Schréder
Experts in lightability™

DECORATIVE

FLEXIA QUERCUS

LENSO FLEX™ 4

The ultimate platform for your unique urban lighting solution

Various designs, many configurations, one single DNA. FLEXIA is the ultimate platform to create your unique urban lighting solution. Focus on creating your own distinctive ambiance for people living and visiting your spaces instead of dealing with non-stop constraints. With no technical limitations, design consistency and the guarantee of the latest innovations, FLEXIA offers a versatile technological platform with refined aesthetics. FLEXIA incorporates a pure design with advanced and interchangeable technology that is compatible with a circular economy. Ideal for large boulevards, city centres, public squares, bike paths and other urban outdoor areas, FLEXIA delivers a high-quality lighting with aesthetic coherency and lowers the carbon footprint for towns and cities - creating a safe and attractive environment.

IP 66 | IK 09 | UL 1598 CSA C22.2 No. 250.0 | 005 certification | RoHS | FLEXI WHITE

URBAN & RESIDENTIAL STREETS | BIKE & PEDESTRIAN PATHS | RAILWAY STATIONS & METROS | CAR PARKS | SQUARES & PEDESTRIAN AREAS

FLEXIA QUERCUS | SUMMARY

Schréder

Concept

FLEXIA QUERCUS is a versatile decorative luminaire, designed to provide the greatest modularity and easy customisation.

This luminaire is distinguished by its plant-like form which integrates perfectly into urban spaces. Its aluminum body sealed to a sophisticated curved polycarbonate protector brings a hint of nature into the heart of your city.

FLEXIA QUERCUS is part of the FLEXIA range and shares the same technical architecture for consistency and interchangeability. It relies on the new LensoFlex®4 photometrical engine, developed on a concept of performance and versatility, and uses the same CR-Kit that regroups the LEDs, lenses, gear and electrical accessories on a tool-free removable unit. This standardisation of internal components enables an easier and more cost-effective management of spare parts.

To simplify installation, FLEXIA QUERCUS is delivered pre-cabled and offers tool-free access to the gear compartment. For safety reasons, it includes an instant electrical disconnection on opening.

It is available with various connectivity options (NEMA or Zhaga), sensors and our FlexiWhite solution that adapts the colour temperature according to the specific needs of the space at that time.

Built with recyclable materials and with an architecture designed for easy maintenance, FLEXIA QUERCUS is a built for a circular economy.

Create attractive urban landscapes with the FLEXIA QUERCUS lighting solutions.

FLEXIA QUERCUS is also available with a diffuse protector in both sizes.

TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS

KEY ADVANTAGES

- State-of-the-art LED modular platform that can be endlessly customised
- Design consistency for all urban applications
- Various suspended mounting options
- Tool-free philosophy: opening, cabling and LED engine removal
- FlexiWhite option for human-centric and nature-friendly scenarios
- Supplied pre-cabled to facilitate its installation
- Connected-ready for your future Smart city requirements
- Based on open and interoperable standards
- Compatible with the Schréder EXEDRA control platform
- Zhaga-D4i certified

FLEXIA QUERCUS includes an instant electrical disconnection on opening and a complete tool-free removable LED engine.

To remain as open and interoperable as possible, FLEXIA QUERCUS is available with both NEMA or Zhaga sockets and complies with the ZD4i standard.

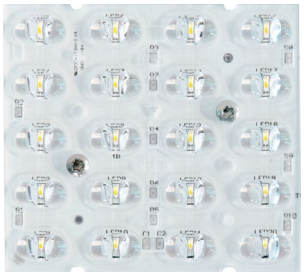
FLEXIA QUERCUS | Standard

FLEXIA QUERCUS | With diffuse protector

LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

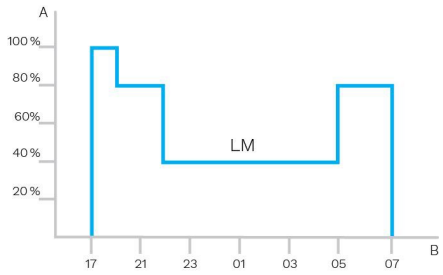
LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.



Custom dimming profile

Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

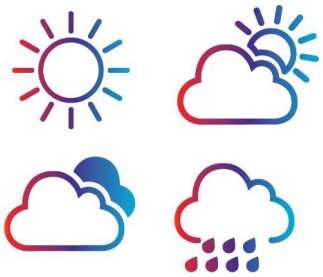
The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



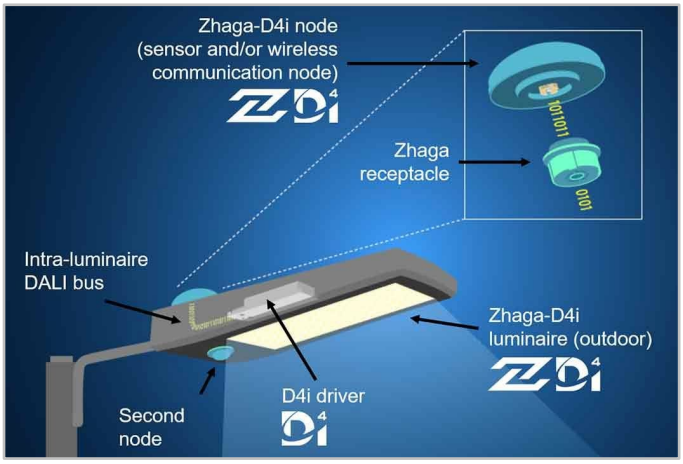
A. Dimming level | B. Time

Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.



The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.



Standardisation for interoperable ecosystems

Member of Zhaga

As a founding member of the Zhaga consortium, Schréder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire. According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

Certification program

The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.

Cost-effective solution

A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.

Schréder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.

Standardisation for interoperable ecosystems

Schréder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schréder EXEDRA system relies on shared and open technologies. Schréder EXEDRA also relies on Microsoft Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

Breaking the silos

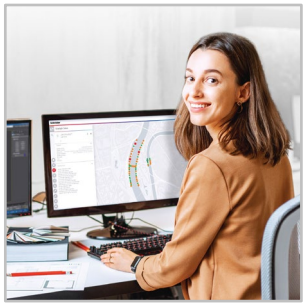
With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface. OWLET IV luminaire controllers, optimised for Schréder EXEDRA, operate Schréder's luminaires and luminaires from third parties. They use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation.

