



**HOLOPHANE**<sup>®</sup>



# Denver<sup>™</sup> iD Pole

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Registered European design / Patented design

# POLE DENVER™ iD

**The Denver iD: Pole** combines a cohesive family aesthetic with an unrivalled system performance - perfect for creating the ideal design-inspired landscape.

Featuring a patented Transition Zone the Denver iD: Pole offers improved visual comfort and lower perceived glare; perfect for the unique requirements of pedestrian-friendly amenity spaces.

Coupled with the latest LED technologies, smart controls integration and class-leading optical performance the new Denver iD: Pole truly brings together form and a feature rich luminaire system.

The Denver iD: Family consists of Pole, Wall and Bollard luminaires, offering the complete solution to your next outdoor environment.

For over 125 years Holophane has enjoyed an enviable reputation throughout the world for expertise, quality and innovation in Lighting. From the earliest days, when the company pioneered its famous glass refractor, the Holophane name has been ever present as a leader in the field of luminaire and lighting design. **Denver iD: Pole** is a continuation of this proud tradition and builds on our heritage of designing luminaires with exceptional optical performance and thermal management which fused together deliver a solution that is future-proof and fully serviceable.

#### Applications

- Amenity Areas
- Town Squares
- Campuses
- Retail Parks
- Car Parks
- Landscaped Areas

#### Overview

- Available with lumen ranges from 2,000 to 12,000 (delivered lumens).
- A range of distributions for a variety of applications with 0% ULOR.
- 2700K, 3000K & 4000K options available.
- CRI > 70.
- Available with integrated control options including ZD4i compatibility.

#### TM66 CEAM-Make Rating



#### Approvals



Complies with EN60598  
IP65 and IK10  
-25°C to +45°C

#### Electrical Industry Awards 2021 Lighting Product of the Year



For further information please visit  
the Holophane website [www.holophane.co.uk](http://www.holophane.co.uk)

## AN ENVIABLE REPUTATION THROUGHOUT THE WORLD

125 years of   
Innovation & Excellence

When Holophane was founded in 1896 in London, headed by Pelham Trotter, it marked the start of an incredible history that has now seen Holophane become a global business revered throughout the world for its expertise, quality, innovation and excellence in lighting.

Holophane's first product was the famous patented globe in 'white' or 'rose crystal' that sold for around 2 shilling (10p). Today, Holophane continues this proud tradition with our values deeply rooted in the dedication to creating luminaires, with exceptional lighting performance, innovative patented technologies, and delivering added customer value beyond illumination.

### What does it mean for our customers?

#### A Trusted & Reliable UK Manufacturer

From Royalty all the way to small residential projects, Holophane has been a trusted manufacturer over the decades for all manner of projects. You can be sure you are in good hands and can rely on the collective knowledge and expertise we have gathered since our inception in 1896.

#### Development of Innovative Products

As part of our design philosophy, Holophane are always trying to push boundaries in the development of unique product innovations. As such many of our luminaires hold UK and International design patents.



#### Products That Deliver Added Value

In today's world, sustainability and added value are becoming increasingly important. As such our products and solutions go further than just lighting. Many of our innovations include integrated smart connected solutions to help customers achieve further energy savings and can also enable remote monitoring.

#### Delivering excellent customer service

Over our 125-year history we have always been committed to delivering the best service to our customers and supporting in a myriad of ways to ensure the best possible outcomes. This goes as far as offering a free lighting design service to one-off products/solutions to meet customers unique needs.

## A COHESIVE FAMILY

The **Denver iD** range was designed to have a cohesive family aesthetic to give consistency across a project and achieve a luminaire identity.

From the commonality of the LED modules to the sleek and simple lines, Denver iD gives your outdoor space its own identity.

Scan the QR codes for information on **Denver iD: Wall** & **Denver iD: Bollard**.

DENVER  
iD POLE



DENVER  
iD WALL



DENVER  
iD BOLLARD



## PRODUCT FEATURES

# POLE DENVER™ iD



### Class Leading Performance

**Denver iD: Pole** features the very latest LED technologies and bespoke individual PMMA optical lenses. These have been optimised to provide the best spacings possible on lighting schemes whilst ensuring low-energy consumption.



