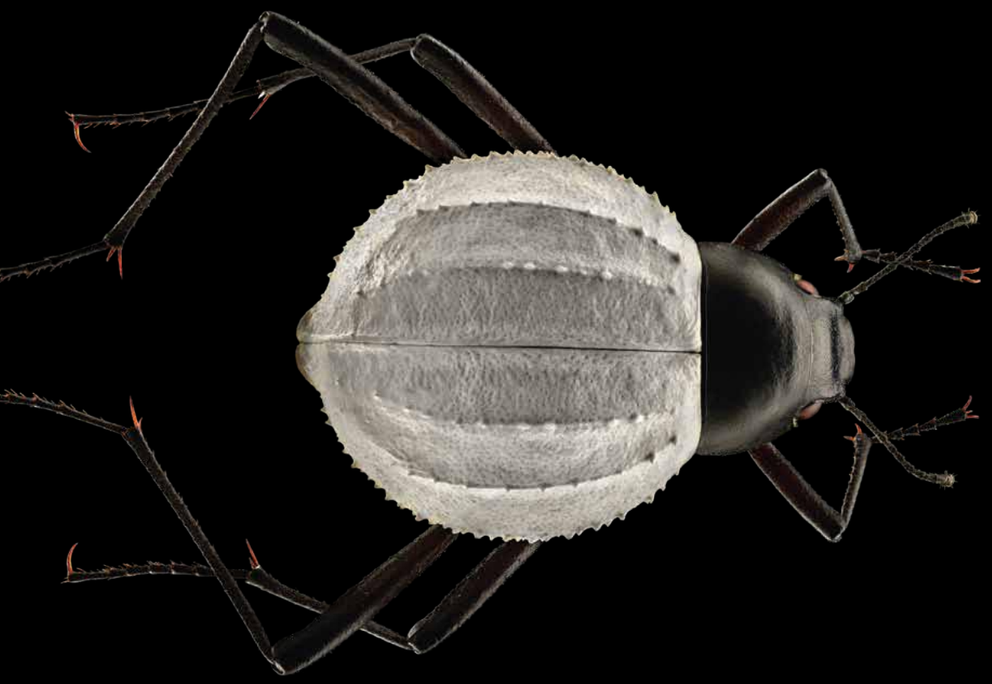


Antares

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.

Luminaires

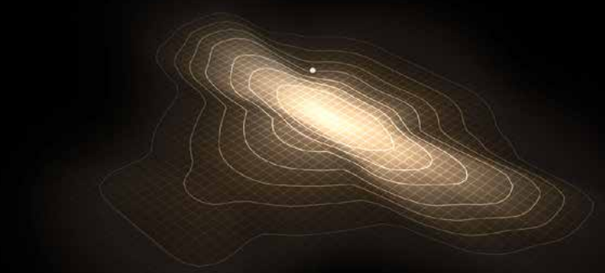
Yloo Lateral, pole pendant and catenary luminaire

Light output
max. 8000lm

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

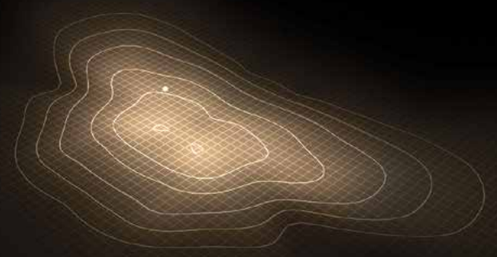
Smart City
optional Zhaga interface

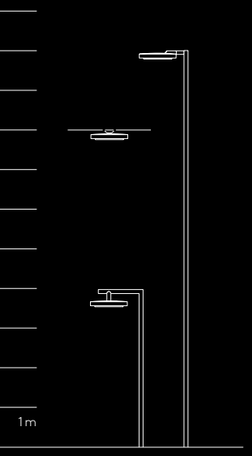
asymm. street narrow – R0



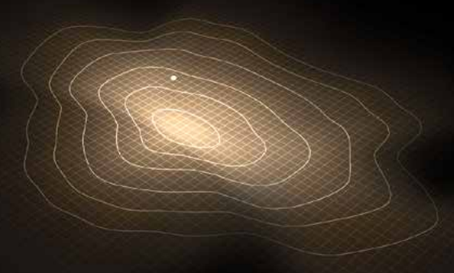
asymm. street standard – R1

asymm. street wide – R2

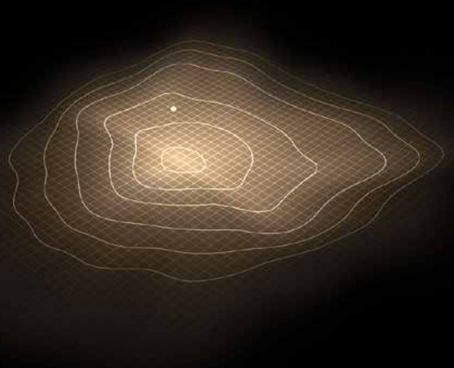




asymm. street wide – R3



asymm. street flood – AS2

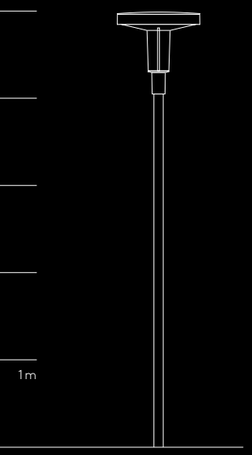


Yloo
Pole top luminaire

Light output max. 6000lm

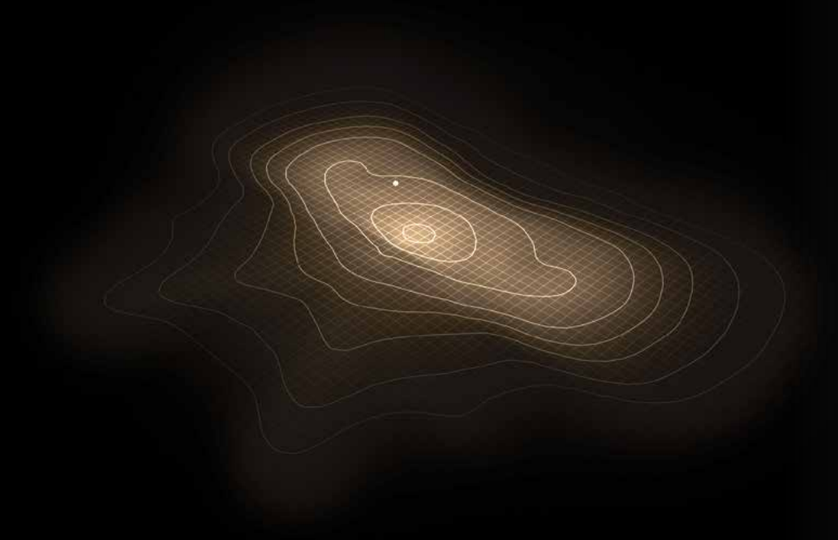
Light colour 2200K, 2700K, 3000K, 4000K

Smart City optional Zhaga interface

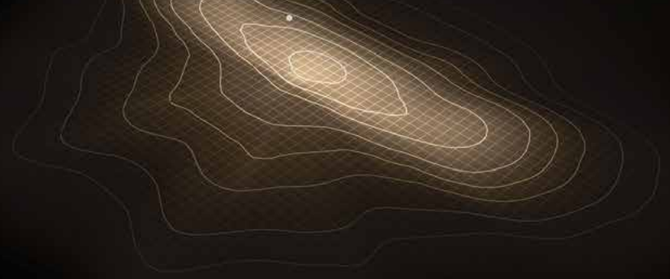


Luminaires

asymm. street standard – R1

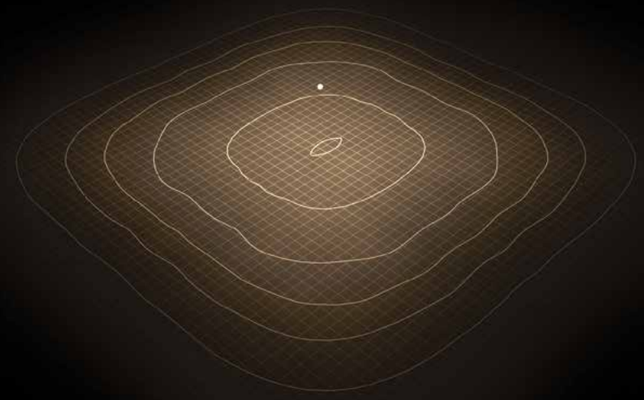


asymm. street narrow – R0

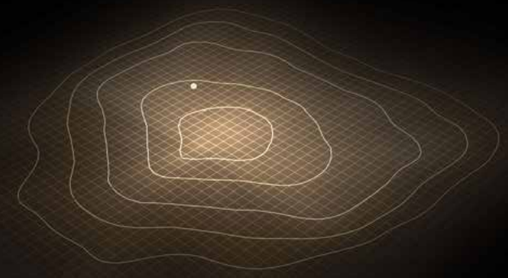


Yloo

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.

