

Dark Sky Lighting

Preserving the night sky

Lighting designed for places, people and our planet

At DW Windsor, we're committed to supporting responsible lighting practices by delivering the right light, in the right place, at the right time. Our mission is to provide specifiers with the tools and guidance needed to eliminate light pollution and help protect biodiversity.

Within this brochure, you'll find a wide range of DarkSky® Approved luminaires designed to enhance the beauty of outdoor spaces while also helping to protect the night-time environment.

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What is light pollution?

Light pollution is excessive, misdirected, or obtrusive artificial light that brightens the night sky. It disrupts ecosystems, harms human health, and obscures astronomical observations.

Light pollution is caused by the overuse or improper design of outdoor lighting products, such as streetlights, billboards, and architectural lighting. The emitted light scatters in the atmosphere interfering with our ability to see stars as well as disturbing the natural behaviours of wildlife and impacting circadian rhythms in humans.





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Types of light pollution

It's estimated that over 80% of the world's population is now impacted by some form of light pollution—with global sky brightness increasing by an estimated 10% per year.

Light pollution arises from inefficient or unnecessary artificial light usage. It encompasses several categories, including light trespass, over-illumination, glare, light clutter, and sky glow. Often, a single light source contributes to multiple categories.



Sky glow

Sky glow is the increased brightness of the night sky caused by artificial lighting, particularly in urban areas. It results from light scattered and reflected off airborne particles and gases, diminishing visibility of stars and celestial objects, and impacting ecosystems and human health.



Light trespass

Light trespass occurs when artificial light spills beyond its intended area, encroaching into spaces where it is not needed or wanted, such as nearby residential windows or gardens. This intrusion can disturb human sleeping patterns, disrupt natural habitats and affect wildlife.



Glare

Glare refers to excessive brightness or harshness of artificial lights, often reducing visibility, and becoming a safety hazard. Glare can typically be divided into disability glare, which impairs visual capabilities, and discomfort glare that arises from exposure to bright luminaires.



Light clutter

Light clutter relates to excessive groupings of luminaires or poorly directed lighting that creates unnecessary visual noise that may cause confusion or lead to accidents. It includes poorly shielded or misdirected luminaires and can obscure visibility, waste energy, and disrupt ecosystems.

The impact of light pollution

The effects of light pollution are far reaching and can be devastating to both humans and wildlife.



Human health

Light pollution can adversely affect human health by disrupting our natural circadian rhythms and affecting the sleep-wake cycle. This can lead to a sleep deficit causing feelings of tiredness and resulting in poor cognitive performance. In addition, a continual lack of sleep has been linked to an increased risk of chronic diseases and can also contribute to mental health issues.



Animal behaviour

Light pollution disrupts ecosystems by disturbing the natural balance of light and darkness. Nocturnal animals, struggle to find food, evade predators, and mate due to artificial lighting, leading to declines in population. Moreover, it can affect plant growth cycles and alter the migration patterns of birds and insects, further exacerbating the negative impacts on ecological stability.



Environmental costs

Light pollution imposes significant environmental costs, notably through the generation of electricity. Financially, it burdens economies with excessive energy consumption, leading to higher utility bills and infrastructure expenses. Moreover, the generation of electricity contributes to air and water pollution, habitat destruction, and greenhouse gas emissions, exacerbating climate change.



Cultural impact

Light pollution diminishes the cultural significance of the night sky by obscuring celestial objects. It affects astronomical research and stargazing activities, affecting cultural traditions associated with celestial observations. Moreover, excessive artificial lighting detracts from the beauty of urban and rural landscapes, altering the night-time ambiance and cultural heritage of communities.



How to light responsibly

Light at night is a necessity of modern life in many urban settings. When carried out responsibly, in line with best practices, good lighting can enhance the built environment while also providing social, environmental and economic benefits.

The best way to eliminate light pollution is by adopting responsible lighting practices. At DW Windsor, lighting responsibly is a core issue for us, and we strongly believe that our role as a manufacturer is to provide the tools and guidance needed to support specifiers and end users with responsible lighting practices.

Four steps to eliminate light pollution

There are four simple steps that can be taken to reduce the impact of outdoor lighting on the night-time environment without impacting on safety.



