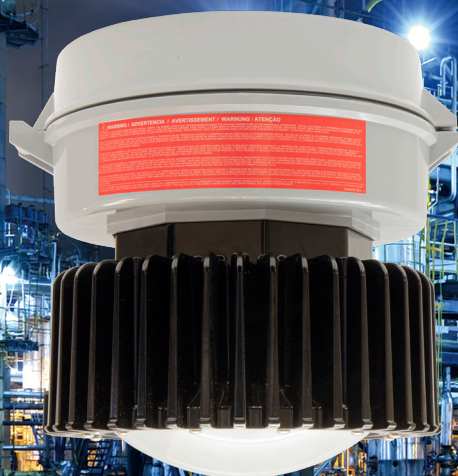


Hazardous Area LED Lighting

CROUSE-HINDS  
SERIES

# Champ VMVL

## LED lighting for hazardous areas



**Safe. Reliable. Efficient.**  
3,000 to 13,000 lumens

**EATON**

*Powering Business Worldwide*





## Champ VMVL LED

# Safe. Reliable. Efficient.

Featuring a broad range of LED luminaires for harsh, hazardous and industrial environments, Eaton Crouse-Hinds series lighting solutions are designed to perform reliably in the most extreme conditions while helping reduce energy, maintenance and manpower costs.

### Why LED?

#### **Useful life**

Rated life is up to 60,000 hours of maintenance-free and safe operation

#### **Energy efficiency**

LED average energy consumption is significantly less than traditional fluorescent and HID fixtures

#### **Start/restart time**

Instant illumination versus 10 minute restrike time for HID

#### **Light quality**

Higher color rendering compared to fluorescent and HID

#### **Environmental benefits**

Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

### Why Crouse-Hinds?

#### **Rugged design**

Built to withstand extreme temperatures, vibration, water and dust

#### **High efficacy**

Up to 127 lumens per watt (model dependent)

#### **Thermal management**

Effective heat sinking ensures longer life

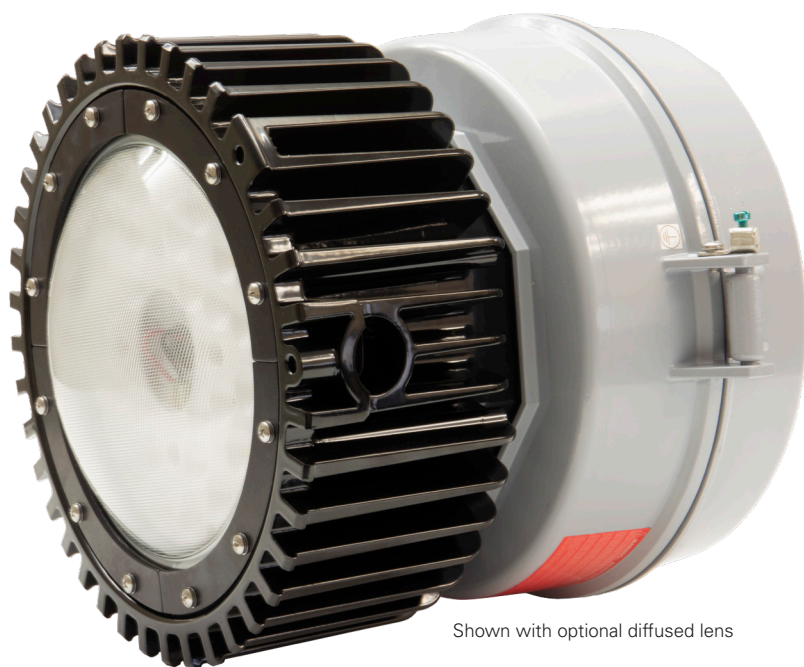
#### **Quality of light**

Custom optics designed to maximize light distribution and intensity

#### **Versatile mounting**

LED fixtures are compatible with Crouse-Hinds series HID installed base

# Design features



Shown with optional diffused lens

## Built to last:

- Type 4X and IP66 rated
- Impact-resistant lens sealed from the outside environment provides ingress protection against water and dust
- Die cast aluminum LED housing provides efficient thermal path to heat sink assembly
- Vertical fin design facilitates air flow and dust shedding

## Simple installation and replacement:

- Contractor-friendly design is ideal for both retrofit and new construction
- Easy to retrofit using existing HID Champ mounting module
- Available with lever lock connectors and standard three-pole terminal block

## Custom optics:

- Type I, III and V optics designed to maximize light distribution and intensity\*

\* Type V optics standard.