Tailored experience



Schréder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

A powerful tool for efficiency, rationalisation and decision making

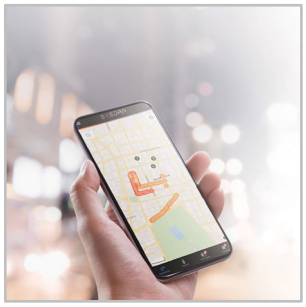
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

ISO 27001
BUREAU VERITAS
Certification

Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schréder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

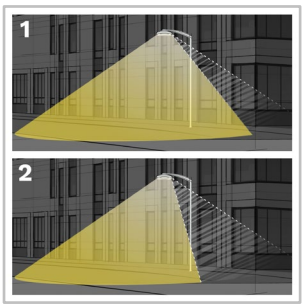
Mobile App: any time, any place, connect to your street lighting



The Schréder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

With the PureNight concept, Schréder offers the ultimate solution for restoring the night sky without switching off cities, while maintaining safety and well-being for people and preserving wildlife. The PureNight concept guarantees that your Schréder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.

Direct the light only where it is wanted and needed

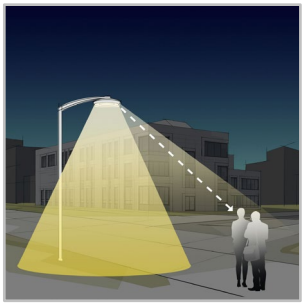


Schréder is renowned for its expertise in photometry. Our optics direct light only where it is wanted and needed. However, light trespass behind the luminaire might be a key concern when it comes to protecting a sensitive wildlife habitat or avoiding intrusive lighting towards buildings. Our fully integrated backlight solutions easily address this potential risk.

- Backlight Mini offers a 50% cut-off of the light output from the back of the luminaire and reduces the beam angle accordingly to circumscribe the proportion of light emitted to the rear.
- Backlight Maxi reduces the light output at the rear of the luminaire by over 80% (both in terms of luminous flux and beam angle).

1. Backlight Mini
2. Backlight Maxi

Offer maximum visual comfort to people



Because of the lower installation height compared to road lighting, visual comfort is an essential aspect of urban lighting. Schréder designs lenses and accessories to minimise any type of glare (distracting, discomforting, disabling glare and blinding glare). Our design offices harness a range of possibilities to find the best solutions for each project and ensure that we provide a gentle light that delivers the best night-time experience.

Protect wildlife

If not well designed, artificial lighting can badly affect wildlife. Blue light and excessive intensity can have a damaging effect on all types of life. Blue light radiation has the ability to suppress the production of melatonin, the hormone that contributes to the regulation of the circadian rhythm. It can also alter the behavioural patterns of animals including bats and moths, as it can change their movements towards or away from light sources. Schréder favours warm white LEDs with minimal blue light, combined with advanced control systems including sensors. This enables permanent adaptation of the lighting to the real needs of the moment, minimising disturbance to the fauna and flora.

Choose a DarkSky Approved luminaire

DarkSky International is the recognised authority on light pollution. It provides leadership, tools and resources to industries and companies willing to reduce light pollution. The DarkSky Approved Luminaires Program certifies outdoor lighting fixtures as being Dark Sky Friendly. This luminaire is part of our approved range of luminaires that comply with the Approval Programme and provide light that is environmentally friendly in every way.

GENERAL INFORMATION

FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
Driver included	Yes
CE mark	Yes
UKCA marking	Yes
ENEC certified	Yes
ENEC+ certified	Yes
UL certified	Yes
ROHS compliant	Yes
Zhaga-D4i certified	Yes
FlexiWhite	Yes
DarkSky Approved	Yes
BE 005 certified	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

· Meets the DarkSky Approved requirements when equipped with a fixed mounting option.

· Meets the DarkSky Approved requirements when fitted with a clear protector

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09
Access for maintenance	Tool-less access to gear compartment

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22°F up to 131°F with wind effect

· Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class 1 US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz 347V - 50-60Hz
Surge protection options (kV)	10 20
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schréder EXEDRA

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White WW 722) 2700K (Warm White WW 727) 3000K (Warm White WW 730) 3000K (Warm White WW 830) 4000K (Neutral White NW 740) 1700-2200K (FlexiWhite) 1700-3000K (FlexiWhite) 1700-4000K (FlexiWhite) 2200-3000K (FlexiWhite
Colour rendering index (CRI)	>70 (Warm White WW 722) >70 (Warm White WW 727) >70 (Warm White WW 730) >80 (Warm White WW 830) >70 (Neutral White NW 740)
ULOR	<7%
ULR	<8%

· DarkSky Approved when fitted with LEDs of 3000K or less.

· ULOR may be different according to the configuration. Please consult us.

· ULR may be different according to the configuration. Please consult us.

LIFETIME OF THE LEDS @ TQ 25°C

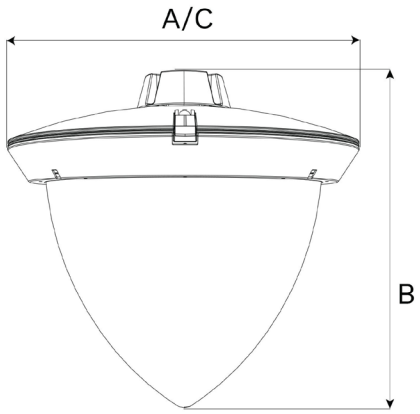
All configurations	100,000h - L95

· Lifetime may be different according to the size/configurations. Please consult us.

