CATALOGUE

Hazlux® Industrial and hazardous location lighting

for explosive atmospheres

Hazlux® lighting fixtures are constructed to meet Hazardous Location and Adverse Environment applications. You can rely on Hazlux to safely provide light where you need it - even under the harshest indoor and outdoor conditions.

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Introduction

Made in Canada at the Thomas & Betts production facility

Hazlux® products are assembled in Canada to meet strict Thomas & Betts quality standards and shipped quickly. We produce what you need when you need it - no waiting for large production runs or shipments from overseas.

All units are inspected on site and then professionally packed so that your order will arrive intact at your installation site. When you need speed and service without sacrificing quality or reliability. you can count on the Thomas & Betts Hazlux® production team.

Speed

Thomas & Betts offers a lead time advantage thanks to the dedicated Hazlux® production operation in Canada. When you need an order fulfilled right away, we have everything we need in house to meet your requirements. The flexible capacity of our assembly operation can easily accommodate both large and small production runs with a fast turnaround. All units are made to order and assembled by our efficient, experienced in-house Hazlux® team. Your complete order is sent out the door as quickly as possible.

Excellence
Our skilled professionals build quality into every product at every step of the process, from design to final assembly.

Each product is inspected and tested to ensure that it meets strict Thomas & Betts quality standards.

Dependability
The reliability and high standards of the Thomas & Betts brand stand behind all Hazlux® products. We take extra steps to ensure that each unit is protected all the way from our production facility to your installation. Special expandable foam packaging is used on all units to prevent shifting in transport so that your order arrives safely.

To reduce the carbon footprint and minimize the environmental impact of operations, a Sustainable Development policy is in effect at the Thomas & Betts production facility. Through a series of initiatives, reductions in usage of water, water bottles, electricity and natural gas, packaging, and pallets have already been realized. Forward-looking initiatives include reductions in paper, further recycling of pallets, and implementation of an eco-delivery schedule.

The Thomas & Betts production facility has been ISO 9001 compliant since 2001.

Introduction
Quality products

Thomas & Betts® is committed to delivering high quality industrial lighting fixtures designed, tested and certified for use in hazardous locations and adverse environment conditions.

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You can rely on Hazlux® to safely provide light where you need it - even under the harshest indoor and outdoor conditions. If safety, labor reduction, quality and reliability are your priorities, consider Hazlux® lighting products.

Features & benefits

- Nameplate displays third party certification for all electrical ratings and hazardous location ratings as required by the Canadian Electrical Code, OSHA regulations and CSA, allows for peace of mind, confirming the right lighting fixture is installed in a certified condition
- Cast, copper-free aluminum construction for high strength, light weight and corrosion resistance meeting the highest life expectancy you can expect from a lighting fixture in a particular application
- The paint used in our standard finish is baked, electro-deposited, pure epoxy powder for maximum corrosion protection. Additional paint finishes are available, offering increased protection against harsh environment
- All exposed hardware is corrosion-resistant stainless
- steel will limit and ease all maintenance required on the lighting fixture
- Faster and easier installation with simple hinge arrangement that permits “hands-free” wiring

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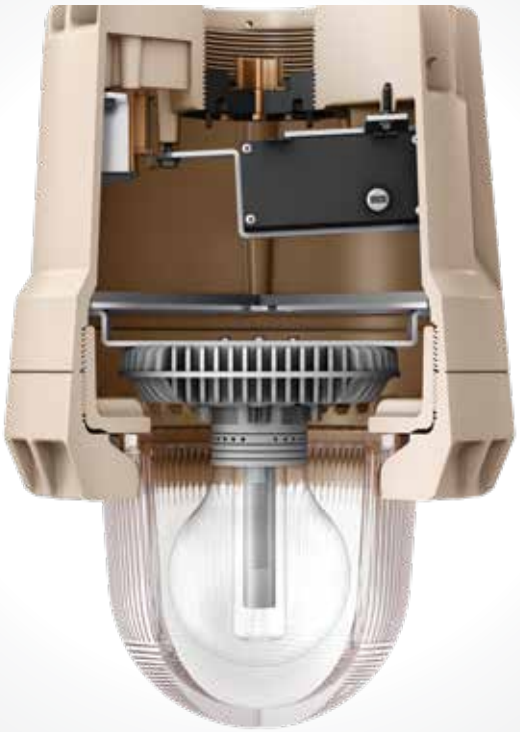

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Design & components

- Hazlux® products are designed with top and bottom fins to provide maximum heat dissipation
- In order to use the whole luminaire as a heat sink, the ballast/generator is installed so that it transfers heat to the luminaire body
- Select induction lamp options feature an additional inner heat sink to provide the coolest possible design for maximum luminaire efficiency
- A metal plate provides two separate compartments for the ballast/generator and lamp source to maximize life expectancy
- Hazlux® 5 fixtures feature electromechanical connect block for quick, safe fixture removal for bench relamping and/or maintenance
- High strength mechanical mounting, robust design and components to withstand ice, strong wind loads or heavy vibrations
- Heat tempered glass for greater strength and thermal shock resistance to selection of refractors to meet your application and lighting requirements

Installation & operation

- Seizure-resistant threads make installation and maintenance easy over years, and Hazlux® 5, Dual pitch acme threads for easier, faster assembly
- Heat-sunk internal components results in cooler operation for extended ballast life, higher lamp wattage and a broader range of hazardous locations

Overview
Hazardous locations

Hazardous location – An area where the possibility of explosion and fire is created by the presence of flammable gases, vapors, dust, fibers or flyings.

Class I - Gas
Class I locations are those in which flammable gases, flammable liquid-produced vapors or combustible liquid-produced vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Typical Class I Locations:
- Petroleum refineries and gasoline storage and dispensing areas
- Industrial firms that use flammable liquids in dip tanks for parts cleaning or other operations
- Petrochemical companies that manufacture chemicals from gas and oil
- Dry cleaning plants where vapors from cleaning fluids can be present
- Companies that have spraying areas where they coat products with paint or plastics
- Aircraft hangars and fuel serving areas
- Utility gas plants and operations involving storage and handling of liquified petroleum gas or natural gas

Class II - Dust
Class II locations are those that are hazardous because of the presence of combustible dust.

Typical Class II Locations:
- Grain elevators, flour and feed mills
- Plants that manufacture, use or store magnesium or aluminum powders
- Plants that have chemical or metallurgical processes: producers of plastics, medicines and fireworks, etc.
- Producers of starch or candies
- Spice-grinding plants, sugar plants and cocoa plants
- Coal preparation plants and other carbon handling or processing areas

Class III - Fibers
Class III locations are those that are hazardous because of the presence of easily ignitable fibers or where materials producing combustible flyings are handled, manufactured or used, but in which such fibers/flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.

Typical Class III Locations:
- Textile mills, cotton gins, cotton seed mills and flax processing plants
- Any plant that shapes, pulverizes or cuts wood and creates sawdust or flyings

Note: Fibers and flyings are not likely to be suspended in the air but can collect around machinery or on lighting fixtures and where heat, a spark or hot metal can ignite them.

Division 1 - Normally hazardous
Hazardous gases or dusts are present under normal operation conditions or during frequent repair and maintenance activity.

Groups A, B, C, D
The gases and vapors of Class I locations are broken into four groups by the code A, B, C and D. These materials are grouped according to the ignition temperature of the substance, its explosion pressure and other flammable characteristics.

Groups E, F, G
Class II dust locations groups E, F and G are classified according to the ignition temperature and the conductivity of the hazardous substance.

Division 2 - Not normally hazardous
Hazardous gases or dusts are not present under normal operating conditions.

Divisions vs. Zones: Area Classification

Continuous hazard	Intermittent hazard	Hazard under abnormal conditions
Zone 0	Zone 1	Zone 2
Division 1		Division 2

Note: These are simplified definitions - complete data is in the Canadian Electicral Code (C.E.C)

Four step method for selecting lighting fixtures for hazardous locations

1. Select a fixture that meets your Class, Division and Group requirements.
For example:
- Class I, Division 2, Group D
- Class II, Division 1, Group G

2. Determine the T-Number for your selected fixture. Be sure it is for the specific wattage, ballast housing, optical assembly and ambient temperature.
- Use the published information in this catalog or in Hazlux® product brochures

3. Determine the Maximum Allowable Temperature for the hazardous materials involved.

Class I Gas:
- Ignition Temperature for the Specific Gas (from NFPA497M)

Class II Dust:
- Group E - 200°C
- Group F - 200°C
- Group G - 165°C
- Or ignition temperature of dust if lower
- Above from NEC® Table 500-3(F)

4. Compare T-Number (from Step 2) to Maximum Allowable Temperature (from Step 3).
- If T-Number is cooler than the Maximum Allowable Temperature, the selected fixture is suitable.
- If T-Number is hotter than the Maximum Allowable Temperature, the selected fixture is not suitable.

T-Number Table

Class I, II, Div. 1, 2 T-Number	Max. Temperature (°C)
T1	450
T2	300
T2A	280
T2B	260
T2C	230
T2D	215
T3	200
T3A	180
T3B	165
T3C	160
T4	135
T4A	120
T5	100
T6	85

Overview
Hazlux® applications

From an offshore oil rig in the Atlantic Ocean to the factory floor, there's a Hazlux® lighting fixture to stand up to virtually every hazardous location.

Here are some of the places you'll find Hazlux® fixtures:

- Chemical manufacturing and processing plants
- Oil refineries
- Oil drilling rigs
- Offshore platforms
- Pipeline pumping stations
- Pulp and paper plants
- Aluminum and copper smelting
- Steel mills and foundries
- Mining operations
- Grain handling facilities
- Flour, sugar and starch processing
- Food processing plants
- Paint and rubber manufacturing facilities
- Marine and coastal facilities
- Shipyards and shipbuilding plants
- Power generation plants
- Waste treatment facilities
- Paint, chemical and plastic mixing/storage areas
- Bulk truck terminals
- Solvent/cleaning areas

Hazlux® lighting fixtures are built to withstand the harsh environmental conditions that exist in real settings.


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01 Hose down
02 Vibration
03 High ambient
04 Dust
05 Corrosion
06 Marine
07 Ice
08 Wind

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Note: Tuff-Skin is a registered trademark of Thomas Manufacturing Corp.