Direction

Lighting should be aimed downwards and fully shielded to minimise light trespass and prevent it from dispersing into the night sky.



Intensity

Light levels should be appropriate for the lighting environment and no brighter than is necessary to avoid disrupting circadian rhythms.



Colour

Warmer colour temperatures minimise the emission of short-wavelength blue light that tends to scatter more in the atmosphere.



Control

Dimmers, motion sensors, and timers can be used to control when and how light is used, helping to manage light levels and save energy.



River Ettrick
Garda handrail



Certified by DarkSky.org

DarkSky® Approved

DarkSky is a globally recognised authority on light pollution, offering third-party certification through its DarkSky® Approved program for lighting products that don't pollute the night sky.

Why DarkSky Approved?

Well designed outdoor lighting can improve safety and security during the hours of darkness while also helping to protect the night sky.

By installing DarkSky® Approved luminaires, you can ensure that your scheme is not contributing to light pollution and helping to preserve the night time environment.



Learn more about
DarkSky Approved

Key approval criteria

- 1 Upward light**
Luminaires must have an upward light output ratio (ULOR) of less than 0.5% or 50 lumens.
- 2 Colour temperature**
Luminaires must have a maximum correlated colour temperature (CCT) of 3000K.
- 3 Dimming**
Luminaires must have the ability to dim down to 10% of their maximum light output.





Pharola DS

Illuminated bollard

Pharola DS is a versatile bollard designed to aid navigation in urban environments. Part of our Pharola family, Pharola DS delivers high performance illumination to promote a feeling of safety after dark with no light above the horizontal.

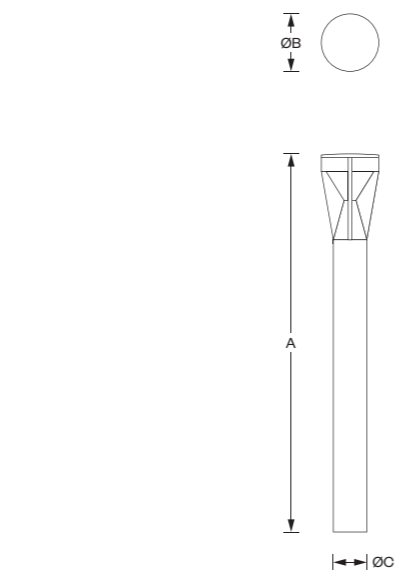
Key advantages

- Features an elegant yet sturdy design with a 89mm diameter base
- Available in two heights - 1000mm and 2200mm to suit a range of lighting applications
- 180° light shield available to prevent light trespass when illuminating sensitive areas
- Can be installed via root, 1st fix root mounting or flange plate, making it a versatile luminaire

Product details

Lumen output:	up to 1,700 lm
Power:	20 W
Optical control:	Symmetric
Colour temperature:	2700K / 3000K
Control:	On/off
Materials:	Aluminium housing Galvanised steel base Silicone seals Polycarbonate glazing
Finish:	Polyester powder coat
Mounting:	Integral root [standard] Flange / buried flange option

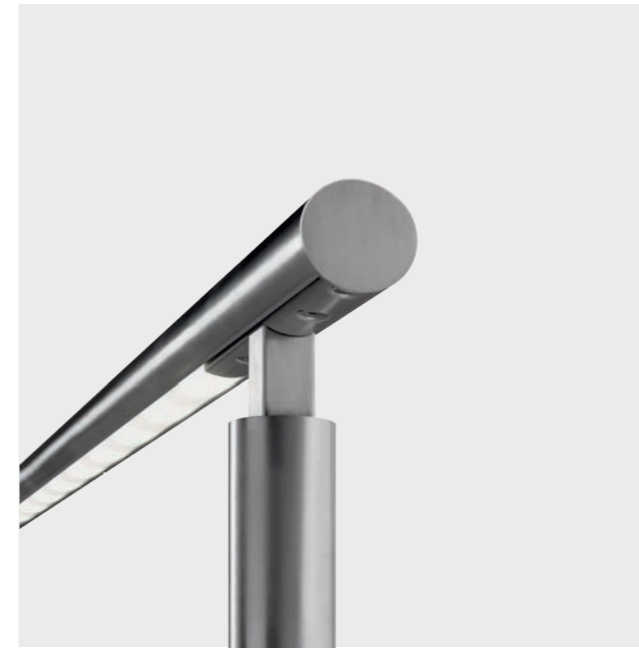
Colour options:
(other colours available on request)



Dimensions mm	A	B	C	kg
Pharola DS 1	1000	152	89	15.0
Pharola DS 2	2200	152	89	23.0



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Garda

Illuminated handrail

Garda is a bespoke, award-winning illuminated handrail that combines style and performance to deliver high quality lighting. The versatile and virtually maintenance-free solution can be tailored to individual project requirements.

