

DATE: 4 September 2026
DESIGNER: Thomas McCormack / Ross Traynor
PROJECT No: 26005-E-PL-100
PROJECT NAME: Beaumont Road

**LIGHTING
REALITY**

Footpaths designed to EN13201-2 2020 CAT P4 and in accordance with Dublin City Council Public Lighting Services General Specification Document. This development will not be taken in charge by Dublin City Council and will remain in private management ownership.

Existing lighting along Beaumont Road & Ellenfield road provided by Dublin City Council Lighting Department.

Public Lighting Report

PREPARED BY: McElligott Consulting Engineers
D4 Riverview Business Park,
Nangor Road,
Dublin 12

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	-64.66	-107.77	172.76	141.20	1.49	1.49
2	Rear Garden	-5.29	-21.13	28.72	70.44	1.44	1.50

Luminaires

Luminaire A Data



Supplier	C U Phosco
Type	E950-28-F2A-727-C550-14W
Lamp(s)	727N
Lamp Flux (klm)	2.06
File Name	E950-28-F2A-727-C0550-14W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	623.6, 113.9, 0.3
No. in Project	3

Luminaire C Data

Supplier	
Type	FLEXIA TOP MINI 5300 10 LH351C@400mA WW 722 230V 00-53-394
Lamp(s)	10 LH351C@400mA WW 722 230V 00-53-394 [CJOINCSTDA], valid from
Lamp Flux (klm)	1.66
File Name	13.8W -x- I-Medium 557642 Deep shape P C 230V EF.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	1182.3, 79.4, 33.3
No. in Project	6

Luminaire D Data



Supplier	Urbis Schreder
Type	PHAROS 5119 Cylindrical, PC, Smooth Asymmetrical, Clear prote
Lamp(s)	8 XP-G3@350mA WW 730 230V
LampFlux(klm)/Colour	0.89 WW 3000K/70
File Name	PHAROS DS 5119 8 XP-G3 350mA WW 730 11W 448232 Cylindrical, PC, Smooth Cl...
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	490.6, 812.7, 26.8
No. in Project	7

Luminaire E Data



Supplier	_Historic Lanterns
Type	QB2B1055.4A + QB2M
Lamp(s)	55W SOX
Lamp Flux (klm)	8.10
File Name	r0004957.cib
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	179.3, 135.2, 67.6
No. in Project	3

Luminaire F Data



Supplier	Thorn
Type	CIVITEQ S - 36 x Neutral White 4000K LED CRI70 500mA - NR Opt
Lamp(s)	LED_4000K
LampFlux(klm)/Colour	8.36 4000/70
File Name	CQS36L50NR740G36_DC.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	602.6, 98.0, 0.0
No. in Project	2

Luminaire G Data



Supplier	_Historic Lanterns
Type	ALPHA 4 135W LST 240V
Lamp(s)	135W LST
Lamp Flux (klm)	22.00
File Name	QA4SB11354.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	266.0, 246.0, 93.0
No. in Project	1

Luminaires



Luminaire H Data

Supplier	Holophane Europe
Type	VMXII.1.LB024.V1.F4Q1.W014 (TZ)
Lamp(s)	LED C.2000 Lumens
Lamp Flux (klm)	2.17
File Name	VMXII.1.LB024.V1.F4Q1.W014 (TZ).IES
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	382.4, 22.8, 0.0
No. in Project	2

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
1	C	-31.35	-16.51	6.00	222.00	0.00	0.00	0.40	100%			
2	C	-56.43	1.04	6.00	41.00	0.00	0.00	0.40	100%			
3	C	-44.69	23.91	6.00	221.00	0.00	0.00	0.40	100%			
4	A	-77.42	-37.17	6.00	70.00	0.00	0.00	0.40	100%			
5	C	-29.00	-6.65	6.00	129.00	0.00	0.00	0.40	100%			
7	A	-54.05	-36.60	6.00	236.00	0.00	0.00	0.40	100%			
8	A	-75.02	-23.05	6.00	147.00	0.00	0.00	0.40	100%			
10	C	-51.74	-18.20	6.00	315.00	0.00	0.00	0.40	100%			
12	D	-5.60	9.77	1.00	222.00	0.00	0.00	0.00	75%			
EX-14	E	-67.66	21.82	6.00	35.00	0.00	0.00	0.40	100%			
EX-15	E	-47.20	-56.83	6.00	321.00	0.00	0.00	0.40	100%			
EX-16	F	8.09	-13.39	9.00	315.00	0.00	0.00	1.00	100%			
EX-17	E	-17.60	-26.89	6.00	313.00	0.00	0.00	1.00	100%			
EX-18	G	-15.38	-36.16	9.00	316.00	0.00	0.00	1.00	100%			
EX-20	H	16.97	6.78	6.00	207.00	0.00	0.00	1.00	100%			
EX-21	H	7.43	27.19	6.00	210.00	0.00	0.00	1.00	100%			
21	D	-13.55	18.84	1.00	220.00	0.00	0.00	0.00	75%			
22	D	-21.47	28.15	1.00	222.00	0.00	0.00	0.00	75%			
23	D	-29.35	37.27	1.00	219.00	0.00	0.00	0.00	75%			
24	D	-39.97	40.80	1.00	306.00	0.00	0.00	0.00	75%			
25	D	-48.48	33.45	1.00	314.00	0.00	0.00	0.00	75%			
26	D	3.24	-0.88	1.00	204.00	0.00	0.00	0.00	75%			
EX-27	F	-34.56	-63.36	9.00	318.00	0.00	0.00	1.00	100%			
28	C	-41.69	6.93	6.00	310.00	0.00	0.00	0.40	100%			

Horizontal Illuminance (lux)