## Increased efficiency:

- Up to 127 lumens per watt (7L model)



## Multiple lens options:

- Clear glass lens standard
- Uplight refractor lens provides ~5% uplight and ~16% sidelight for better visibility
- Optional lenses include diffused glass, clear polycarbonate or uplight refractor

Shown with optional uplight refractor lens and guard



## Connected lighting

**Flexible & intuitive software controls**

Tune light output to meet safety and task needs – light where you need it

For more information go to:  
**[Crouse-Hinds.com/LEDconnected](https://www.crouse-hinds.com/LEDconnected)**



## Why choose Champ VMVL?

**Safe, reliable and efficient.** VMVL LED luminaires are engineered to deliver high lumen output and maintenance-free long life in the toughest conditions.

### VMVL-7 vs. 175 watt HID



**77%**  
ENERGY  
EFFICIENCY



**75%**  
TOTAL COST  
OF OWNERSHIP



**100%**  
MAINTENANCE  
REDUCTION

Assumptions: Calculations based on overall life of the LED system. Energy cost of \$.09 per kilowatt; 24 hour per day operation; labor rate of \$75 each for 2 workers; average time for fixture maintenance of 1 hour.



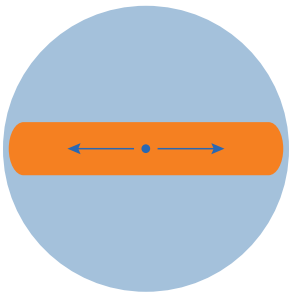
## Custom optics

Eaton's Crouse-Hinds continuously focuses on engineering product solutions tailored to our customers' unique needs and applications.

Champ VMVL LED luminaires feature custom optics designed to maximize light distribution and intensity, providing flexibility for retrofits or new installations throughout the site.

Type III optics minimize light spillover onto the walls and direct light to the ground.

## Three optical options to maximize light distribution and intensity

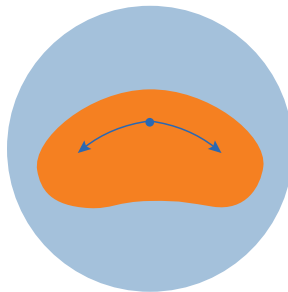


### TYPE I

Long and rectangular for hallways, walkways, loading docks, catwalks.

#### Ideal for:

- Mining conveyor belts
- Aisleways and hallways
- Catwalks and walkways
- Ramps and loading docks
- Tunnels with overhead mounts

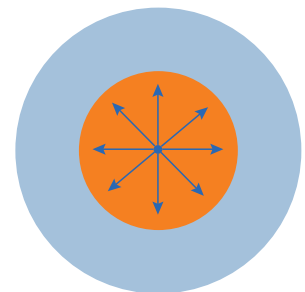


### TYPE III

Stanchion and wall mount light distribution, minimizing spillover on the wall.

#### Ideal for:

- Narrow crosswalks or passages with wall mounted fixtures
- Tunnels with wall mount
- Wall or stanchion mount requiring 180° forward throw beam patterns



### TYPE V

Regular circular distribution pattern for high/low bay indoor and outdoor ceiling or pendant mount lighting.

#### Ideal for:

- Pendant, ceiling or stanchion mount overhead building mounts
- Processing mills, industrial plants, large buildings, warehouses, etc.



# Case study: Type I optics

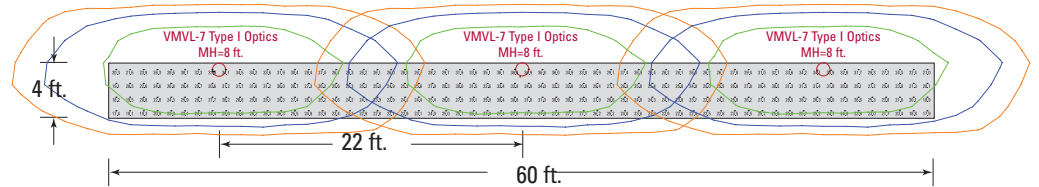
## Catwalk/conveyor lighting

Utilizing Eaton's Crouse-Hinds lighting layout services, Champ VMVL luminaires with Type I optics and HID luminaires are shown installed on a catwalk to compare photometrics.

