photinus Schréder
Experts in lightability™

PROTOS

Versatile, efficient split solar lighting with unbeatable value

KEY ADVANTAGES

- **Two sizes of solar panel to suit project requirements**
- **Independent settings (tilt and orientation) for solar panel and luminaire**
- **Designed for easy on-site deployment and adjustment**
- **In-ground sealed battery for optimum performance and longevity**
- **One or two (back-to-back) luminaires**
- **Numerous light distributions**
- **Optional sensors for light-on-demand scenarios**

The PROTOS solar LED luminaire is a perfect blend of functionality and attractive design. Ideal for areas where electrical infrastructure is lacking or too costly to install, PROTOS is a self-sufficient outdoor solar LED luminaire with versatile technical options.

Equipped with an efficient monocrystalline photovoltaic panel with adjustable tilt, PROTOS ensures optimum energy harvesting. Its intelligent control features independent day and night detection, allowing for customisable time programmes. This makes it an excellent choice for street lighting, car parks, access roads, outdoor areas and business premises.

The PROTOS family includes the 150 and 275 models, which refer to the Wp module power and offer configurations with either one or two luminaires (“DUO”). The integrated LiFePo4 battery, embedded in the ground together with the post, ensures optimum temperature maintenance and protection against theft. Charged during the day, the battery powers the LED luminaires, which are automatically activated at dusk and dawn, providing superior light distribution thanks to high-efficiency LEDs and advanced optical components.

PROTOS comes in anthracite as standard, but can be ordered in any RAL colour for large projects.

HIGHLIGHTS

Elegant square design, premium finish and a seamless, cable-free aesthetic.

Supplied as an easy-to-assemble kit for simplicity and convenience.

Waterproof components (LED module, power supply and cabling) make the luminaire lightweight and easy to install.

Available with two sizes of monocrystalline solar panel to suit any geography.

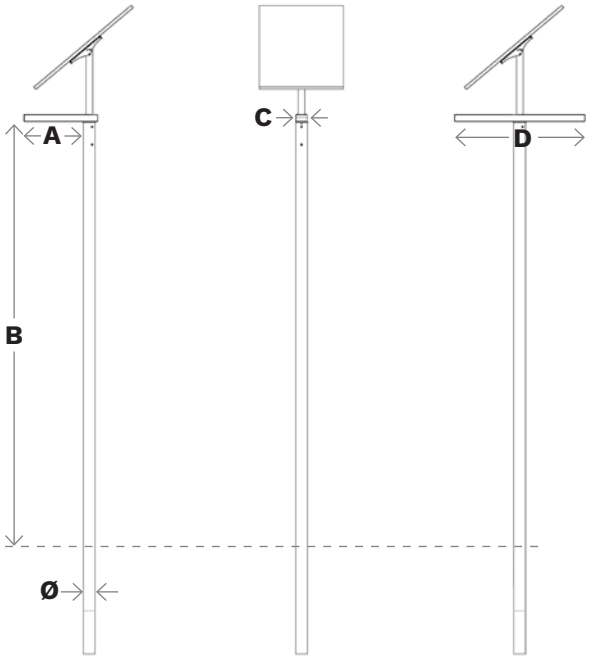
Toolless coded connectors for all connections.

The IPX8 LiFePo4 battery offers superior water resistance and reliable performance.