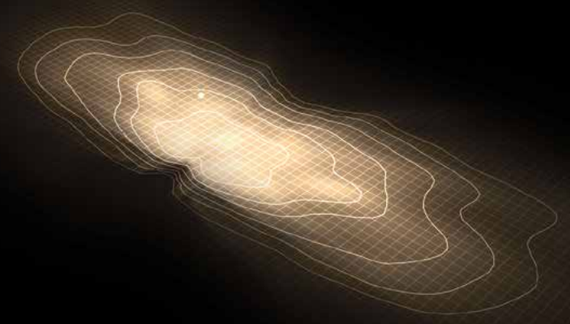
Comfort optics

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.

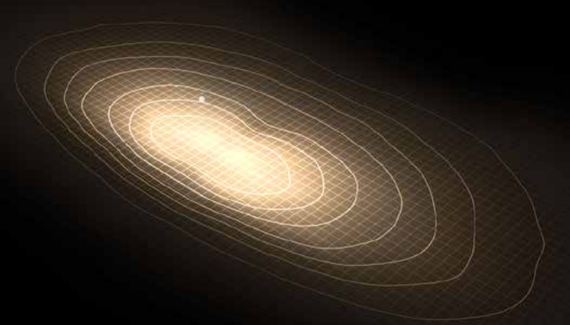
Light output max. 10500lm
Light colour 2700K, 3000K, 4000K
Smart City optional Zhaga interface

Luminaires

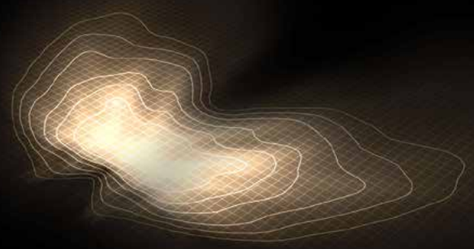
asymm. street

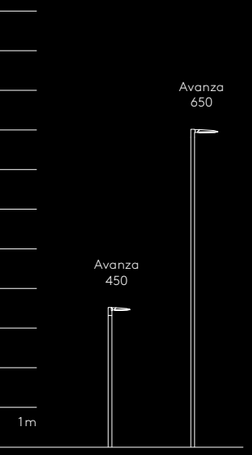


asymm. street Comfort optics



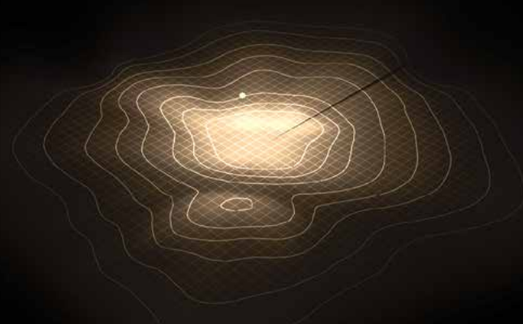
asymm.



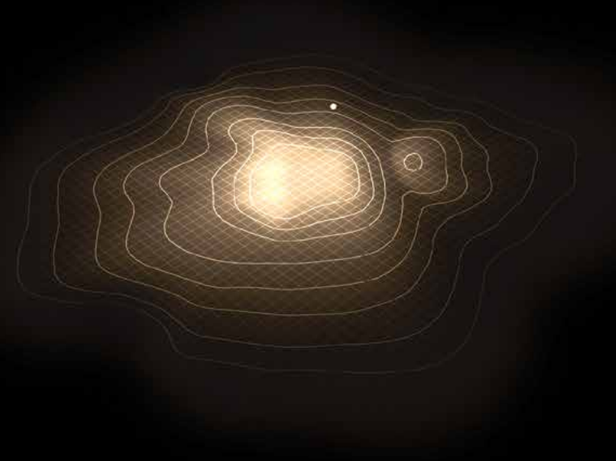


Avanza

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.

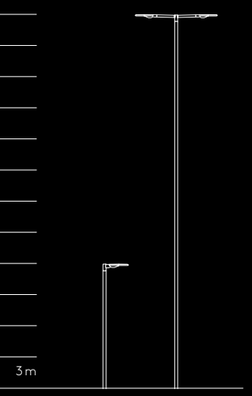
The new Tal pole luminaire by Selux makes decisions about investments in solid, future-proof lighting and design quality in urban spaces easy. Tal constitutes a high-performance, flexible product system for virtually all application areas in technical exterior lighting: it's efficient, versatile and 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

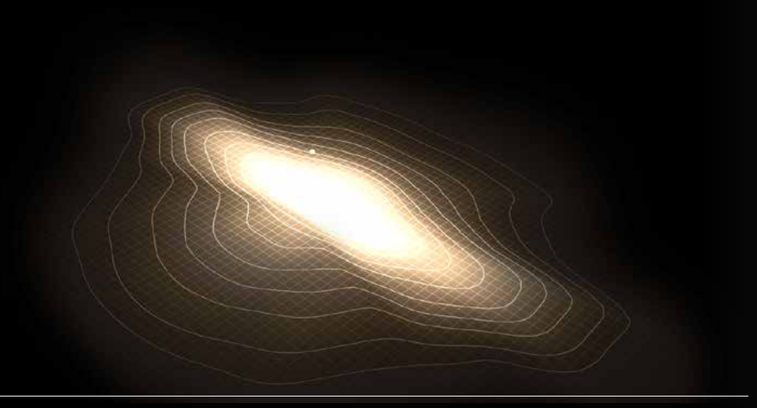
With various light distributions for roads, pedestrian crossings and squares, Tal can provide efficient, standardised illumination of wide stretches of road or intricately shaped open spaces. Freeform-lens optics ensure precision light guidance. Depending on the application, four different performance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

Tal Pole top and lateral luminaire

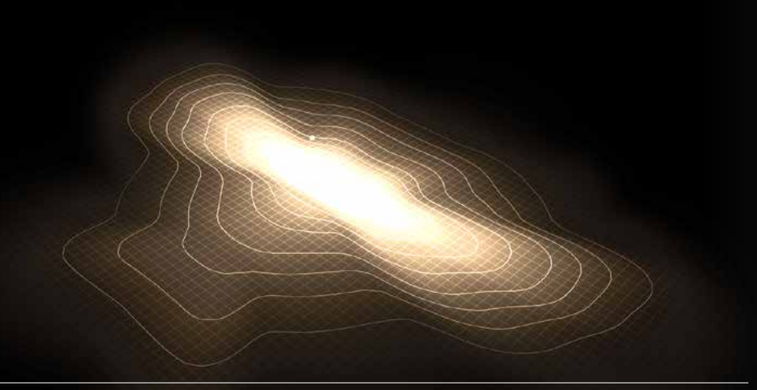
Light output max. 18 000lm
Light colour 2700K, 3000K, 4000K
Smart City optional Zhaga interface