Hose-Down and Wet Locations
- Certified for wet locations - NEMA 4X, IP66 (indoor and outdoor); UL1598A (marine) and CSA Listed
- Superior gasketing system - both tank and globe gasketing systems withstand hose-down pressures
- Uninterrupted globe thread - assures positive seal
- Baked-on, dry epoxy coating - not paint but 100% dry solids
- Globes, refractors and finish designed to withstand thermal shock during hose down

High-Ambient Temperature Areas
- All standard fixtures are tested and listed for at least 40°C ambient - even under heavy dust blanket and no air flow
- Exclusive heat sink design results in a cool operating fixture, extended ballast/lamp life and lower maintenance costs
- Unmatched selection of high-ambient, temperature rated fixtures- contact factory for fixtures certified for 55°C and 65°C applications
- Steam spray and thermal shock resistant

Corrosion and Abrasion
- Baked-on, dry epoxy coating - not paint but 100% dry solids
- Stainless steel external hardware
- Sand-blast resistant finish
- Superior silicone gasketing system on both tank and globe. Other gasketing systems available for special corrosive applications such as phosphates
- Aluminum components contain less than 0.4% copper - maximum corrosion resistance
- Special HazCote® corrosion fighter finish available for extremely corrosive areas; consult Thomas & Betts for details

Ice and Arctic Conditions
- Gasketing system and finish allow for expansion and contraction through wide temperature variations
- Metal halide ballasts start at -29°C; high-pressure sodium ballasts start as low as -51°C (consult Thomas & Betts for details)
- High-strength mechanical mountings withstand extra ice loading
- Tempered glassware available for extra thermal shock safety margin

Vibration, Seismic Shock and Vandalism
- Vibration tested by UL and CSA
- Vibration-resistant hardware throughout fixture
- Screw retainers on guard ensure retention even if screws are not completely tightened
- Vibration-resistant globe thread and sealing system
- Optional refractors, high-strength tempered glass and Tuff-Skin® globes for protection from vandalism

Dust Blanket
- Tested and listed by UL and CSA
- Thermal performance is at 40°C ambient; optional thermal performance to 55°C and 65°C ambient available (consult factory)
- Cone pendant mount available (45° sloped sides) for areas where dust or other residue buildup is a problem
- Exclusive heat sink design - results in a cool operating fixture, extended ballast/lamp life and lower maintenance costs

Marine-Duty Option
- This feature is supplied as standard on most Hazlux® 3 fixtures
- Designed for abuse - hose down, arctic, hurricane, vibration and shock, high temperature, corrosion and other environmental conditions typical of adverse marine locations
- Exclusive combination of marine and hazardous location approvals on the same fixture line

Wind
- Wind-tunnel tested at McDonnell Douglas Corporation at air flow speeds in excess of 198 mph (320 km/h)
- Guard specially designed to secure reflector during high wind loading
- All fasteners are stainless steel
- High-strength mechanical mountings withstand strong wind loads

Area lighting
Hazlux® 3 LED DL Series

Hazlux® durability meets LED technology.
Superior performance lighting for hazardous locations.

Safe, durable and now available with LED technology for superior energy efficiency.
Thomas & Betts Hazlux® luminaires are known as high quality industrial lighting fixtures designed, tested and certified for use in hazardous locations and adverse environment conditions. Specifiers rely on Hazlux® to safely provide light where it's needed - even under the harshest indoor and outdoor conditions.

Safe, dependable, durable Hazlux® luminaires are now available with LED technology to offer longer life, enhanced energy efficiency, reduced maintenance, and a smaller footprint.

All Hazlux® LED products are designed and assembled in Canada for exceptional service and support with reduced lead times. Experienced assembly operation easily accommodates both large and small production runs with a fast turnaround.

High-efficacy luminaire offers excellent performance and energy savings
Thomas & Betts has taken the rugged, reliable design of Hazlux® lighting fixtures and introduced the capabilities of LED technology to create a high-performance luminaire with an impressive lumen output.

High-efficacy luminaire

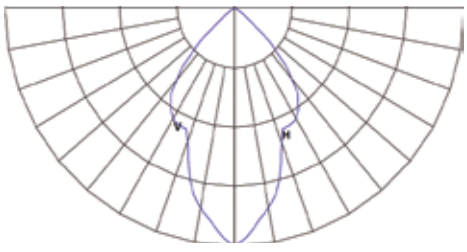
Model	AC power (W)	Lumen	Lm/W
DL005	45	5,800	129
DL007	58	7,100	122
DL010	88	10,100	114
DL015	122	15,600	128
DL017	131	17,800	135
DL020	166	20,400	123

T-ratings & thermal management

	40˚C		55˚C	
Model	Class I Div 2	Class I Div 2 & Class II	Class I Div 2	Class I Div 2 & Class II
DL005	T5	T4A	T5	T4
DL007	T5	T4A	T5	T4
DL010	T4A	T4A	T4A	T4
DL015	T4	T3C	N/A	N/A
DL017	T4	T3C	N/A	N/A
DL020	T3C	T3C	N/A	N/A

Higher T-ratings and optimal thermal management
With an exclusive design that maximizes heat dissipation, Hazlux® LED fixtures lower internal temperature allow for higher T-rating and extended LED and driver life in extreme ambient temperatures. With the entire luminaire acting as a heat sink, Hazlux® LED fixtures allow higher wattages for better performance.

Versatile optics include reflector options for diffuse light distribution
The Hazlux® LED fixture is available with a thermal-resistant globe and a variety of reflectors for the ideal beam angle from 35˚ to 65˚.



Area lighting
Hazlux® 3 LED DL Series

Labor-saving installation and maintenance-friendly construction.

Designed for easy retrofit installation
Using the same mounting style options as existing Hazlux® lighting fixtures, the new LED luminaires can easily be attached as retrofit fixtures.*

The HazVertor™ adapter ring makes it easy to replace Crouse-Hinds Champ® series lighting fixtures without removing the top hat from the conduit system.

Hinged design for hands-free wiring
Easy tank access allows Hazlux® lighting fixtures to be maintained quickly and safely. The hinged lid is designed to support the weight of the tank, leaving both the installer's hands free.

Field-replaceable LED engine and driver
The LED driver is designed in its own compartment so it can be easily replaced in the field using a connector, with no re-wiring required. A fiberglass insulator protects the driver from the heat of the LED engine.

Robust construction for long life expectancy
Cast, copper-free aluminum construction offers corrosion resistance in a strong, lightweight fixture for maximum life expectancy. Baked epoxy powder finishes and stainless steel exposed hardware provide additional corrosion resistance.

Certifications shown on external surface
An easily identifiable nameplate displays third party certification for all electrical and hazardous location ratings as required by the Canadian Electrical Code, OSHA regulations and CSA to provide peace of mind, confirming that the correct lighting fixture with the required certifications is in place.

Hazlux® 3 LED DL Series

Assembly guide

Complete luminaire consists of:

- A mounting style
- Driver tank
- Globe or refractor
- Optional guard and/or reflector

Mounting style

Cone-top pendant

Ceiling and pendant mount

HazVertor™ adapter ring

Wall mount

25˚ angle stanchion

Straight stanchion

Ballast tank

Standard housing

Globe or refractor

Refractor globe

Heat-resistant prismatic glass globe

Guard

Polymeric guard

Cast guard

Reflector*

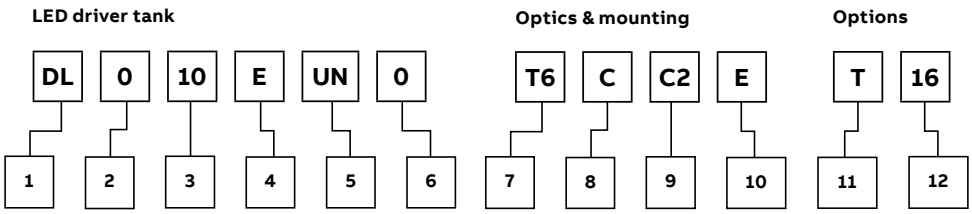
30° angle reflector

Standard dome

*Reflectors are sold separately

Hazlux® 3 LED DL Series

Catalog numbering system



UNIPAK™ =

- LED Driver Tank +
- Optics & Mountings +
- Options (if necessary)

LED driver tank

		Order code	Description
1	**Fixture series**	**DL**	Hazlux® 3 fixture
2	**Fixture**	**C**	Standard fixture
3	**Lumen output**	**05**	5,800 lumens, 45W
		07	7,100 lumens, 58W
		10	10,100 lumens, 88W
		15	15,600 lumens, 122W
		17	17,800 lumens, 131W
		20	20,400 lumens, 166W
4	**FIxture**	**E**	Electronic LED Driver
5	**Voltage/ frequency**	**UN**	120 to 277VAC 50/60Hz (voltage range includes 208V, 220V, 240V etc.)
		UN2	Universal 347/480VAC 50/60Hz (Not available for DL017 and DL020)
6	**LED driver housing style**	**0**	Standard housing
		S	Standard housing with stainless steel inserts

Optics & mounting

		Order code	Description
7	**Optical assembly options**	**TG**	Thermal shock-resistant globe
		R1	Type I glass refractor globe
		R3	Type III glass refractor globe
		R5	Type V glass refractor globe
8	**Guard option**	**C**	Cast aluminium guard
		L	Polymeric guard
9	**Mounting style**	**A2**	¾" Cone-top pendant
		A3	1" Cone-top pendant
		B2	¾" wall mount
		B3	1" wall mount
		C2	¾" Ceiling / pendant mount
		C3	1" Ceiling mount
		HV1	HazVertor™ ring - Class I, Div. 2, Zone 2
		HV2	HazVertor™ ring - Class I Div. 2 Zone 2, Class II
		L4	1¼" Straight stanchion
		L5	1½" Straight stanchion
		S4	1¼" 25° Angle stanchion
		S5	1½" 25° Angle stanchion
		Blank	No mounting (to replace exisiting fixture)
10	**UNIPAK™ options**	**E**	UNIPAK™ with LED light source

Certifications, standards & approvals/characteristics

Certifications & standards	
Class I	Division 2, Groups A, B, C and D
	Zone 2, Groups IIC, IIB, IIA
Class II	Division 1 and 2, Groups E, F and G
Class III	UL® Listed (UL1598A) for Marine Locations
	UL844
	NEMA 4X
	CSA C22.22 No. 137

Approvals/ characteristics

Options

		Order code	Description
11	**Special options**	**T**	Hazcote® custom anti-corrosion coating (consult factory)
		G	Grey colour option
12	**Light distribution options**	**13**	Internal reflector 35˚ beam angle*
		14	Internal reflector 45˚ beam angle*
		15	Internal reflector 65˚ beam angle*

*DL005, DL007 and DL010 only

Hazlux® 3 LED DL Series

Individual components (to be used with LED driver housing)