RANGE

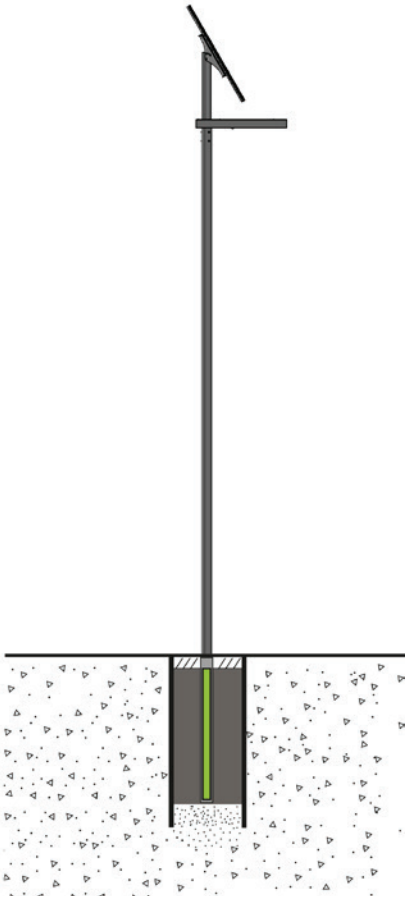
	PRODUCT	POLE HEIGHT	ENERGY HARVESTING	ENERGY STORAGE	LUMINAIRE
	**PROTOS 150**	4200mm | 14ft	150Wp photovoltaic panel	LiFePo4 battery 474Wh or 1152Wh (1 or two batteries)	1x 24-LED module
	PROTOS 275	5000mm | 16ft	275Wp photovoltaic panel		
	**PROTOS 150 DUO**	4200mm | 14ft	150Wp photovoltaic panel	LiFePo4 battery 474Wh or 1152Wh (1 or two batteries)	2x 24-LED module
	PROTOS 275 DUO	5000mm | 16ft	275Wp photovoltaic panel		

DIMENSIONS AND MOUNTING

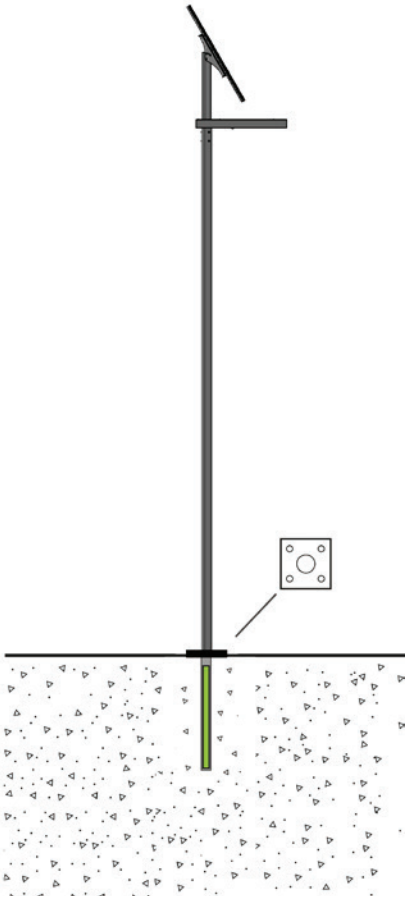


	A (mm | inch)	B (mm | ft)	C (mm | inch)	D (mm | inch)	Ø (mm | inch)
PROTOS 150	670 | 26	4200 | 14	125 | 4.9	-	133 | 5.2
PROTOS 275		5000 | 16			
PROTOS 150 DUO	-	4200 | 14		1470 | 58	
PROTOS 275 DUO		5000 | 16			