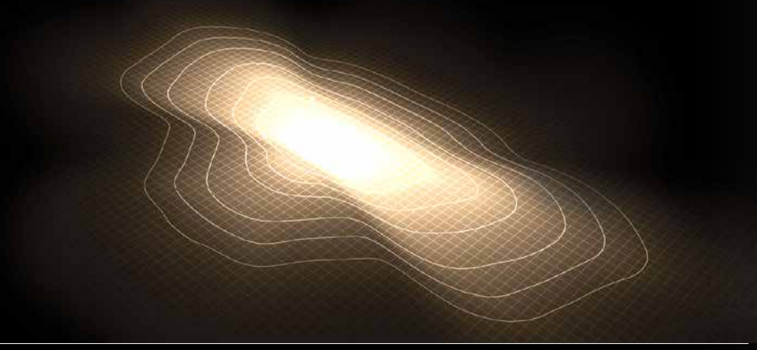
street narrow regular



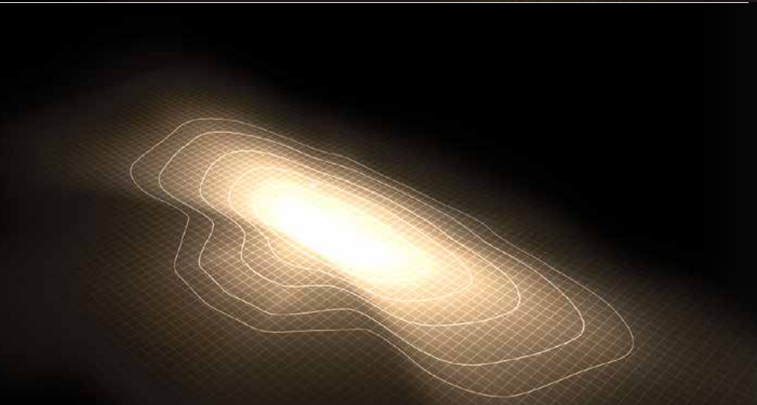
street narrow long



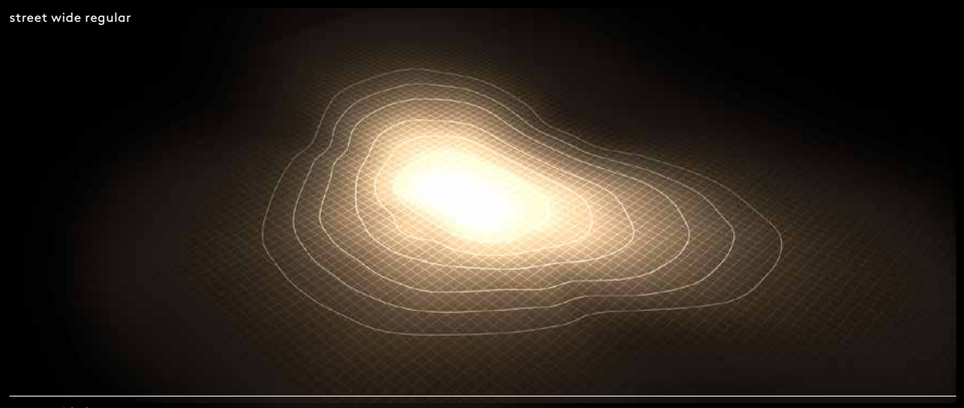
street medium regular



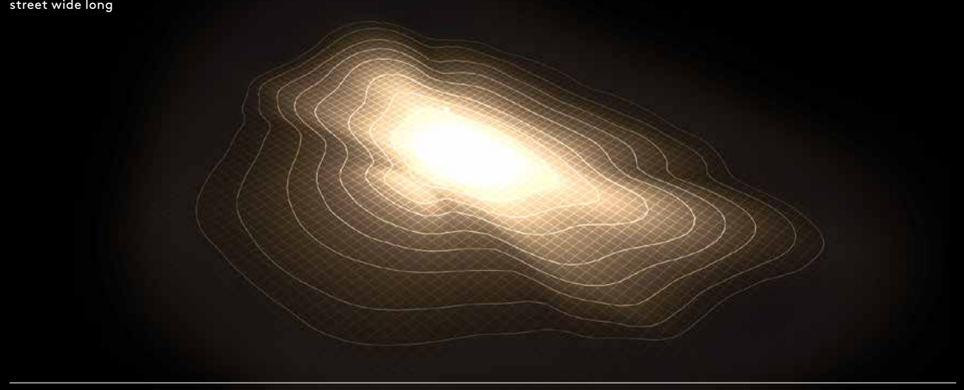
street medium long



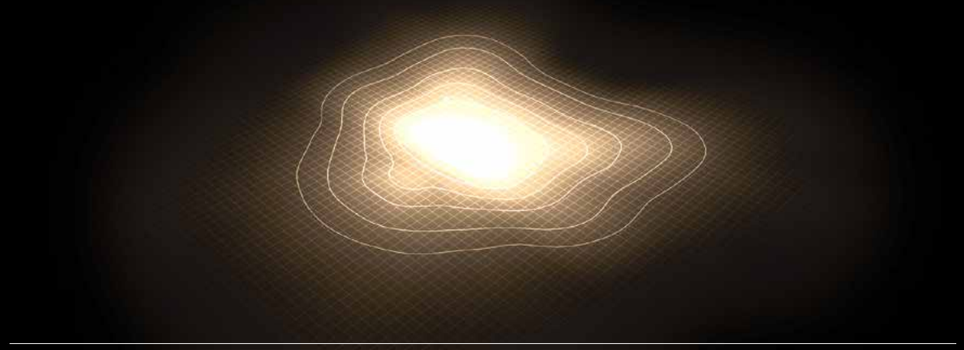
street wide regular



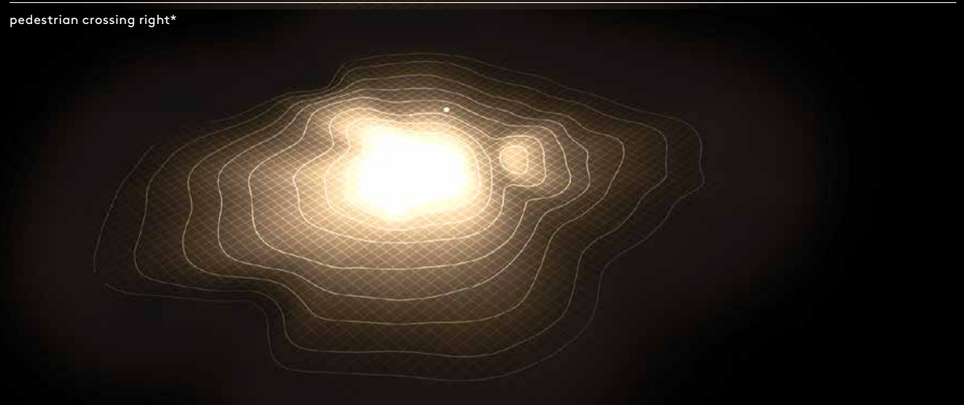
street wide long



asymm. flood



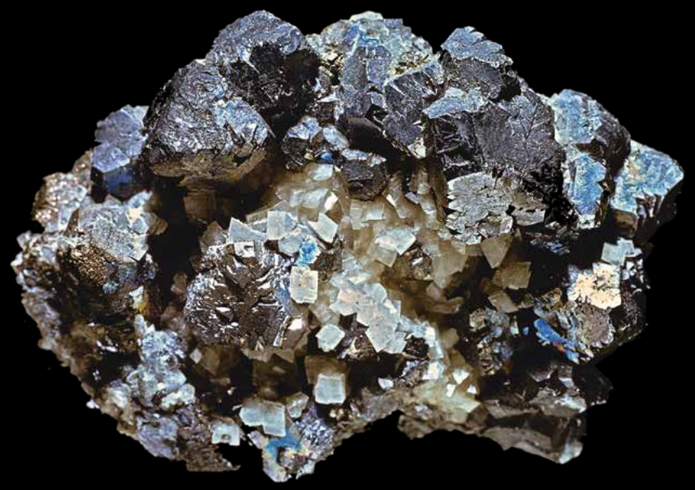
pedestrian crossing right*



*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

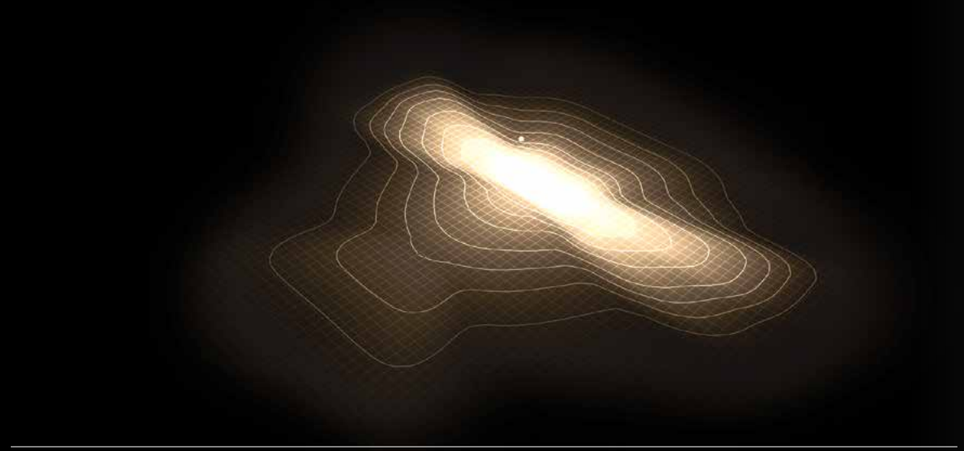
Light output max. 15200lm