Grid 1

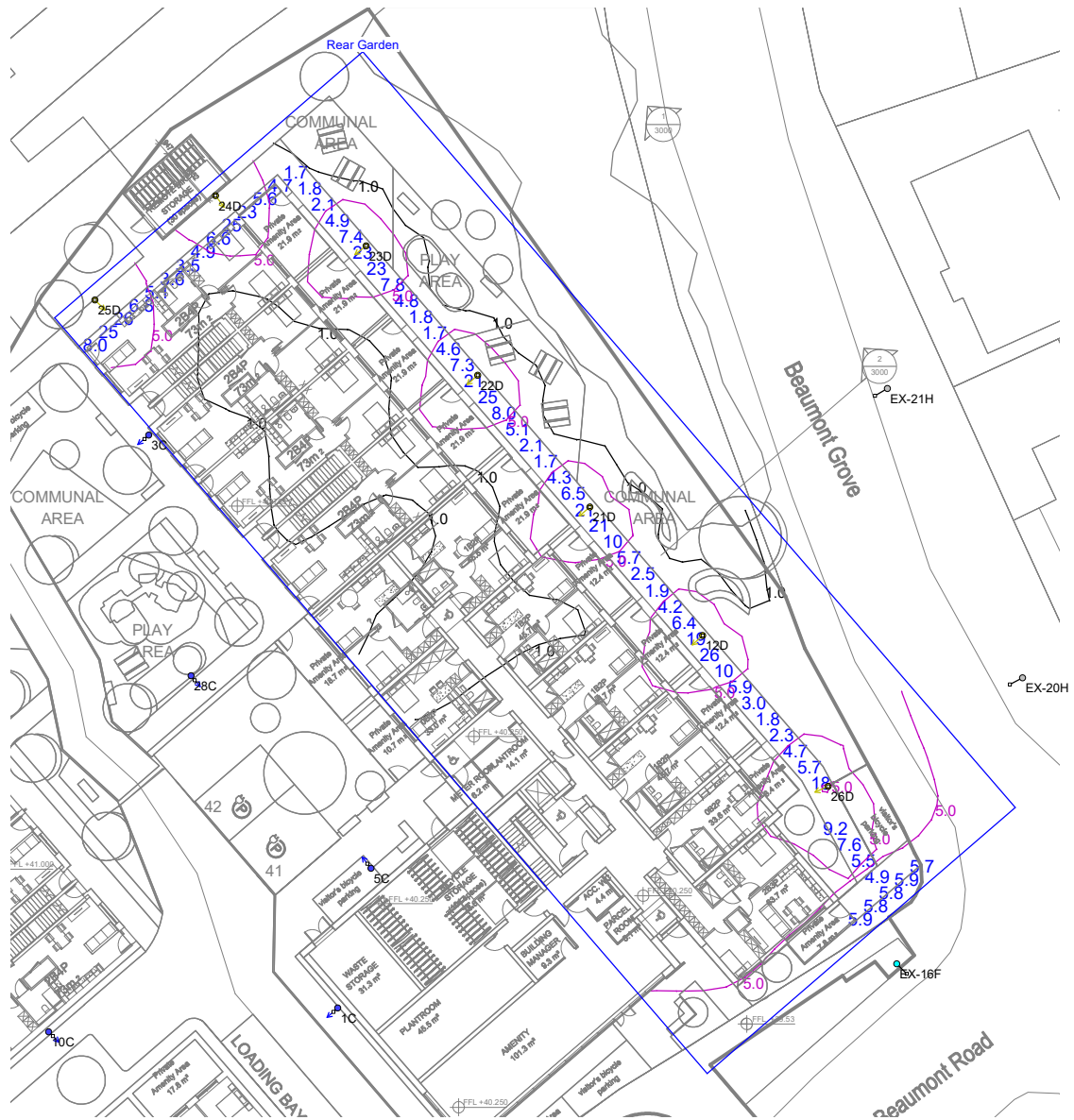


Results

Eav	6.14
Emin	1.20
Emax	26.16
Emin/Emax	0.05
Emin/Eav	0.20

Horizontal Illuminance (lux)

Rear Garden



Results

Eav	8.84
Emin	1.74
Emax	26.18
Emin/Emax	0.07
Emin/Eav	0.20

AMENITY LIGHTING APPLICATIONS

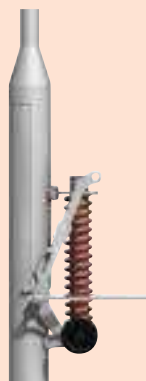
Ideally suited to often difficult access locations such as:

- Pathways
- Public parks
- Car parks
- Industrial areas



Counterbalance Units - RLS168 / RLH168

The column is lowered by means of a spring counterbalance unit, RLS168 (see right), available in a range of strengths based on column height and headload, or with a universal hydraulic unit, the RLH168 (see page 12 for full details).



RLS168



RLH168

To see the base-hinged columns in operation visit our YouTube channel
www.youtube.com/AbacusLighting



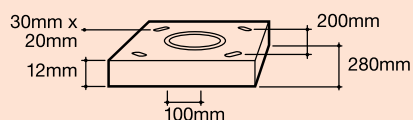
LIGHT DUTY

4-8M BASE-HINGED COLUMN Patent No: 968113

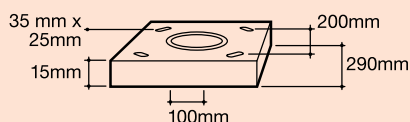
Designed to EN40. Hot dip galvanised to BS EN ISO 1461:2009. Manufactured in steel tube to EN10210

Flange Plate

Type 0 FA000G Bolts/cross brace M16 x 500mm
FC020 Template



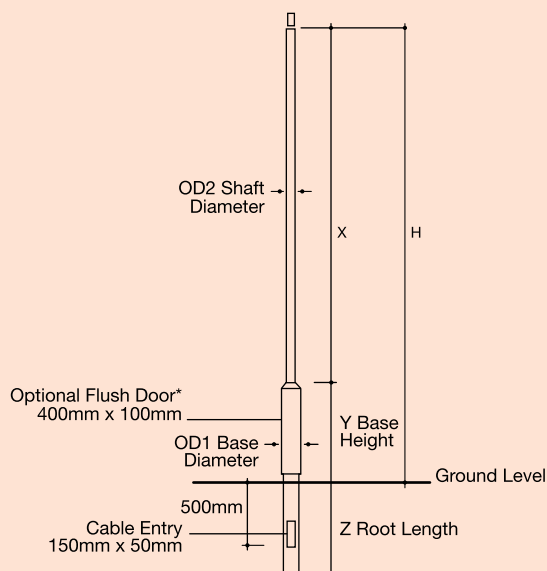
Type 1 FA001G Bolts/cross brace M20 x 500mm
FC021 Template



Accessories

XXSC003F Tamper resistant locking screw
XXSC003F Key for locking screw
ELSAB1/6A Single fuse cut-out, 6A, loop in/out (not fitted)
ELSAB12/6A Twin fuse cut-out, 6A, loop in/out (not fitted)

Column Dimensions



*Flush Door Option

Flush door enables internal locking mechanism. Side fitted locking screw not required on this model. Add /FD suffix.

Root Mounted

Dimensions (mm)											
Product Code	Height	OD1	OD2	x	y	z	Weight (kg)	OTM (kNm)	Shear (kN)	Min. Concrete Diameter*	Counterbalance Type & Max. Weight
T041RLS	4m	168	76	2875	1050	800	50	4.9	1.4	607	RLS168 - Yellow 18kg RLS168 - White 28kg RLS168 - Red 38kg RLS168 - Blue 53kg RLH168 - 53kg
T051RLS	5m	168	76	3875	1050	800	59	4.7	1.2	569	RLS168 - Yellow 11kg RLS168 - White 19kg RLS168 - Red 28kg RLS168 - Blue 40kg RLH168 - 40kg
T061RLS	6m	168	76	4860	1050	1000	67	4.6	1.1	291	RLS168 - White 11kg RLS168 - Red 19kg RLS168 - Blue 29kg RLH168 - 29kg
T081RLS	8m	168	89	6830	1050	1200	87	5.3	1.2	198	RLS168 - Blue 11kg RLS168 - Green 17kg RLH168 - 17kg

*Root concrete diameter based on poor soil or better, min. 230kN/m² per m

Flange Plate Mounted

Dimensions (mm)											
Product Code	Height	OD1	OD2	x	y	Flange Plate	Weight (kg)	OTM (kNm)	Shear (kN)	Concrete Dimension*	Counterbalance Type & Max. Weight
T041RLS /FP	4m	168	76	2875	1050	Type 0	47	4.9	1.4	750 x 800	RLS168 - Yellow 10kg RLS168 - White 20kg RLS168 - Red 29kg RLS168 - Blue 53kg RLH168 - 53kg
T051RLS /FP	5m	168	76	3875	1050	Type 0	52	4.7	1.2	750 x 800	RLS168 - Yellow 10kg RLS168 - White 18kg RLS168 - Red 27kg RLS168 - Blue 40kg RLH168 - 40kg
T061RLS /FP	6m	168	76	4860	1050	Type 0	57	4.6	1.1	750 x 800	RLS168 - White 10kg RLS168 - Red 18kg RLS168 - Blue 28kg RLH168 - 29kg
T081RLS /FP	8m	168	89	6830	1050	Type 1	72	5.3	1.2	750 x 900	RLS168 - Blue 11kg RLS168 - Green 17kg RLH168 - 17kg