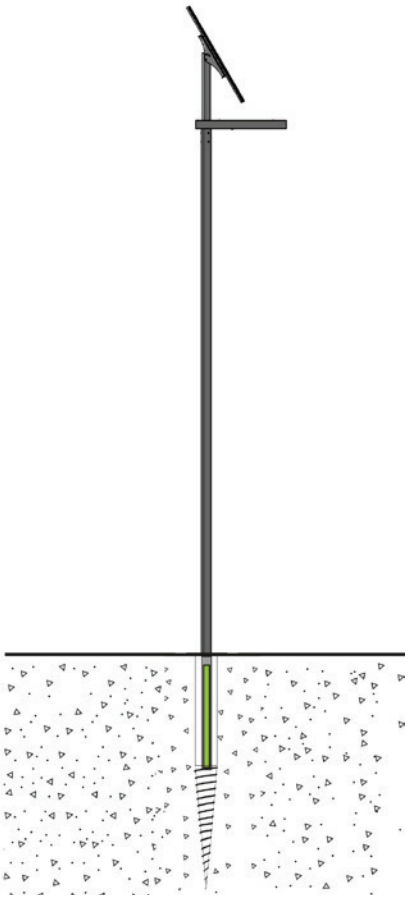
PIPE FOUNDATION



ANCHOR BASE



GROUND SCREW FOUNDATION



CHARACTERISTICS

GENERAL	
CE Mark	Yes
Electrical class	Class III EU
Wind speed resistance	Land category 4: 200km/h
	Land category 1: 120km/h

MATERIALS	
Pole	Galvanised steel
Metal parts	Aluminium
Finish	Polyester powder coating
Standard colour	RAL 7016M anthracite grey*
Impact resistance	IK 06

*any other RAL colour upon request

SOLAR PANEL

	PROTOS 150 PROTOS 150 DUO	PROTOS 275 PROTOS 275 DUO
Technology	Monocrystalline silicon cells	
Solar cells quantity	60 cells	110 cells
Frame	Anodised aluminium alloy	
Glass	3.2mm (0.13 in) tempered glass	
Power	150Wp	275Wp
Electrical characteristics	VOC: 40.38V	VOC: 38.4V
	VMPP: 34V	VMPP: 32V
	ISC: 4.51A	ISC: 9.12A
	IMPP: 4.41A	IMPP: 8.58A
Lifetime expectancy	25 years	

BATTERY	
Technology	LiFePo4
Voltage	12.8V
Capacity	474Wh (37Ah) or 1152Wh (90Ah)
Operating temperature	-20°C to 55°C | -4°F to 131°F
Autonomy	3 to 5 days
Tightness level	IPX8
Lifetime expectancy	>10 years

LED MODULE	
Optic/protector	PMMA/PC integrated
Tightness level	IP 67
LED colour temperature	2200K (Warm White 722) 3000K (Warm White 730) 4000K (Neutral White 740)
Colour rendering index (CRI)	>70
Upward Light Output Ratio (ULOR)	0%
Upward Light Ratio (ULR)	0%
Lifetime of the LEDs @ Tq 25°C	100,000h - L95

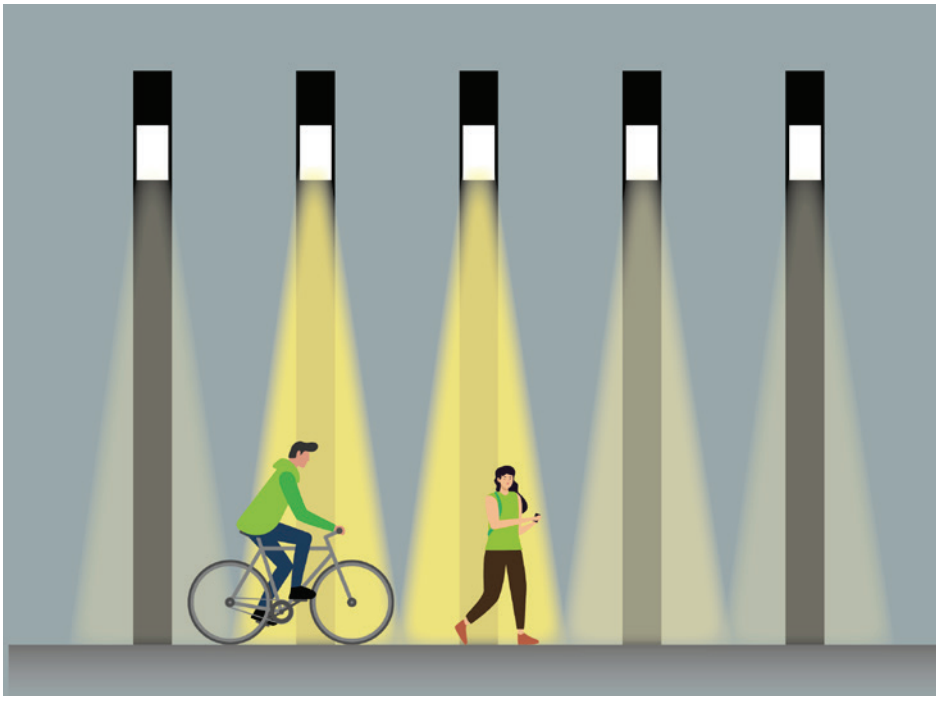
CONTROL	
PIR sensor	Optional
Microwave sensor	Optional
Zhaga socket	Optional