**Small Module**  
2,000 - 6,000 lumens



**Large Module**  
7,000 - 12,000 lumens

### Easily maintainable

**Denver iD: Pole** has an easily removable and replaceable LED module. This enables the module and gear to be replaced in case of unlikely failures or upgraded.

This helps to extend the overall system life and sustainability of the luminaire.

### Connected

**Denver iD: Pole** is ZD4i compatible when specified with the 4-pin Zhaga socket options (TZ01 or TZ02) enabling a future proof luminaire that can be used in conjunction with Controlux Air or an expanding ecosystem of third party devices and sensors.

**Note:** Post Top Bracket for Denver iD: Pole is sold separately. Please enquire with your Holophane representative for the full range of mounting options.



## TRANSITION ZONE

### Patented Transition Zone

An intermediary zone between the LED array and dark night sky. Individual LEDs can often give a pixelation effect and be uncomfortable to the observer. The Transition Zone's angled white surface helps give the effect of a large lit area/light source and thus creating a smoother lit effect.

This is important, especially in pedestrian-friendly amenity spaces, to stop LED dazzle and create a more visually comfortable environment.

### Patented Transition Zone - Performance

The patented Transition Zone's angled white surface helps to further reflect/control high angle light in a more precise way that may otherwise have been wasted in a luminaire not using a transition zone.



### Hydrophilic Properties

The glass in Denver iD: Pole has hydrophilic properties which attracts water particles. However, there are benefits for outdoor luminaires.

Hydrophilic glass encourages water droplets to combine together to 'sheet' and run off the surface easily, minimizing the effect on emitted light. Conversely, whilst Hydrophobic glass encourages beading of water on the surface, it does not encourage water particles to combine and run off. This can effect overall light output negatively.

### High Transparency Glass

The glass used in Denver iD: Pole is over 99% transparent ensuring that no light output is compromised. Additionally, this means that less light emitted at higher angles is not wasted and thus improves overall performance of the luminaire.

### Recessed LEDs

The LED boards in Denver iD: Pole are recessed into the LED module. This helps to prevent unnecessary up light.



# TRANSITION ZONE

# THERMAL MANAGEMENT

The reliability and performance of an LED luminaire is dependent on a combination of factors. Keeping the temperature of the drivers, LEDs and electronic components as low as possible is critical to maintaining the luminaire's efficiency.

One of Holophane's key luminaire design principles ensures that **Denver iD: Pole** utilises all three heat transfer principles of conduction, convection and radiation.



## Conduction

Taking heat away from electronic components, LEDs and drivers.

**Denver iD: Pole's** driver and LEDs are mounted directly to the LM6 Aluminium to promote efficient transfer of heat.



## Convection

From luminaire heat sink chassis and LED module to ambient air.

**Denver iD: Pole's** driver and LEDs are mounted separately to avoid compound heating of components. In addition there is a protective thermal membrane between the LED module and gear housing.



## Radiation

Surface finish and form designed to maximise heat radiation.

**Denver iD: Pole's** large flat surface area helps to promote cooling through radiation.

# THERMAL MANAGEMENT

# MAINTENANCE

## Maintainability

Maintainability is the ease with which a product can be maintained in order to isolate defects, correct defects and replace faulty components without having to replace components that are not affected. Denver iD has been designed to deliver all of these benefits to the end user - throughout the lifecycle of the product. With its 'plug and play' modules which can be replaced in-situ Denver iD is the complete maintainable LED solution.