*Concrete dimension based on a minimum ground bearing pressure of 150kN/m² (Passive concrete design). (S = square dimension, H = depth)

Outreach & Floodlight Brackets

		Outreach Brackets		Spigot Lengths	Floodlight Brackets	
				/SP 230mm /SP1 100mm		
Height	Projection Length	Overlap Fit on Shaft	Flush Fit on Spigot	Type/Bolt Centres (mm)	Overlap Fit on Shaft	Flush Fit on Spigot
4m		T041RLS	T041RLS/SP+/SP1*		T041RLS	T041RLS/SP
	0.30m	PR2-03/S or /D	PR1-03/S or /D*	Single	FL1/1	FL0/1
	0.50m	PR2-05/S or /D	PR1-05/S or /D*	Double (600)	FL1/2	FL0/2
5m		T051RLS	T051RLS/SP+/SP1*		T051RLS	T051RLS/SP
	0.30m	PR2-03/S or /D	PR1-03/S or /D*	Single	FL1/1	FL0/1
	0.50m	PR2-05/S or /D	PR1-05/S or /D*	Double (600)	FL1/2	FL0/2
6m		T061RLS	T061RLS/SP+/SP1*		T061RLS	T061RLS/SP
	0.30m	PR2-03/S or /D	PR1-03/S or /D*	Single	FL1/1	FL0/1
	0.50m	PR2-05/S or /D	PR1-05/S or /D*	Double (800)	FL1/3	FL0/3
8m		Post top lanterns only			T081RLS	T081RLS/SP
				Single	FL2/1	FL1/1
				Double (800)	Post top floodlight only	

*Outreach brackets series PR1 & PR2 below 0.50m projection fit onto 100mm spigot (/SP1). 0.50m + on standard 230mm spigot (/SP). Please refer to pages 37-39.

Column Headload Capacity (m²)

Based on UK rationalised wind loading factors for EN40

Product Code	Lantern Mounting/Projection	Max. Headload (kg)	Light 396	Medium 429	Heavy 466	Very Heavy 576
T041RLS	Post Top	53	1.161	1.062	0.969	0.763
	0.25m Single Outreach	15	0.305	0.279	0.254	0.2
	0.50m Single Outreach	10	0.225	0.206	0.187	0.145
T051RLS	Post Top	38	0.787	0.714	0.645	0.493
	0.25m Single Outreach	15	0.25	0.227	0.205	0.157
	0.50m Single Outreach	10	0.186	0.168	0.151	0.114
T061RLS	Post Top	28	0.543	0.485	0.43	0.312
	0.25m Single Outreach	10	0.204	0.183	0.163	0.12
	0.50m Single Outreach	10	0.147	0.131	0.116	0.083
T081RLS	Post Top	17	0.16	0.133	0.109	0.06
	0.25m Single Outreach	8	0.06	0.05	–	–

For complete information on foundation options please refer to www.abacuslighting.com/base-hinged-fixed-columns.asp



E950

TECHNICAL DATASHEET

E950 is a high quality, low-cost solution to replace existing sodium discharge and compact fluorescent luminaires on minor roads.

This luminaire complies with ETL guidelines for White Light Emitting Diode Lighting Units and is eligible for the Enhanced Capital Allowance (ECA) Scheme.

The E950 is DarkSky Approved whilst remaining contractor friendly.



SPECIFICATION

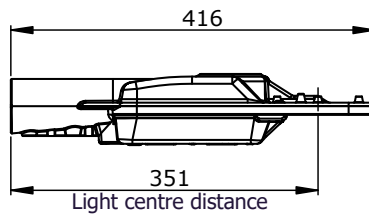
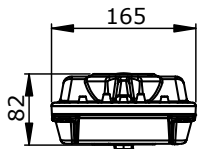
Feature	Low Power	High power
Power Consumption	7 - 27W	9 - 41W
Correlated Colour Temperature	4000K, 3000, 2700K, 2200K	4000K , 3000K, 2700K
DarkSky Approved	Yes (with 3000K CCT or warmer only)	
Luminaire Luminous Flux	650 ~ 3700 lm	980 ~ 6600 lm
Maximum Luminaire Efficacy	Up to 134 lm/W	Up to 154 lm/W
Lumen Maintenance Output	L80 @ 100,000 hours (1050mA, Ta = 25°C), L90 @ 50,000 hours (1050mA, Ta = 25°C)	L90 @ 100,000 hours (1050mA, Ta = 25°C), **Lumen depreciation calculated up to 100,000 hours using IES TM-21 method.
Number of LEDs	28	
Glare Rating	G4 max	
Colour Rendering Index	>70	
Optical Cover	PMMA/Polycarbonate Lenses	
Weight (Total)	3kg	
Operating Temperature	-40°C to +40°C (+50°C*)	
Installation Height	4 ~ 8m	
Electrical Class	I	
Control System Input	DALI or Step-dimming	
Surge Protection	10 kV Comm. Mode, 6 kV Diff. Mode to IEC 61000-4-5	
Shielding	Front, rear, left and right shielding options	
Dimming Control	Multi step dimming	
Lighting Regulation	Mini Photocell, NEMA Socket, Zhaga Book 18 Socket	
Installation	SE Ø 34-42mm x 100mm Long, PT Ø 60-76mm x 76mm Long (with adapter)	
Material	Full High Pressure Die Cast Aluminium or Plastic base housing option	
Finish	Polyester powder coat cured under heat	
Colours	Light grey (RAL 7035), other RAL colours available on request	
Ingress Protection	IP66	
Impact Rating	IK10	
Wind Area (projected)	0.049m ²	
Wind Area (SCx)	0.017m ²	

*The available output power of this luminaire is temperature dependent. Contact us for details performance specifications.

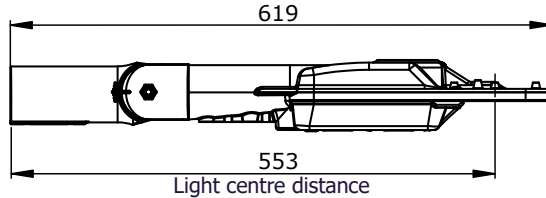
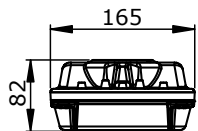
E950

TECHNICAL DATASHEET

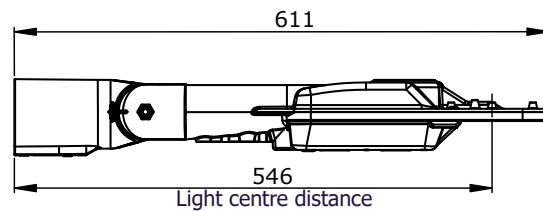
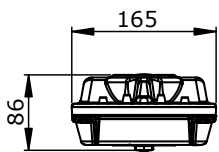
Input details			E950 per MCB					
Voltage range	Frequency range	Inrush current	B10	B16	B20	C10	C16	C20
220 - 240V	50 - 60Hz	24.88A for 236 μ S	12	20	26	20	33	43



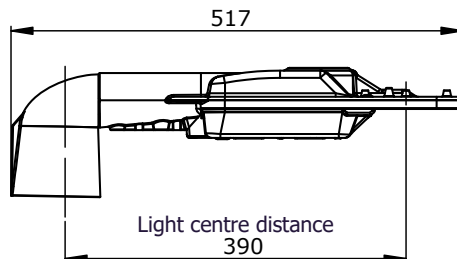
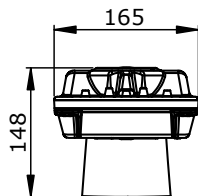
Fixed 0° tilt Side Entry
SE 34-42mm diameter



