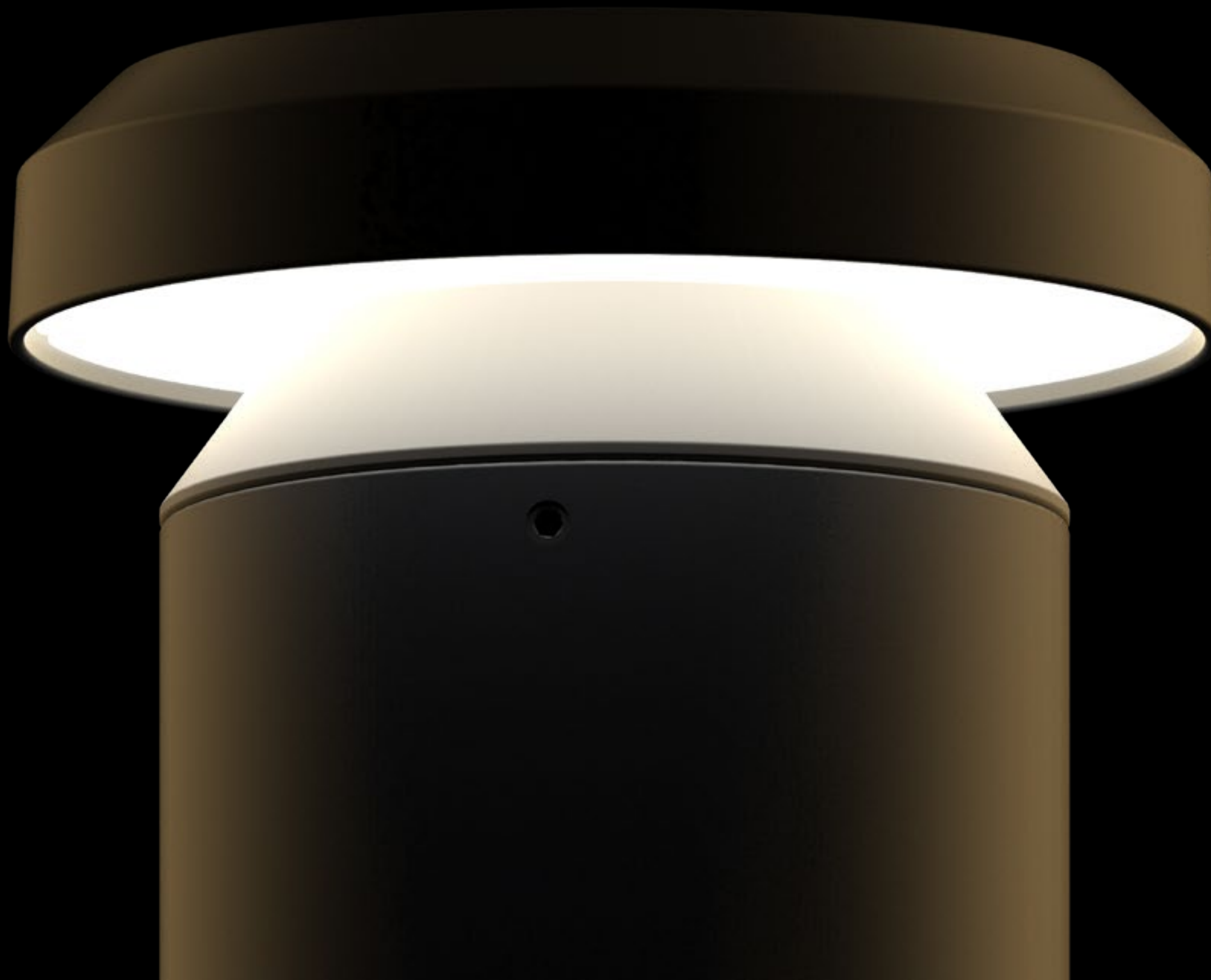


ZOE: Dark-sky technology

Invisible source & Glare-free & No uplight Create Comfort to your Environment and Protect your Safety





ZOE – The Charm of Light

A lighting tool for Pathways and Squares

The ZOE bollard luminaire vividly connects paths and squares outdoor areas: Four light distributions and three construction sizes enable nuanced lighting designs with just a single luminaire range. Its innovative optical lens creates either light distribution aligned at 180° to one side for paths, or 360° light distribution for open areas. The ZOE lighting system is designed for uniform illumination in both of these applications. Luminaire spacing of up to 10m is achieved without compromises in terms of glare control.