Key advantages

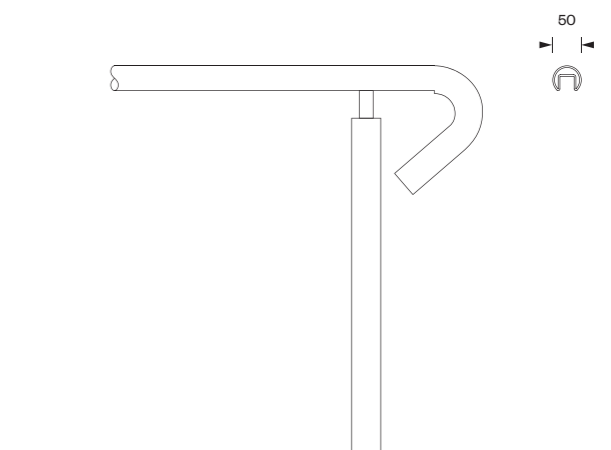
- Four LED modules available - Garda Classic, Garda Pro, Garda Comfort and Garda RGBW
- Modules offered in a range of sizes from 120mm - 1200mm, with the option of symmetric and asymmetric optics
- Offered in stainless steel with seamless joints, or powder-coated aluminium in any custom finish
- Also available as a patented AntiClimb® solution with a sloped profile for safety-critical applications

Product details

Lumen output:	up to 1,800 lm (Garda Pro module)
Power:	2 - 16 W
Optical control:	Asymmetric / Symmetric*
Colour temperature:	2700K / 3000K
Control:	1-10V dimming DALI dimming DMX (via converter)
Materials:	Brushed stainless steel or Powder coated aluminium
Mounting:	Wall brackets (round & square) Stanchions Various infill options

*module dependant

Colour options:
(other colours available on request)



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Sephora Wall

Wall mounted

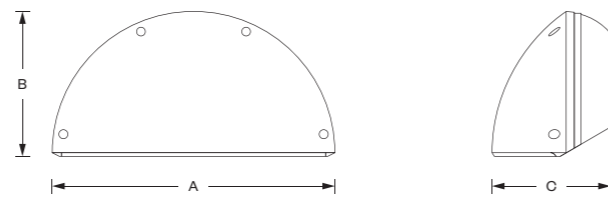
Sephora Wall is a BREEAM compliant wall-mounted luminaire featuring a slim profile and superior optical performance. With a simple, curved shape, and a choice of glazings, Sephora Wall is ideally suited to a range of architectural applications.

Key advantages

- Two glazing options - Clear glazing for performance or frosted glazing for comfort
- Choice of control options, including integral CMS plus emergency backup available
- Features a first fix mounting plate and automatic electrical disconnection to facilitate safe, easy installation
- Also available with SunLike™ technology which offers a reduced blue light peak and high CRI of 95Ra