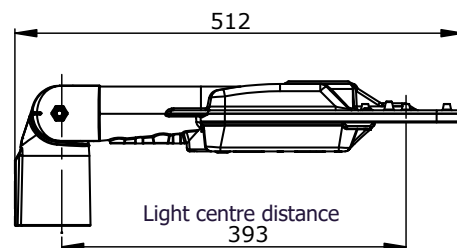
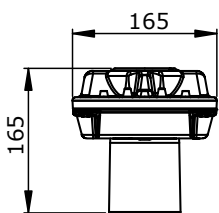
Adjustable tilt $\pm 15^\circ$ Side Entry
SE 34-42mm diameter



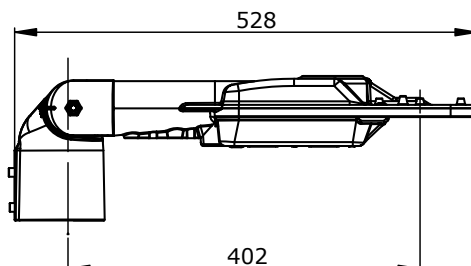
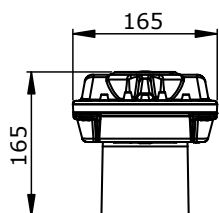
Adjustable tilt $\pm 15^\circ$ Side Entry
SE 48-60mm diameter



Fixed 0° tilt Post Top
PT 60-76mm diameter



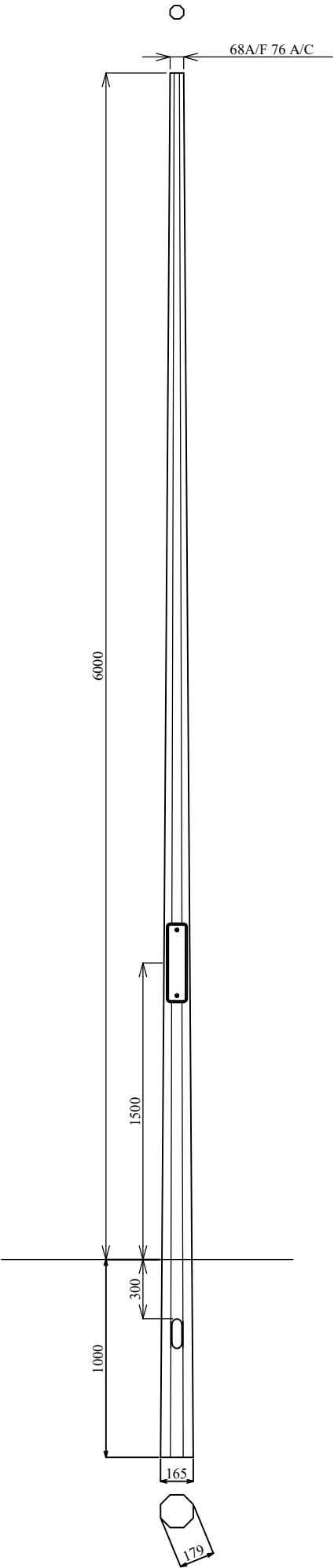
Adjustable tilt $\pm 15^\circ$ Post Top
PT 48-60mm diameter



Adjustable tilt $\pm 15^\circ$ Post Top
PT 60-76mm diameter

PRODUCT : 6m Octagonal Column

REVISION : 01

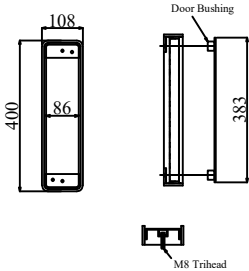


8 Sided Rooted Column
Steel 3mm Grade S275 minimum

Column designed to IS EN:40
Rationalized Wind Factor 587
Terrain Catagory 2
PSF Live Loads 1.4
PSF Dead Loads 1.2

Designed to EN40
Complies with NRA and UK
Highway agency design manual
for roads and bridges.
Galvanized to IS EN 1461

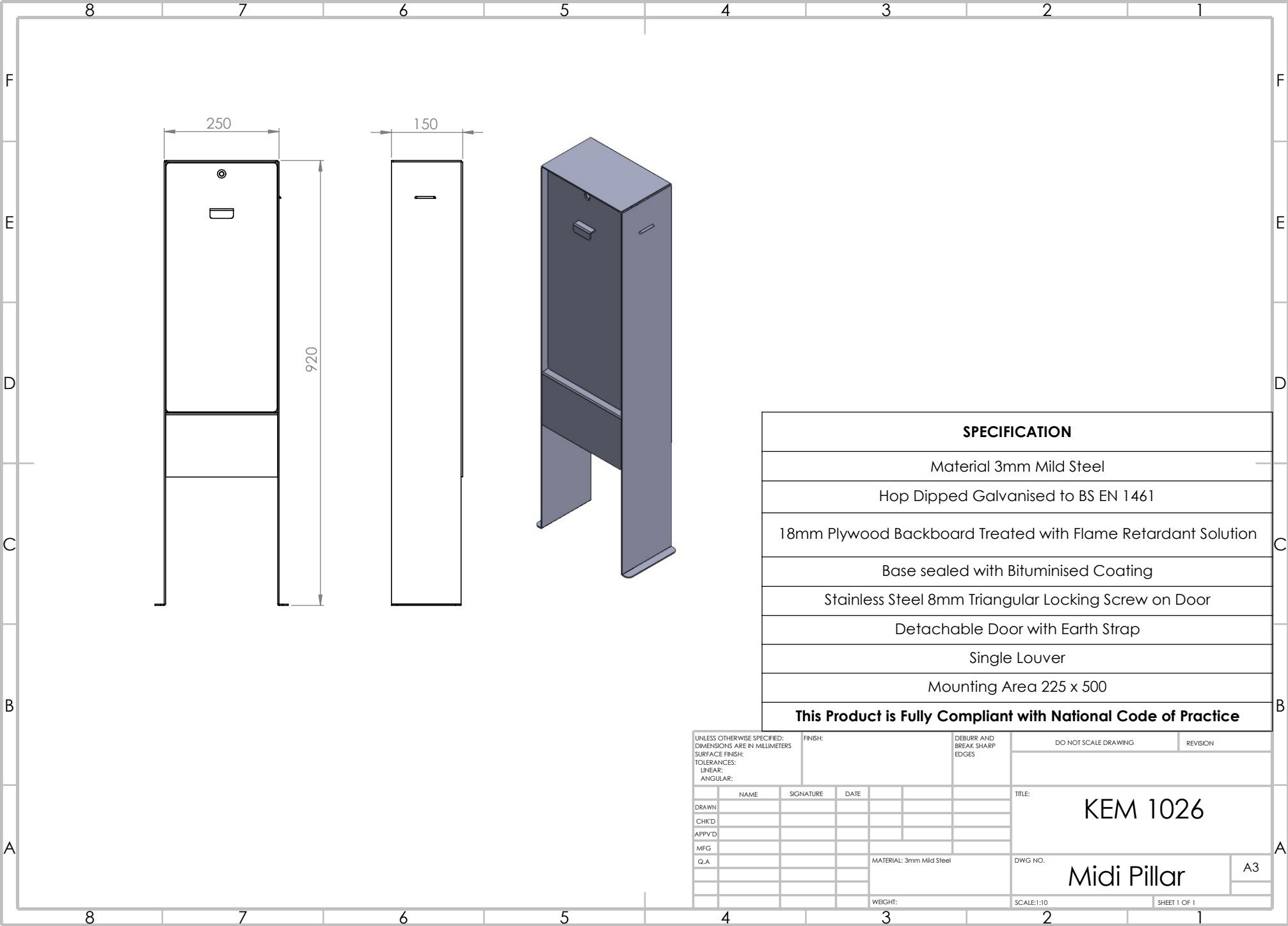
Door Size
400 x 108 External
308 x 86 Internal



Cable Entry Size
150 x 50mm

Foundation Guideline
1000(H)x700(W)x700(D)
Builders Sleeve 220ID min

Lampost Construction	
Date :	30-09-2010
Drg. No.	LPC06001
Origin	



FLEXIA TOP



Designer : iOL Design



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 a unique ambiance for people living and visiting your spaces instead of dealing with non-stop constraints. With no technical limitations, more design consistency and the guarantee of the latest innovations, FLEXIA offers a versatile technological platform with refined aesthetics. FLEXIA incorporates a refined design with an advanced and interchangeable technology 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 design consistency and lowers the carbon footprint for towns and cities - creating a safe and attractive environment.