PERFORMANCE

		Luminaire output flux (lm) Warm White 722		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)
	Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Up to
PROTOS	24	400	6300	500	7000	500	7400	3	51	191
PROTOS DUO	2x24	800	12600	1000	14000	1000	14800	6	102	191

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

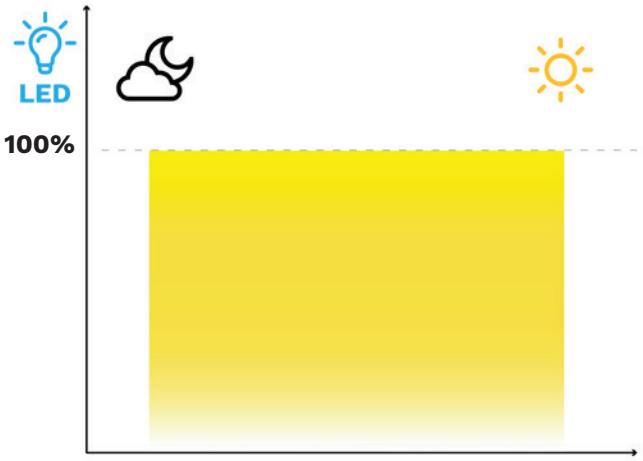
LIGHT ON DEMAND



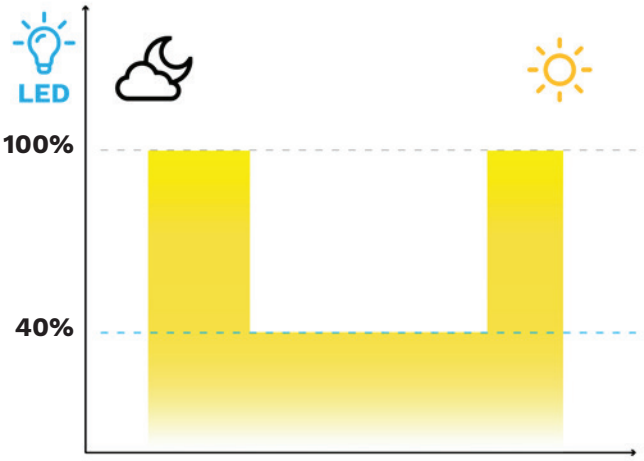
With advanced sensor technology and options for stand-alone operation or communication between luminaires, light-on-demand features make a significant contribution to species conservation by actively reducing light pollution. These intelligent luminaires provide full light intensity only when needed, ensuring optimum visibility and safety. By dimming the lights during periods of low activity, they prevent over-dimensioning and eliminate the need for additional solar panels and larger batteries, making them an efficient and sustainable solution.

STANDARD DIMMING PROFILES*

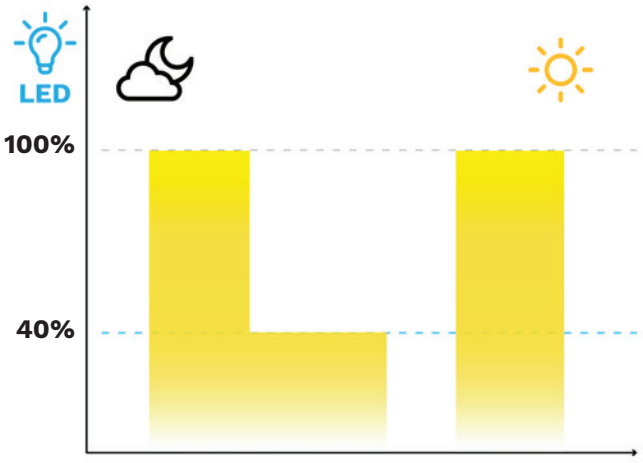
V3: all night 100%



V4: night dimming to 40%



V5: partial switch OFF



Light on demand (sensor)

*Customised dimming profiles are available as an option.