Mounting options

Cone-top pendant

Ceiling and pendant mount

HazVertor™ adapter ring

Wall mount

25˚ Angle stanchion

Straight stanchion

Part no.	Description	Conduit hub size (in)
VA2	Cone-top pendant	¾
VA3	Cone-top pendant	1
VC2	Ceiling mount	¾
VC3	Ceiling mount	1
VB2-VIB	Wall mount	¾
VB3-VIB	Wall mount	1
VS4-VIB	25° angle stanchion	1¼
VS5-VIB	25° angle stanchion	1½
VL4-VIB	Straight stanchion	1¼
VL5-VIB	Straight stanchion	1½
HV1	HazVertor™ adapter ring	N/A
HV2	HazVertor™ adapter ring	N/A

Globes or refractors

Refractor globe

Heat-resistant prismatic glass globe

Part no.	Description
VGT15	Heat-resistant prismatic glass globe
VGL15R1	IES Type I refractor globe
VGL15R3	IES Type III refractor globe
VGL15R5	IES Type V refractor globe

Globes or refractors

Polymeric guard

Cast guard

Part no.	Description
VGU22P	Polymeric guard
VGU22	Cast guard

Optional components

Reflectors or exit sign

30° Angle reflector

Standard Dome

Part no.	Description
VR15P	Standard dome, fiberglass-reinforced polyester
VRA15P	Angular dome, fiberglass-reinforced polyester

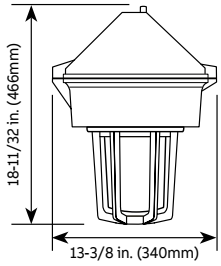
Note: Reflectors are shipped bulk unless specified

Hazlux® 3 LED DL Series

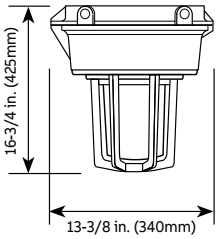
Dimensions & photometry – Standard housing with globe and guard

Standard housing with globe and guard

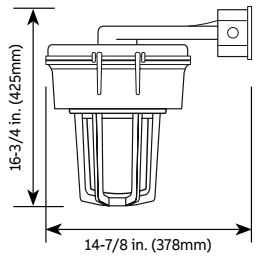
Dimensions



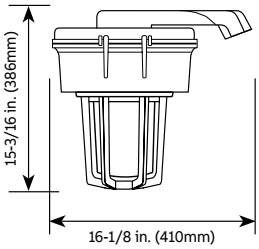
Cone-Top Pendant



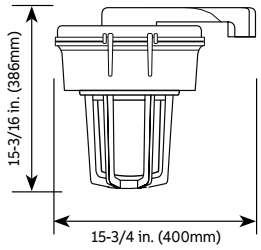
Ceiling Mount



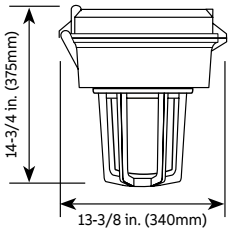
Wall Mount



25˚ Angle Stanchion Mount

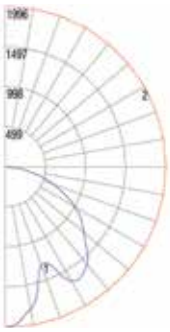


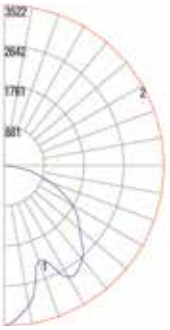
Straight Stanchion



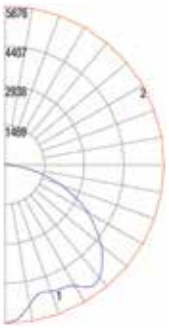
HazVertor™ Ring

Photometry – Ceiling mount

Reference data		Candlepower curve
Catalogue No.	**DL005EUN0TGC2E**	
Luminaire Lumens	5,895	
Luminaire Efficacy Rating (LER)	131	
Input Watt	260	
Spacing Criterion	1.3	
Spacing Criterion (90-270	1.3	
Spacing Criterion (diagonal)	1.44	

Catalogue No.	**DL010EUN0TGC2E**	
Luminaire Lumens	10,123	
Luminaire Efficacy Rating (LER)	115	
Input Watt	88.19	
Spacing Criterion	1.24	
Spacing Criterion (90-270	1.24	
Spacing Criterion (diagonal)	1.4	

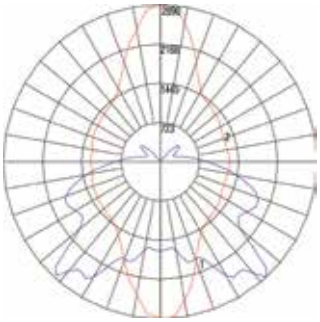
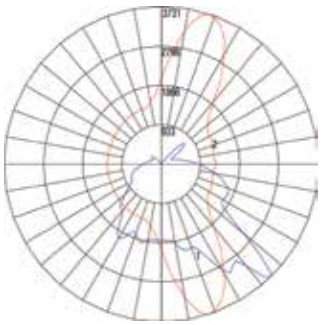
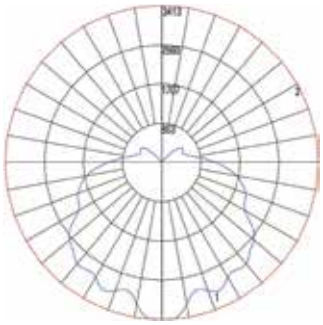
Catalogue No.	**DL010EUN0TGC2E**	
Luminaire Lumens	15,605	
Luminaire Efficacy Rating (LER)	128	
Input Watt	121.8	
Spacing Criterion	1.08	
Spacing Criterion (90-270	1.08	
Spacing Criterion (diagonal)	1.42	

Catalogue No.	**DL020EUN0TGC2E**	
Luminaire Lumens	20,476	
Luminaire Efficacy Rating (LER)	123	
Input Watt	166.1	
Spacing Criterion	1.46	
Spacing Criterion (90-270	1.46	
Spacing Criterion (diagonal)	1.58	

Hazlux® 3 LED DL Series

Photometry – Standard housing with glass refractor – Ceiling mount

Standard housing with globe and guard

Photometry – Ceiling mount		
Reference data		**Candlepower curve**
Catalogue No.	**DL010EUN0R1C2E**	
Luminaire Lumens	8,047	
Luminaire Efficacy Rating (LER)	92	
Total luminaire watts	87	
Maximum Candela	2,890	
Maximum Candela (< 90˚ Vertical)	2,890	
Maximum Candela	887 (11.0%)	
at 90˚ Vertical	luminaire lumens)	
Maximum Candela	1,463 (18.2%)	
from 80 to < 90˚ Vertical	luminaire lumens)	
Catalogue No.	**DL010EUN0R3C2E**	
Luminaire Lumens	8,649	
Luminaire Efficacy Rating (LER)	99	
Total luminaire watts	87.27	
Maximum Candela	3,731	
Maximum Candela (< 90˚ Vertical)	3,731	
Maximum Candela	883 (10.2%)	
at 90˚ Vertical	luminaire lumens)	
Maximum Candela	1,308 (15.1%)	
from 80 to < 90˚ Vertical	luminaire lumens)	
Catalogue No.	**DL020EUN0R5C2E**	
Luminaire Lumens	17,004	
Luminaire Efficacy Rating (LER)	102	
Total luminaire watts	166.3	
Maximum Candela	3,413	
Maximum Candela (< 90˚ Vertical)	3,413	
Maximum Candela	1,171.3 (6.9%)	
at 90˚ Vertical	luminaire lumens)	
Maximum Candela	1,662.7 (9.8%)	
from 80 to < 90˚ Vertical	luminaire lumens)	

Area lighting
Hazlux® 3

Designed, tested and certified for use in hazardous locations and adverse environments. New labor-saving features for Hazlux® 3 fixtures

Induction Lighting
Long life for reduced maintenance

Hazlux® 3 induction lighting provides a 60,000+ hour lamp life, drastically reducing expensive maintenance costs of industrial lighting in hazardous locations.

HazVertor™ Adapter Ring
Replace other brand fixtures without removing the top hat

The HazVertor™ adapter ring gives you the freedom to replace Crouse-Hinds Champ® series lighting fixtures (VMV, DMV or LMV types) with Hazlux® 3 lighting fixtures without removing the Crouse-Hinds top hat from the conduit system, eliminating the need to replace conduit and wiring.

Save time and increase efficiency. The HazVertor™ can be ordered as a separate item or as part of a Hazlux® 3 fixture assembly. Look for the HV1 or HV2 mounting style options and switch to increased efficiency, wider suitability for hazardous locations, improved light distribution and improved T-numbers.

Hazlux® UNIPAK™ Packaging
- UNIPAK™ is the Hazlux customized packaging system that is designed to save money for all concerned
- UNIPAK™ fixtures are normally assembled and can include globes, guards, reflectors, lamps, fuses and other options
- Outlet boxes are normally shipped separately; consult factory regarding outlet boxes to be assembled to UNIPAK™ fixtures
- Assembled UNIPAK™ fixtures are shipped in one carton with the fixture foam packed in place
- Refer to the “Catalog Numbering System” for each individual Hazlux® fixture series for ordering information

UNIPAK™ saves seven ways:
- Fewer cartons to receive, count, move, open and disposeFewer storage problems
- Reduces inventory expense
- Eliminates lost or back-ordered parts
- Eliminates mismatched fixtures or lamps
- Significantly reduces labor costs
- Reduces total installed cost per fixture

Area lighting
Hazlux® 3

Fixtures for Class I, Division 2; Class II; wet and marine locations.


01


02


03


04


05


06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08


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10


11


12

01 ???
02 ???
03 ???
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07 ???
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10 ???
11 ???
12 ???

Applications

- Chemical Plants
- Oil Refineries
- Paint, Rubber Manufacturing
- Offshore Platforms
- Oil Drilling Rigs
- Oil, Gas Transmission
- Waste Treatment Facilities
- Airplane, Aerospace Facilities
- Electronics Manufacturing
- Pharmaceutical Plants
- Aircraft Manufacturing
- Vehicle Maintenance Facilities
- Grain Handling, Food Processing
- Coal Handling and Processing
- Flour, Sugar, Starch Processing
- Ammunition Manufacturing
- Coal, Gold and Copper Mining
- Pulp and Paper Manufacturing
- Copper, Aluminum Smelting
- Breweries, Malt Plants
- Shipyards, Shipbuilding Facilities
- Automobile Manufacturing
- Marine and Coastal Facilities
- Utility Power Plants
- Steel Mills, Foundries
- General Manufacturing Plants

Fixtures for Class I, Division 2; Class II; wet and marine locations.