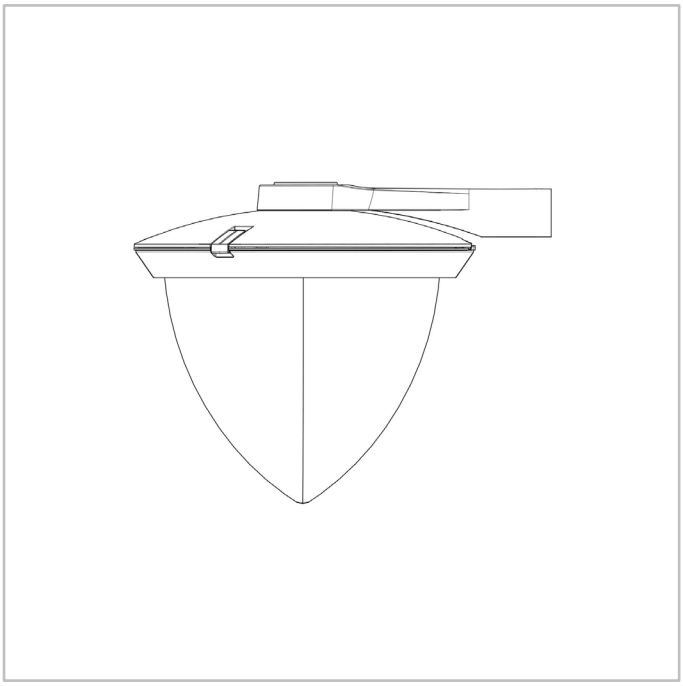
DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	FLEXIA QUERCUS MIDI : 504x490x504 | 19.8x19.3x19.8 FLEXIA QUERCUS MAXI : 610x693x610 | 24.0x27.3x24.0
Weight (kg | lbs)	FLEXIA QUERCUS MIDI : 11.5 | 25.3 FLEXIA QUERCUS MAXI : 16.8 | 37.0
Aerodynamic resistance (CxS)	FLEXIA QUERCUS MIDI : 0.10 FLEXIA QUERCUS MAXI : 0.14
Mounting possibilities	Side-entry slip-over – Ø60mm Side-entry penetrating – Ø48mm Suspended ¾" gas male Suspended 1" gas male Suspended 1" gas female Surface mounting

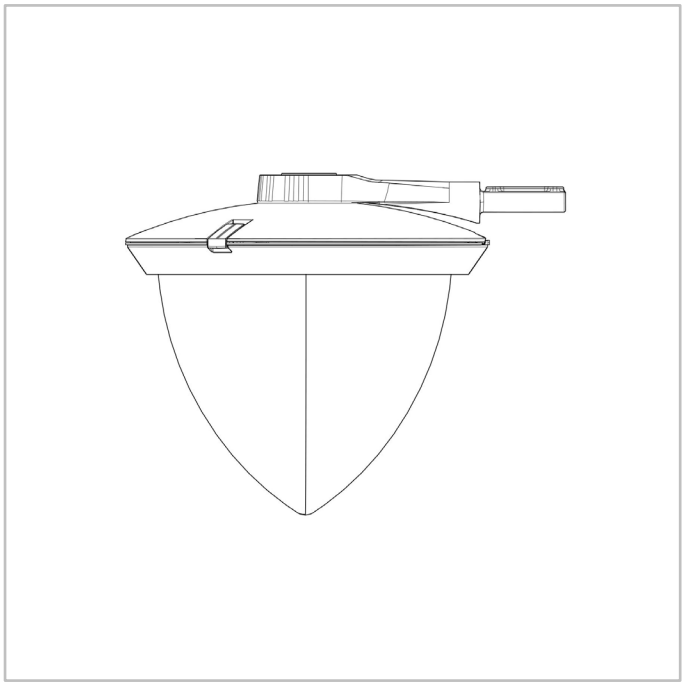
· *For more information about mounting possibilities, please consult the installation sheet.*



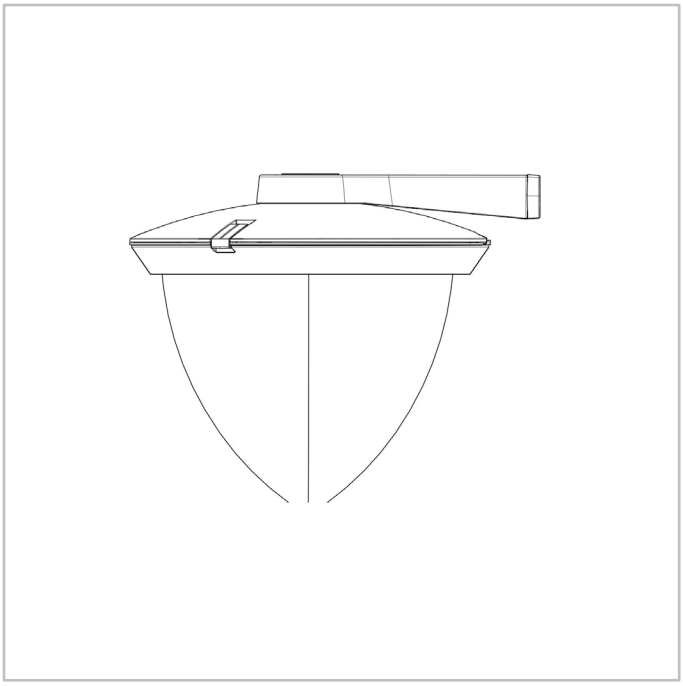
FLEXIA QUERCUS | Side-entry enclosing Ø60mm mounting (L2)



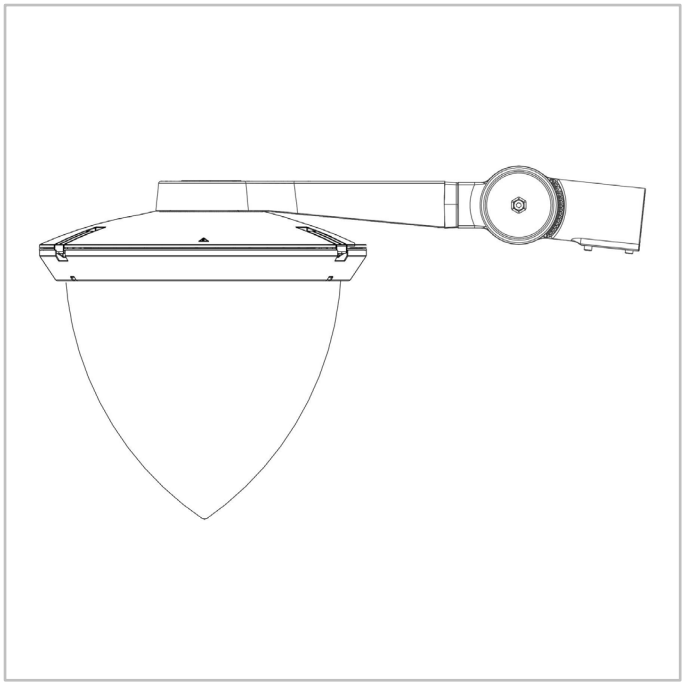
FLEXIA QUERCUS | Side-entry penetrating spigot Ø48mm (L3)