Light colour 2700K, 3000K, 4000K

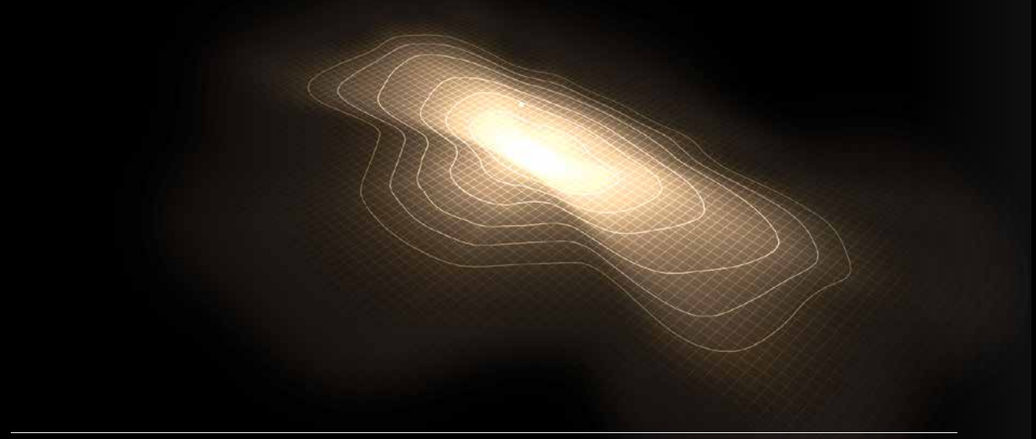
Smart City optional Zhaga interface

Luminaires

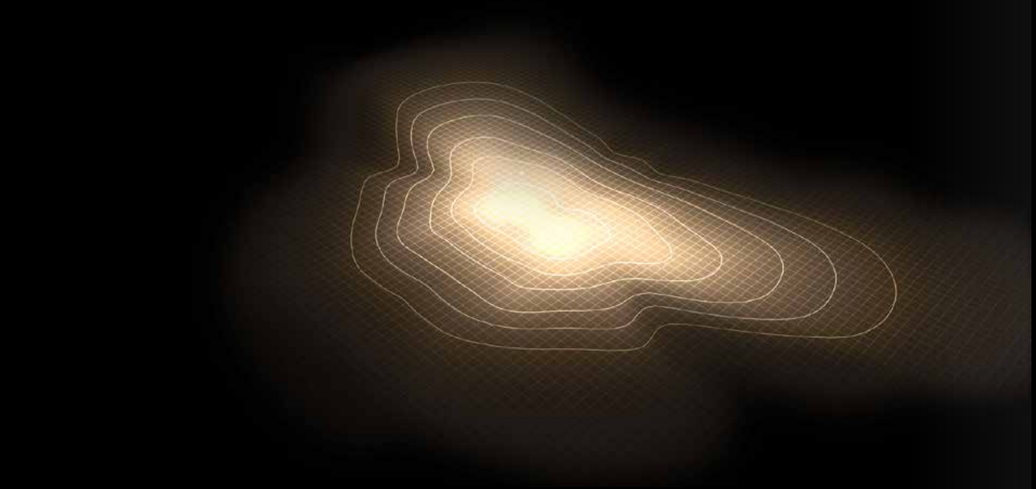
asymm. street narrow – R0



asymm. street standard – R1

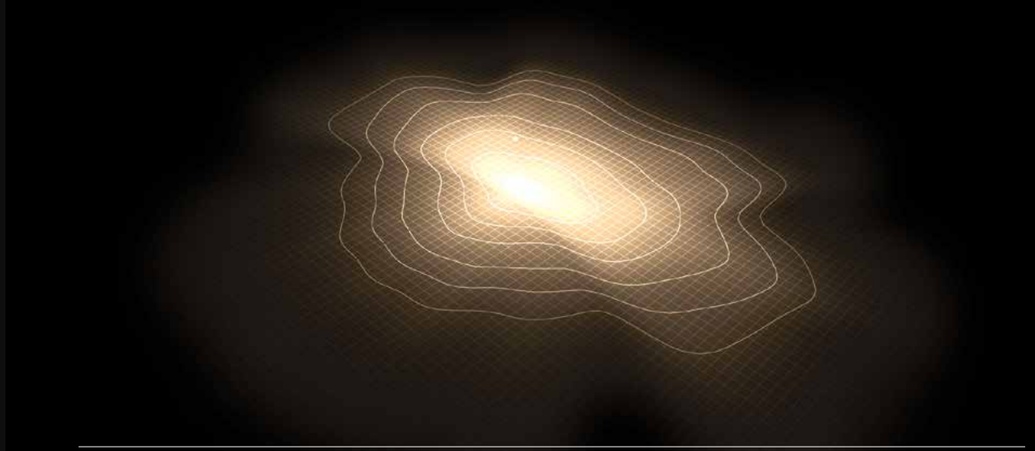


asymm. street wide – R2

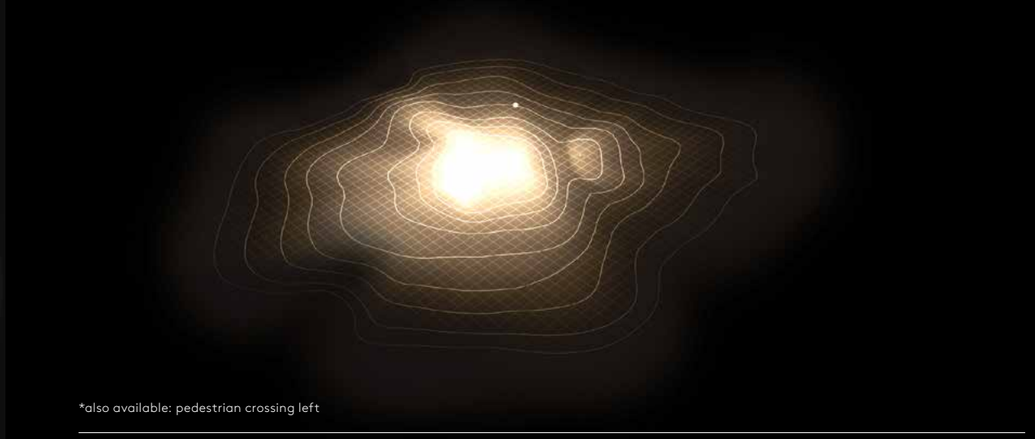


Tessia

asymm. street wide – R3

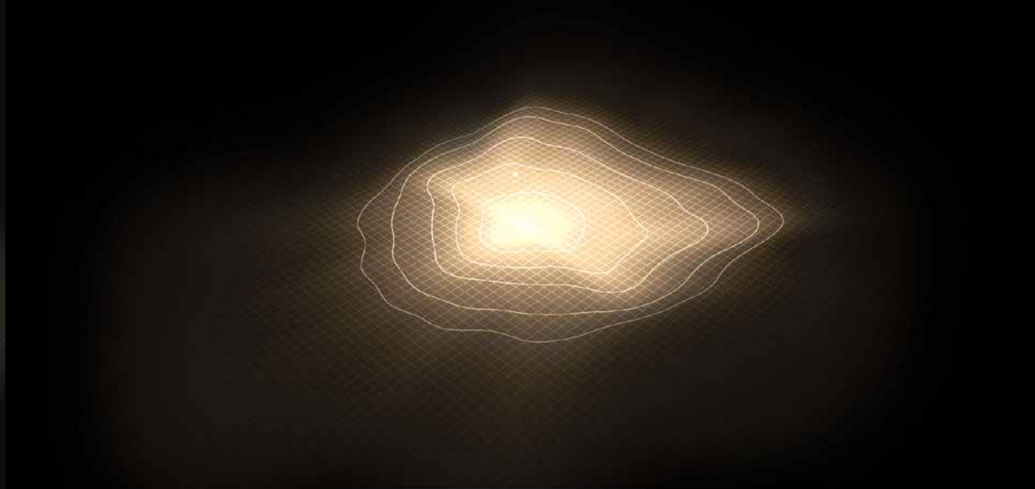


pedestrian crossing right*



*also available: pedestrian crossing left

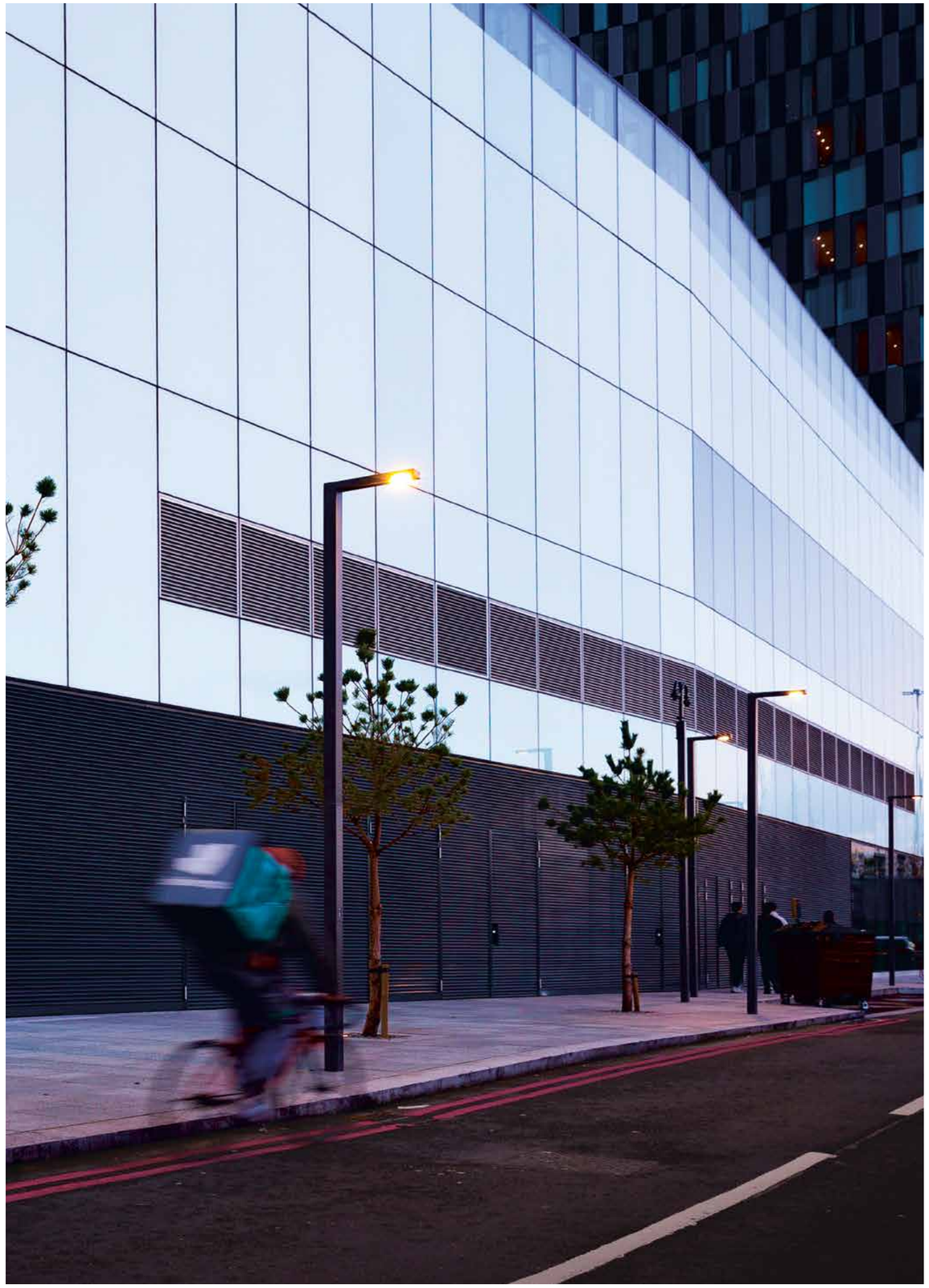
asymm. flood max – AS2



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

