

# DENVER<sup>TM</sup> iD WALL



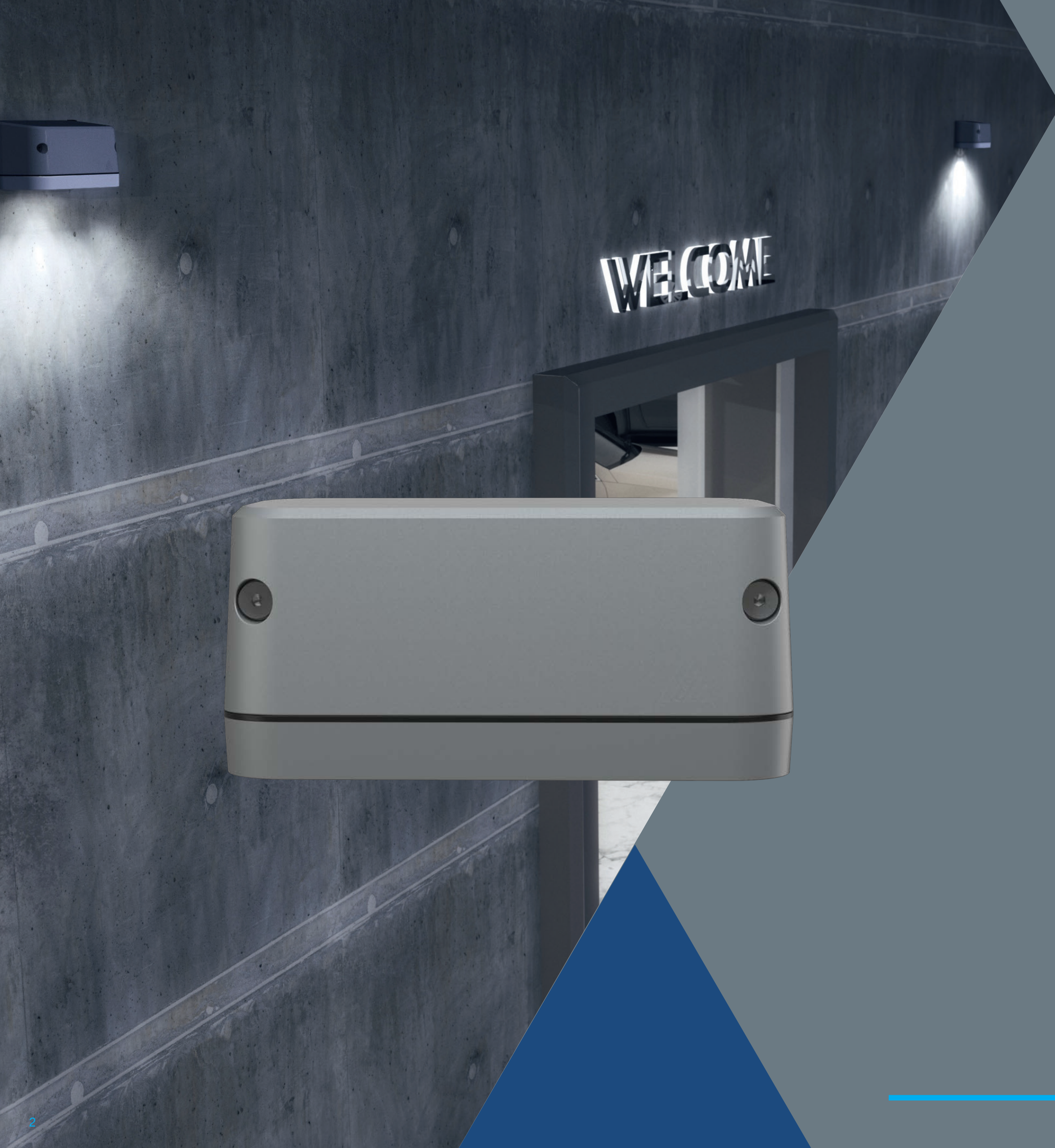
DENVER  
iD WALL



**HOLOPHANE<sup>®</sup>**

REGISTERED EUROPEAN DESIGN  
PATENTED DESIGN





# WALL DENVER™ iD

**The Denver iD: Wall** 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: Wall 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: Wall 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: Wall** 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
- Campuses
- Retail Parks
- Car Parks
- Landscaped Areas
- Offices
- Walkways
- Perimeter areas

#### Overview

- Available with lumen ranges from 700 to 4,000 (delivered lumens).
- 5 optimised optical distributions suitable for a variety of environments.
- 2700K, 3000K & 4000K options available.
- CRI > 70.
- Available with integrated control and emergency options (c.300 lm in emergency mode).
- Ease of installation via modular design.
- Spacings of 15m to 20m at 3m mounting height with 5 lux average.