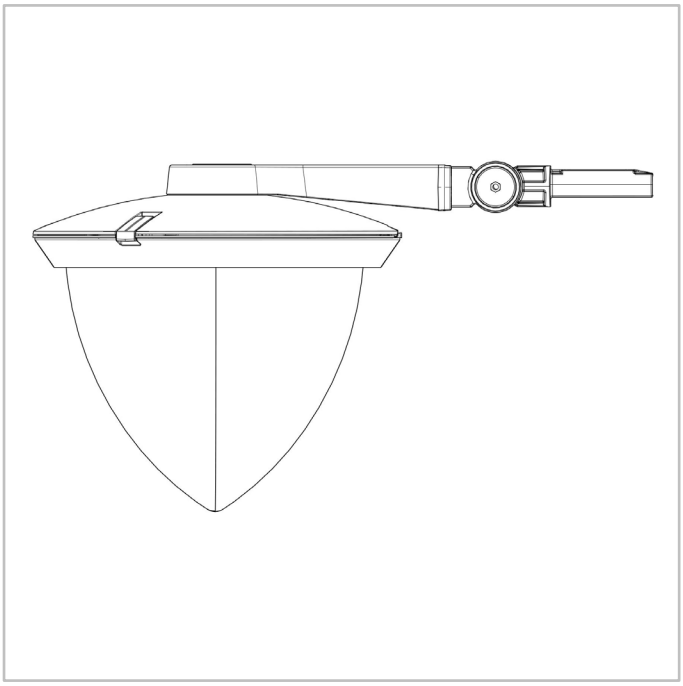
FLEXIA QUERCUS | Side-entry 40X40 square direct mounting (E1)



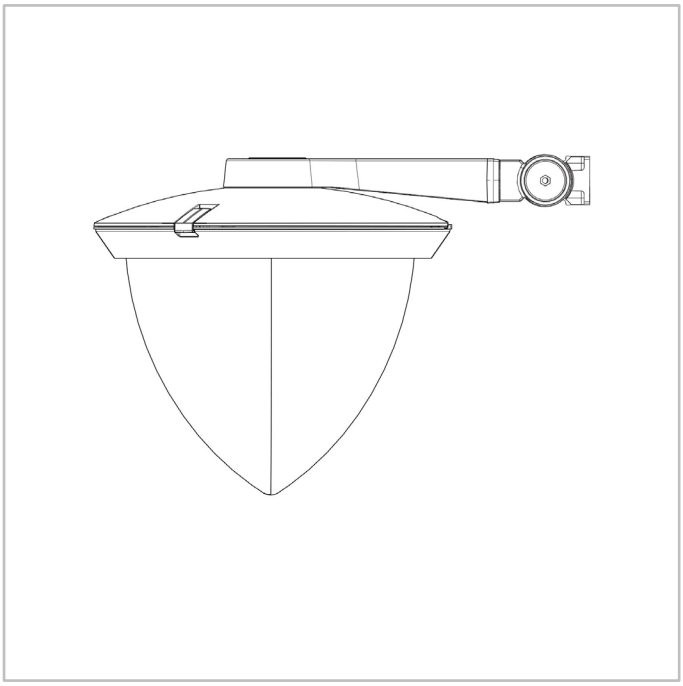
FLEXIA QUERCUS | Knuckle joint side-entry enclosing Ø60mm mounting (A6)



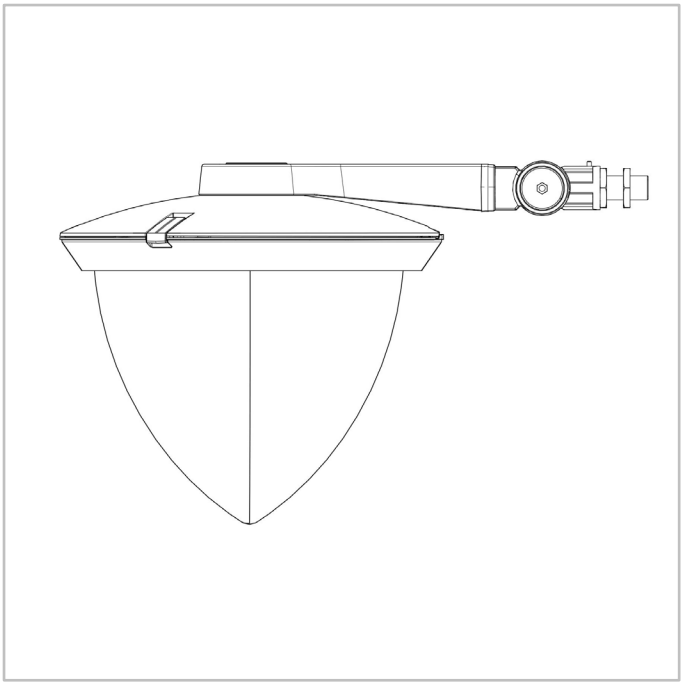
FLEXIA QUERCUS | Knuckle joint side-entry penetrating Ø48mm spigot (A5)



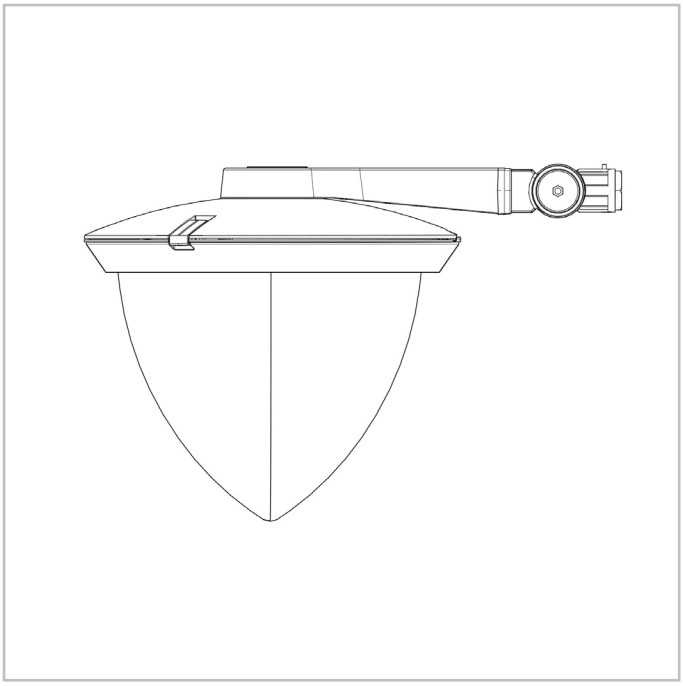
FLEXIA QUERCUS | Knuckle joint side-entry 60X50 square mounting (A2)