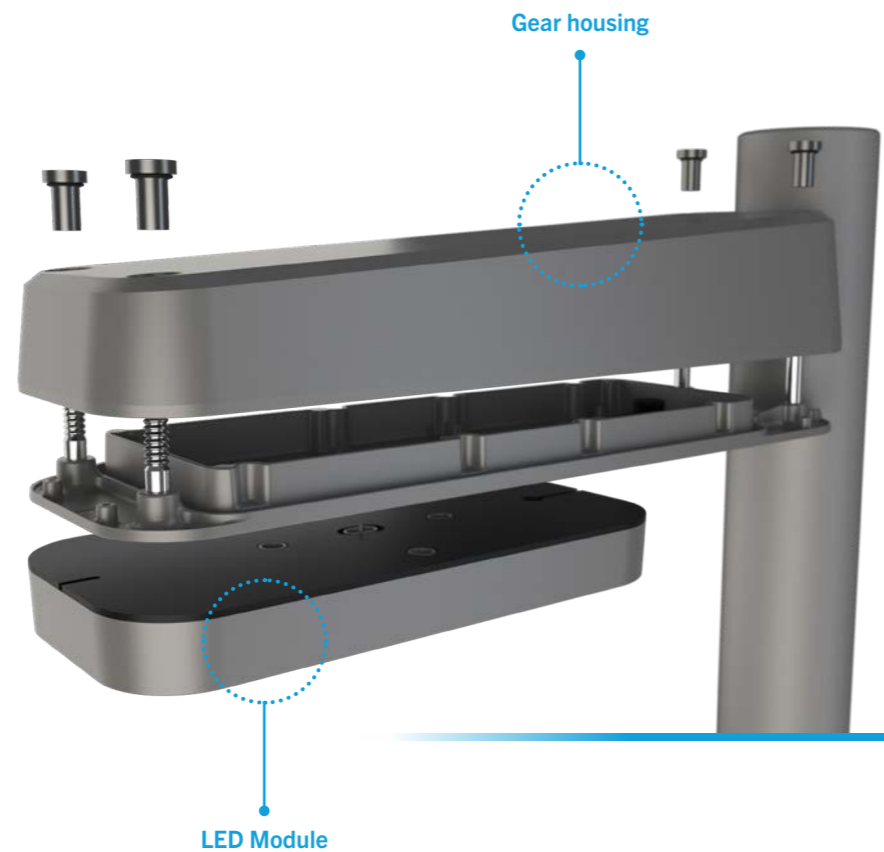
## Upgradability

As LED technology ever improves and LEDs become more efficient the LED modules also have the ability to be upgraded in situ. This enables the luminaire to be future proof and can take advantage of any performance gains.

## Sustainability

With the ability to replace major components means that the **Denver iD: Pole** can ensure a longer more sustainable luminaire system life.

Using recyclable components such as Glass and Aluminium means that a large percentage of Denver iD: Pole can be recycled at end-of-life through recycling schemes such as Lumicom.



# SPECIFICATION

## Specification

**Holophane Denver iD: Pole** consists of a 2-part body and a removable LED module manufactured from LM6 marine grade die-cast aluminium with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white Transition Zone to reduce perceived glare. This is sealed behind high-transparency 'hydrophilic' glass. Both luminaire body and LED module are sealed to IP65 and rated IK10. Drivers and LED are mounted separately from each other to promote low operating temperatures and long system life. Column mounting of the luminaire is facilitated by a bespoke post-top bracket with specific interface to attach luminaire to bracket. Cable entry and termination to the luminaire is via an IP65 cable gland. Access to the luminaire is via 4 x nuts.

3000K or warmer must be selected for IDA dark sky certification.

## Features and benefits

### Exceptional Performance

- Lumen packages from 2,000-12,000 lumens that allows a variety of applications challenges to be met.
- 5 optimised optical distributions delivered by LEDs with individual lenses behind a high-transparency hydrophilic glass cover.
- Patented Transition Zone helps to achieve improved visual comfort and lower perceived glare.

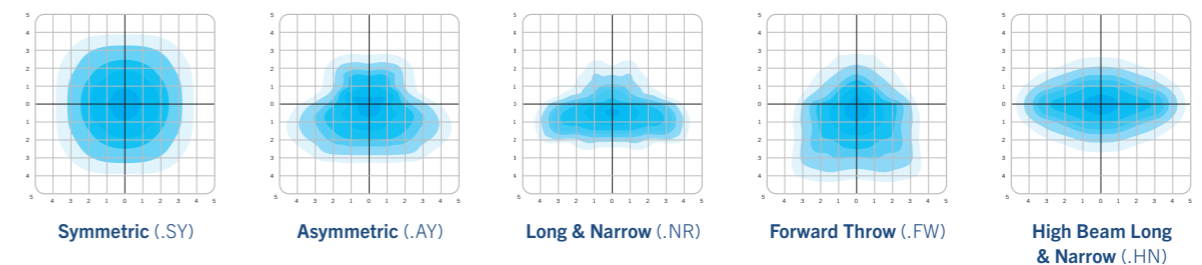
### Easy Installation & Maintenance

- Bespoke post-top bracket required to facilitate mounting to a range of column spigot diameters.
- A removable/upgradeable LED module and easy access to gear compartment ensures that key components can be removed and replaced if required.