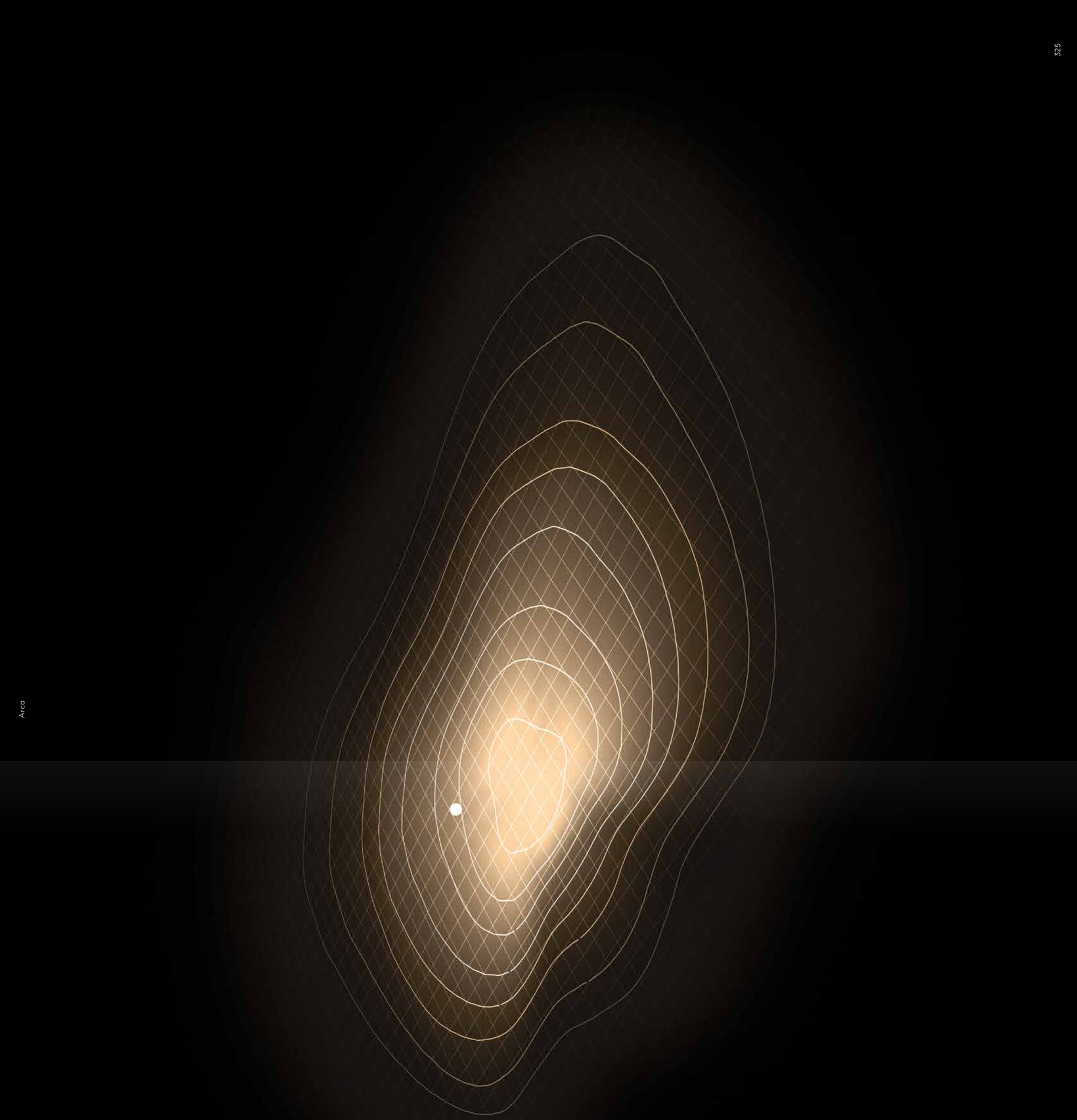
With an impressive design language that harmoniously blends in with any architectural setting, the Arca Linear is a complete pole/luminaire combination with a uniform profile width that constitutes a continuous integrated unit. The system is as sophisticated as it is simple and is available for order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

LED

REPLACEMENT

MODULE

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.

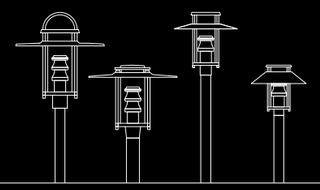
Future-proof Selux LED retrofitting sets