IP 66

IK 09



Concept

FLEXIA TOP is a decorative post-top luminaire designed to provide the greatest modularity and easy customisation. It is composed of an aluminum body sealed with a polycarbonate protector. This protector is available in two sizes (Midi and Mini).

Create a unique lighting ambiance thanks to the FLEXIA TOP accessories like Coppa and Quattro. FLEXIA TOP also offers three different decorative crowns: the Mona as standard and the Lisa or Scala as options. Both the Lisa and Scala crowns can have a customised finish (colour, pattern, texture) to enhance your identity.

FLEXIA TOP is part of the FLEXIA range and shares the same technical architecture for more consistency and interchangeability. It relies on the new LensoFlex®4 photometrical engine, developed on a concept of performance, dark-sky compliance (PureNight) and versatility, and use 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 TOP is delivered pre-cabled. FLEXIA TOP offers a tool-free access to the gear compartment. For safety reasons, it includes an instant electrical disconnection on opening.

The FLEXIA TOP luminaire is available with various connectivity options (NEMA or Zhaga), sensors and the FlexiWhite solution that adapts the colour temperature of the lighting to the need of the space and the moment.

Built with recyclable materials and with an architecture designed for easy service, FLEXIA TOP is a role model for a circular economy.



FLEXIA TOP is available with two protector sizes: Mini and Midi.



FLEXIA TOP can be customised with three different crowns and internally enhanced with various accessories for more modularity and creativity.

TYPES OF APPLICATION

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

KEY ADVANTAGES

- State-of-the-art LED modular platform that can be endlessly customised
- Design consistency for all urban applications
- Numerous mounting possibilities
- Tool-free philosophy: opening, cabling and LED engine removal
- PureNight: dark-sky and low-glare lighting distributions
- 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 Schröder EXEDRA control platform
- Zhaga-D4i certified



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



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

FLEXIA TOP | FLEXIA TOP Mini



FLEXIA TOP | FLEXIA TOP Midi



FLEXIA TOP | With Coppa accessory (not compatible with the Mini protector)



FLEXIA TOP | With Quattro accessory (not compatible with the Mini protector)



FLEXIA TOP | With customised crowns

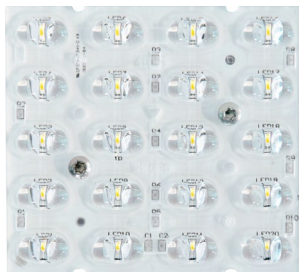




LensoFlex®4

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.

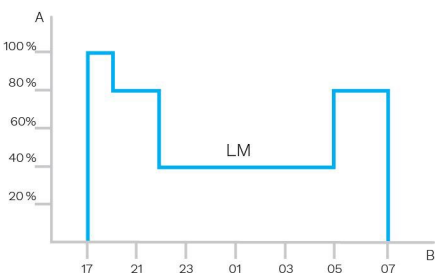




Custom dimming profile

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.

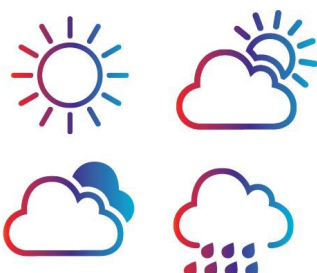


A. Dimming level | B. Time



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.



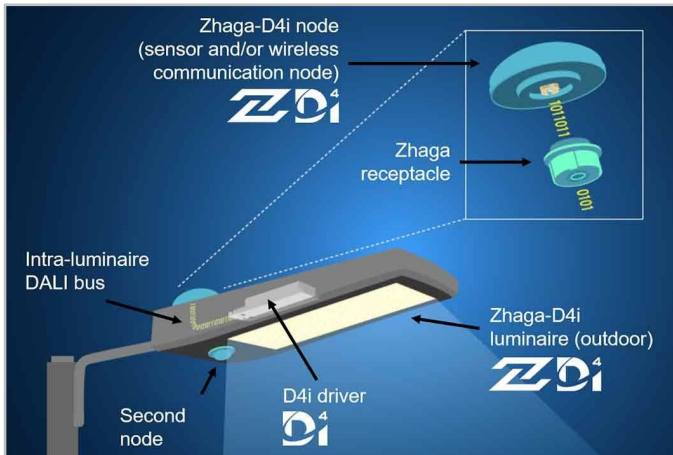
PIR sensor: motion detection

In places with little nocturnal activity, lighting can be dimmed to a minimum most of the time. By using passive infrared (PIR) sensors, the level of light can be raised as soon as a pedestrian or a slow vehicle is detected in the area.

Each luminaire level can be configured individually with several parameters such as minimum and maximum light output, delay period and ON/OFF duration time. PIR sensors can be used in an autonomous or interoperable network.



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



As a founding member of the Zhaga consortium, Schröder 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.

Schröder 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

Schröder 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 Schröder EXEDRA system relies on shared and open technologies. Schröder 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

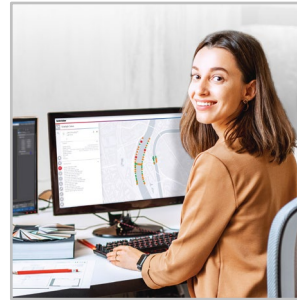
With EXEDRA, Schröder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schröder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- 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 Schröder EXEDRA, operate Schröder'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

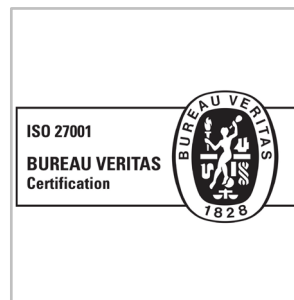


Schröder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable 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

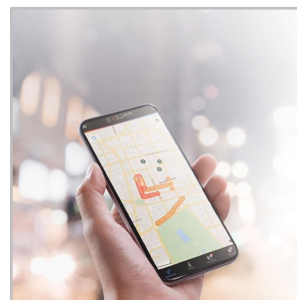
Data is gold. Schröder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side



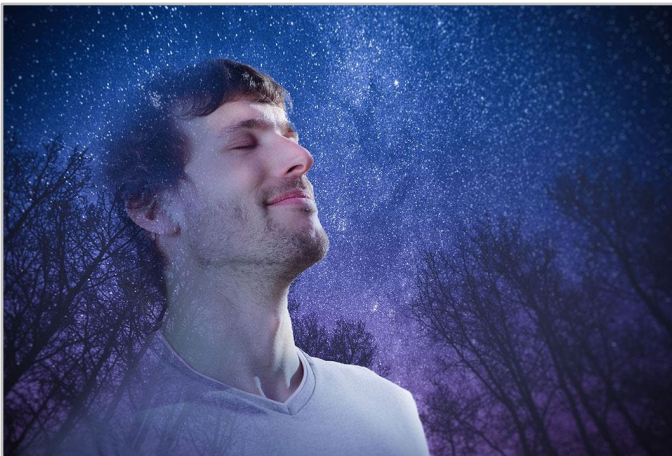
Schröder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schröder EXEDRA meets the requirements for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

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

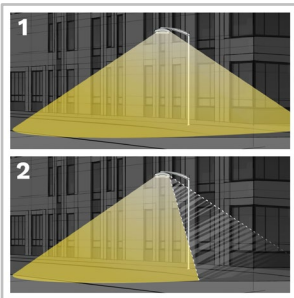


The Schröder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

With the PureNight concept, Schröder 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 Schröder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.