The Optic design along with the Dark ring adopted prevents emission of light above the horizontal. Good visual comfort conditions for passers-by and vehicle drivers is ensured thanks to the optic system designing.



Regular led bollards without Super Comfort technology

Performance ? Glare, Shadow, Non-uniform horizontal illumination



The Story

The ZOE collection of bollards keep evolving in terms of technology and shape, as well, by keeping an elegant design to be integrated with the architecture.

We developed a new innovative optic system able to guarantee super visual comfort, excellent horizontal effect with high inter-distances and two lighting distributions

Invisible source

The optic is optimized to completely hide the light source from view.

Visual Comfort

Invisible source even in compromise situation such as sitting position.

Uniformity

Outstanding Uniform lighting on the ground

Horizontal Excellence

Illuminate the horizontal plane by eliminating the shadow at the base and perfectly patterning the light, from the points closest to and farthest from the pole uniformly.

ZOE New led bollards With Super Comfort technology

Invisible source, Visual comfort, No shadow, Horizontal excellence and Uniform



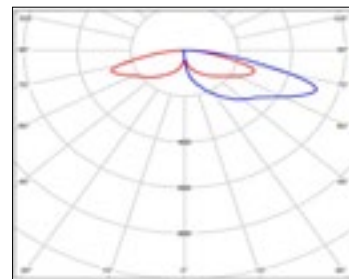
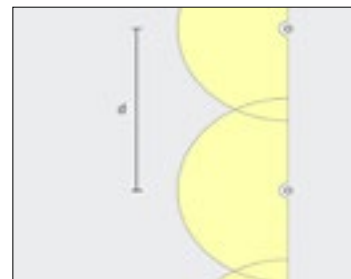
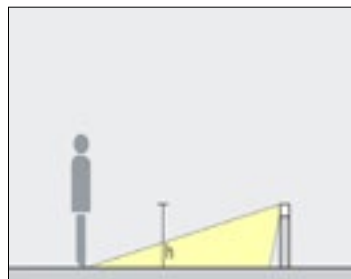
Performance of
ZOE led bollards

Performance of
Regular led bollards



ZOE bollard luminaires with 180° wide Asymmetric light distribution (h =900 mm) enable uniform path lighting with luminaire spacings (d) of Ideal at 7m, and might be up to 9m.

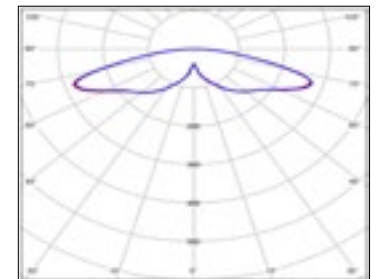
Arrangement: $d \leq 7m$



The 360° Symmetric light emission of ZOE bollard luminaires lends itself to the uniform illumination of squares and open areas.

The spacing(d) between two luminaires (h =900 mm) is Ideal at 8m, and might be up to 10m.