### Fully Controllable

- Integrated ZD4i compatibility enabling connectivity. Compatibility with a range of 3rd party photocells, devices and sensors.
- Compatible with Controlux Air.

## Light Distributions



# MAINTENANCE

# SPECIFICATION

# CONTROLS

## ZD4

The **ZD4i architecture** provides a future-proof foundation that enables users to build on whenever their site/project is ready to opt into new advances in technology. It is designed to work with industry-recognised, futureproof drivers and sensors that have the potential to increase energy efficiency and collect different types of data. By having **Denver iD: Pole** ZD4i ready customers can upgrade/adjust the controllability of their lighting and gather valuable data whenever they are ready.



### Customer Benefits

#### Increased Energy Savings

Sensors and devices can be used to optimise luminaires to give greater energy savings and provide light only when it is required.

#### Flexibility

The ZD4i architecture enables the interchanging and upgrading of sensor and device options should and when the end-user pleases.

#### Future Proof

End-users have access to an ever expanding eco-system of devices and sensors through 3rd-party suppliers. The ZD4i architecture is an industry recognised platform.

**Note:** Please ensure that the selected IoT device is compatible and suitable for the respective luminaire. All installation should be completed in compliance with the respective devices installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party devices.



**IOT.TZ.CA**  
For use with TZ01 or TZ02

CONTROLUX AIR is a wireless technology that offers intelligent lighting with reductions in energy consumption of up to 80%. It optimises energy savings thanks to the individual control of light sources. It controls, monitors and manages street lighting, reporting consumptions, operating hours or system faults.



**IOT.TZ.TSZC**  
For use with TZ01

The PrecizionHALO is Lucy Zodian's latest photocell innovation that packs a number of features into its small, compact design. Optimised for the latest generation of LED Streetlights, the PrecizionHALO works alongside Zhaga drivers and connectors.



**IOT.TZ.EAS**  
For use with TZ01

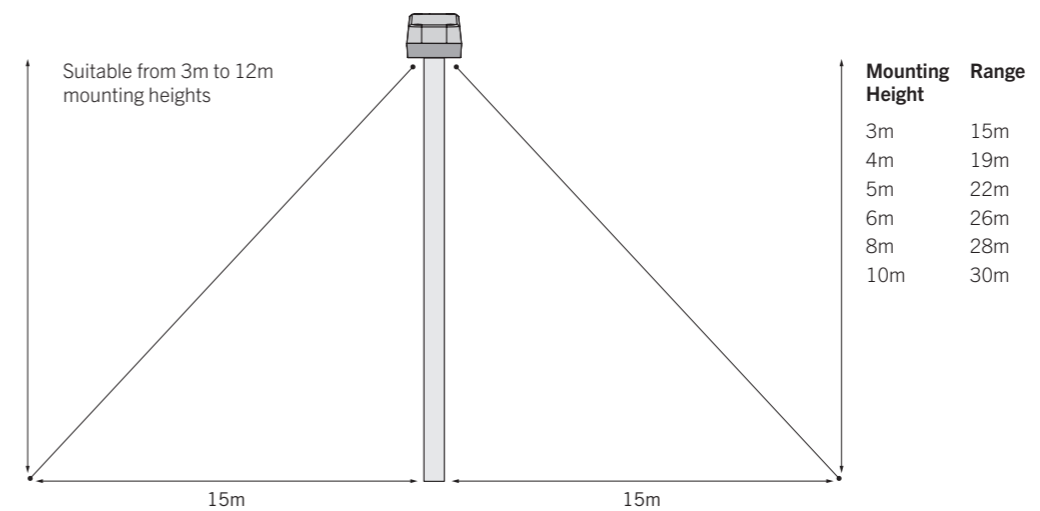
EasyAir SNO110 is ideally suited for outdoor applications and is intended for individual pole control and configuration. It automatically connects to the Global Navigation Satellite System (GNSS) to obtain date and time information in real time. On/off switching as well as a 5-step DynaDimmer scheduling based on date and time can be configured using Bluetooth communication. Therefore, this device can easily replace a photocell or LineSwitch-based control mechanism.