Product details

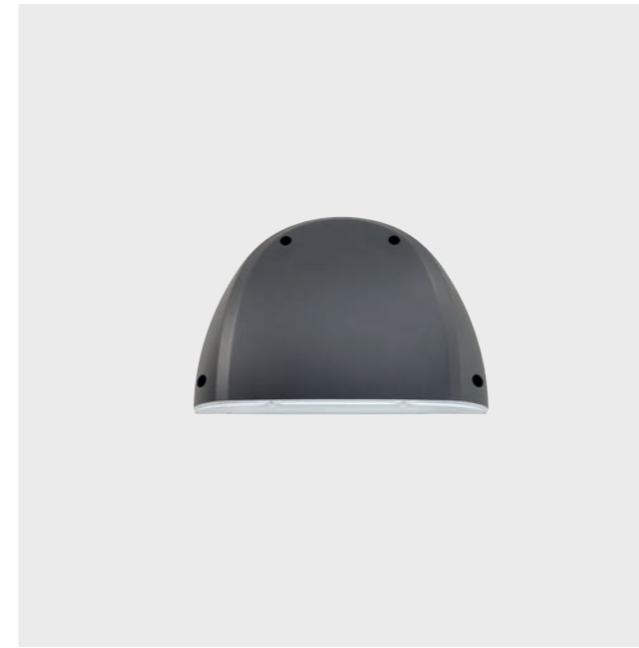
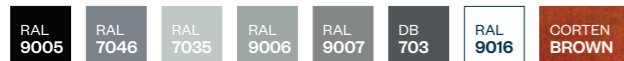
Lumen output:	up to 3,600 lm
Power:	6 - 37 W
Optical control:	3 optics
Colour temperature:	2700K / 3000K
Control:	On/off (photocell) 1-10V dimming DALI dimming
Materials:	Aluminium housing Silicone seals Polycarbonate glazing
Finish:	Polyester powder coat
Mounting:	Wall-mounted



Dimensions mm	A	B	C	kg
Sephora Wall	380	195	165	3.0



Colour options:
(other colours available on request)



Kirium Wall

Wall mounted

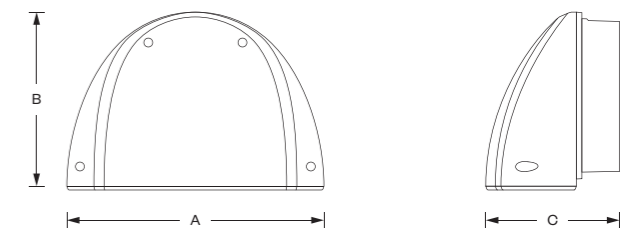
Kirium Wall is a high performance wall-mounted luminaire combining creative and functional features. Easy to install and optimised for wide spacings, Kirium Wall is suited to illuminating passageways and building exteriors.

Key advantages

- Two glazing options - Clear glazing for performance or frosted glazing for comfort
- Choice of control options, including integral CMS plus emergency backup available
- Features a first fix mounting plate and automatic electrical disconnection to facilitate safe, easy installation
- Can accommodate a BESA box for conduit mounting applications

Product details

Lumen output:	up to 3,600 lm
Power:	6 - 37 W
Optical control:	3 optics
Colour temperature:	2700K / 3000K
Control:	On/off (photocell) 1-10V dimming DALI dimming
Materials:	Aluminium housing Silicone seals Polycarbonate glazing
Finish:	Polyester powder coat
Mounting:	Wall-mounted BESA fixing for conduit



Dimensions mm	A	B	C	kg
Kirium Wall	340	235	182	3.5



Colour options:
(other colours available on request)





Kirium Pro S

Column mounted

Developed to support operators as they work to lower energy consumption and cut carbon emissions, Kirium Pro S is our next generation street lighting solution, designed to help lower running costs and deliver substantial long-term savings.

Key advantages

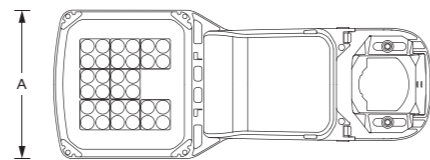
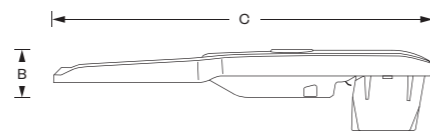
- Offered in three sizes with multiple LED configurations to support a range of road lighting classes
- Highly efficient solution optimised for low energy usage over its 100,000+ hour lifetime for long-term savings
- Hassle-free maintenance thanks to flat glass glazing and toolless entry
- Zhaga D4i certified luminaire able to accommodate compatible control devices

Product details

- Lumen output:** up to 30,500 lm
- Power:** 7 - 187 W
- Optical control:** 14 Diamond+ optics*
- Colour temperature:** 2700K / 3000K
- Control:** On/off (photocell)
Pre-set dimming
CMS
- Materials:** Aluminium housing
Silicone seals
Toughened glass glazing
- Finish:** Polyester powder coat
- Mounting:** Post top (Ø 60 - 76mm)
Side entry (Ø 34 - 42mm)

*6 optics for 80 LED version

Colour options:
(other colours available on request)



Dimensions mm	A	B	C	kg	lm/m²
Kirium Pro S Mini	200	80	532	4.8	0.039
Kirium Pro S1	246	80	632	5.5	0.053
Kirium Pro S2	320	80	704	7.2	0.059



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Kirium One

Column mounted

Offering exceptional performance, easy maintenance and a low total cost of ownership, Kirium One is a highly efficient lighting solution designed with contractors in mind, and optimised for road and footpath lighting applications.