Note: Tuff-Skin is a registered trademark of Thomas Manufacturing Corp.

Features

- Modular fixture components enable hundreds of easy-to-assemble combinations
- Cast copper-free aluminum housings and mounting covers are lightweight and resist corrosion
- Electrostatically applied powder-coat finish for added corrosion resistance
- Thermal shock-resistant glass globes and refractors protect lamps in wet, marine and outdoor applications
- All glass globes and refractors are fully threaded and provide
- a dust-tight, watertight seal with silicone rubber gaskets
- Standard globe guards are made from rugged polycarbonate plastic or cast aluminum with keyhole slots for ease of installation and do not interfere with globe threads
- All exposed hardware is stainless steel for corrosion resistance and screws are slotted, hex-head style to further ease installation
- Comprehensive UL Listings for Class I, Division 2; Class I, Zone 2; and Class II
- Available for use with high-pressure sodium and metal halide lamps up to 400 watts
- Eight different mounting styles - rigid pendant, flexible pendant, cone pendant, ceiling, wall, 25° angle stanchion, straight stanchion and HazVertor™ Adapter Ring
- Three ballast housing choices - standard housing, R-housing and large housing
- Heat sinks in ballast housings enable ballasts to operate cooler, provide longer life and improve temperature performance
- Bright white FRP (fiberglass-reinforced polyester) angle or dome reflectors resist corrosion while maximizing lighting effectiveness
- Many optical choices - standard globes, threaded refractor globes, 73/4“ globes, 12“ refractors, enclosed high-bay reflectors and more
- All mounting covers provided with dual-lead ground wire for connection to field and fixture grounds
- Optional HazCote® coating for extremely corrosive applications
- Optional stainless steel inserts for guard screws and ballast tank closure screw for enhanced corrosion resistance
- Optional Tuff-Skin® silicone coating on glass optics contains fragments if glass is broken (for food processing)
- Optional instant restrike starter for HPS lamps up to 150 watts restarts hot HPS lamp after momentary power failure

Certifications / Compliances

UL® Listed (UL844) and CSA certified (csa C22.2 no. 137) for:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, Groups IIA, IIB, IIC
- Class II, Divisions 1 & 2, Groups E, F, G
- Class III
- Wet locations

UL® Listed (UL1598A) for:

- Marine Locations
- NEMA 4X, IP66

Materials and Finishes

- Ballast Housings - Copper-free aluminum, powder finish
- Mounting Covers - Copper-free aluminum, powder finish
- Guards - Polycarbonate, copper-free aluminum or steel
- Globes - Tempered glass or borosilicate glass
- Refractor Globes - Borosilicate glass
- Refractors (12“) - Borosilicate glass
- Hardware - Stainless steel
- Reflectors - Fiberglass-reinforced polyester (standard dome, angle); anodized aluminum (deep dome, high bay enclosed)
- Gaskets - High-temperature silicone rubber

Hazlux® 3 Standard housing

Assembly guide

Complete luminaire consists of:

- A mounting style
- Ballast tank
- Globe or refractor
- Optional guard and/or reflector

Mounting style

HazVertor™ adapter ring | Rigid or flexible pendant | Cone-top pendant | Ceiling mount | Wall mount | 25˚ Angle stanchion | Straight stanchion

Ballast tank

Standard housing

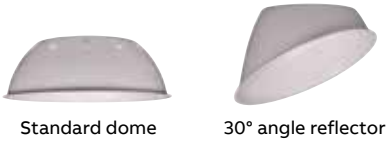
Globe or refractor

Heat-resistant globe | Type V refractor | Low-bay refractor

Guard

Polymeric guard | Cast guard | Wire guard

Reflector*



Standard dome | 30° angle reflector

*Reflectors are sold separately

Hazlux® 3 Standard housing

Catalog numbering system

Ballast tank | **Optics & mounting** | **Options**

1	2	3	4	5	6	7		8	9	10	11	12	13
D	S	Ø	15	H	04	Ø		TGL	– P2	E	T	F	C

UNIPAK™ =
- Ballast tank +
- Optics & mountings +
- Options (if necessary)

Ballast tank

		Order code	Description		
1	**Fixture series**	**D**	Hazlux® 3 fixture		
2	**Lamp type**	**S**	High-pressure sodium		
		H	Metal halide		
		C	150-Watt HPS 100V only		
3	**Starter circuit/ quartz options**	**Ø**	Standard fixture (without options)		
		P	Pulse start (MH only)*		
		Q	Quartz auxiliary option (not hazardous rated)		
		R	Instant restart (50 - 150W HPS)		
		J	Auto shutoff starter (HPS Only)		
		Y	Auto shutoff starter with quartz restrike (HPS only, non-UL)		
4	**Lamp wattage**				**Metal halide lamps**
		07	70W ED28	**10**	100W ED28
		17	175W ED28	**20**	200W ED28PS
		25	250W ED28		
					High pressure sodium lamps
		05	50W ED23 1/2	**07**	70W ED23 1/2
		10	100W ED23 1/2	**15**	150W ED23 1/2
5	**Ballast circuit**	**H**	High Reactance		
		C	Constant Wattage Autotransformer (CWA)		
		I	CWI		
		P	Reactor (AII ballasts high power factor)		
6	**Voltage/ frequency**	**03**	120/277V, 60 Hz	**04**	120/208/240/277V, 60 Hz
		09	120/277/347V, 60 Hz (CSA)	**12**	120V, 60 Hz
		20	208V, 60 Hz	**24**	240V, 60 Hz
		27	277V, 60 Hz	**34**	347V, 60 Hz
		48	480V, 60 Hz	**225**	220V, 50 Hz
		245	240V, 50 Hz		
7	**Ballast housing style**	**Ø**	Standard housing		
		S	Standard housing with stainless steel inserts		

Optics & mounting

		Order code	Description
8	**Optical assembly options**	**TG**	Thermal shock-resistance globe
		TGC	Thermal shock-resistance globe with cast guard
		TGL	Thermal shock-resistance globe with polymeric guard
		SG	Tuff-Skin® coated globe
		SGC	Tuff-Skin® coated globe with cast guard
		SGL	Tuff-Skin® coated globe with polymeric guard
		R2	12-in. glass refractor, type II
		R5	12-in. glass refractor, type V
		R2G	R2 with wire guard
		R5G	R5 with wire guard
		CBDL	Closed bottom refractor with polycarbonate lens
9	**Mounting style**	**A2**	¾" Cone-top pendant
		A3	1" Cone-top pendant
		B2	¾" wall mount
		B3	1" wall mount
		C2	¾" ceiling mount
		C3	1" ceiling mount
		F2	¾" flexible pendant
		F3	1" flexible pendant
		HV1	HazVertor™ ring - Class I, Div. 2, Zone 2
		HV2	HazVertor™ ring - Class I Div. 2, Zone 2, Class II
		L4	1¼" straight stanchion
		L5	1½" straight stanchion
		P2	¾" rigid pendant
		P3	1" rigid pendant
		S4	1¼" 25° angle stanchion
		S5	1½" 25° angle stanchion
10	**UNIPAK™ options**	**E**	UNIPAK™ with clear lamp
		D	UNIPAK™ with dual arc lamp
		U	UNIPAK™ no lamp

Certifications, standards & approvals/characteristics

Certifications & standards	
Class I	Zone 2, Groups IIC, IIB, IIA
	Division 2, Groups A, B, C and D
Class II	Division 1 and 2, Groups E, F and G
Class III	UL® Listed (UL1598A) for Marine Locations
	UL844
	NEMA 4X, IP66
	CSA C22.2 No. 137

Approvals/ characteristics

Options

		Order code	Description
11	**Special options**	**T**	HazCote® custom anti-corrosion coating (consult factory)
12	**Fusing options**	**F**	Fuse block(s) with fuse(s)*
12	**Certification**	**C**	Canadian market

*Fuse Block are not available for marine locations

Hazlux® 3 Standard housing

Individual components (to be used with ballast housing)

Mounting options


Rigid pendant


Ceiling mount


Wall mount


Cone-top pendant


25˚ angle stanchion


HazVertor™ adapter ring


Flexible pendant


Straight stanchion

Part no.	Description	Conduit hub size (in)
VP2	Rigid pendant	¾
VP3	Rigid pendant	1
VA2	Cone-top pendant	¾
VA3	Cone-top pendant	1
VF2	Flexible pendant	¾
VF3	Flexible pendant	1
VC2	Ceiling mount	¾
VC3	Ceiling mount	1
VB2-VIB	Wall mount	¾
VB3-VIB	Wall mount	1
VS4-VIB	25° angle stanchion	1¼
VS5-VIB	25° angle stanchion	1½
VL4-VIB	Straight stanchion	1¼
VL5-VIB	Straight stanchion	1½
HV1	HazVertor™ adapter ring	N/A
HV2	HazVertor™ adapter ring	N/A

Globes or refractors


Heat-resistant globe


Refractor glass


Low-bay refractor

Part no.	Description
VGT22	5½"-dia. heat-resistant globe (250W max.)
VGT22TS	5½"-dia. heat-resistant globe (250W max.) Coated with Tuff-Skin®
VRF22C2	12"-dia. IES Type II refractor, 5½" thread
VRF22C5	12"-dia. IES Type V refractor, 5½" thread
VR22CBDL	Low-bay refractor with plastic lens

Guards


Polymeric guard


Cast guard


Wire guard

Part no.	Description
VGU22P	Polymeric guard for VGT22 series globe
VGU22	Polymeric guard for VGT22 series globe
VGR48	Steel wire guard for All VRF series 12" refractors

Individual components

Reflectors or exit sign


Standard dome


30° angle reflector

Three sided exit Sign

Part no.	Description
VR22P	Standard dome, fiberglass-reinforced polyester
VRA22P	30° angle reflector, fiberglass-reinforced polyester
VRE22	Three-sided exit sign

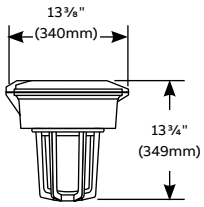
Note: Reflectors are shipped bulk unless specified

Hazlux® 3 Standard housing

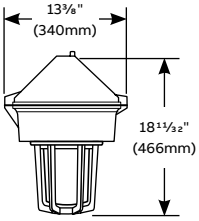
Dimensions & photometry – Standard housing with globe and guard