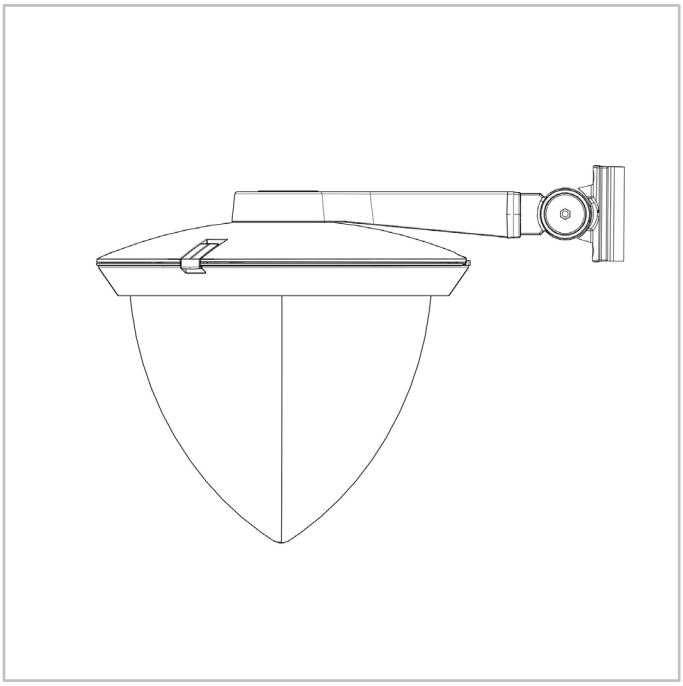
FLEXIA QUERCUS | Knuckle joint 1" gas male side entry mounting (A3)



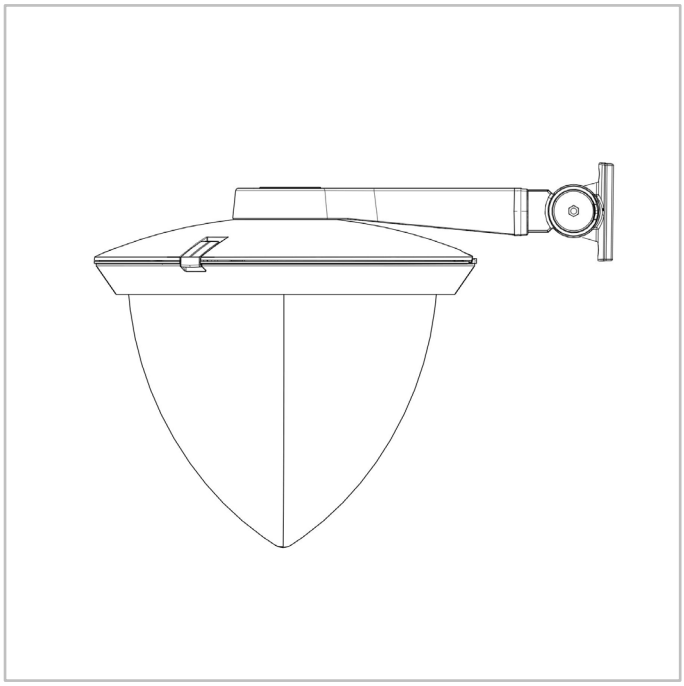
FLEXIA QUERCUS | Knuckle joint 1" gas female side entry mounting (A4)



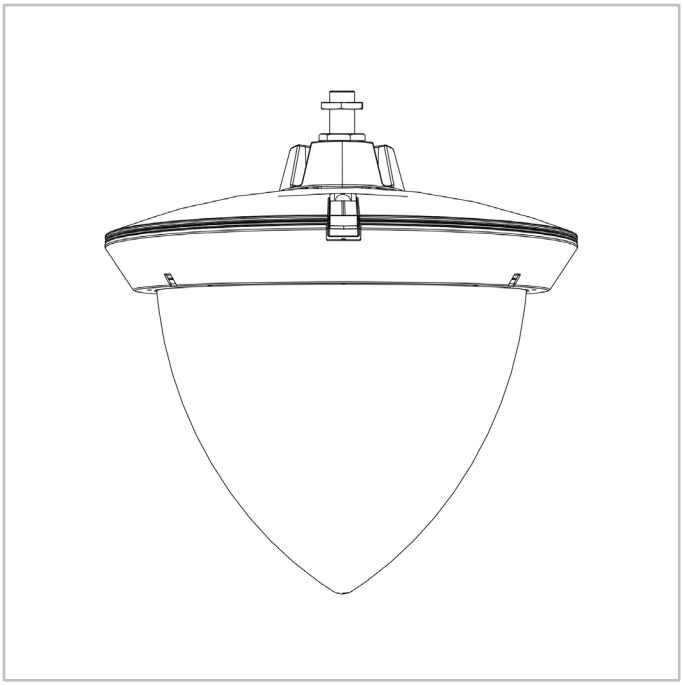
FLEXIA QUERCUS | Knuckle joint surface mounting (WB)



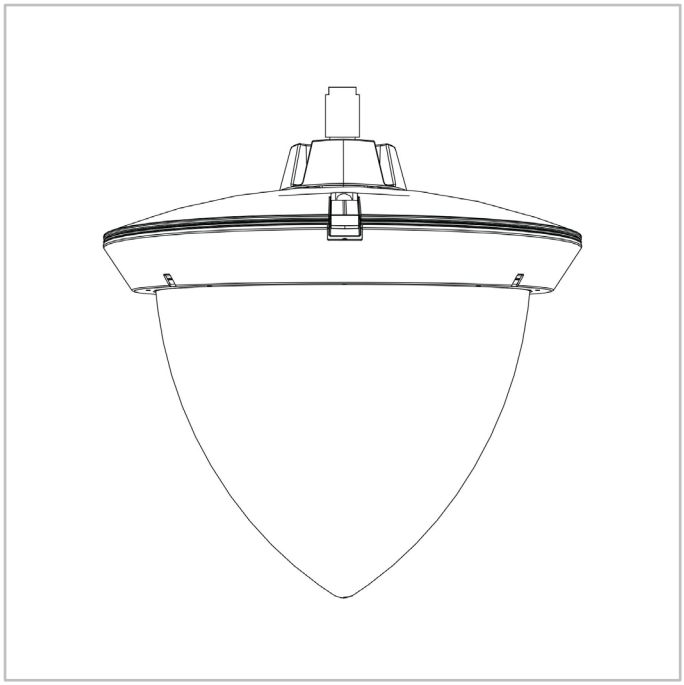
FLEXIA QUERCUS | Knuckle joint rear bracket mounting (WM)