Tritec S – Sky

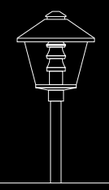
Light for
Generations

Gen5 LED Replacement kit

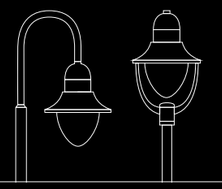
CLASSICS



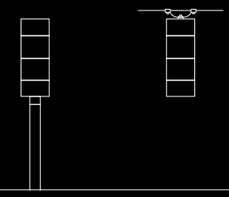
Saturn → 334



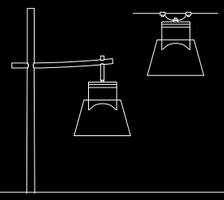
Alpha → 336



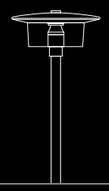
Beta → 338



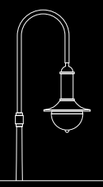
Lanova → 340



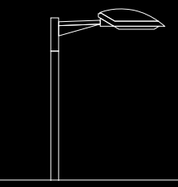
Sombreo → 341



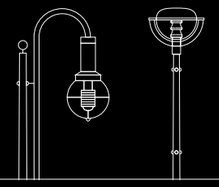
Rondero → 337



Trocadero → 339



Urbi 2 → 344

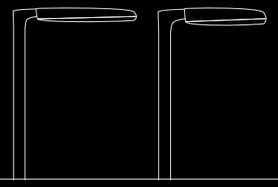


Urbi 1 / 3 → 345

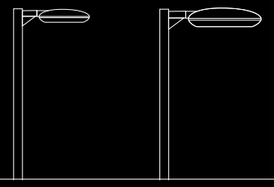
Hardenberg → 348

Witzleben → 349

Schupmann → 346



Jessica → 342

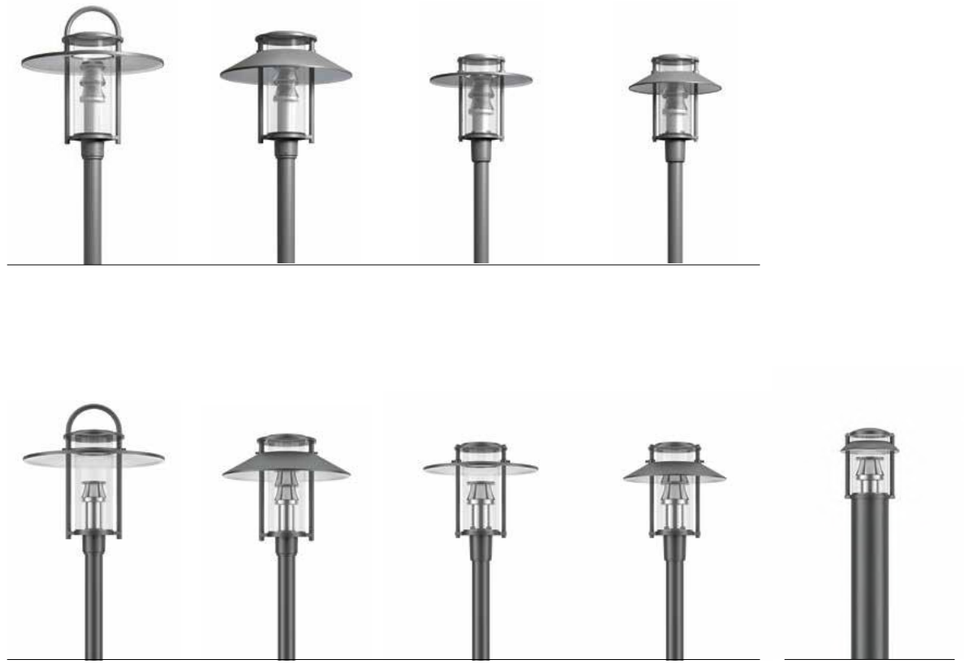


Discera → 343

Saturn

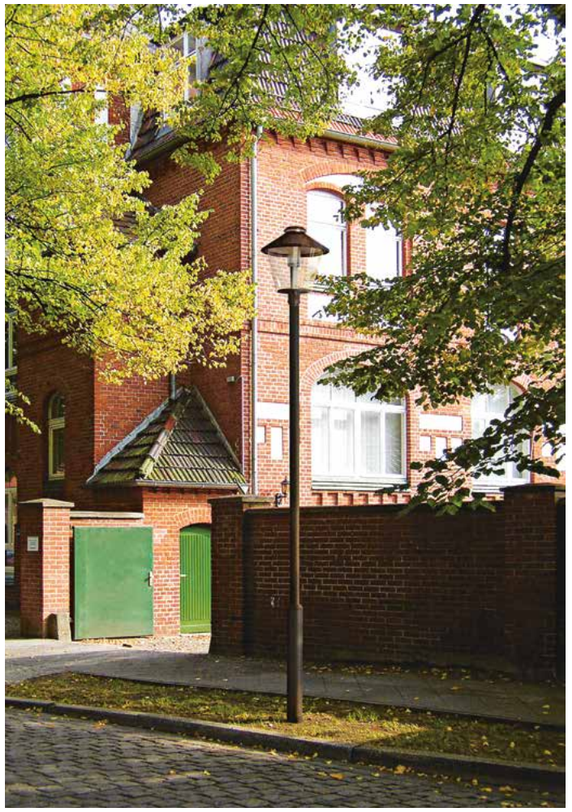
The luminaires of the Saturn family are perfect for areas close to residential districts, particularly where there is a need for comfortable light. This is where Saturn luminaires can contribute to a pleasant, residential environment with a feeling of neighbourliness. The Saturn is available in four 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



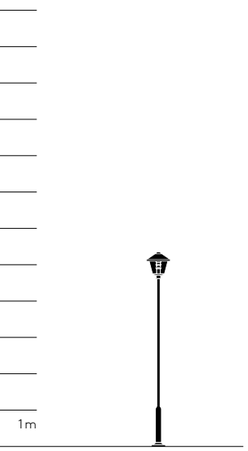
Tritec A – Ambiance

Tritec S – Sky



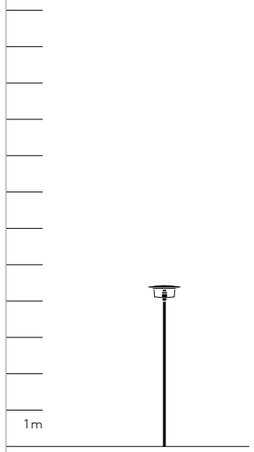
Alpha

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.



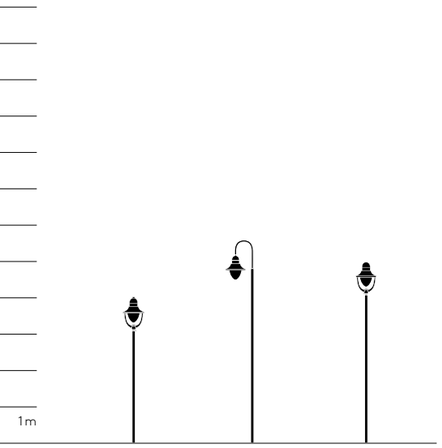
Rondero

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.



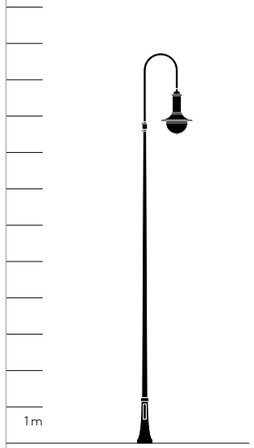
Beta

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.



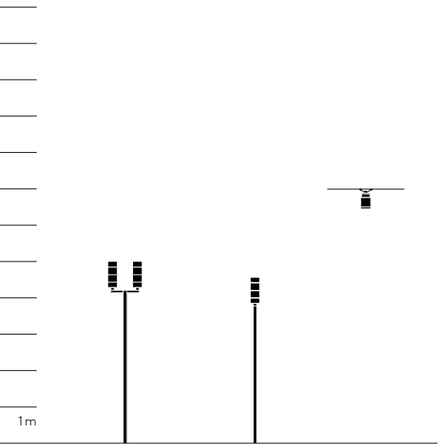
Trocadero

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.