Standard housing with globe and guard

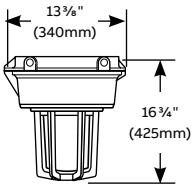
Dimensions



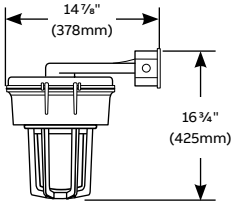
Rigid and flexible pendant



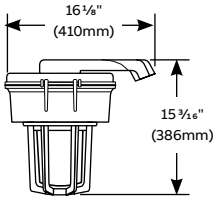
Cone-top pendant



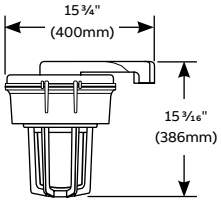
Ceiling mount



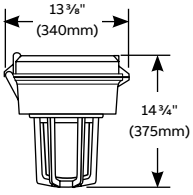
Wall mount



25˚ angle stanchion

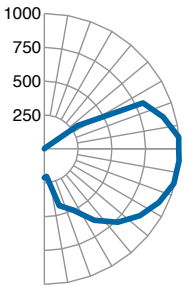


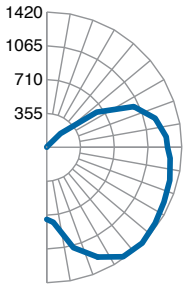
Straight stanchion

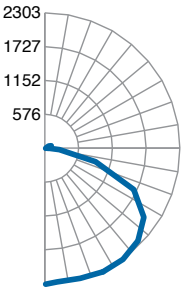


HazVertor™ ring

Photometry – Ceiling mount

Reference data		Candlepower curve
Catalogue No.	**DSO10H09O-TGLA2E**	
Lamp	100W HPS ED23 1/2	
Lamp Lumens	9500	
Input Watt	130	
Luminaire Lumens	8318	
Efficiency	88%	
Efficacy Rating (LER)	64.0	
Spacing Criterion (0-180)	3.56	
Spacing Criterion (90-270)	3.56	
Spacing Criterion (diagonal)	3.42	

Catalogue No.	**DHO17C09O-TGLA3E**	
Lamp	175W MH ED28	
Lamp Lumens	14000	
Input Watt	210	
Luminaire Lumens	12719	
Efficiency	91%	
Efficacy Rating (LER)	60.6	
Spacing Criterion (0-180)	2.38	
Spacing Criterion (90-270)	2.38	
Spacing Criterion (diagonal)	2.36	

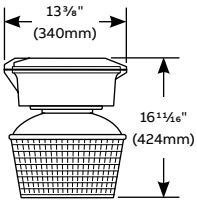
Catalogue No.	**DHO17C09O-TGLA3E & VR22P**	
Lamp	175W MH ED28	
Lamp Lumens	14000	
Input Watt	210	
Luminaire Lumens	10006	
Efficiency	71%	
Efficacy Rating (LER)	47.7	
Spacing Criterion (0-180)	1.52	
Spacing Criterion (90-270)	1.52	
Spacing Criterion (diagonal)	1.68	

Hazlux® 3 Standard housing

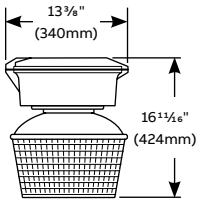
Dimensions & photometry – Standard housing with 12” refractor and guard

Standard housing with globe and guard

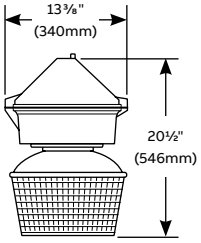
Dimensions



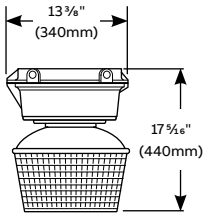
Rigid pendant



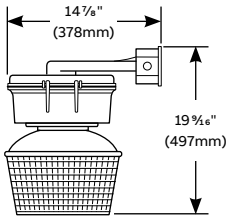
Flexible pendant



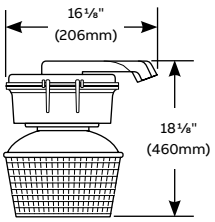
Cone-top pendant



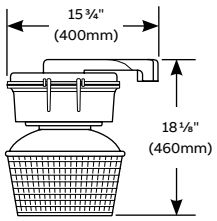
Ceiling mount



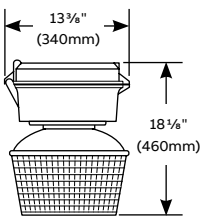
Wall mount



25˚ angle stanchion mount



Straight stanchion

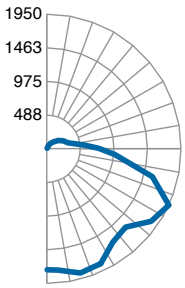


HazVertor™ ring

Photometry – Ceiling mount

Reference data	
Catalogue No.	**DHO17C09O-R5A2E**
Lamp	175W MH ED28
Lamp Lumens	14000
Input Watt	210
Luminaire Lumens	11690
Efficiency	84%
Efficacy Rating (LER)	55.7
Spacing Criterion (0-180)	1.46
Spacing Criterion (90-270)	1.46
Spacing Criterion (diagonal)	1.74

Candlepower curve

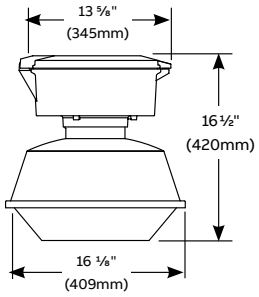


Hazlux® 3 Standard housing

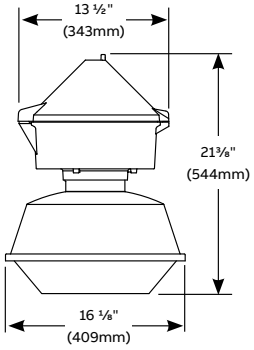
Dimensions & photometry – Standard housing with globe and guard

Standard housing with globe and guard

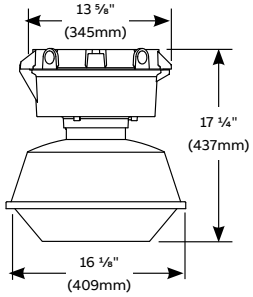
Dimensions



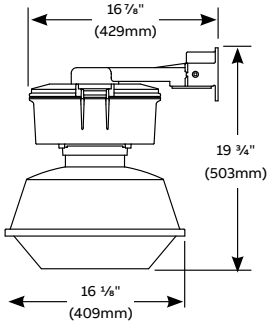
Rigid and flexible pendant



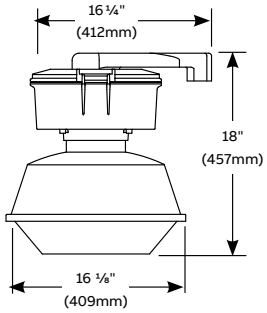
Cone-top pendant



Ceiling mount



Wall mount

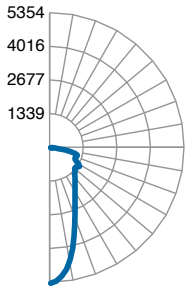


Straight stanchion

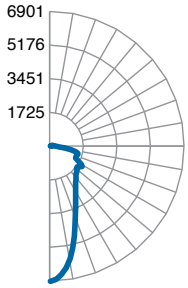
Photometry – Ceiling mount

Reference data	
Catalogue No.	**DSO15H09O-CBDL-A2E**
Lamp	150W HPS ED23 1/2
Lamp Lumens	16000
Input Watt	165
Luminaire Lumens	8744
Efficiency	55%
Efficacy Rating (LER)	53
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.66
Spacing Criterion (diagonal)	0.80

Candlepower curve



Catalogue No.	**DHO25C09O-CBDL-A2E**
Lamp	250W MH ED28
Lamp Lumens	20500
Input Watt	275
Luminaire Lumens	11869
Efficiency	58%
Efficacy Rating (LER)	43
Spacing Criterion (0-180)	0.68
Spacing Criterion (90-270)	0.68
Spacing Criterion (diagonal)	0.82



Hazlux® 3 R-Housing

Assembly guide

Complete luminaire consists of:

- A mounting style
- Ballast tank
- Globe or refractor
- Optional guard and/or reflector

Mounting style

HazVertor™ adapter ring | Rigid or flexible pendant | Cone-top pendant | Ceiling mount | Wall mount | 25˚ Angle stanchion | Straight stanchion

Ballast tank

Standard housing

Globe or refractor

Heat-resistant globe | Type V refractor | Low-bay refractor

Guard

Polyme guard | Cast guard | Wire guard

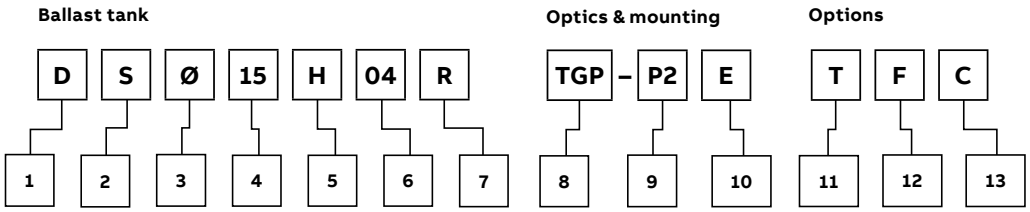
Reflector*

Standard dome | 30° angle reflector | Deep dome

*Reflectors are sold separately

Hazlux® 3 R-Housing

Catalog numbering system



UNIPAK™ =

- Ballast tank +
- Optics & mountings +
- Options (if necessary)

Ballast tank

		Order code	Description		
1	**Fixture series**	**D**	Hazlux® 3 fixture		
2	**Lamp type**	**S**	High-pressure sodium		
		H	Metal halide		
3	**Starter circuit/ quartz options**	**Ø**	Standard fixture (without options)		
		P	Pulse start (MH only)*		
		Q	Quartz auxiliary option (not hazardous rated)		
		R	Instant restart (50 - 150W HPS)		
		J	Auto shutoff starter (HPS Only)		
		Y	Auto shutoff starter with quartz restrike (HPS only, non-UL)		
4	**Lamp wattage**				**Metal halide lamps**
		10	100W ED28	**17**	175W ED28
		20	200W ED28PS	**25**	250W ED28
					High pressure sodium lamps
		05	50W ED23 1/2	**07**	70W ED23 1/2
		10	100W ED23 1/2	**15**	150W ED23 1/2
5	**Ballast circuit**	**H**	High reactance		
		C	Constant Wattage Autotransformer (CWA)		
		I	CWI		
		P	Reactor (All ballasts high power factor)		
6	**Voltage/ frequency**	**03**	120/277V, 60 Hz	**04**	120/208/240/277V, 60 Hz
		09	120/277/347V, 60 Hz (CSA)	**12**	120V, 60 Hz
		20	208V, 60 Hz	**24**	240V, 60 Hz
		27	277V, 60 Hz	**34**	347V, 60 Hz
		48	480V, 60 Hz	**225**	220V, 50 Hz
		245	240V, 50 Hz		
7	**Ballast housing style**	**Ø**	R-Housing		
		S	R-Housing with stainless steel inserts		