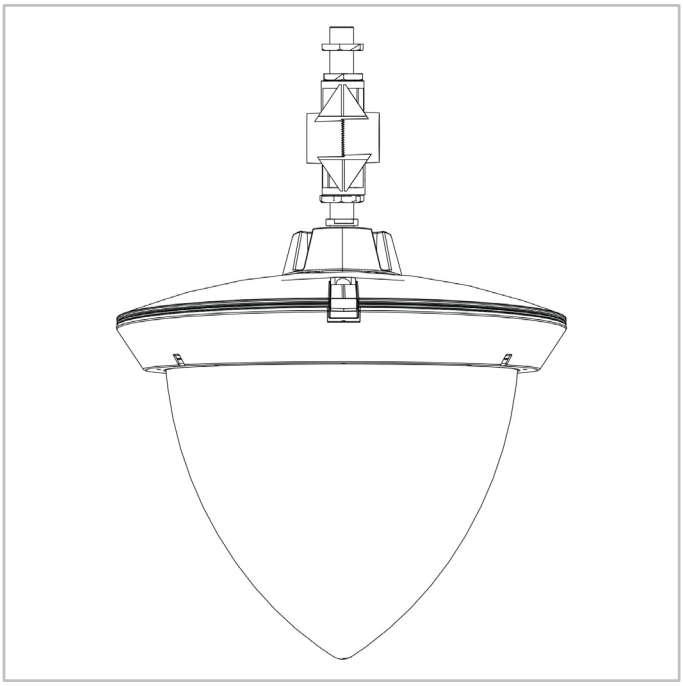
FLEXIA QUERCUS | Suspended with fixed 1" gas male mounting (S2)



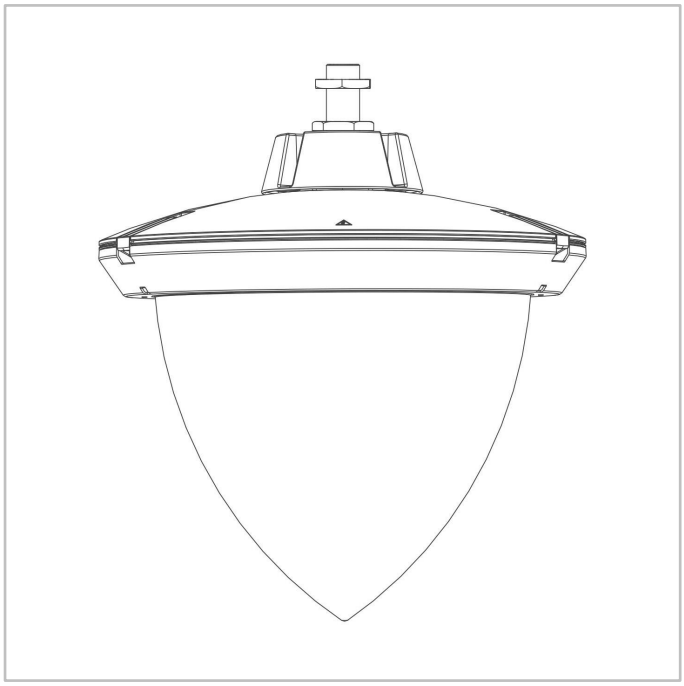
FLEXIA QUERCUS | Suspended with fixed 1" gas female enclosing mounting (S3)



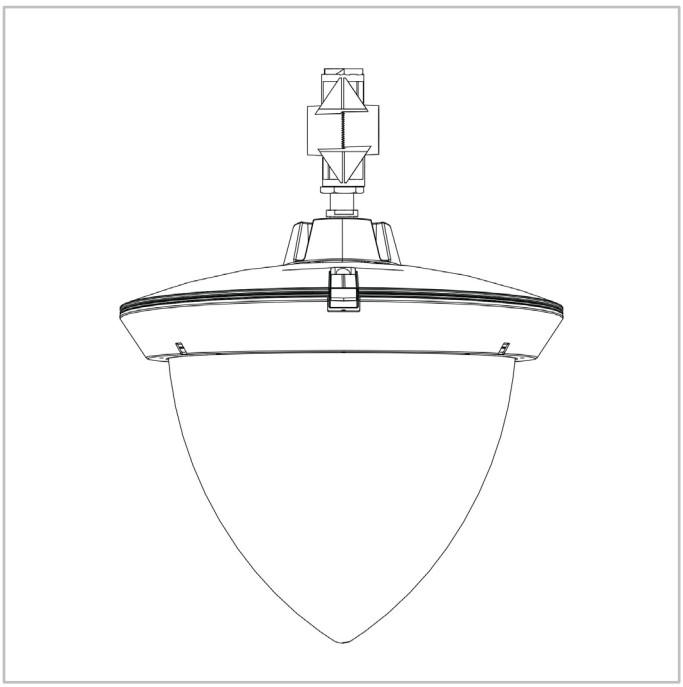
FLEXIA QUERCUS | Suspended with knuckle joint 1” gas male mounting (S4)



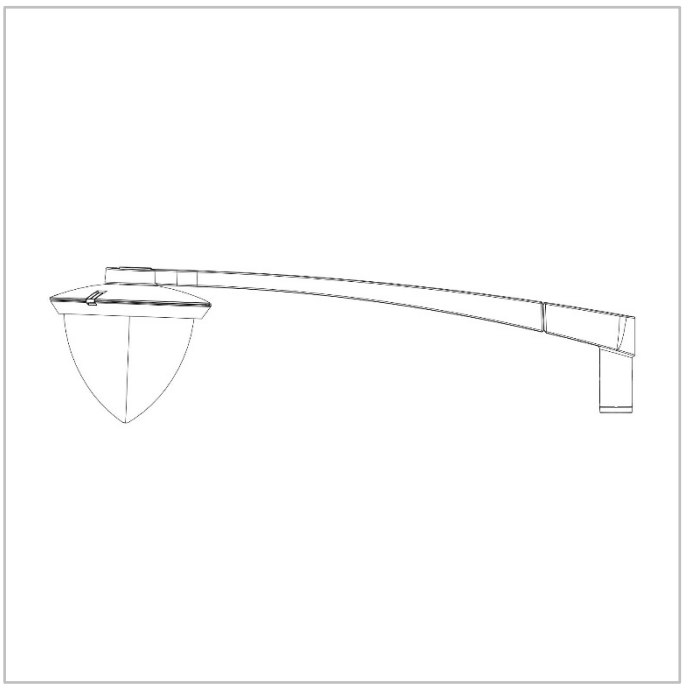
FLEXIA QUERCUS | Suspended with fixed 3/4” gas (S6)