**Denver iD: Pole** shown with .TZ02 option.



#### .CAP option

The .CAP option combines a bottom facing 4-pin Zhaga socket (.TZ02) and a ZD4i Wattstopper IP66 sensor.



# CONTROLS



# CONTROLS COMPATIBLE WITH CONTROLUX AIR

Controlux Air helps users transform their existing infrastructure into a wireless platform. With Controlux Air, you have full remote configuration or your site with an intuitive user interface which is map based and delivers accurate/update reporting.



## Wireless Controller

Wireless communication, lighting control and external sensor interface.

External antenna allowing communication with 'Motion Sensor' and 'Wireless Gateway'.

Creates a wireless mesh type network when used with the 'Wireless Gateway'.

Available with option code .T1Z4.

Node be to be ordered as separate item (IOT.TZ4.TSK).



## Motion Sensor

Motion sensor and wireless communication triggering 1 to 10 luminaires (with Integral Wireless Controller) upon detection (user configurable).

Wireless communication with 'Gateway'.

Detects pedestrians, cyclists and cars range (range: 2.5 -75 mph)

Range: up to 15m on each side, 9m front and 3m behind at a mounting height of 5m (max).



## Gateway

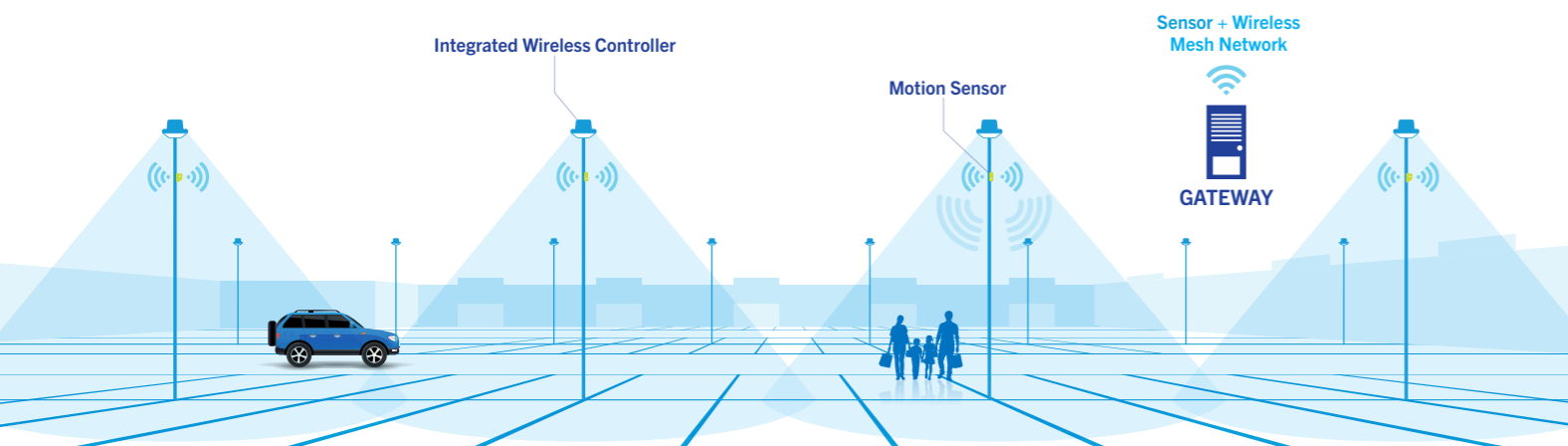
Wireless network and server communication (via SIM Card).

Suitable for pole, wall or inside cabinet mounting.

One Gateway required for up to 200 devices (Motion Sensors or Integrated Light Controllers)

with a range of up to 1km open field range.

Links all devices to web-based Customer Interface for remote management of luminaires and devices.



## Intuitive user interface

Gain in-depth insights into every single aspect of your lighting system. Smart analytics and simple charts will help you make the right decision about your lighting infrastructure.



## Automatic failure reports

Lighting-related system faults are identified, and automatic failure reports are sent in real-time. This results in optimized maintenance, better planning, reduced costs and extended luminaire life.



## Power metering

Dedicated hardware provides precise energy metering, which is converted into detailed energy usage and savings reports.