Optics & mounting

		Order code	Description
8	**Optical assembly options**	**R1**	7¾" refractor globe, type I
		R3	7¾" refractor globe, type III
		R5	7¾" refractor globe, type V
		R1P	R1 with polymeric guard
		R3P	R3 with polymeric guard
		R5P	R5 with polymeric guard
		R1G	R1 with cast guard
		R3G	R3 with cast guard
		R5G	R5 with cast guard
		TG	7¾" thermal shock-resistant
		TGP	TG with polymeric guard
		TGC	TG with cast guard
		RCB	Enclosed high-bay reflector
		RCG	RCB with steel wire guard
9	**Mounting style**	**A2**	¾" cone-top pendant
		A3	1" cone-top pendant
		B2	¾" wall mount
		B3	1" wall mount
		C2	¾" Ceiling mount
		C3	1" ceiling mount
		F2	¾" flexible pendant
		F3	1" flexible pendant
		HV1	HazVertor™ ring - Class I, Div. 2, Zone 2
		HV2	HazVertor™ ring - Class I Div. 2, Zone 2, Class II
		L4	1¼" straight stanchion
		L5	1½" straight stanchion
		P2	¾" rigid pendant
		P3	1" rigid pendant
		S4	1¼" 25° angle stanchion
		S5	1½" 25° angle stanchion
10	**UNIPAK™ options**	**E**	UNIPAK™ with clear lamp
		D	UNIPAK™ with dual arc lamp
		U	UNIPAK™ no lamp

Certifications, standards & approvals/characteristics

Certifications & standards	
Class I	Zone 2, Groups IIC, IIB, IIA
	Division 2, Groups A, B, C and D
Class II	Division 1 and 2, Groups E, F and G
Class III	UL® Listed (UL1598A) for Marine Locations
	UL844
	NEMA 4X, IP66
	CSA C22.2 No. 137

Approvals/ characteristics

Options

		Order code	Description
11	**Special options**	**T**	HazCote® custom anti-corrosion coating (consult factory)
12	**Fusing options**	**F**	Fuse block(s) with fuse(s)*
12	**Certification**	**C**	Canadian market

*Fuse Block are not available for marine locations

Hazlux® 3 R-Housing

Individual components (to be used with ballast housing)

Mounting options


Rigid pendant


Ceiling mount


Wall mount


Cone-top pendant


HazVertor™ adapter ring


25˚ angle stanchion


Flexible pendant


Straight stanchion

Part no.	Description	Conduit hub size (in)
VP2	Rigid pendant	¾
VP3	Rigid pendant	1
VA2	Cone-top pendant	¾
VA3	Cone-top pendant	1
VF2	Flexible pendant	¾
VF3	Flexible pendant	1
VC2	Ceiling mount	¾
VC3	Ceiling mount	1
VB2-VIB	Wall mount	¾
VB3-VIB	Wall mount	1
VS4-VIB	25° angle stanchion	1¼
VS5-VIB	25° angle stanchion	1½
VL4-VIB	Straight stanchion	1¼
VL5-VIB	Straight stanchion	1½
HV1	HazVertor™ adapter ring	N/A
HV2	HazVertor™ adapter ring	N/A

Globes or refractors


Heat-resistant globe


Type I, III or V refractor glass

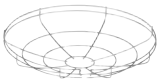

Enclosed high-bay reflector

Part no.	Description
VGT31S	7¾" dia. heat-resistant globe (250W max.)
VGT31STS	7¾" dia. heat-resistant globe (250W max.) coated with Tuff-Skin®
VGL31R1	7¾" dia. IES type I refractor globe (250W max.)
VGL31R3	7¾" dia. IES type III refractor globe (250W max.)
VGL31R5	7¾" dia. IES type V refractor globe (250W max.)
VR31CB	Enclosed high-bay, anodized aluminum with lens

Guards


Polymeric guard


Cast guard


VGR64 wire guard

Part no.	Description
VGU31RP	Polymeric guard for VGT31S globe and VGL31R series refractor globes
VGU31R	Cast aluminum guard for VGT31S globe and VGL31R series refractor globes
VGR64	Steel wire guard for VR31CB enclosed high bay reflector

Optional components

Reflectors


Standard dome


30° angle reflector


Deep dome

Part no.	Description
VR31P	Standard dome, fiberglass-reinforced polyester
VRA31P	30° angle reflector, fiberglass-reinforced polyester
VRD31	Deep dome, anodized aluminum

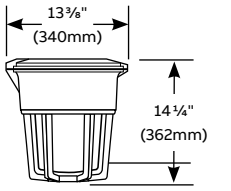
Note: Reflectors are shipped bulk unless specified

Hazlux® 3 R-Housing

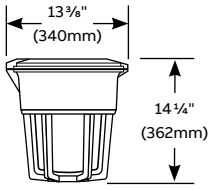
Dimensions & photometry – R-Housing with 7-¾" refractor and guard

R-Housing with 7-¾" refractor and guard

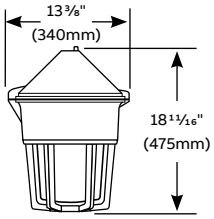
Dimensions



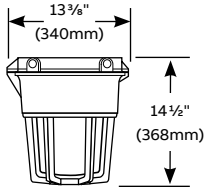
Rigid pendant



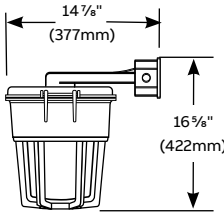
Flexible pendant



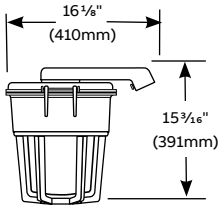
Cone-top pendant



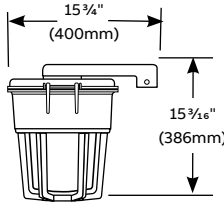
Ceiling mount



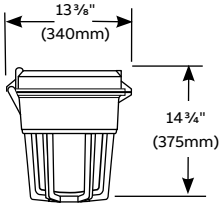
Wall mount



Straight stanchion mount

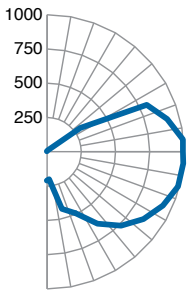


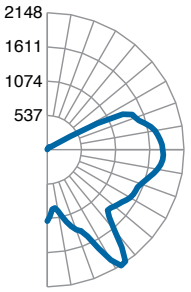
Straight stanchion

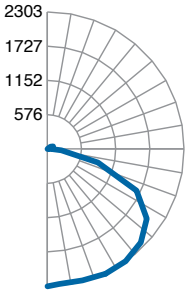


HazVertor™ ring

Photometry – Ceiling mount

Reference data		Candlepower curve
Catalogue No.	**DSO10H09R-TGCA3E**	
Lamp	100W HPS ED23 1/2	
Lamp Lumens	9500	
Input Watt	130	
Luminaire Lumens	8318	
Efficiency	88%	
Efficacy Rating (LER)	64.0	
Spacing Criterion (0-180)	3.56	
Spacing Criterion (90-270)	3.56	
Spacing Criterion (diagonal)	3.42	

Catalogue No.	**DHP17C09R-TGA3E**	
Lamp	175W MH ED28PS	
Lamp Lumens	17700	
Input Watt	192.5	
Luminaire Lumens	14969	
Efficiency	85%	
Efficacy Rating (LER)	78	
Spacing Criterion (0-180)	1.86	
Spacing Criterion (90-270)	1.86	
Spacing Criterion (diagonal)	2.00	

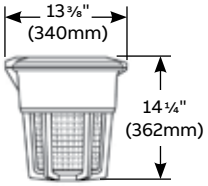
Catalogue No.	**DHO17C09R-TGA3E & VR31P**	
Lamp	175W MH ED28	
Lamp Lumens	14000	
Input Watt	210	
Luminaire Lumens	10006	
Efficiency	71%	
Efficacy Rating (LER)	47.7	
Spacing Criterion (0-180)	1.52	
Spacing Criterion (90-270)	1.52	
Spacing Criterion (diagonal)	1.68	

Hazlux® 3 R-Housing

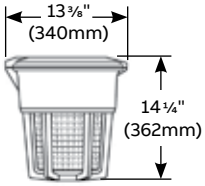
Dimensions & photometry – R-Housing with 7-¾” refractor and guard

R-Housing with 7-¾” refractor and guard

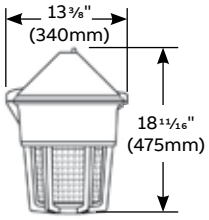
Dimensions



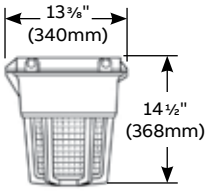
Rigid pendant



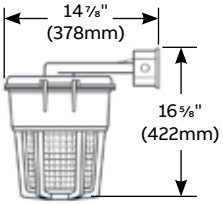
Flexible pendant



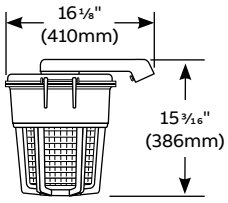
Cone-top pendant



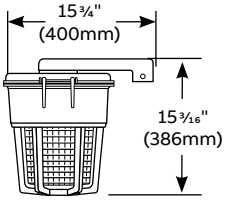
Ceiling mount



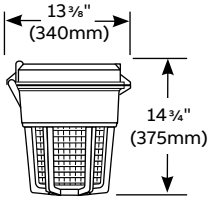
Wall mount



25˚ stanchion mount



Straight stanchion

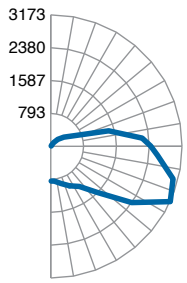


HazVertor™ ring

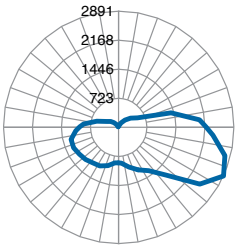
Photometry – Ceiling mount

Reference data	
Catalogue No.	**DHO17C09R-R1A3E**
Lamp	175W MH ED28
Lamp Lumens	14000
Input Watt	210
Luminaire Lumens	10352
Efficiency	74%
Efficacy Rating (LER)	49.3
Spacing Criterion (0-180)	1.68
Spacing Criterion (90-270)	3.02
Spacing Criterion (diagonal)	2.02