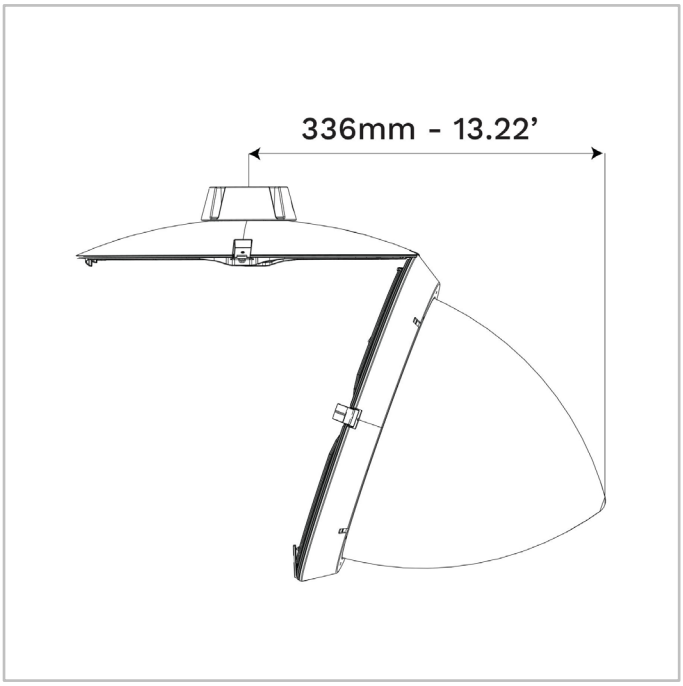
FLEXIA QUERCUS | Suspended and knuckle joint 1” gas female enclosing mounting (S5)



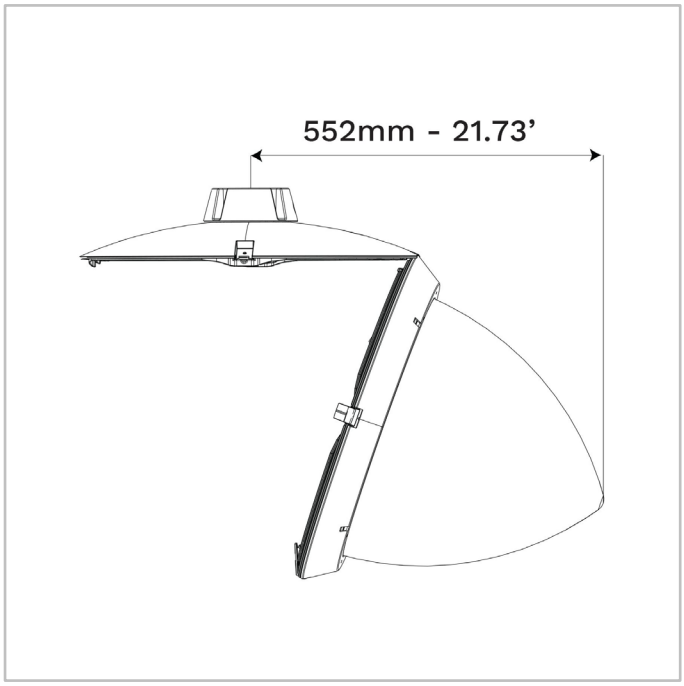
FLEXIA QUERCUS | SOFIA bracket (F0)



FLEXIA QUERCUS | Luminaire opening clearance - Midi



FLEXIA QUERCUS | Luminaire opening clearance - Maxi



FLEXIA QUERCUS MIDI

Photometry

LENSO FLEX™4

	Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
10	400	2400	400	2600	400	2800	400	2600	500	3000	7	22	155
20	800	6400	900	7000	900	7500	900	7000	1000	8200	13	64	164
30	1200	7600	1300	8300	1400	8900	1300	8300	1500	9700	19	66	171
40	1600	10100	1800	11100	1900	11800	1800	11100	2100	12800	25	87	173

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

FLEXIA QUERCUS MAXI

Photometry

LENSO FLEX™4

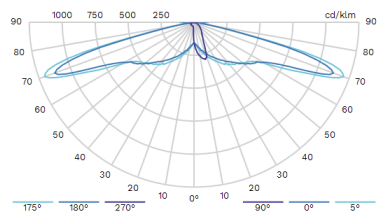
	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
50	2300	14100	2600	15500	2600	15500	3000	18000	31	123	179
60	2800	16400	3100	18000	3100	18000	3600	20900	37	146	180
70	3300	17700	3600	19400	3600	19400	4200	22500	41	151	187
80	3700	19900	4100	21900	4100	21900	4800	25400	46	171	189

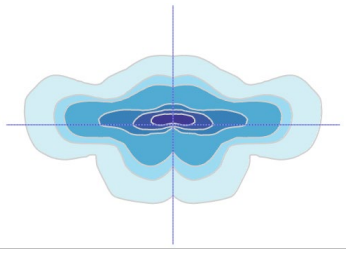
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