## Accurate real-time data

Generation of analytics per an individual light point or their groups. Available data includes: notifications about lighting-related faults, number of triggers per light point, generated energy savings, heatmaps, and more.



## Map-based visualizations

Outdoor lighting points are represented in a graphic interface on Google Maps, coordinated with GPS technology, which enables you to locate, monitor and control individual light points with ease.



## Continuous support

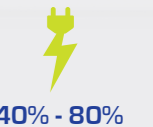
CityManager receives periodic security and feature upgrades. We do this to ensure optimum functionality and system performance.



## Financial Benefits

By installing Controlux Air controls systems, you benefit financially, thanks to energy savings and reduced energy costs.

### Energy savings of up to 80%



- By using dynamic lighting, it is possible to generate energy savings of 40-80%, depending on the usage environment

- In dense urban environments, the Controlux Air solution has the potential to generate energy savings of 40-50% (in this case, actual savings depend on the traffic intensity)

### Maintenance costs savings up to 50%



- Automatic failure reporting
- No need for expensive visual inspections
- Extended luminaire lifetime
- Excellent preventive maintenance



For more information about ControluxAir scan the QR code or visit [www.holophane.co.uk/controlux-air](http://www.holophane.co.uk/controlux-air)

Code	<b>Luminaire</b> (required)
DPL	Denver iD Pole
Code	<b>Series</b> (required)
.1	Series 1
Code	<b>Lamp Type</b> (required)
.LA02X	LED light engine producing c.2,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA03X	LED light engine producing c.3,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA04X	LED light engine producing c.4,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA05X	LED light engine producing c.5,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA06X	LED light engine producing c.6,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA07X	LED light engine producing c.7,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA08X	LED light engine producing c.8,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA09X	LED light engine producing c.9,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA10X	LED light engine producing c.10,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA11X	LED light engine producing c.11,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
.LA12X	LED light engine producing c.12,000 lm with a nominal 2700K, 3000K or 4000K colour temperature
Code	<b>Distribution</b> (required)
.SY	Symmetric
.AY	Asymmetric
.NR	Long and Narrow
.FW	Forward Throw
.FWBL	Forward Throw with internal backlight shield
.HN	High Beam Long and Narrow distribution
.HNBL	High Beam Long and Narrow distribution with internal backlight shield
Code	<b>Colour</b> (required)
.C1	Smooth White (RAL9016)
.C4	Graphite (RAL 7011)
.C6	Smooth Grey (RAL7035)
.C7	Black (RAL9005)
.C9	Metallic Silver (RAL9006)
.RAL****	RAL Colour (Customer choice)
Code	<b>Paint Finish</b> (option)
.C	Enhanced Paint Finish
Code	<b>Voltage Electrical Class</b> (option)
.CII	Class II
Code	<b>Photocell</b> (option)
.TSZ	Complete with miniature 70 lux factory fitted photocell. (Zodion SS12)
.TSZA	Complete with miniature 55 lux factory fitted photocell. (Zodion SS12A)
.TSZB	Complete with miniature 35 lux factory fitted photocell. (Zodion SS12B)
.T1	Complete with NEMA socket. (To accept standard NEMA Photocell, available from Holophane).
.T7	Complete with 7-pin dimming NEMA ANSI C136.41 socket (photocell/node supplied by others) without locking top
.T7T	Complete with 7-pin dimming NEMA ANSI C136.41 socket (photocell/node supplied by others) with weather proof locking top
.TZ01	Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node supplied by others) with weather proof locking cap
.TZ02	Complete with 4-Pin Zhaga Socket - 'Bottom' (suitable photocell/node supplied by others) with weather proof locking cap
.TZ03	Complete with 4-Pin Zhaga Socket - 'Top & bottom' (suitable photocell/node supplied by others) with weather proof locking cap.
Code	<b>Dimming Outputs</b> (option)
.LRD	LED Regulable DALI
.LRT56	Pre-set to dim to 50% between 12am to 6am
.LRT66	Pre-set to dim to 60% between 12am to 6am
.LRT76	Pre-set to dim to 70% between 12am to 6am
.LRT****	Customer specified pre-set dimming
Code	<b>Control Gear</b> (option)
.CL7	Programmed to deliver 70% of the initial lumens over the life of the luminaire
.CL8	Programmed to deliver 80% of the initial lumens over the life of the luminaire
.CL9	Programmed to deliver 90% of the initial lumens over the life of the luminaire
.CL****	Customer specified programming
Code	<b>Controls</b> (option)
.PH1	PIR on a Zhaga socket, suitable up to 12m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG (purchased separately).
.PH2	Groupable PIR on a Zhaga socket, suitable up to 12m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG.G (purchased separately).
.CA	Wireless lighting node (top socket) for use with Holophane Controlux Air System. (Includes subscription package for two years)
.CAP	Wireless lighting node (top socket) & PIR (bottom socket) for use with Holophane Controlux Air System. (Includes subscription package for two years). Suitable up to 12m.
Code	<b>Cable Entry</b> (option)
.FL431	4 metres of 1.5mm <sup>2</sup> 3 core single cable "flex"
.FL531	5 metres of 1.5mm <sup>2</sup> 3 core single cable "flex"
.FL631	6 metres of 1.5mm <sup>2</sup> 3 core single cable "flex"
.FL731	7 metres of 1.5mm <sup>2</sup> 3 core single cable "flex"
.FL831	8 metres of 1.5mm <sup>2</sup> 3 core single cable "flex"
.FL451	4 metres of 1.5mm <sup>2</sup> 5 core single cable "flex"
.FL551	5 metres of 1.5mm <sup>2</sup> 5 core single cable "flex"
.FL651	6 metres of 1.5mm <sup>2</sup> 5 core single cable "flex"
.FL751	7 metres of 1.5mm <sup>2</sup> 5 core single cable "flex"
.FL851	8 metres of 1.5mm <sup>2</sup> 5 core single cable "flex"
.FL4312	4 metres of 2.5mm <sup>2</sup> 3 core single cable "flex"
.FL5312	5 metres of 2.5mm <sup>2</sup> 3 core single cable "flex"
.FL6312	6 metres of 2.5mm <sup>2</sup> 3 core single cable "flex"
.FL7312	7 metres of 2.5mm <sup>2</sup> 3 core single cable "flex"
.FL8312	8 metres of 2.5mm <sup>2</sup> 3 core single cable "flex"
Code	<b>122-version</b> (option)
.AR	Arctic cable