#### TM66 CEAM-Make Rating

Preliminary Rating: 2.6 (Excellent circularity).

#### Approvals



Complies with EN60598

IP65 and IK10

-20°C to +45°C



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: Pole** & **Denver iD: Bollard**.

DENVER  
iD POLE



DENVER  
iD WALL



DENVER  
iD BOLLARD



## PRODUCT FEATURES

### Class Leading Performance

**Denver iD: Wall** 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.



### Easily maintainable

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

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



# WALL DENVER™ iD



### 2-part housing

**Denver iD: Wall** is constructed in two parts consisting of the Front casting combined with the LED module and back box. This design makes installation easy but also ensures easy maintenance for driver or emergency battery changes.

Cable entry and termination is via 2 x 20mm IP65 membrane cable glands.



With option .B, PL0, PL1 & PL2

### Connected

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



# TRANSITION ZONE

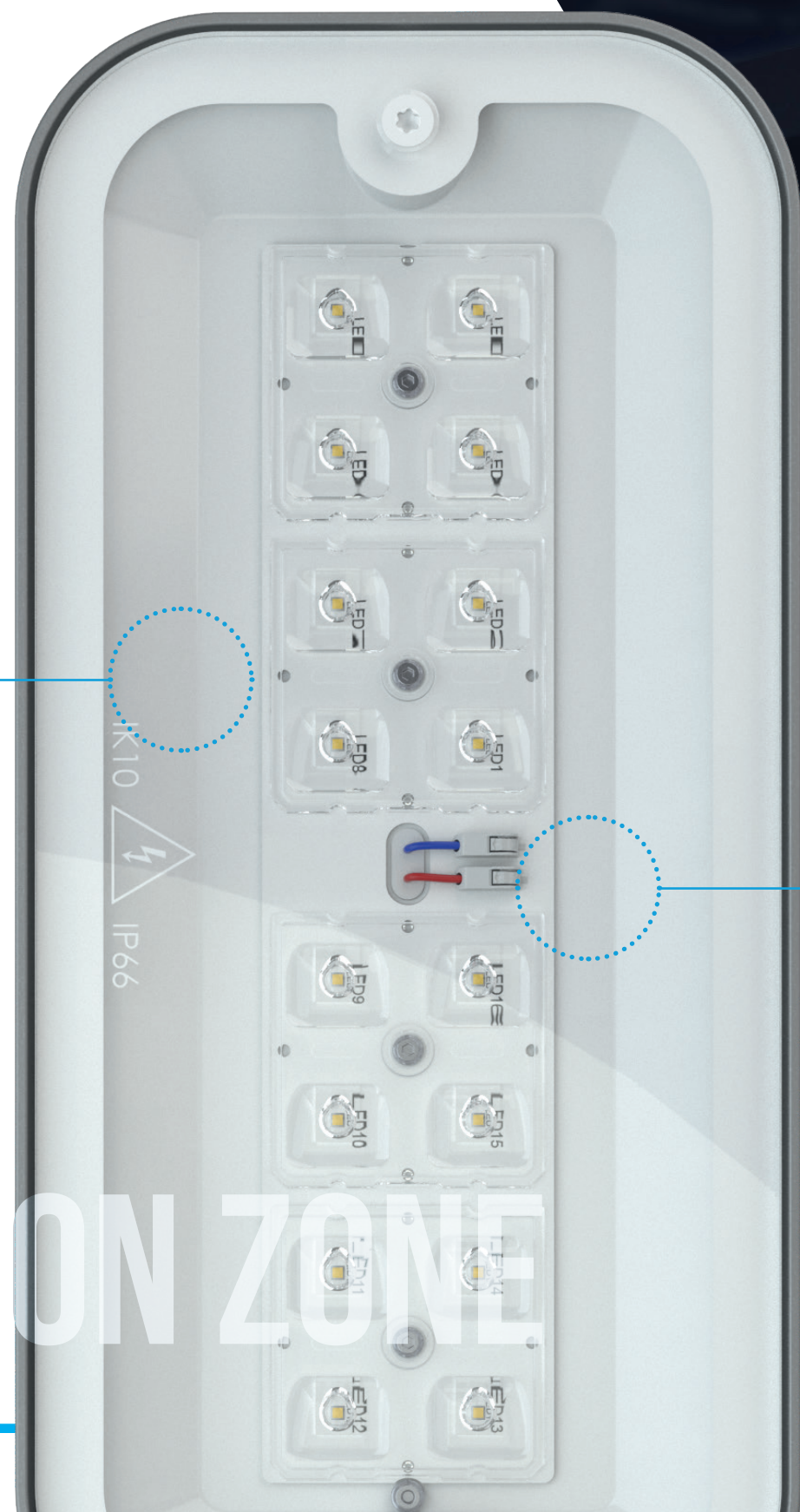
## Patented Transition Glare

An intermediary zone between the 'bright LEDs' 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: Wall** utilises all three heat transfer principles of conduction, convection and radiation.



### Conduction

Taking heat away from electronic components, LEDs and drivers.

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



# THERMAL MANAGEMENT



# INSTALLATION AND MAINTENANCE

## Installation

**Denver iD: Wall** offers numerous ways of mounting the luminaire. This can be done either directly with the standard product or with a range of back boxes for uneven wall surfaces (dependent on option choice).

## Maintainability

In the unlikely situation when an LED module has become damaged or prematurely failed the LED module can be easily removed and replaced in situ.

Additionally, drivers and emergency batteries are easily accessed via the gear compartment.