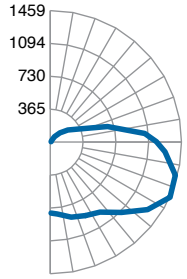
Candlepower curve



Catalogue No.	**DHO17C09R-R3A3E**
Lamp	175W MH ED28
Lamp Lumens	14000
Input Watt	210
Luminaire Lumens	10609
Efficiency	76%
Efficacy Rating (LER)	50.5
Spacing Criterion (0-180)	1.62
Spacing Criterion (90-270)	2.28
Spacing Criterion (diagonal)	2.10



Catalogue No.	**DHO17C09R-R5A3E**
Lamp	175W MH ED28
Lamp Lumens	14000
Input Watt	210
Luminaire Lumens	10221
Efficiency	73%
Efficacy Rating (LER)	48.7
Spacing Criterion (0-180)	2.00
Spacing Criterion (90-270)	2.00
Spacing Criterion (diagonal)	2.30

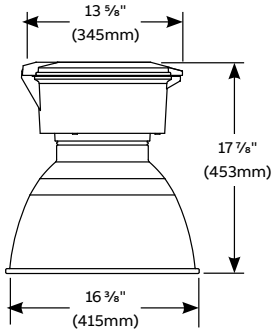


Hazlux® 3 R-Housing

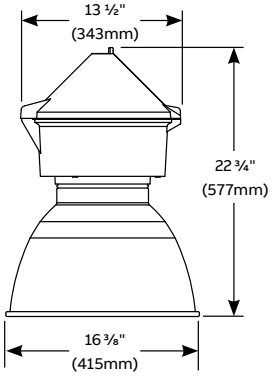
Dimensions & photometry – Standard housing with globe and guard

Standard housing with globe and guard

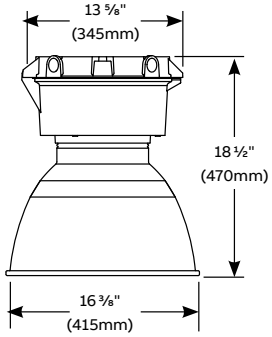
Dimensions



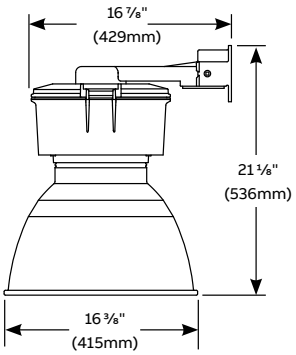
Rigid and flexible pendant



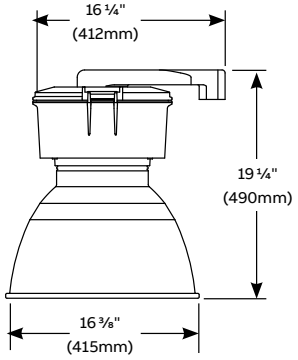
Cone-top pendant



Ceiling mount



Wall mount

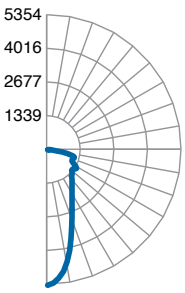


Straight stanchion

Photometry – Ceiling mount

Reference data	
Catalogue No.	**DHP25C04R-RCB-P2E**
Lamp	250W MH ED28PS
Lamp Lumens	25000
Input Watt	250
Luminaire Lumens	16988
Efficiency	68%
Efficacy Rating (LER)	68
Spacing Criterion (0-180)	2.28
Spacing Criterion (90-270)	2.28
Spacing Criterion (diagonal)	1.82

Candlepower curve



Hazlux® 3 Large housing

Assembly guide

Complete luminaire consists of:

- A mounting style
- Ballast tank
- Globe or refractor
- Optional guard and/or reflector

Mounting style

HazVertor™ adapter ring | Rigid or flexible pendant | Cone-top pendant | Ceiling mount | Wall mount | 25˚ Angle stanchion | Straight stanchion

Ballast tank

L-housing

Globe or refractor

Heat-resistant globe | Type V refractor | Low-bay refractor

Guard

Steel wire guard | Cast aluminium guard | Steel wire guard

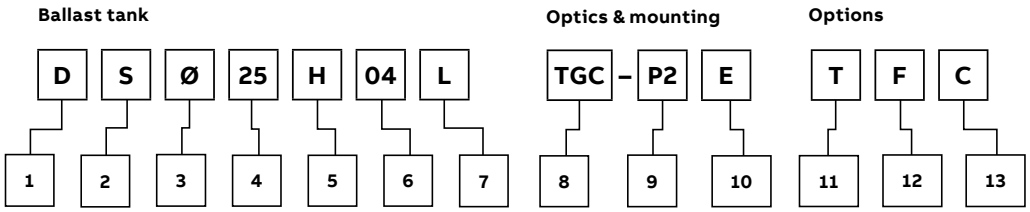
Reflector*

Standard dome | 30° angle reflector | Deep dome

*Reflectors are sold separately

Hazlux® 3 Large Housing

Catalog numbering system



UNIPAK™ =

- Ballast tank +
- Optics & mountings +
- Options (if necessary)

Ballast tank

		Order code			Description
1	**Fixture series**	**D**			Hazlux® 3 fixture
2	**Lamp type**	**S**			High-pressure sodium
		H			Metal halide
3	**Starter circuit/ quartz options**	**Ø**			Standard fixture (without options)
		P			Pulse start (MH only)*
		Q			Quartz auxiliary option (not hazardous rated)
		J			Auto shutoff starter (HPS only)
4	**Lamp wattage**				**Metal halide lamps**
		20	200W ED28PS	**25**	250W ED28
		32	320W ED28PS	**35**	350W ED37PS
		40	400W ED37		
					High pressure sodium lamps
		20	200W ED18	**25**	250W ED18
		40	400W ED18		
5	**Ballast circuit**	**H**			High reactance
		C			Constant Wattage Autotransformer (CWA)
		I			CWI
		P			Reactor (All ballasts high power factor)
6	**Voltage/ frequency**	**03**	120/277V, 60 Hz	**04**	120/208/240/277V, 60 Hz
		09	120/277/347V, 60 Hz (CSA)	**12**	120V, 60 Hz
		20	208V, 60 Hz	**27**	277V, 60 Hz
		34	347V, 60 Hz	**48**	480V, 60 Hz
		225	220V, 50 Hz	**245**	240V, 50 Hz
7	**Ballast housing style**	**L**			Large housing
		M			Large Housing with stainless steel inserts

Optics & mounting

		Order code	Description
8	**Optical assembly options**	**R2**	12” refractor glass, type II
		R5	12” refractor glass, type V
		R2G	R2 with steel wire guard
		R5G	R5 with cast guard
		RCB	Enclosed high-bay reflector
		RCG	RCB with steel wire guard
		TG	7¾” thermal shock-resistant CBDL globe
		TGC	TG with cast aluminum guard
		SG	Tuff-Skin® coated globe*
9	**Mounting style**	A2	¾” cone-top pendant
		A3	1” cone-top pendant
		B2	¾” wall mount
		B3	1” wall mount
		C2	¾” ceiling mount
		C3	1” ceiling mount
		F2	¾” flexible pendant
		F3	1” flexible pendant
		HV1	HazVertor™ ring - Class I, Div. 2, Zone 2
		HV2	HazVertor™ ring - Class I Div. 2, Zone 2, Class II
		L4	1¼” straight stanchion
		L5	1½” straight stanchion
		P2	¾” rigid pendant
		P3	1” rigid pendant
		S4	1¼” 25° angle stanchion
		S5	1½” 25° angle stanchion
10	**UNIPAK™ options**	**E**	UNIPAK™ with clear lamp
		D	UNIPAK™ with dual arc lamp
		U	UNIPAK™ no lamp

*Tuff-Skin is a registered trademark of Thomas Manufacturing Corp

Certifications, standards & approvals/characteristics

Certifications & standards	
Class I	Zone 2, Groups IIC, IIB, IIA
	Division 2, Groups A, B, C and D
Class II	Division 1 and 2, Groups E, F and G
Class III	UL® Listed (UL1598A) for Marine Locations
	UL844
	NEMA 4X, IP66
	CSA C22.2 No. 137

Approvals/ characteristics

Options

	Order code	Description
11 **Special options**	**T**	HazCote® custom anti-corrosion coating (consult factory)
12 **Fusing options**	**F**	Fuse block(s) with fuse(s)*
12 **Certification**	**C**	Canadian market

*Fuse Block are not available for marine locations

Hazlux® 3 Large housing

Individual components (to be used with ballast housing)

Mounting options


Rigid pendant


Ceiling mount


Wall mount


Cone-top pendant


25˚ angle stanchion


HazVertor™ adapter ring


Flexible pendant


Straight stanchion

Part no.	Description	Conduit hub size (in)
VP2	Rigid pendant	¾
VP3	Rigid pendant	1
VA2	Cone-top pendant	¾
VA3	Cone-top pendant	1
VF2	Flexible pendant	¾
VF3	Flexible pendant	1
VC2	Ceiling mount	¾
VC3	Ceiling mount	1
VB2-VIB	Wall mount	¾
VB3-VIB	Wall mount	1
VS4-VIB	25° angle stanchion	1¼
VS5-VIB	25° angle stanchion	1½
VL4-VIB	Straight stanchion	1¼
VL5-VIB	Straight stanchion	1½
HV1	HazVertor™ adapter ring	N/A
HV2	HazVertor™ adapter ring	N/A

Globes or refractors


Heat-resistant globe


Type III or V refractor glass

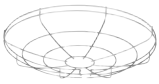

Enclosed high-bay reflector

Part no.	Description
VGT31	7¾” dia. heat-resistant globe (400W max.)
VGT31TS	7¾” dia. heat-resistant globe (400W max.) coated with Tuff-Skin®
VRF31C2	12” dia. IES type II refractor, 7¾” thread
VRF31C5	12” dia. IES type V refractor, 7¾” thread
VR31CB	Enclosed high-bay, anodized aluminum with lens