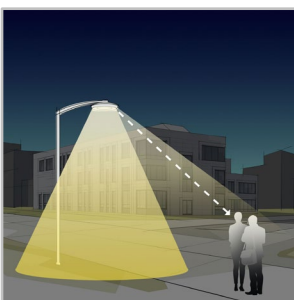
Direct the light only where it is wanted and needed



1. Without backlight
2. With backlight

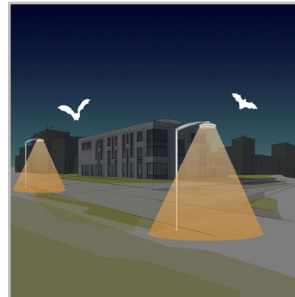
Schröder is renowned for its expertise in photometry. Our optics direct light only where it is wanted and needed. However, light trespass behind the luminaire might be a key concern when it comes to protecting a sensitive wildlife habitat or avoiding intrusive lighting towards buildings. Our fully integrated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

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. Schröder 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. Schröder 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 Dark Sky certified luminaire



The International Dark-Sky Association (IDA) is the recognised authority on light pollution. It provides leadership, tools and resources to industries and companies willing to reduce light pollution. The IDA's Fixture Seal of Approval programme certifies outdoor lighting fixtures as being Dark Sky Friendly. All products approved by this programme must comply with the following criteria:

- The light sources shall have a maximum correlated colour temperature of 3000K;
- Uplight allowance limited to 0.5% of total output, or 50 lumens, with no more than 10 lumens in the 90-100 degree UL zone;
- The luminaires must have a dimming capability to 10% of full rating;
- The luminaires must be equipped with a fixed mounting option;
- The luminaires must have Safety Certification by an independent laboratory.

This approved Schröder range of luminaires complies with these requirements.

GENERAL INFORMATION	
Recommended installation height	4m to 5m 11' to 16'
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
CB mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
UL certified	Yes
ROHS compliant	Yes
Dark Sky friendly lighting (IDA certification)	Yes
Zhaga-D4i certified	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, e
BE 005 certified	Yes
RCM mark	Yes
UKCA marking	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

· Only FLEXIA TOP Midi meets the IDA Dark Sky requirements

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
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

· Any other RAL or AKZO colour upon request

OPERATING CONDITIONS	
Operating temperature range (Ta)	-30°C up to +35°C / -22°F up to 95°F

· 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
Surge protection options (kV)	10 20
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-4-5 / 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)	Schröder EXEDRA
Sensor	PIR (optional)

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)
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	<3%
ULR	<4%

- Meets IDA Dark Sky requirements 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.

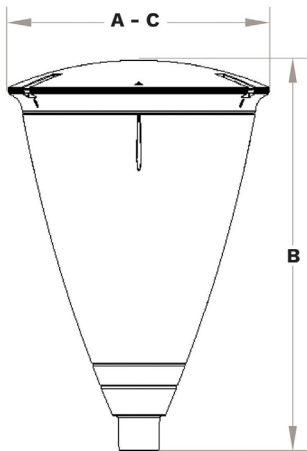
LIFETIME OF THE LEDS @ TQ 25°C	
All configurations	100,000h - L95

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

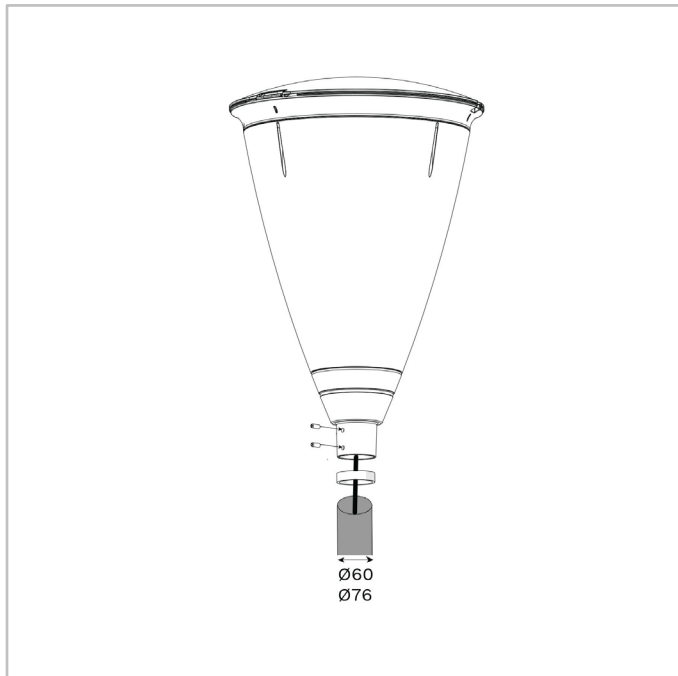
DIMENSIONS AND MOUNTING

AxBxC (mm inch)	FLEXIA TOP MINI : 504x612x504 19.8x24.1x19.8
	FLEXIA TOP MIDI : 504x752x504 19.8x29.6x19.8
Weight (kg lbs)	FLEXIA TOP MINI : 9.8 21.6
	FLEXIA TOP MIDI : 10.0 22.0
Aerodynamic resistance (CxS)	FLEXIA TOP MINI : 0.08
	FLEXIA TOP MIDI : 0.11
Mounting possibilities	Post-top slip-over – Ø60mm
	Post-top slip-over – Ø76mm

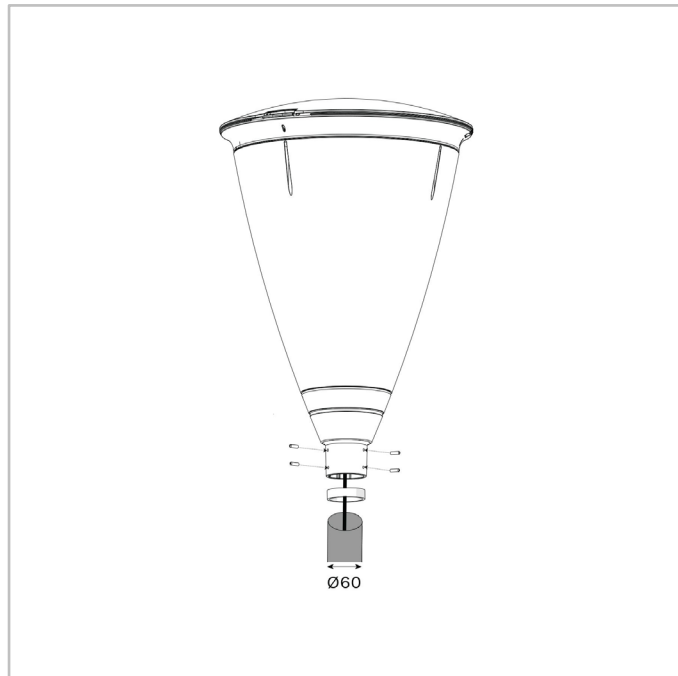
· For more information about mounting possibilities, please consult the installation sheet.