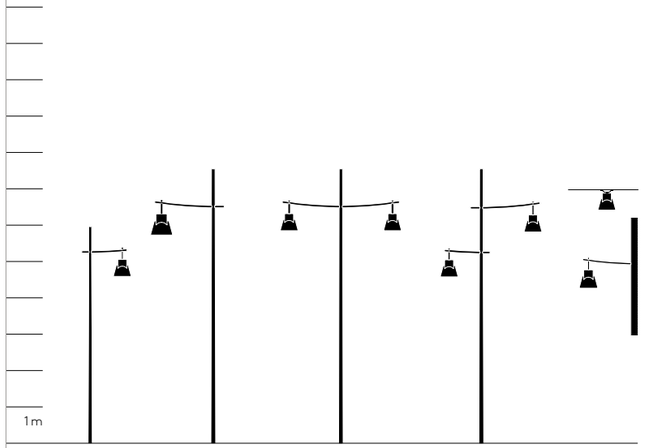
Lanova

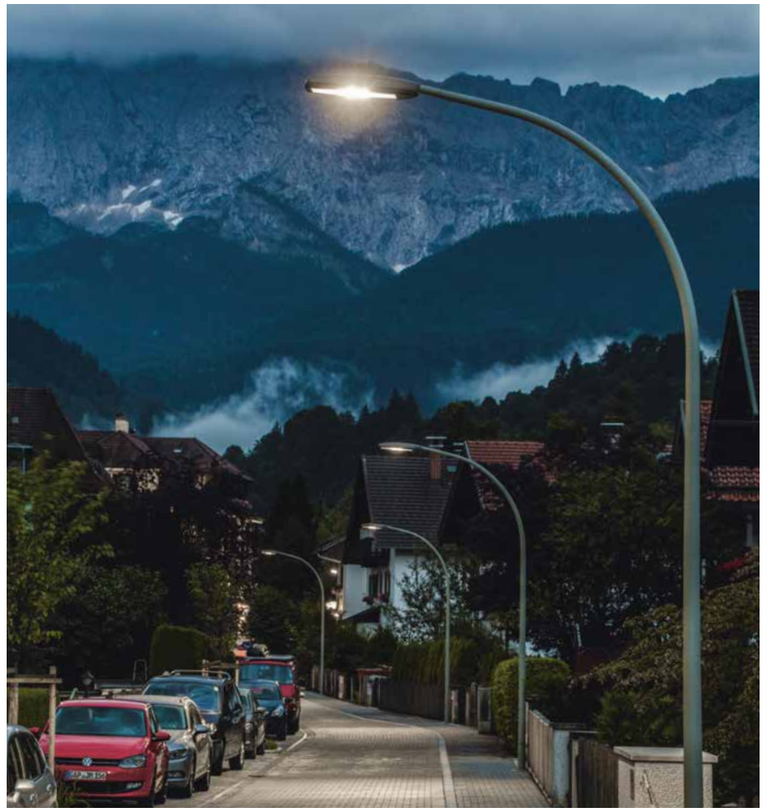
With its appearance of weightlessness, Lanova's elegant glow will illuminate roads, squares or pedestrianised areas. Lanova combines state-of-the-art lighting technology with exclusive materials. Additionally, its optical system ensures both comfortable anti-glare and energy efficient light guidance.



Sombreo

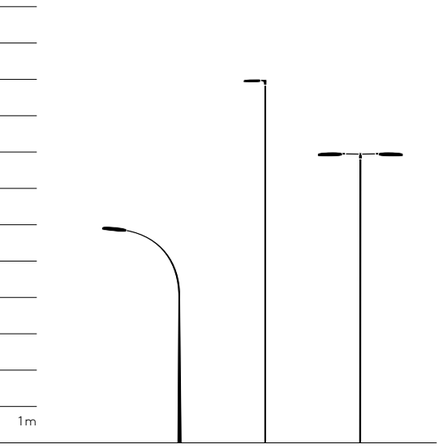
Inspired by the form of a typical residential luminaire, Sombreo acts as a distinctive eye-catcher in urban areas. It is ideal for settings where a particularly pleasant light mood is required. The Sombreo is available in two sizes for single or double fixtures as well as a catenary version.





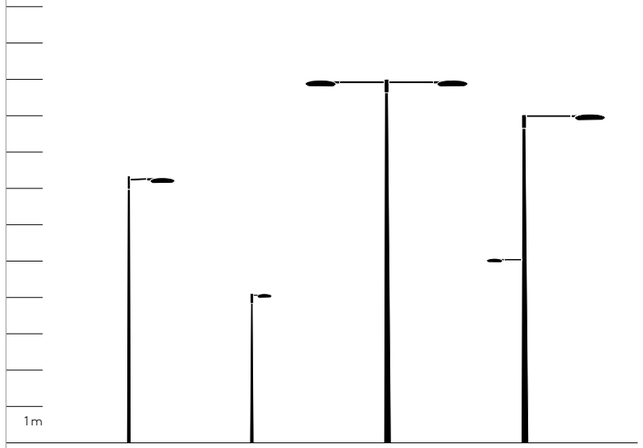
Jessica

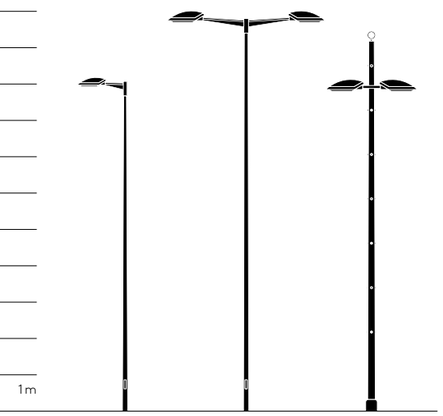
Its discreet, unobtrusive shape enables the Jessica luminaire to blend seamlessly into the architecture of cities or smaller communities. The luminaire family consists of two sizes: the Jessica 600 and the Jessica 800, while the luminaire is also ideally suited for upswept poles. Premium quality technology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

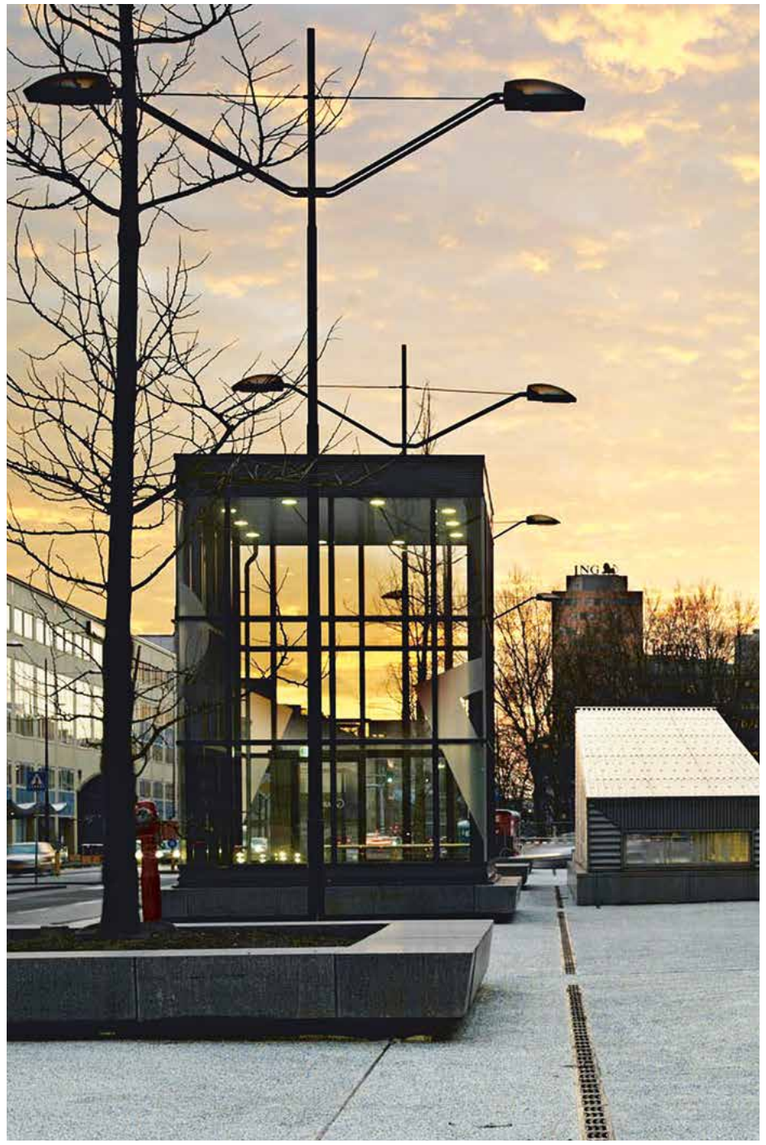


Discera

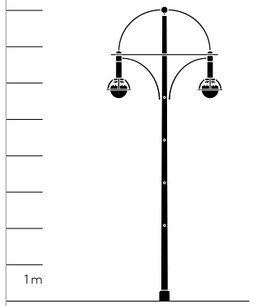
The timeless design of the Discera luminaire creates a calming, well-balanced look. Its intimate appearance enables it to blend harmoniously into all street environments. Discera is available in two sizes: the Discera 400 and 600 – offering optimal visual comfort with maximum energy efficiency.