Replace 'X' in lamp type code with either:  
2 for 2700K  
3 for 3000K  
4 for 4000K

max length catered for

accessories

Code	
DPL.BLS1	DPL external back light shield 125mm, finished in either .C1/.C4/.C6/.C7/.C9
DPL.WB	Wall Bracket

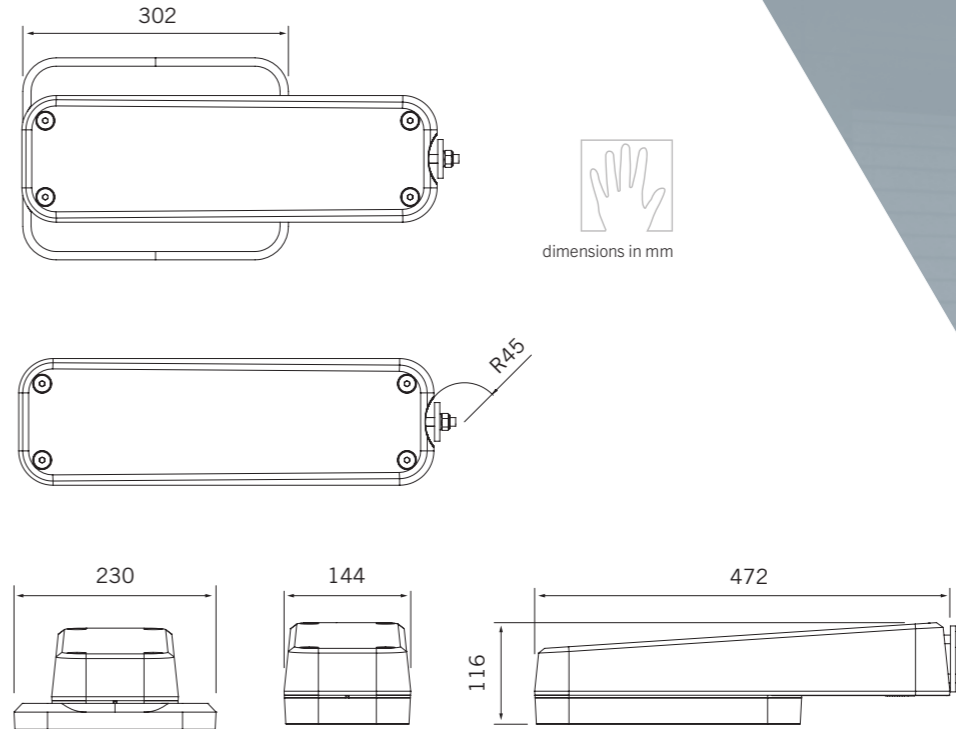
DPL	.LA02X	.SY	.C1	.C	.CII	.TSZ	.LRD	.CL7	.PH1	.AR
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Example