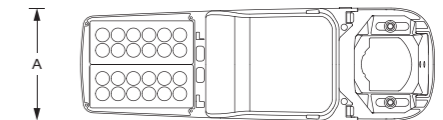
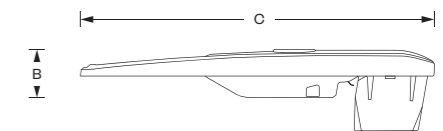
Key advantages

- Futureproofed design using industry-standard platforms and a range of connectivity options
- Available with 12 or 24 LED light engines and flexible drive currents for tailored performance
- Zhaga D4i certified luminaire able to accommodate compatible control devices
- Easy to install using optional Universal Entry which allows for quick switching on site

Product details

- Lumen output:** up to 10,200 lm
- Power:** 9 - 72 W
- Optical control:** 11 optics
- Colour temperature:** 2700K / 3000K
- Control:** On/off (photocell)
Pre-set dimming
CMS
- Materials:** Aluminium housing
Silicone seals
PMMA optics
- Finish:** Polyester powder coat
- Mounting:** Post top (Ø 60 - 76mm)
Side entry (Ø 34 - 42mm)

Colour options:
(other colours available on request)



Dimensions mm	A	B	C	kg	lm/m²
Kirium One	188	589	80	4.2	0.026



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Windsor DS

Column mounted

Often imitated, never bettered, our signature luminaire, Windsor, combines timeless design with award-winning optical performance. Handcrafted from copper using traditional methods, Windsor DS is a Dark Sky version of this traditional lantern.

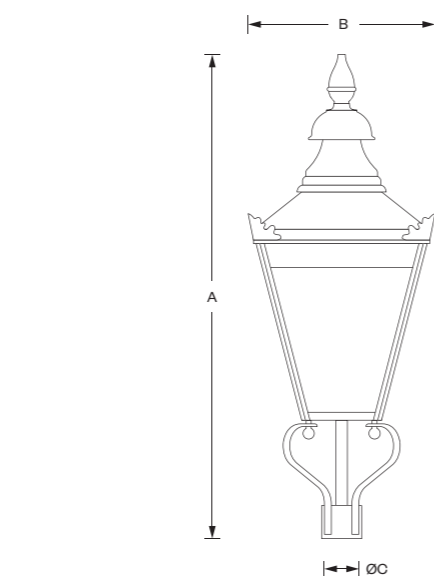
Key advantages

- The truest reflection of a Victorian gas lantern design with authentic styling features
- Manufactured from corrosion-resistant copper, offering incredible longevity
- Offered with a traditional frog or cast mounting base. Can also be wall mounted.
- Can be specified with a range of control options, including integral CMS and via a Zhaga socket

Product details

Lumen output:	up to 9,500 lm
Power:	5 - 80 W
Optical control:	14 Diamond+ optics
Colour temperature:	2700K / 3000K
Control:	On/off (photocell) Pre-set dimming CMS
Materials:	Copper housing Silicone seals Toughened glass glazing
Finish:	Polyester powder coat Natural / polished copper
Mounting:	Post top (Ø76mm) Wall bracket