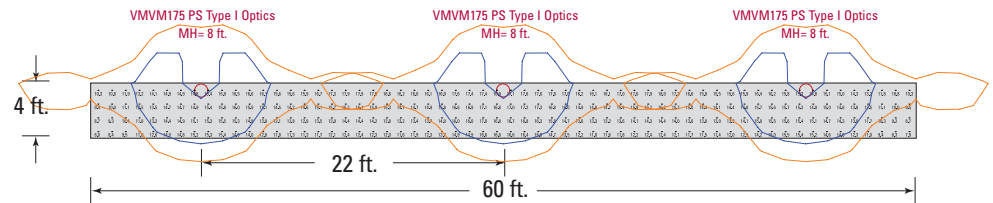
## Comparison

**Champ Type I LEDs have a wider linear pattern** than equivalent HID luminaires and provide more efficient light dispersion, which fully illuminates the catwalk.

Champ VMVL w/ Type I optics



175W metal halide w/ Type I optics



## Results

**Champ VMVL LED with Type I optics** provides superior illumination along the conveyor and walkway safely. With no gaps in illumination, the optical pattern allows for increased spacing of fixtures and a safer conveyor system.

| Luminaire  | Calc. type  | Units | Avg.  | Max. | Min. | Avg./min. | Max./min. |
|------------|-------------|-------|-------|------|------|-----------|-----------|
| Champ VMVL | Illuminance | Fc    | 26.91 | 36.9 | 17.4 | 1.55      | 2.12      |
| 175W MH    | Illuminance | Fc    | 14.32 | 18.0 | 7.9  | 1.81      | 2.28      |

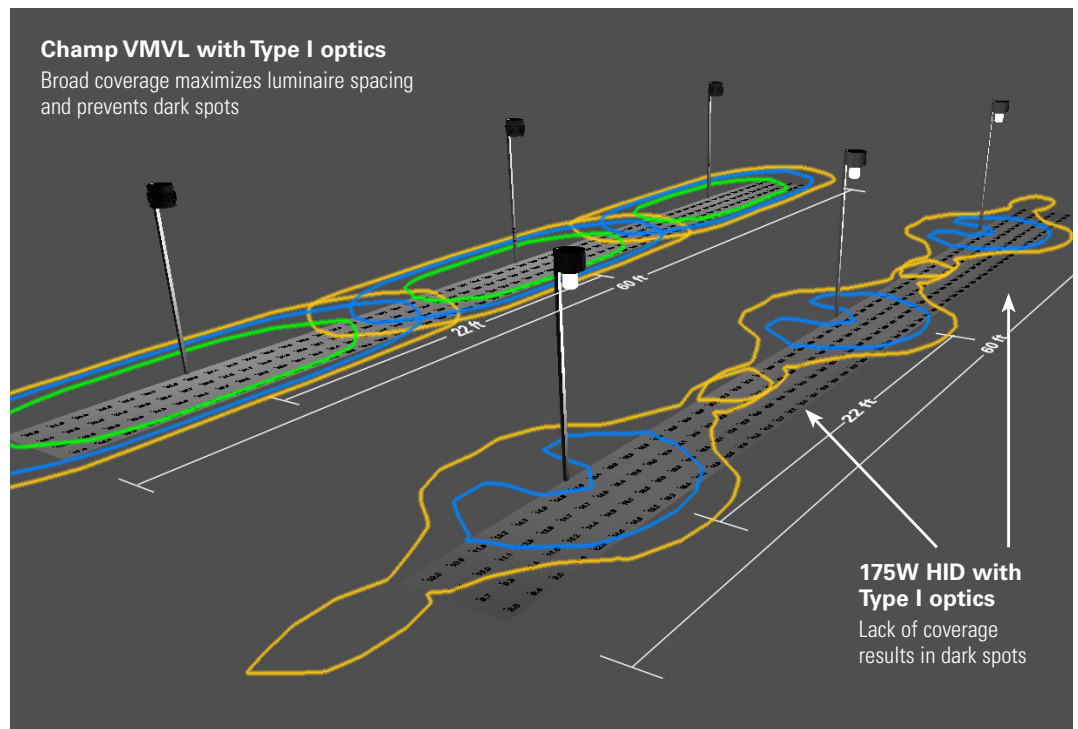
## Savings realized

- **Champ Type I pattern allows for greater fixture spacing** along the catwalk or conveyor system
- Increased visibility with no dark spots results in safer conditions for workers
- Up to 77% energy savings over the life of the fixture

**Champ VMVL has broader coverage area, higher delivered footcandles and uniformity for a typical catwalk or conveyor application.**

Champ VMVL with Type I optics

Broad coverage maximizes luminaire spacing and prevents dark spots



**175W HID with Type I optics**  
Lack of coverage results in dark spots

## Lighting layout & design services:

Let us help you design your next big project!