LIGHT DISTRIBUTIONS

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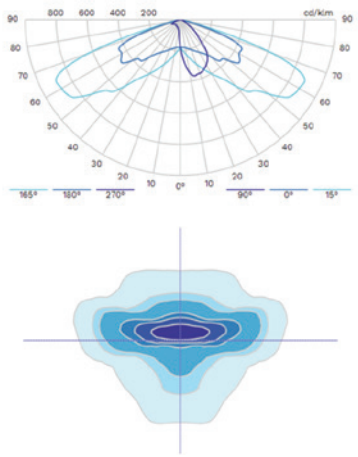

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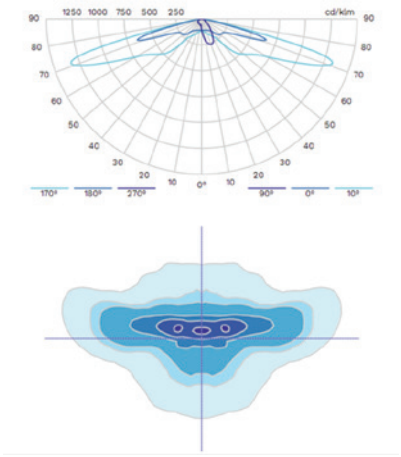

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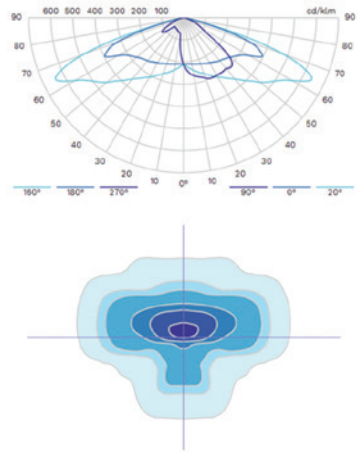

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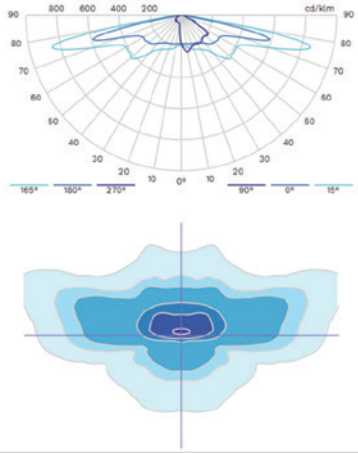

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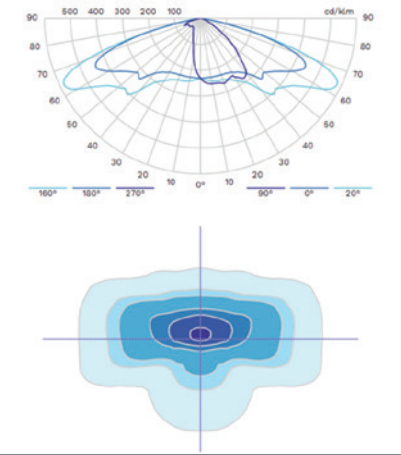

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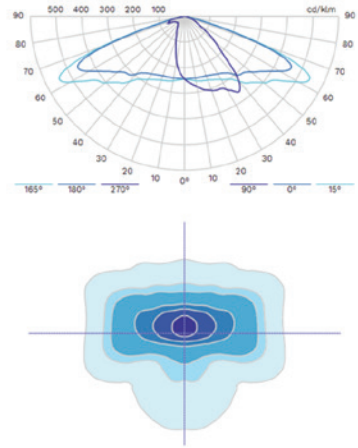