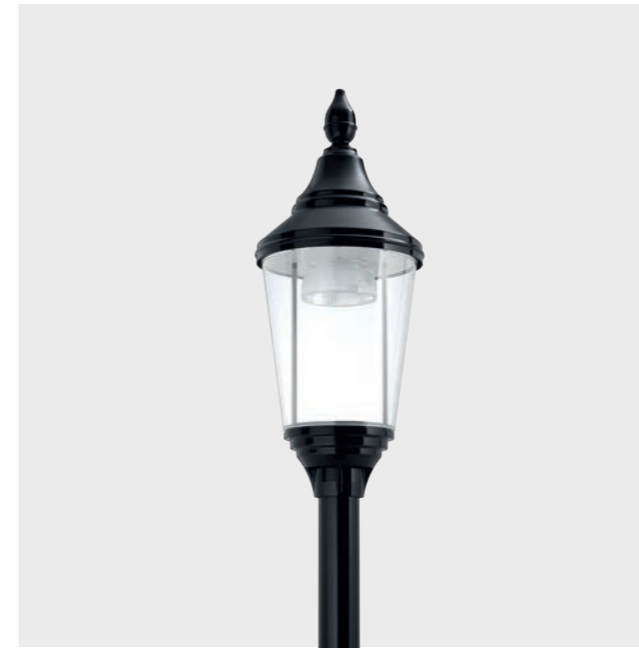
Colour options:
(other colours available on request)



Dimensions mm	A	B	C	kg	lm/m²
Windsor DS	1140	440	76	10.0	0.22



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York

Column mounted

York's elegant profile and 360-degree conical glazing with invisible wiring creates another timeless classic. Featuring a glazed base for increased uniformity, York is perfect for multiple applications from housing developments to amenity areas.

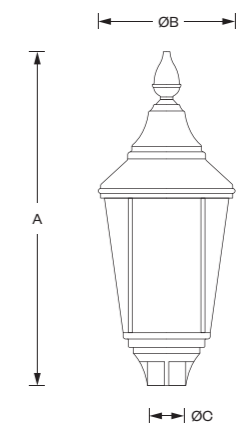
Key advantages

- Offered with a choice of four canopies styles to suit a range of architectural settings
- Available with three light engines - Performance LED, Performance CoB and Comfort CoB
- Features a glazed cast base to deliver improved uniformity while eliminating shadowing around the column
- Easy to install thanks to a self-centring column entry and retractable connection block

Product details

Lumen output:	up to 6,900 lm
Power:	6 - 57 W
Optical control:	14 Diamond+ optics
Colour temperature:	2200K / 2700K / 3000K
Control:	On/off (photocell) Pre-set dimming CMS
Materials:	Aluminium housing Silicone seals Polycarbonate glazing
Finish:	Polyester powder coat
Mounting:	Post top (Ø 76mm)

Colour options:
(other colours available on request)



Dimensions mm	A	B	C	kg	lm/m²
York	788	323	76	5.0	0.14



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Strand DS

Column & bracket mounted

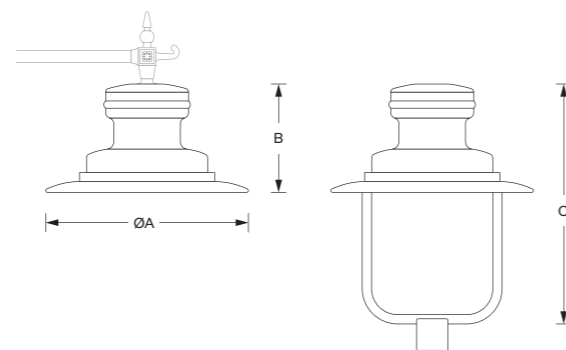
One of our most popular heritage products, Strand's design is inspired by traditional railway gas lanterns. Now reimaged for DarkSky lighting applications, Strand DS features flat glass glazing and can be wall or column-mounted.

Key advantages

- Traditional pendant luminaire suited to both period and contemporary locations
- Can be specified with our Easyfit™ entry connector for ease of installation
- Multiple column and bracket mounting options, including a square U bracket version
- Exceptional ease of maintenance via stainless steel quick release latches

Product details

Lumen output:	up to 11,300 lm
Power:	6 - 95 W
Optical control:	14 Diamond+ optics
Colour temperature:	2700K / 3000K
Control:	On/off (photocell) Pre-set dimming CMS
Materials:	Aluminium housing Silicone seals Toughened glass glazing
Finish:	Polyester powder coat
Mounting:	Pendant U bracket Wall bracket