Arrangement: $d \leq 8m$



65 lm/W -0.38W/m²

Class P2 (EN 13201)

Area : 2*13.2 m

E: 16.9lx

Emin: 2.5 lx

U0: 0.15

7 m

40 lx

20 lx

2 lx

70 lm/W -0.45W/m²

Class P2 (EN 13201)

Area : 2*13.2 m

E: 18.7 lx

Emin: 2.8 lx

U0: 0.16

8 m

40 lx

20 lx

2 lx



Asymmetric
180°
180° WIDE
H=280mm



Asymmetric
180°
180° WIDE
H=600mm



Asymmetric
180°
180° WIDE
H=900mm



Symmetric
360°
360° WIDE
H=280mm



Symmetric
360°
360° WIDE
H=600mm



Symmetric
360°
360° WIDE
H=900mm



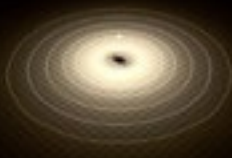
180° Asymmetric



180° WIDE Asymmetric



360° Symmetric



360° WIDE Symmetric

A new version capable of eliminating the risk of glare and providing uniform horizontal illumination



- 1.Upper cover--- Corrosion-resistant casting aluminum, No-Rinse surface treatment; Dual powder coating finish Graphite grey RAL7024 color; Outstanding Integral heat sink as the thermal management system supporting Max 40watts power
- 2.Optical lens--- Made of Polycarbonate. Patented design Specially for wide spread illumination and Glare-control performance, as well high light efficiency. UV Stabilised, Vandal and Heat resistant robust, Fire resistant; Suitable for outdoor application with long durable life-time
- 3.Anti-glare cone--- Corrosion-resistant casting aluminum, No-Rinse surface treated; Dual powder coating finish Matt black color; Glare-free above the light aperture
- 4.LED module--- High-power LEDs: warm white 3000K, neutral white 4000K, or cool white 6000K
- 5.Surge protection device--- 10kV SPD, ordered separately
- 6.Control gear--- On/Off, 1-10V dimmable, DALI controllable, Timer dimming for option
- 7.Bollard--- Corrosion-resistant aluminum profile, No-Rinse surface treatment; Dual powder coating finishing Graphite grey RAL7024 color; Optimized surface for reduced accumulation of dirty.
- 8.Junction box--- IP66, ordered separately
- 9.Base plate--- For mounting on accessories; Mount accessories to be ordered separately

LED outdoor lighting fixture, ground and floor installation, with 180° asymmetric and 360° symmetric optics.

Product consists of the entire luminaire, but mounting parts and accessories should be ordered separately.

LED modular are directly mounted to upper housing thermal pad for optimal thermal performance

Molded high grade water-tight silicone gaskets between the upper cover, optical lens, the cone, and the bollard, throughout insures the sealing and provides ingress protection

The optical assembly is installed on the lower bollard by means of a bayonet fitting and fixed with three sets of torx screws. Stable mechanical system prevents damage from installation generated vibration

The bollard is anchored to the ground by means of the fixing base made of die-cast aluminum alloy with low copper content, resistant to corrosion.

The external Aluminum parts undergo a multi-step pre-treatment, it utilizes premium ultra-weatherable polyester powder coatings to withstand extended outdoor exposure, providing excellent resistance to corrosion, atmospheric agents and UV rays, degradation and abrasion. The good film appearance combined with excellent mechanical and exterior exposure qualities display greater than twice as much gloss retention

The luminaire is under protection of IP66 rating, maintaining strength and precision to sustain long term dayform appearance and service life, and IK10 rated enclosure protects electrical equipment against external mechanical impacts

The bottom part of the optical compartment has a nickel-plated brass cable fixing connector rated IP66 and outgoing rubber cable

Specially designed and manufactured exterior Polycarbonate Optical lens controls excellently the brightness, wide spread distribution and uniformity. It delivers visual-comfort elements and ensure glare-free illumination, providing a comfortable and safe atmosphere to your space. The optical lens is high degree UV resistant and fire rated, strong enough to withstand extended outdoor exposure for long time durability, as well as high impact resistance

The electronic control gear offers regular ON/OFF, 0-10V Dimmable, Timer dimming, DALI-2.0 and D4i control for your application needed.

Integral 6KV surge protection offered as standard, 10kV offered as customized to be ordered separately

The electrical connection requires IP connectors to be ordered separately.