\*Restrictions apply.

**Note:** The specifications of the Holophane luminaire, all descriptions, illustrations, drawings and specifications in the Holophane catalogue and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

DIMENSIONS & PERFORMANCE



dimensions in mm

<b>Weight</b>	DPL Small 6.1 kg	DPL Large 7.5 kg
<b>Windage</b>	DPL 0.042 m <sup>2</sup>	

Typical luminaire performance

Configuration	Delivered Lumens	Circuit Power (W)	Driver output current (mA)	Luminaire total no. of LEDs	Luminaire Efficacy (lm/W)
DPL.LA02X	c.2,000	15	550	8	135
DPL.LA03X	c.3,000	24	900	8	123
DPL.LA04X	c.4,000	30	575	16	134
DPL.LA05X	c.5,000	38	740	16	130
DPL.LA06X	c.6,000	48	925	16	125
DPL.LA07X	c.7,000	49	500	32	143
DPL.LA08X	c.8,000	57	580	32	141
DPL.LA09X	c.9,000	66	675	32	136
DPL.LA10X	c.10,000	69	480	48	144
DPL.LA11X	c.11,000	78	540	48	141
DPL.LA12X	c.12,000	87	600	48	138

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturers data) and luminaire power of +/- 5%.



Small Module: 8 / 16 LED



Large Module: 32 / 48 LED

# GIVING YOUR OUTDOOR SPACE ITS OWN IDENTITY



# SUSTAINABILITY ENVIRONMENTAL



AN ECO DESIGN THAT IS SUSTAINABLE WITHIN.

Our products are just one part of our sustainability efforts, with the 4 pillars of our eco-design which constantly push us to create the most sustainable products that reduce our own environmental impact.

## Pillar One Sustainable we make more with less

How are we doing it?

- To make use of recycled materials where we can
- Reducing unnecessary materials, weight and component count
- Only using components that can be used in other luminaires
- Reduce labour time and energy usage during the manufacturing process

## Pillar Three Serviceable we ensure product longevity

All of our products are:

- Upgradable
- Simple in design
- Ensure easy access to internal components
- Spares are easily available to enable customer servicing and repair

## Pillar Two Scalable we tailor the product for application

We offer:

- Products that are scalable to accommodate new features
- Form-factor sizing for each application to help reduce material waste
- Flexible mounting options

## Pillar Four Separable we are committed to global sustainability

Our products are:

- Environmentally friendly
- Recyclable
- Easy to disassemble, making materials used easy to separate



For information on our EarthLIGHT initiative please scan the QR code



## CIRCULAR ECONOMY TM66

Holophane's ambitious sustainability efforts have set us on the path to obtaining several accreditations with the LIA and CIBSE's TM66 which allows us to rate our products and follow a method that designs out waste.

The traditional resource consumption model is linear, where raw material is collected to make products, then often thrown away once they have served their purpose.

CIBSE's TM66 allows us to rate our products and follow a method to design out waste, maximise value and improve maintenance so that our luminaires can be repaired, recycled and re-used.



2.5 to 4.0	Excellent circularity
1.5 to 2.5	Definite/substantial progress to circularity
0.5 to 1.5	Some circular economy functionality
0 to 0.5	Very poor circular economy performance

# Denver™ iD Pole



## Speak to the Holophane experts today

Get in touch to discover how, together, we can ensure your lighting space works for you and the planet.

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 [holophane.co.uk](http://holophane.co.uk)

HOL-BRO-DPL-UK-02/25



theLIA