Guards


Polymeric guard


Cast guard


VGR64 wire guard

Part no.	Description
VGU31	Cast aluminum guard for VGT31 globe
VGR48	Steel wire guard for all VRF series 12” refractors
VGR64	Steel wire guard for VR31CB enclosed high bay reflector

Optional components

Reflectors


Standard dome


30° angle reflector


Deep dome

Part no.	Description
VR31P	Standard dome, fiberglass-reinforced polyester
VRA31P	30° angle reflector, fiberglass-reinforced polyester
VRD31	Deep dome, anodized aluminum

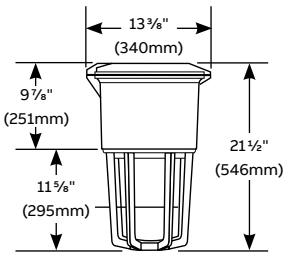
Note: Reflectors are shipped bulk unless specified

Hazlux® 3 Large housing

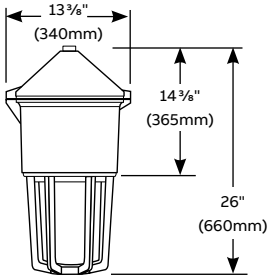
Dimensions & photometry – Large housing with globe and guard

Large housing with globe and guard

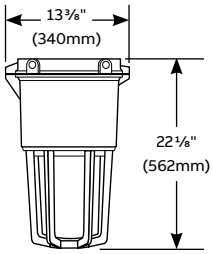
Dimensions



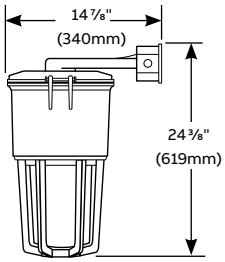
Rigid pendant



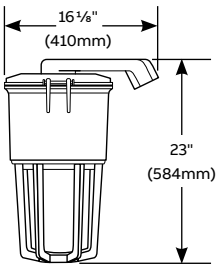
Cone-top pendant



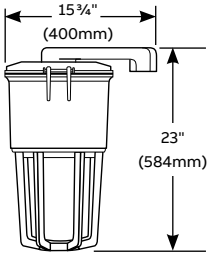
Ceiling mount



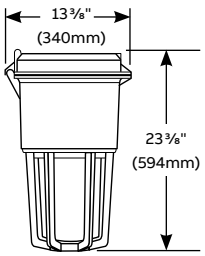
Wall mount



25˚ angle stanchion mount



Straight stanchion

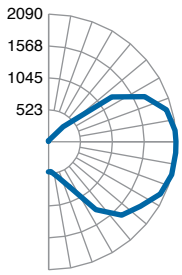


HazVertor™ ring

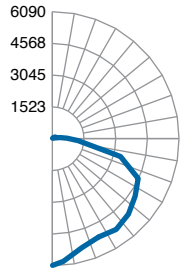
Photometry – Ceiling mount

Reference data	
Catalogue No.	**DSO20C09L-TGCA3E**
Lamp	200W HPS ED18
Lamp Lumens	22000
Input Watt	255
Luminaire Lumens	18415
Efficiency	84%
Efficacy Rating (LER)	72.2
Spacing Criterion (0-180)	NA
Spacing Criterion (90-270)	NA
Spacing Criterion (diagonal)	NA

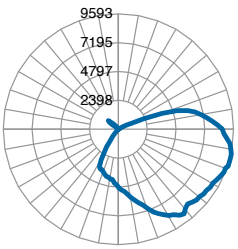
Candlepower curve



Catalogue No.	**DHO35C09L-TGCA3E**
Lamp	350W MH ED37PS
Lamp Lumens	34000
Input Watt	400
Luminaire Lumens	26392
Efficiency	78%
Efficacy Rating (LER)	66.0
Spacing Criterion (0-180)	1.36
Spacing Criterion (90-270)	1.36
Spacing Criterion (diagonal)	1.58



Catalogue No.	**DHP40C04L-TG-P2V & VRA31P**
Lamp	400W MH ED37PS
Lamp Lumens	44000
Input Watt	400
Luminaire Lumens	30407
Efficiency	69%
Efficacy Rating (LER)	76
Spacing Criterion (0-180)	2.32
Spacing Criterion (90-270)	1.72
Spacing Criterion (diagonal)	1.58

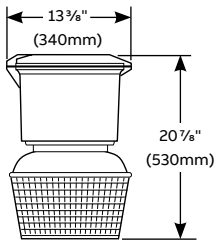


Hazlux® 3 Large housing

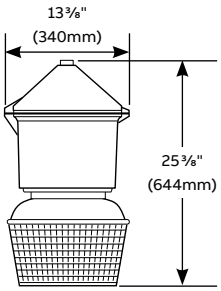
Dimensions & photometry – Large housing with 12” refractor

R-Housing with 7-¾” refractor and guard

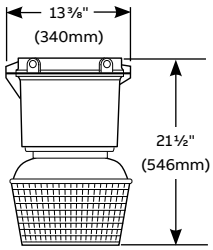
Dimensions



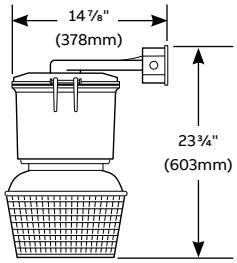
Rigid and flexible pendant



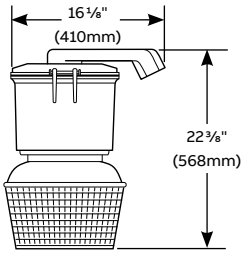
Cone-top pendant



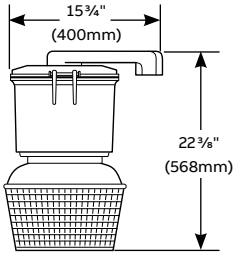
Ceiling mount



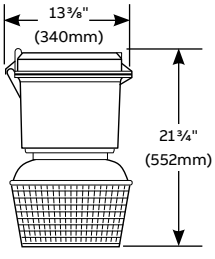
Wall mount



25˚ angle stanchion mount



Straight stanchion

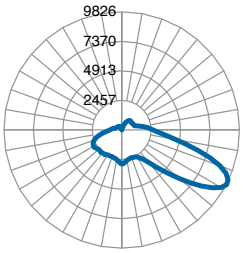


HazVertor™ ring

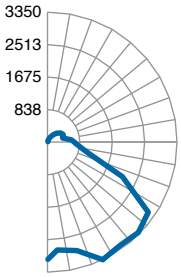
Photometry – Ceiling mount

Reference data	
Catalogue No.	**DHP32C04L-R2-P2E**
Lamp	320W MH ED28PS
Lamp Lumens	30000
Input Watt	352
Luminaire Lumens	21773
Efficiency	73%
Efficacy Rating (LER)	62
Spacing Criterion (0-180)	1.56
Spacing Criterion (90-270)	1.50
Spacing Criterion (diagonal)	1.90

Candlepower curve



Catalogue No.	**DSO20C04L-R5-P2E**
Lamp	200W HPS ED18
Lamp Lumens	22000
Input Watt	240
Luminaire Lumens	16414
Efficiency	75%
Efficacy Rating (LER)	68
Spacing Criterion (0-180)	1.66
Spacing Criterion (90-270)	1.66
Spacing Criterion (diagonal)	1.80

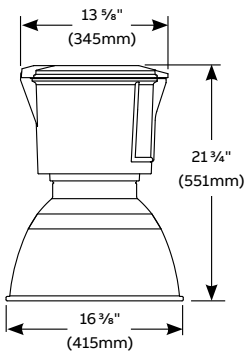


Hazlux® 3 Large housing

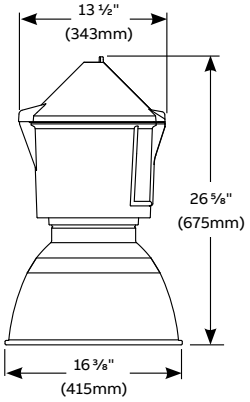
Dimensions & photometry – Large housing with high bay refractor

R-Housing with 7-¾" refractor and guard

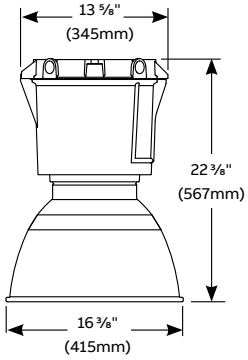
Dimensions



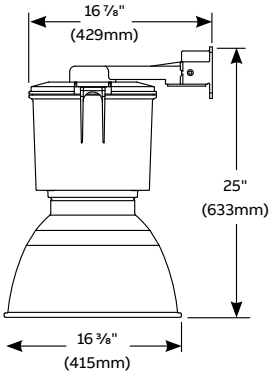
Rigid and flexible pendant



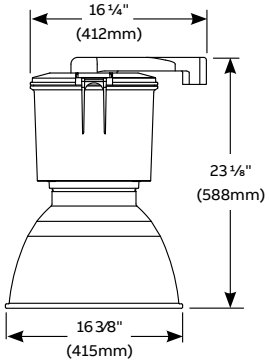
Cone-top pendant



Ceiling mount



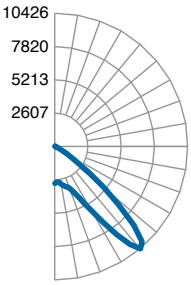
Wall mount



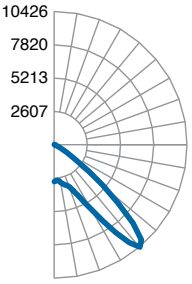
Straight stanchion

Photometry – Ceiling mount

Reference data		Candlepower curve
Catalogue No.	**DHP25C04-RCB-A3E**	
Lamp	250W MH ED28PS	
Lamp Lumens	25000	
Input Watt	250	
Luminaire Lumens	17383	
Efficiency	70%	
Efficacy Rating (LER)	70	
Spacing Criterion (0-180)	2.36	
Spacing Criterion (90-270)	2.36	
Spacing Criterion (diagonal)	1.86	



Catalogue No.	**DSO20C04L-RCB-A3E**	
Lamp	200W HPS ED18	
Lamp Lumens	22000	
Input Watt	240	
Luminaire Lumens	12810	
Efficiency	58%	
Efficacy Rating (LER)	53	
Spacing Criterion (0-180)	1.70	
Spacing Criterion (90-270)	1.70	
Spacing Criterion (diagonal)	1.38	



Additional information
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