All external screws used are in stainless steel.

Highlight

- 1. Utilizes premium ultra-weatherable Epoxy/Polyester dual powder coatings to withstand extended outdoor exposure, providing excellent resistance to corrosion, ultraviolet degradation and abrasion
- 2. Hot Neutral Salt Spray (destructive testing) >1,500 hours
- 3. Dark-Sky technology, Invisible light source, Visual comfort, No shadow, Horizontal excellence and Uniform lighting on the ground
- 4. Extremely wide light-distribution for less luminaire needed
- 5. Easy & Quick installation and maintenance; Professional structural design; Heavy duty material
- 6. Motion sensor & CASAMBI Ready & Charging Post coming soon
- 7. Optical part and Electrical part can be replaceable easily

Accessories (Should be ordered seperately)

- 1. M10 x 100mm 304 stainless steel bolts 3pcs for each light for mounting use
- 2. IP66 waterproof connector for power cable connection
- 3. IP66 junction box built-inside the fixture, wiring ready
- 4. Foundation (Concrete anchor)
- 5. Input power cable

Instruction of Model No.:

ZOE -P/E-BL36/18-H28/60/90-A/B/D/E/S/Mxx

- 1. "P" means professional equipment at top quality level for outdoor uses, which is suitable to use in such as seaside with excellent resistance to corrosion, ultraviolet degradation and abrasion ; "E" means regular equipment at high quality constructionns
- 2. "36" means Symmetric 360° beam angle; "18" means Asymmetric 180° beam angle with two optical designs for choice, one is light distribution forward throw, the other is "180° WIDE" with a long distance distribution at horizontal direction and Optimized back light
- 3. "28" means overall height 28cm; "60" means overall height 60cm; "90" means overall height 90cm
- 4. "A" means Non-dimmable; "B" means 0-10V dimmable; "D" means DALI-2.0 controllable; "E" means DALI D4i ; "S" means Wattage and CCT adjustable; "M" means Motion sensor
- 5. "xx" means Input Power 8W, 10W, 12W, 15W, 20W, 24W, 36W, 40W

Finishing color



RAL7024

RAL9005

RAL8019



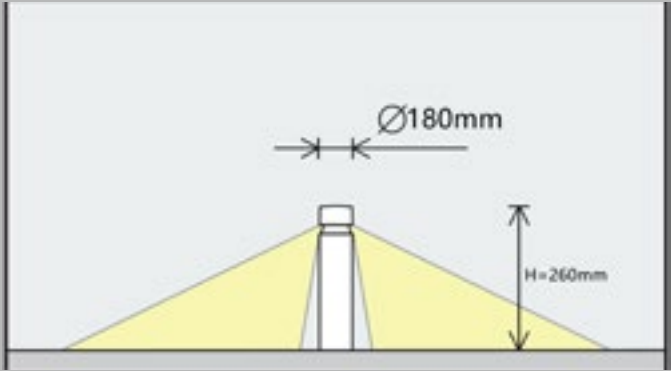
Integration with architecture

Compact and elegant design with round shaped bollards in relation to different architectural elements. New finishings to harmonize with several outdoor spaces to be integrated into architecture even during the day. Ideal for urban and residential settings.

Bollard luminaire with shielded light. Light exiting 180° and or 360°. The light is **controlled and emitting by means of a special designed optic system, and be secondary optimized by a dark-cone of glare-control**, and onto the surface to be illuminated. This luminaire is for usage in the modular LED bollard concept. The adopted LED technique offers durability and optimal light output with low power consumption at the same time.