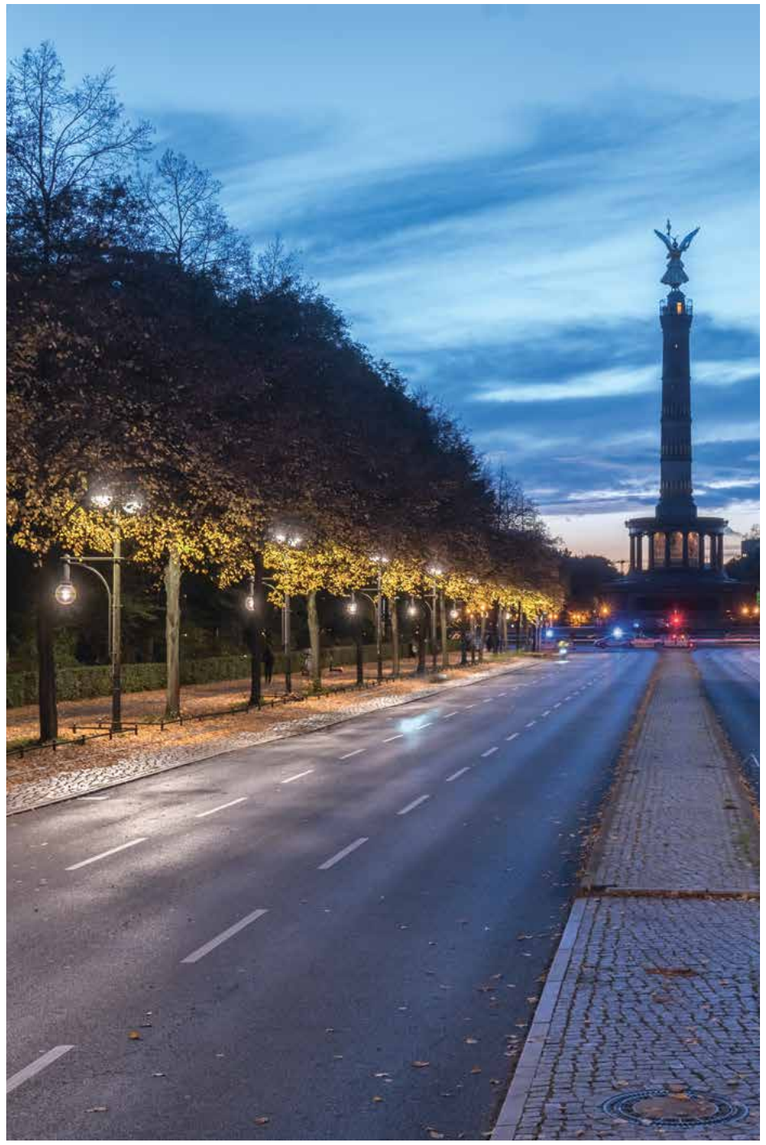






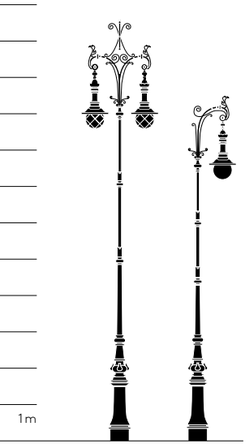
Urbi 2





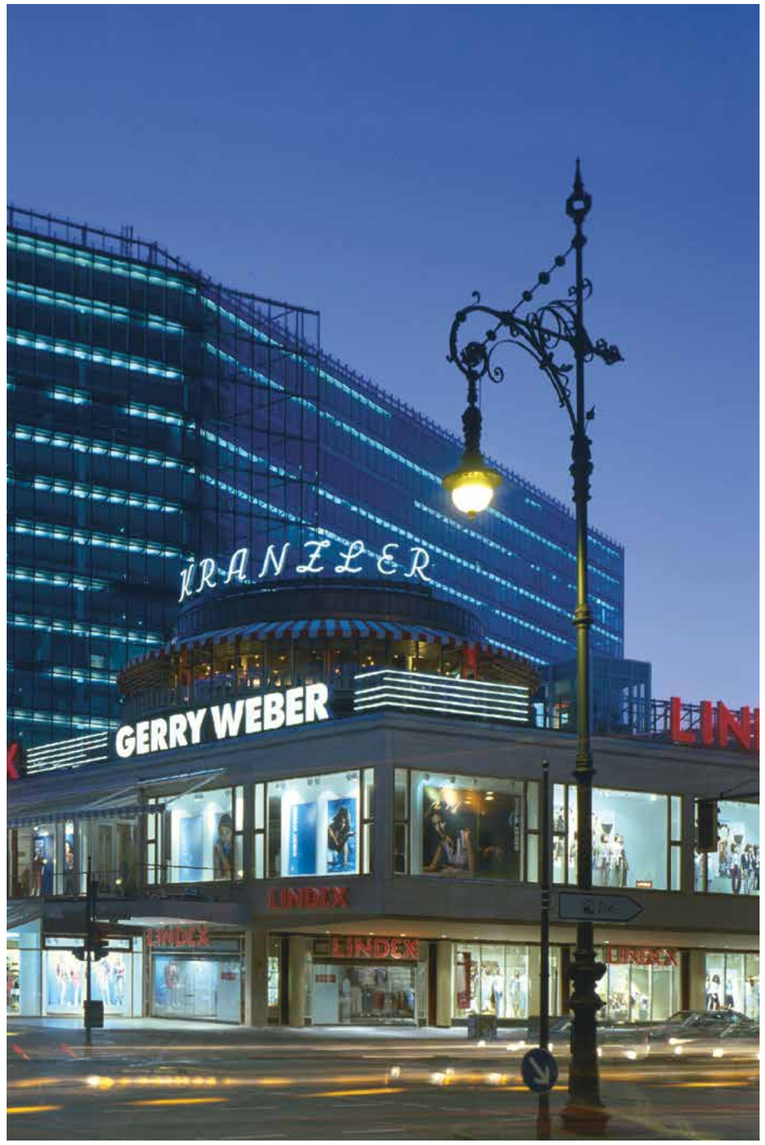
Urbi 1/3

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



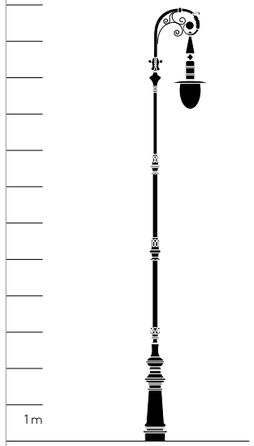
Schupmann Fixture

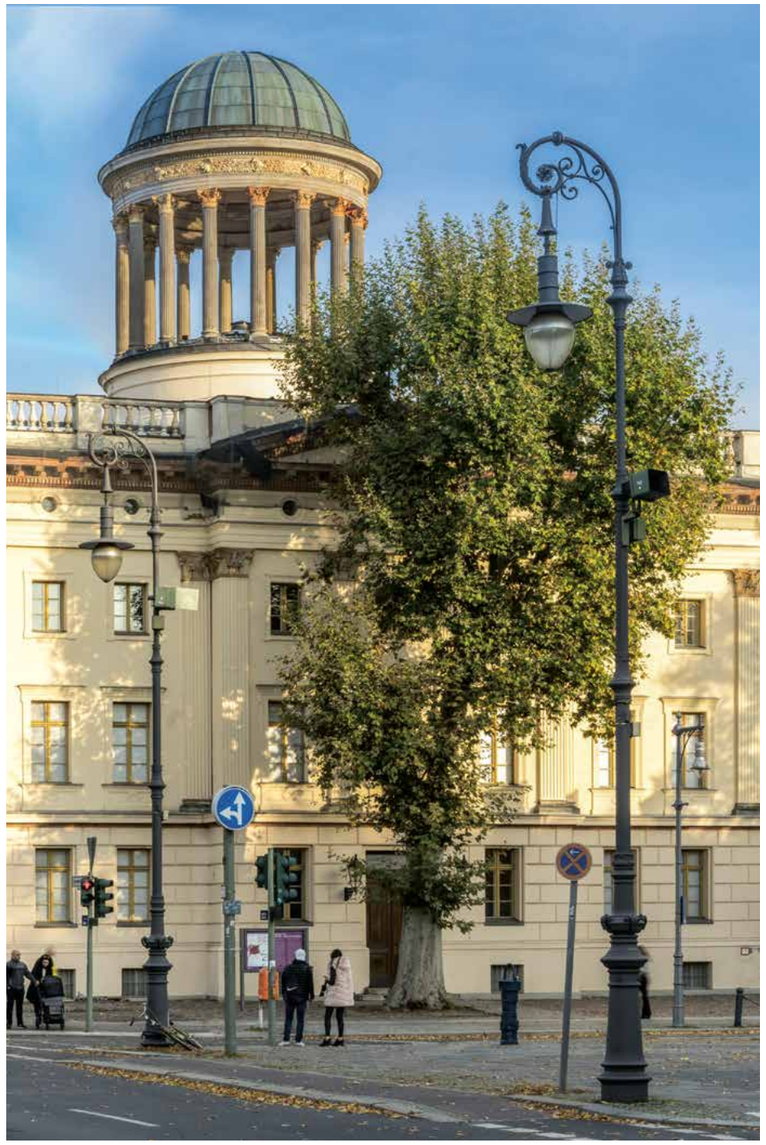
This is a faithful replica of the historical Berlin Schupmann fixture incorporating modern lighting technology. The original design by Ludwig Schupmann was installed in 1888 between Pariser Platz and Spandauer Straße in Berlin.



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.