Dimensions mm	A	B	C	kg	lm/m²
Strand DS	585	315	765	5.7	0.097



Ely DS

Column & bracket mounted

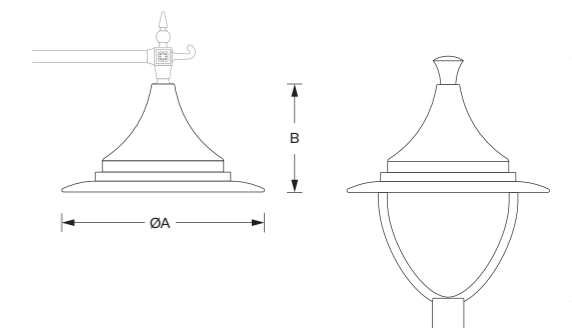
With its classic design and elegant proportions, Ely is ideally suited to both traditional and modern architectural locations. Ely DS features flat glass glazing for DarkSky applications and can be wall or column-mounted for ultimate flexibility.

Key advantages

- Quintessential luminaire design featuring a wide brim and flat glazing to eliminate upward light
- Can be specified with our Easyfit™ entry connector for ease of installation
- Multiple column and bracket mounting options, including a tear drop U bracket version
- Exceptional ease of maintenance via stainless steel quick release latches

Product details

Lumen output:	up to 10,200 lm
Power:	6 - 81 W
Optical control:	14 Diamond+ optics
Colour temperature:	2700K / 3000K
Control:	On/off (photocell) Pre-set dimming CMS
Materials:	Aluminium housing Silicone seals Toughened glass glazing
Finish:	Polyester powder coat
Mounting:	Pendant U bracket Wall bracket



Dimensions mm	A	B	C	kg	lm/m²
Ely DS	585	315	765	5.7	0.097





Daytona

Column mounted

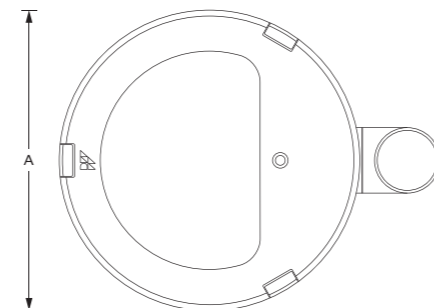
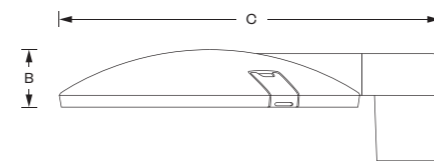
Daytona balances style, efficiency and practicality to deliver a luminaire capable of maximising performance while providing an outstanding service life. Available in two sizes, Daytona is also offered with Tunable White technology.

Key advantages

- Future-proofed lighting solution with replaceable light engines to facilitate future upgrades
- Tunable White technology improves visual comfort whilst minimising the impact to wildlife
- Features toolless entry for easy luminaire maintenance, saving time and lowering costs
- Supports a range of NEMA and Zhaga connectivity and control options via top and/or bottom sockets

Product details

Lumen output:	up to 23,800 lm
Power:	6 - 187 W
Optical control:	14 Diamond+ optics
Colour temperature:	2700K / 3000K / Tunable White
Control:	On/off (photocell) Pre-set dimming CMS Bluetooth
Materials:	Aluminium housing Silicone seals Toughened glass glazing
Finish:	Polyester powder coat
Mounting:	Post top (Ø 60 - 76mm) Side entry (Ø 34 - 42mm)



Dimensions mm	A	B	C	kg	lm/m²
Daytona 450	480	88	582	8.7	0.043
Daytona 500	580	111	682	13.5	0.065



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LIGMAN

In addition to our own range of lighting products, we can supply a wide range of DarkSky Approved luminaires in the UK through our partnership with Ligman.



View Ligman DarkSky Approved luminaires

Dorothy House, Wiltshire

Case Study

Dorothy House Hospice Care borders Winsley Mines—a designated site of specific scientific interest, special area of conservation and hibernation roost for the Greater Horseshoe bat.

DW Windsor worked closely with lighting design consultancy, DFL, to create a scheme for the new car park. Products were selected that offered a high degree of control over light distribution ensuring light levels did not exceed 0.5 lux outside the area. All luminaires feature passive infrared (PIR) controls to dim them down when not needed. The design achieved 0% upward light, which helped win the project a prestigious 'Good Lighting' award from the Commission for Dark Skies.





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