Construction
size



LED Module
at 2700K
CRI 83
Max value

8W/560lm; 10W/700lm; 12W/840lm; 15W/1050lm


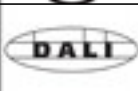
Light color
CCT

	2700K CRI 83		4000K CRI 83
	2700K CRI 92		4000K CRI 92
	3000K CRI 83		5000K CRI 80
	3000K CRI 92		6000K CRI 76



Light
distribution

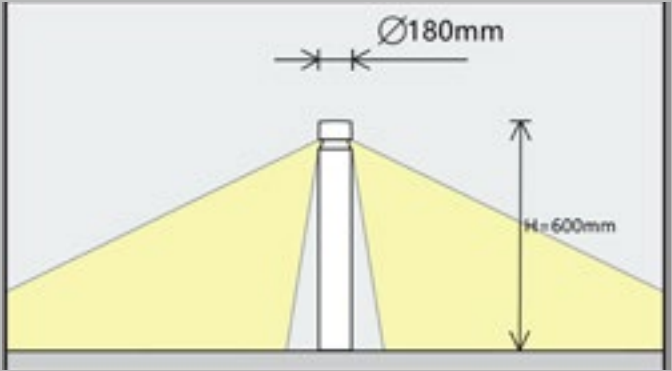
Floor washlights	
	Asymmetric 180° Asymmetric 180° WIDE
	Symmetric 360° Symmetric 360° WIDE

Control
gear









	Switchable
	DALI-2 / D4i

Color
Housing


	Graphite grey RAL7024
	Customized RAL





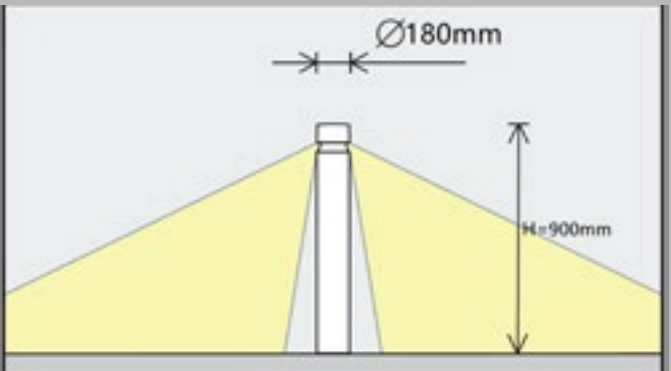
8W/560lm; 10W/700lm; 12W/840lm; 15W/1050lm;
20W/1400lm; 24W/1680lm; 30W/2100lm; 36W/2520lm

	2700K CRI 83		4000K CRI 83
	2700K CRI 92		4000K CRI 92
	3000K CRI 83		5000K CRI 80
	3000K CRI 92		6000K CRI 76









Floor washlights	
	Asymmetric 180° Asymmetric 180° WIDE
	Symmetric 360° Symmetric 360° WIDE


	Switchable
	DALI-2 / D4i


	Graphite grey RAL7024
	Customized RAL





8W/560lm; 10W/700lm; 12W/840lm; 15W/1050lm;
20W/1400lm; 24W/1680lm; 30W/2100lm; 36W/2520lm; 40W/2800lm

	2700K CRI 83		4000K CRI 83
	2700K CRI 92		4000K CRI 92
	3000K CRI 83		5000K CRI 80
	3000K CRI 92		6000K CRI 76

Floor washlights	
	Asymmetric 180° Asymmetric 180° WIDE
	Symmetric 360° Symmetric 360° WIDE

	Switchable
	DALI-2 / D4i

	Graphite grey RAL7024
	Customized RAL



Marking out gardens and pathways

When light is used to indicate pedestrian paths and illuminate potential obstacles, the luminaires must be durable and appealing. Whether our range is used to illuminate public spaces, residential gardens, paths or driveways- you will find the correct light distribution for every requirement. The range includes a wide range of lighting solutions for residential spaces such as driveways and gardens. Outdoor spaces can be stylishly illuminated with any of our driveway lights or garden lighting. Our luminaires boast superior visual comfort, to ensure they do not dazzle pedestrians and children. Our designs are minimalist and stylish and incorporate extreme strength and resistance to vandalism in public places.