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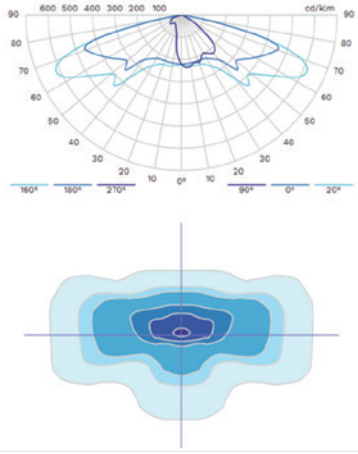

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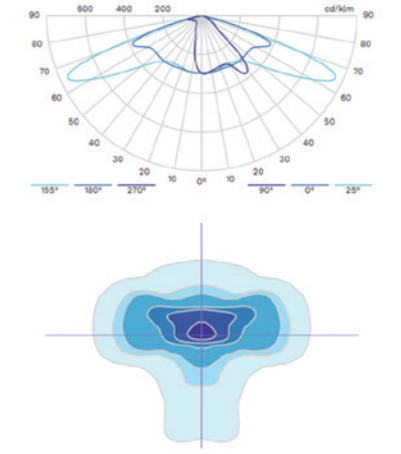

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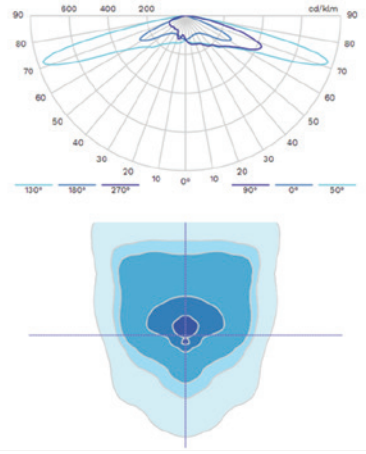

LIGHT DISTRIBUTIONS

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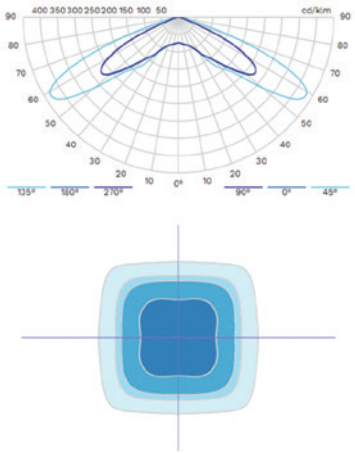

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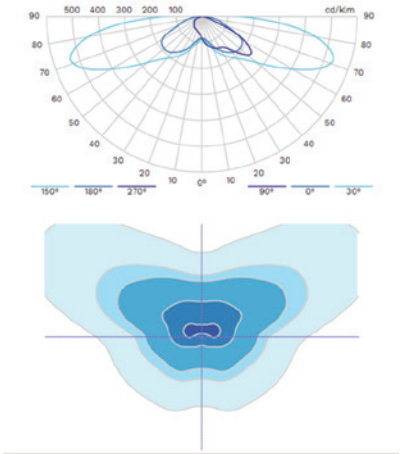

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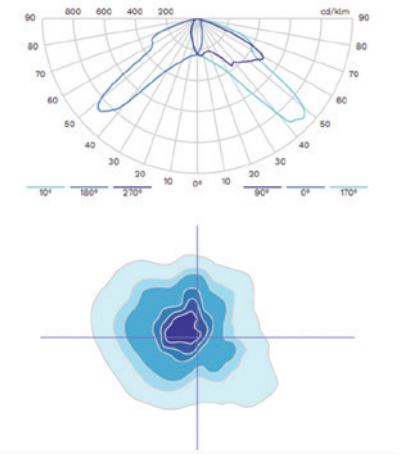

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