## 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 the **Denver iD: Wall** ensures a longer more sustainable luminaire system life.

At the end-of life the majority of the components can be recycled via recycling centres such as Lumicom.



Standard



Back Box .B



Deep PIR Back Box .PL0, .PL1 or .PL2



Deep PIR Back Box with multiple cable entry .PL0, .PL1 or .PL2 + .B

# MAINTENANCE

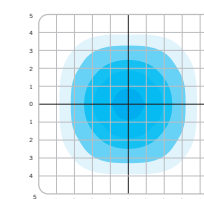
# SPECIFICATION

## Specification

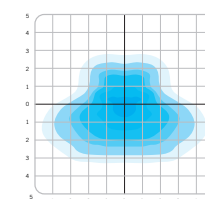
**Holophane Denver iD: Wall** consists of a 2-part body and a removable LED module manufactured from LM6 marine grade die-cast aluminium with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white 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. Mounting of the luminaire is facilitated by mounting the back casting of luminaire to suitable surface. Cable entry and termination to the luminaire is via an 2 x IP65 20mm cable gland. Access to the luminaire is via 2 x nuts.

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

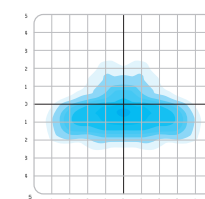
## Light Distributions



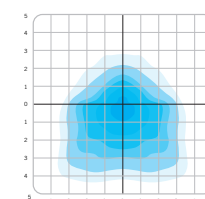
Symmetric (.SY)



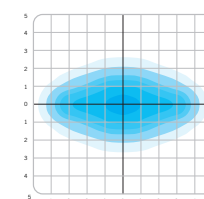
Asymmetric (.AY)



Long & Narrow (.NR)



Forward Throw (.FW)



High Beam Long & Narrow (.HN)

# SPECIFICATION

## Features and benefits

### Exceptional Performance

- Lumen packages from 700 - 4,000 lumens with efficacies of up to 130 lumens per Watt.
- 5 optimised optical distributions (Symmetric, Asymmetric, Long & Narrow and High Beam Long & Narrow) delivered by quality 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

- 2-part body construction ensures ease of installation of the luminaire to a suitable surface.
- 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 via the TZ01 option. Compatibility with a range of 3rd party photocells, devices and sensors.
- Integrated 1hr & 3hr emergency options.
- Compatible with Controlux Air.
- Developed with fully integrated presence detectors.