**Contact Crouse-Hinds Customer Service**  
crousecustomerctr@eaton.com  
(866) 764-5454

## Rugged solutions for complex environments.

Champ VMVL LED luminaires are engineered to provide maintenance-free illumination in the most demanding hazardous rated environments.

The Champ VMVL features a compact, high efficacy design with custom optics to ensure maximum efficiency and mounting flexibility, including the ability to retrofit the Crouse-Hinds installed base to service both LED upgrades and new projects.

| Model   | Nominal lumens* | Watts | Efficacy | Equivalent HID |
|---------|-----------------|-------|----------|----------------|
| VMVL-3  | 3,250           | 28    | 125 lm/W | 70W            |
| VMVL-5  | 5,537           | 45    | 128 lm/W | 100W           |
| VMVL-7  | 7,442           | 61    | 126 lm/W | 175W           |
| VMVL-9  | 9,234           | 76    | 126 lm/W | 250W           |
| VMVL-11 | 11,114          | 92    | 122 lm/W | 320W           |
| VMVL-13 | 13,100          | 95    | 137 lm/W | 400W           |

\*Nominal lumens based on Type V optics, 5000K CCT with clear glass lens. Wattage measured at 120 VAC.

### Applications:

- For areas with mounting heights of up to 30 feet
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Extremely corrosive, wet, dusty, hot and/or cold conditions
- Classified and hazardous locations

### Champ VMVL benefits:

- Instant illumination and restrike
- Dimmable driver, 0-10V
- Cold temperature operation / no warm-up required
- Option for redundancy in drivers with multiple series circuits connected to each driver to avoid complete loss of illumination
- Easy installation - compact modular fixture attaches onto existing Champ mounting module
- Energy-efficient technology - up to 77% energy savings over HID fixtures
- Contains no mercury or other hazardous substances
- Shock- and vibration-resistant solid-state luminaires have no filaments or glass components that could break - greatly reduces the risk of premature failure
- Operating ambient: -40°C to 65°C
- Up to 60,000 hours lifetime at 55°C
- 5 year fixture warranty†

†Refer to page 2 of the authorized distributor price book for Crouse-Hinds standard Terms and Conditions.

### LED system:

- High intensity discrete power emitters
- Standard: cool white (5000K, 70 CRI); optional: warm white, (3000K, 80 CRI) or neutral white (4000K, 70 CRI)
- Custom Type I, III and V optics available

### Colored LED options:

- Available in green or amber\*
- Reduction in light pollution for night space observation and sky glow due to isolating blue wavelength in red and amber colors
- Wildlife-friendly
- Improves visibility for telescopes in observatories during night sky space exploration

\*Custom optics not available with colored LEDs.

## Connected lighting

Remote monitoring and control for use in hazardous and hard-to-access areas.



### Connected lighting highlights:



**Advanced scheduling control** allows for improving energy efficiency during non-operational hours. Easy software control lets a user set up schedules for lights to be on and off at pre-defined times, removing the challenges of manual management.



**Daylight harvesting** allows for use of the daylight and adjusts the light level of luminaire to maintain the desired light levels. It is best suited for outdoor environments or indoor areas where daylight is present during operational hours of a facility.



**Fixture grouping** is an added benefit that maximizes control in a defined area. By grouping light fixtures, same control settings can be applied to them to increase efficiency and response time.



**Occupancy sensing** is best used in areas that see infrequent traffic, such as storage areas of warehouses. Innovative occupancy sensor controls can automatically illuminate the area once presence is sensed in an area and also turn it back off when sensors stop sensing the presence.



**Advanced dimming controls** help reduce the energy consumptions by setting dimming levels. Dimming controls could be used in conjunction with other control features, such as scheduling and occupancy sensing, to improve energy savings.