LensoFlex4

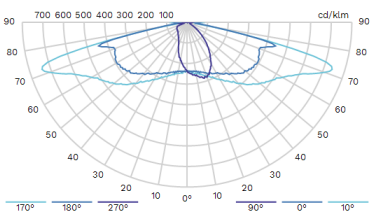
LENSO FLEX™4

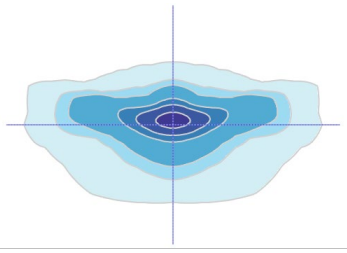
5300 Ultra-Narrow



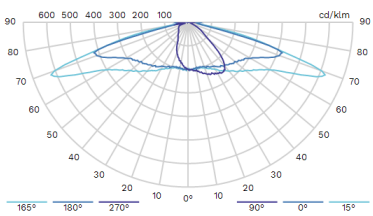


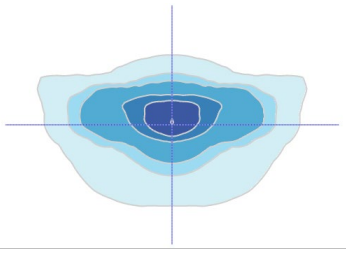
5301 Narrow



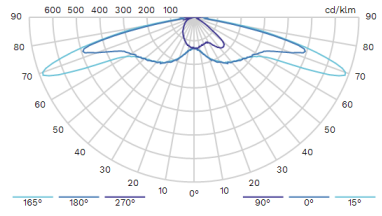


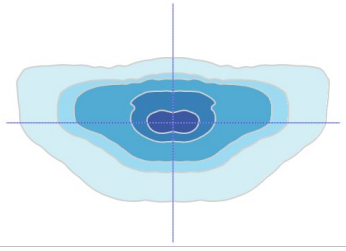
5303 Medium



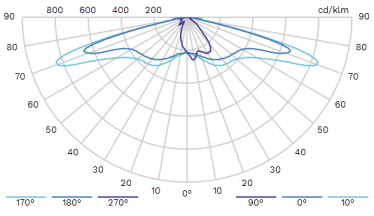


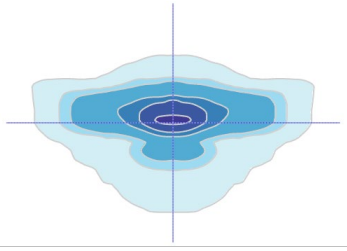
5305 Medium



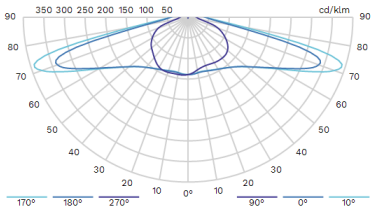


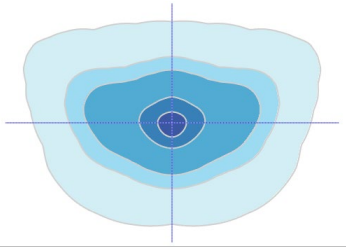
5306 Medium



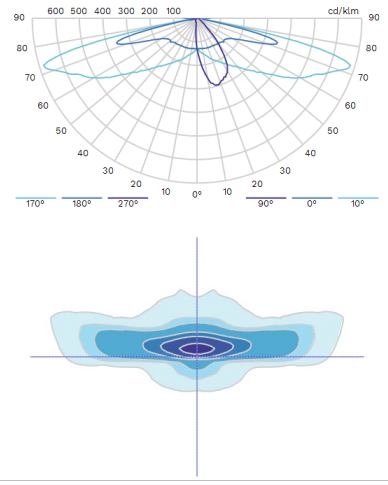


5392 Medium

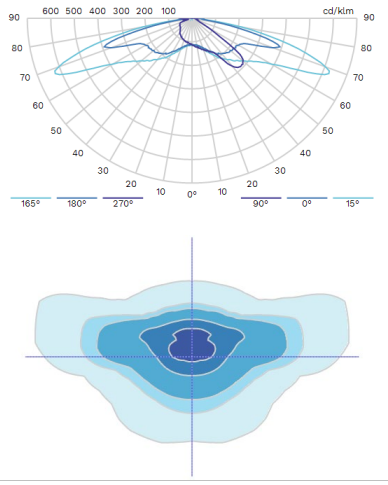




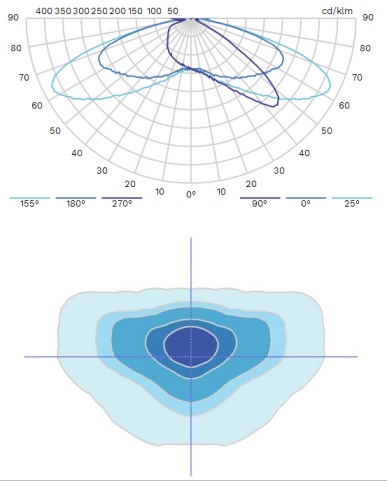
LENSO FLEX™4 5399 Medium



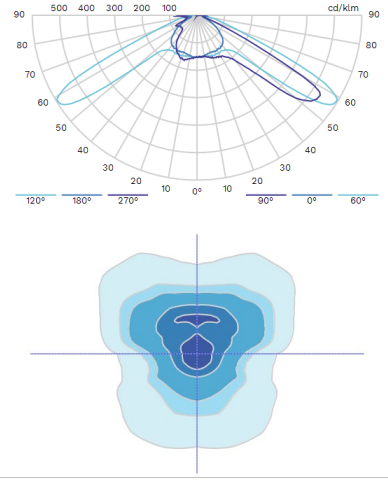
LENSO FLEX™4 5307 Wide



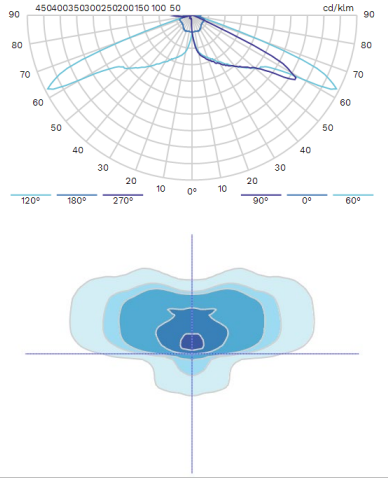
LENSO FLEX™4 5308 Wide



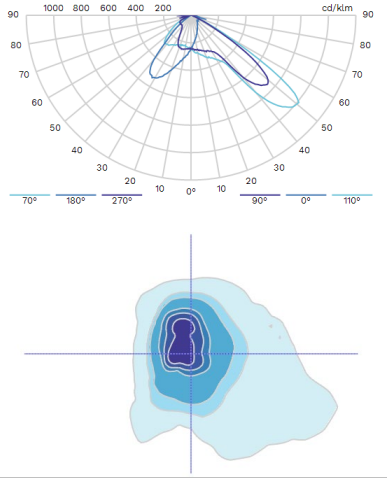
LENSO FLEX™4 5366 Extra-Wide



LENSO FLEX™4 5393 Ultra-Wide



LENSO FLEX™4 5370 Zebra Left



LENSO FLEX™4 5369 Zebra Right