# CONTROLS

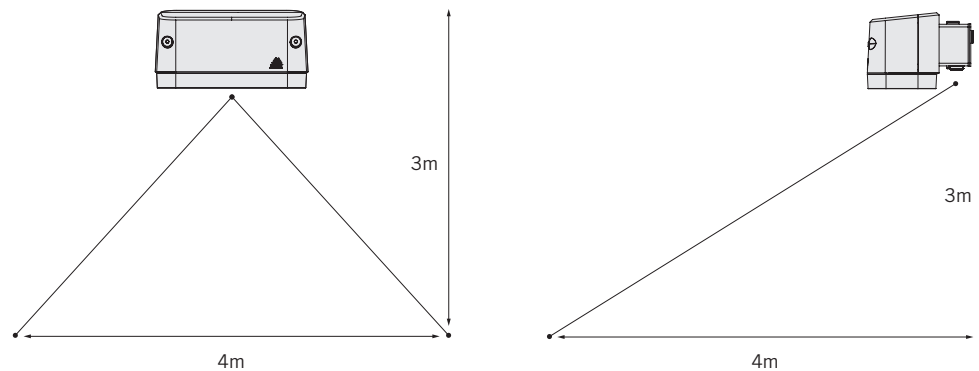
## Integrated Presence Sensors

**Denver iD: Wall** is available with a range of integrated controls and PIR options to suit project requirements. This ranges from simple on/off switching to dimming. All PIRs require an additional Back-Box which is included within the option.

**PL0 Option**  
Integrated PIR, suitable from 4.5m up to 9m. Switches off after 10 minutes of inactivity.

**PL1 Option**  
Integrated PIR, suitable from 4.5m up to 9m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes.

**PL2 Option**  
Groupable PIR (within 4m range), suitable up to 4m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes.



# 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. By having **Denver iD 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



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



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

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.



The PrecizionHALO is Lucy Zodion'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.

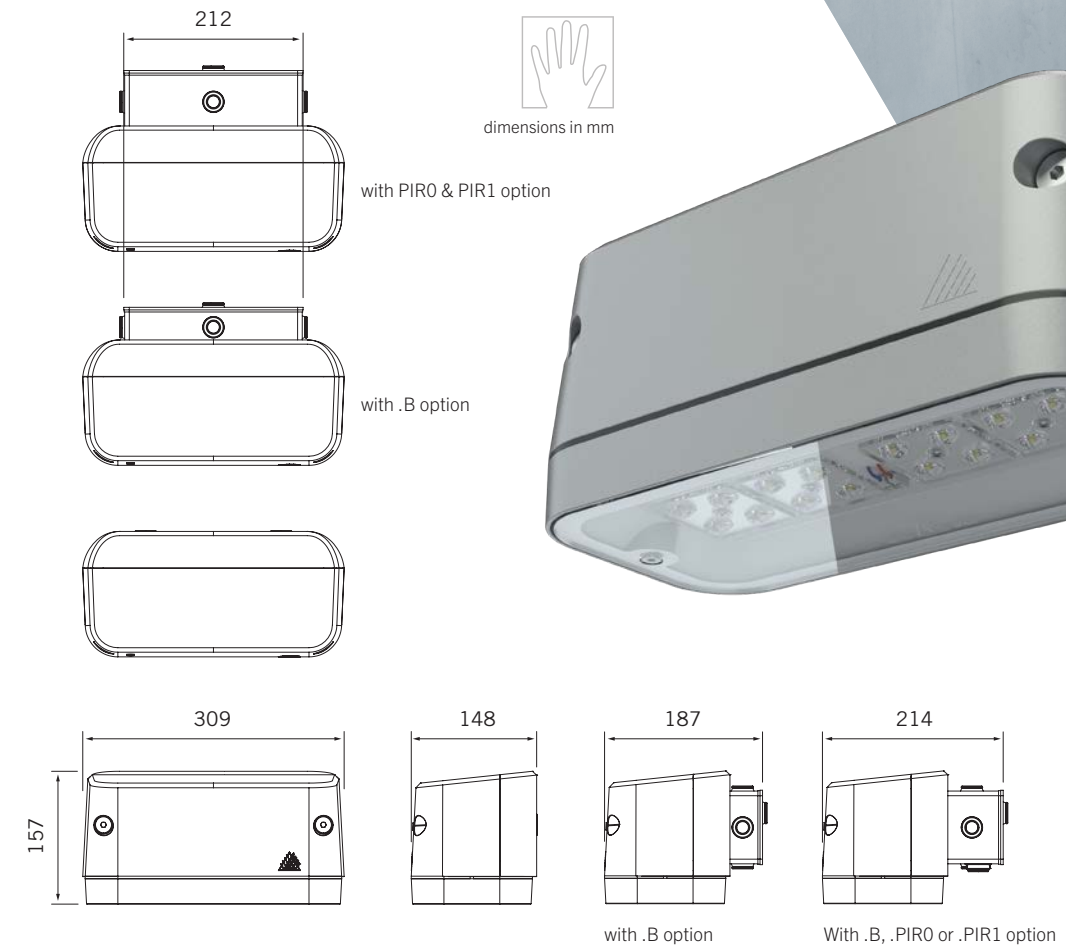
EasyAir SNO110 is ideally suited for outdoor applications and is intended for individual pole control and configuration. It automatically connects to the Global Navigation Satellite System (GNSS) to obtain date and time information in real time. On/off switching as well as a 5-step DynaDimmer scheduling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