## Flexible & intuitive software controls

Tune light output to meet safety and task needs – light where you need it



For more information go to:  
**Crouse-Hinds.com/LEDconnected**



## Certifications and compliances:

### NEC, CEC & IEC

- Class I, Division 2, Groups A, B, C, D
- Class II, Groups E, F, G
- Class III
- Class I, Zone 2 AEx ec mb IICT\*GC
- Zone 21 tb IIIC
- Simultaneous Presence
- Wet Locations, Type 4X, IP66

### UL standards

- UL 844 Hazardous (Classified)
- UL1598 Luminaires, UL1598A Marine

### CSA standard

- CSA C22.2 No. 137

### IEC/ATEX standards\*

- IEC 60079-0:2011, 6th Edition / EN 60079-0:2012
- IEC 60079-7:2010, 5.1 Edition / EN 60079-7:2015
- IEC 60079-31:2008, 2nd Edition / EN 60079-31:2014
- IEC 60529:2001 / EN 60529:2001
- IEC 60598-1:2008 / EN 60598-1:2008
- IEC 60598-2:2008 / EN 60598-2:2008
- IEC 60079-18:2017, 4.1 Edition / EN 60079-18:2015 + A1:2017

\*IEC/ATEX certifications applicable for voltage ranges: 100-277VAC, 127-250 VDC.

### Luminaire markings

- IECEx UL 13.0052X
- DEMKO 13 ATEX 1305741X
- DEMKO 13 ATEX 1475031X

### 100-277 VAC/127-250 VDC (UNV1 luminaire only)

- Ⓢ II 3 G EX ec mb IIC T5 Gc -40°C to +40°C
- Ⓢ II 3 G EX ec mb IIC T5 Gc -40°C to +55°C
- Ⓢ II 3 G EX ec mb IIC T4 Gc -40°C to +65°C
- Ⓢ II 2 D Ex tb IIIC T72°C Db -40°C to +40°C
- Ⓢ II 2 D Ex tb IIIC T87°C Db -40°C to +55°C
- Ⓢ II 2 D Ex tb IIIC T92°C Db -40°C to +65°C

### Standard materials:

- Lamp housing and adapter - die cast aluminum with Corro-free™ epoxy powder coat
- Lens - heat- and impact-resistant glass
- Gaskets - silicone
- External hardware - stainless steel
- Factory-sealed, no external seals required

### Weights:

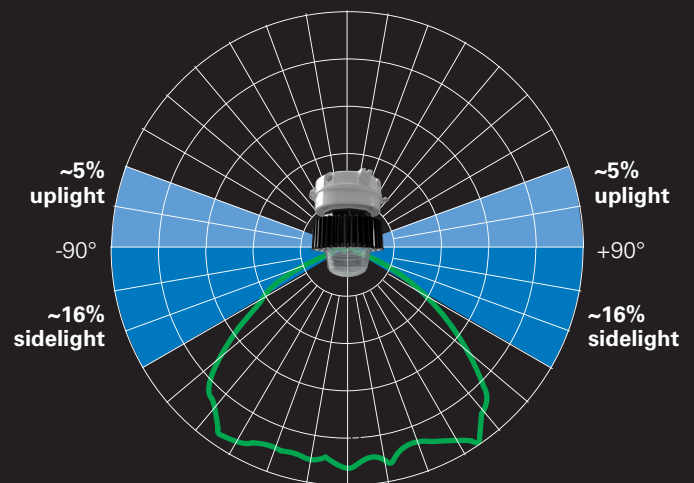
| Model             | lbs.  | kg.  | Mounting module    | lbs. | kg.  |
|-------------------|-------|------|--------------------|------|------|
| VMVL-3 to VMVL-7  | 19.00 | 8.62 | Pendant            | 1.25 | 0.57 |
| VMVL-9 to VMVL-13 | 19.20 | 8.70 | Cone pendant       | 4.00 | 1.81 |
|                   |       |      | Flexible pendant   | 1.50 | 0.68 |
|                   |       |      | Ceiling            | 2.75 | 1.25 |
|                   |       |      | Wall               | 4.50 | 2.04 |
|                   |       |      | Angled stanchion   | 3.50 | 1.59 |
|                   |       |      | Straight stanchion | 4.50 | 2.04 |

## Uplight refractor lens now available



## Maximize light dispersion

The new uplight refractor lens is perfect for low bay ceilings, suspended pendant mounts, areas with elevated infrastructure or areas which require dispersed side and uplight illumination.