FLEXIA TOP | Universal slip-over mounting
Ø60mm (P3) or Ø76mm (P4) - 2XM8 screws



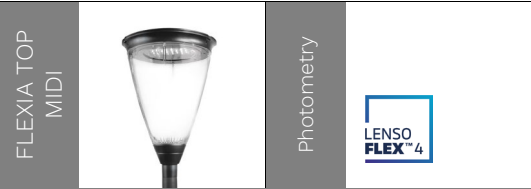
FLEXIA TOP | Slip-over mounting Ø60mm
(P6) - 6XM8 screws





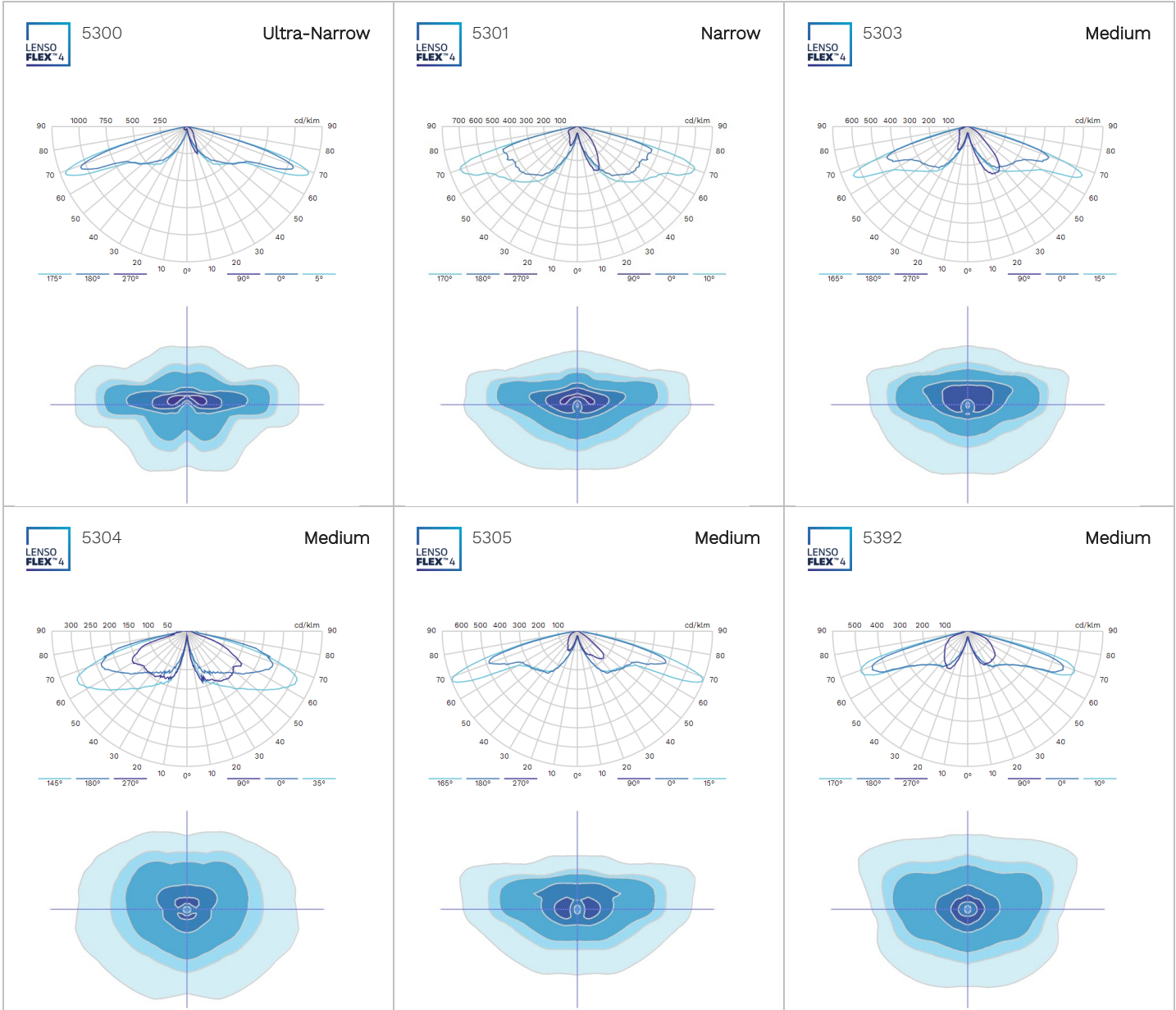
		Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
		Warm White WW 722		Warm White WW 727		Warm White WW 730		Warm White WW 830		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to	
10	600	2100	700	2400	800	2600	700	2400	800	2800	7	22	147	
20	1300	4600	1500	5100	1600	5500	1500	5100	1700	6000	13	46	159	
30	2000	6900	2200	7800	2400	8400	2200	7800	2600	9000	19	67	160	
40	2700	9200	3000	10300	3300	11100	3000	10300	3500	12000	25	89	164	

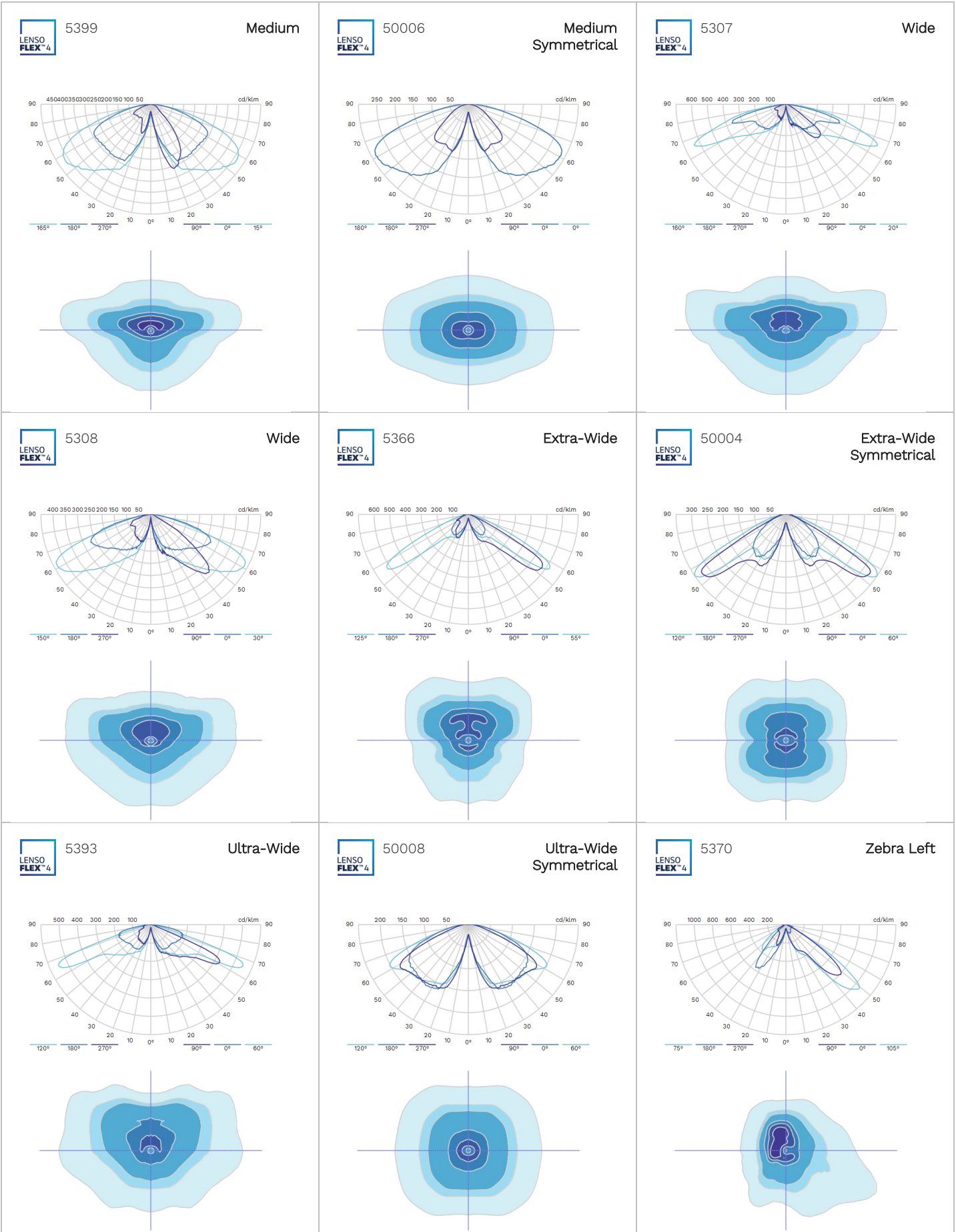
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %



		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	600	2300	700	2500	700	2700	700	2500	800	3000	7	22	153	
20	1200	6300	1400	7000	1500	7600	1400	7000	1600	8200	13	67	164	
30	1900	7200	2100	8100	2200	8700	2100	8100	2400	9400	19	67	176	
40	2500	9500	2800	10700	3000	11500	2800	10700	3300	12400	25	89	168	

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





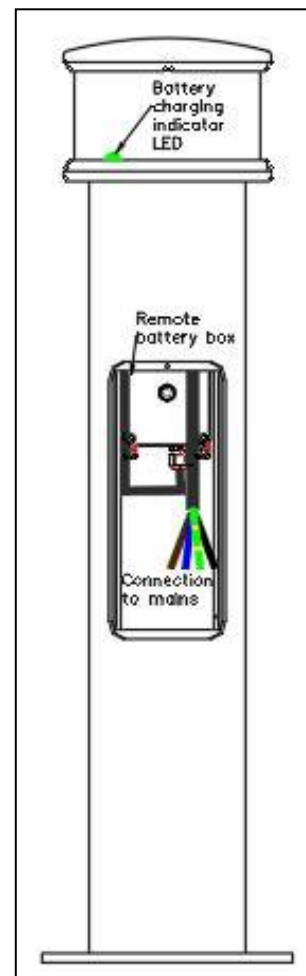


Pharos II LED Emergency Bollard Data Sheet

Supply	230Vac +/-10%
Frequency	50/60Hz
Mains current	470mA
Safety class	I
Charge power	3.6W
Power factor	0.88
Charge current	180-210mA
Recharge period	24 hours
Back up time	3 hours
Back up type	Maintained
Visual charge indicator	Yes
Battery type	3x 4.0 Ah NiCad
	D cells
Total LED's (Normal operation)	8
Emergency LED's	8
Emergency LED power	Approx. 2.6W
Emergency LED current	Approx. aver 150mA
Emergency light output	Approx. 627L
Normal operation LED drive current	350mA
Normal operation light output	1464L
Ta max	25°C

Description: See separate installation instructions DAT 279 for mechanical details of optic and bollard base. The emergency bollard contains LED's driver/invertor and surge protector within the optic. A mains connection is made to the optic by the customer within the bollard base. A remote battery enclosure connects to the optic and is installed in the base on the backboard for easy battery replacement. The bollard optic requires both a permanent mains feed and a switchable/ maintained feed to allow the bollard illumination to be switched off without activating emergency mode. If the permanent supply is lost the bollard will supply emergency lighting for 3 hours once the batteries are fully charged. A switched/ maintained feed can be created in the bollard e.g., by use of a time clock. Room is left on the backboard for installation of a 6A fused cut out.

Note The bollard will need to live feeds to operate correctly in maintained mode.



Electrical Connection

"ISOLATE BOLLARD ELECTRICALLY PRIOR TO ANY SERVICE OPERATION. THE BOLLARD IS A CLASS I DEVICE WHICH CONTAINS VOLTAGES ABOVE SELV!!"

Space inside the bollard door is limited. It is recommended that an electrical connection is made to the flying lead of the optic in a suitable IP rated junction box if a suitable fused cut out for the bollard or bollards is made elsewhere. Either in a lighting column or feeder pillar. For electrical connections-

Mains permanent live- Brown

Mains permanent neutral-Blue

Safety earth ground- Yellow /Green

Maintained/ switched live- Black

Remove the battery enclosure cover (the enclosure must be removed from bollard base). Connect the battery and carefully replace the enclosure cover and fix back to bollard base. Mains can now be switched on. The LED charge light should illuminate, showing that permanent mains is present and the batteries are being charged. The battery needs 24 hours to charge before functional tests can be carried out. The commission date should then be clearly written on the enclosure.

Note The LED's (Lamp) and driver/ invertor are not end user replaceable. Please contact Urbis about replacement options.

Testing/Commissioning

- Connect the battery.
- Switch on the permanent supply - Check the battery charge LED illuminates.
- Switch on the maintained supply - Check the bollard lighting illuminates at full power.
- Switch off the maintained supply - Check the bollard lighting extinguishes but battery charge LED remains illuminated.
- Switch off the permanent supply - Check the Battery charge LED extinguishes, and the bollard lighting illuminates at a reduced output.
- Enter the commissioning date on the Battery Pack. Switch on the permanent supply and ensure 24 hours of uninterrupted charging before bollard is ready for an emergency.

Battery Charge indicator

A green indicator light will only illuminate when the permanent mains feed is present and shows the batteries are being charged.
If the permanent feed is present and the indicator light does not illuminate there is a fault which requires immediate investigation.

The indicator LED is in the optic on the lower transition plate. It may be difficult to see its correct operation when the main LED's are on or during bright day light.

Testing Emergency Lighting

Legislation clearly states the requirements of testing emergency lighting. See BS 5266-1:2016 12.0 for routine inspection and testing. Annex M has an example inspection and test certificate. Maintaining your emergency lighting ensures that all users have sufficient illumination in the event of an emergency to evacuate the area. The role of the "responsible person" is to carry out periodic checks, below is an overview of the testing procedure to give an idea of the frequency and means of testing that should be carried out. **(Please ensure reference is made to latest legislation. Below is an example which may no longer comply with latest legislation).**

Monthly

Check charge indicator is on until supply is turned off. Switch off the mains power supply to the lighting unit. Ensure emergency LED's within emergency light are on. Note any defects and rectify immediately. Record your results in your fire safety logbook.

Yearly

Check charge indicator is on until supply is turned off. Switch off the mains power supply to the lighting unit. Leave the unit to run for the rated period (e.g. three hours). The emergency LED's should be on for the whole period. If emergency LED's fail within this time, replace the battery. Record your results in your fire safety logbook.

Third Anniversary of the Installation

On the 3rd year of the installation the emergency lighting unit should be assessed by a qualified electrician. The mains power supply should be disabled and a full three hour test of the lighting unit should be carried out. It is also important to have the unit checked for compliance with the latest British standard. Any faults should be fixed and the actions taken should be recorded in the emergency lighting log book.

After the third year of installation, the lighting units should be checked annually by a competent person, carrying out the same routine and checks as were made on the three year anniversary.

Battery Change Procedure