Code	<b>Luminaire (required)</b>
DWL	Denver iD Wall
Code	<b>Series (required)</b>
.1	Series 1
Code	<b>Lamp Type (required)</b>
.LA012	LED light engine producing c.1,000 lm with a nominal 2700K colour temperature
.LA022	LED light engine producing c.2,000 lm with a nominal 2700K colour temperature
.LA032	LED light engine producing c.3,000 lm with a nominal 2700K colour temperature
.LA042	LED light engine producing c.4,000 lm with a nominal 2700K colour temperature
.LA013	LED light engine producing c.1,000 lm with a nominal 3000K colour temperature
.LA023	LED light engine producing c.2,000 lm with a nominal 3000K colour temperature
.LA033	LED light engine producing c.3,000 lm with a nominal 3000K colour temperature
.LA043	LED light engine producing c.4,000 lm with a nominal 3000K colour temperature
.LA014	LED light engine producing c.1,000 lm with a nominal 4000K colour temperature
.LA024	LED light engine producing c.2,000 lm with a nominal 4000K colour temperature
.LA034	LED light engine producing c.3,000 lm with a nominal 4000K colour temperature
.LA044	LED light engine producing c.4,000 lm with a nominal 4000K colour temperature
Code	<b>Distribution (required)</b>
.SY	Symmetric
.AY	Asymmetric
.NR	Long and Narrow light distribution
.FW	Forward Throw
.HN	High Beam Long and Narrow light distribution
Code	<b>Colour (required)</b>
.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 (option)</b>
.C	Enhanced Paint Finish
Code	<b>Voltage Electrical Class (option)</b>
.CII	Class II
Code	<b>Photocell (option)</b>
.TSZ	Complete with miniature 70 lux factory fitted photocell. (Zodion SS12)
.TZ01	Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node supplied by others) with weather proof locking cap
Code	<b>Controls (option)</b>
.PL0	Integrated PIR, suitable up to 6m. Switches off after 10 minutes of inactivity. Remotely re-programmable with accessory HEL.PRG (purchased separately)
.PL1	Integrated PIR, suitable from 4.5m up to 9m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG (purchased separately)
.PL2	Groupable PIR (within 4m range), suitable up to 4m. 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). Suitable up to 12m.
Code	<b>Emergency (option)</b>
.EM1	1hr maintained integrated emergency. Self-test
.EM3	3hr maintained integrated emergency. Self-test
Code	<b>Dimming Outputs (option)</b>
.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 - 4 (option)</b>
.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
Code	<b>Cable Entry (option)</b>
.B	Cable backbox for side, top and bottom cable entry
Code	<b>Screws - 21 (option)</b>
.V1	Vandal-resistant screws
DBD	.LA012 .SY .C1 .C .CII .TSZ .TZ01



## DIMENSIONS & PERFORMANCE



### Typical luminaire performance

Configuration	Delivered Lumens	Circuit Power (W)	Driver output current (mA)	Luminaire total no. of LEDs	Luminaire Efficacy (lm/W)
DWL.LA01X	c.1,000	7	200	8	127
DWL.LA02X	c.1,500	12	360	8	135
DWL.LA03X	c.2,500	18	650	8	137
DWL.LA04X	c.4,000	25	475	16	153

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%.

### Weight

DWL 6.5 kg

**Note:** TSZ not compatible with TZ01/PIR0/PIR1.

### accessories

Code	Description
DWL.VK	Vandal Key
DWL.FLS	Front Light Shield
DWL.BB	Back box
DWL.PM	Pole mount adapter

**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.



# GIVING YOUR OUTDOOR SPACE ITS OWN IDENTITY

WELCOME





WALL DENVER™ iD



DENVER  
iD WALL



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