## More directional light

~5% uplight and ~16% sidelight for better visibility



For more information go to:  
**Crouse-Hinds.com/ChampLED**

Electrical ratings:

| UNV1 driver  | Input power (watts) | Input amps at 100-277 VAC | UNV34 driver | Input power (watts) | Input amps at 347-480 VAC |
|--------------|---------------------|---------------------------|--------------|---------------------|---------------------------|
| VMVL-3       | 27                  | 0.27-0.10                 | VMVL-3       | 28                  | 0.08-0.06                 |
| VMVL-5       | 45                  | 0.45-0.16                 | VMVL-5       | 44                  | 0.13-0.09                 |
| VMVL-7       | 61                  | 0.61-0.21                 | VMVL-7       | 57                  | 0.16-0.12                 |
| VMVL-7-S892  | 60                  | 0.60-0.23                 | VMVL-7-S892  | 61                  | 0.18-0.13                 |
| VMVL-9       | 76                  | 0.76-0.26                 | VMVL-9       | 68                  | 0.20-0.14                 |
| VMVL-9-S892  | 80                  | 0.80-0.29                 | VMVL-9-S892  | 73                  | 0.22-0.15                 |
| VMVL-11      | 91                  | 0.92-0.32                 | VMVL-11      | 83                  | 0.24-0.17                 |
| VMVL-11-S892 | 97                  | 0.97-0.35                 | VMVL-11-S892 | 86                  | 0.25-0.18                 |
| VMVL-13      | 95                  | 1.10-0.42                 | VMVL-13      | 91                  | 0.29-0.17                 |
| VMVL-13-S892 | 99                  | 1.10-0.36                 | VMVL-13-S892 | 96                  | 0.31-0.19                 |

Temperature codes, UNV1 driver:

| UNV1: VMVL-3 to VMVL-11   | 40°C | 55°C | 65°C |
|---|------|------|------|
| Class I, Division 2   | T5   | T5   | T4A  |
| Class II, Division 1  | T6   | T6   | T5   |
| Simultaneous rating Class I, Division 1 & 2                                   | T4A  | T4   | T3C  |
| Class I, Zone 2<br>AEx ec mb; Ex ec mb  | T5   | T5*  | T4   |
| Class III, Div. 1<br>Class II, Div. 1, Groups E, F, G<br>Zone 21, AEx tb IIIC | T72  | T72  | T92  |

\* TCode is T4 for VMVL-11 with R1, R3 Optics

| UNV1: VMVL-7, 9 & 11-S892  | 40°C | 55°C | 65°C |
|--|------|------|------|
| Class I, Division 2  | T5   | T4A  | T4A  |
| Class II, Division 1   | T6   | T6   | T5   |
| Simultaneous rating Class I, Division 1 & 2                                  | T4A  | T4   | T3C  |
| Class I, Zone 2<br>AEx ec mb; Ex ec mb                                       | T4   | T4   | T4   |
| Class III, Div. 1<br>Class II, Div. 1, Groups E, F, G<br>Zone 21 AEx tb IIIC | T72  | T87  | T92  |

| UNV1: VMVL-13   | 40°C | 55°C |
|---|------|------|
| Class I, Division 2   | T4A  | T4A  |
| Class II, Division 1  | T6   | T6   |
| Simultaneous rating Class I, Division 1 & 2                                   | T4A  | T4A  |
| Class I, Zone 2<br>AEx ec mb; Ex ec mb  | T5   | T4   |
| Class III, Div. 1<br>Class II, Div. 1, Groups E, F, G<br>Zone 21, AEx tb IIIC | T64  | T77  |

| UNV1: VMVL-13-S892   | 40°C | 55°C |
|--|------|------|
| Class I, Division 2  | T5   | T4A  |
| Class II, Division 1   | T6   | T6   |
| Simultaneous rating Class I, Division 1 & 2                                  | T5   | T4A  |
| Class I, Zone 2<br>AEx ec mb; Ex ec mb                                       | T4   | T4   |
| Class III, Div. 1<br>Class II, Div. 1, Groups E, F, G<br>Zone 21 AEx tb IIIC | T64  | T77  |

| All models          |                      |                     |                      |
|---------------------|----------------------|---------------------|----------------------|
| Power factor        | ≥0.90                | THD                 | ≤15%                 |
| UNV34               |                      | UNV1                |                      |
| Voltage range, VAC* | 347-480V at 50/60 Hz | Voltage range, VAC* | 100-277V at 50/60 Hz |
|                     |                      | Voltage range, VDC  | 127-250V             |

\*IEC voltage: 100-240 VAC @ 50/60 Hz.  
\*\*For VMVL-3: PF>0.9 from 100-255 VAC.

EMC / CE compliance:  
If the dimming interface of the LED driver is connected to an external dimmer which is not provided with the luminaire, a ferrite core must be used on the input and dimming lines.  
Approved ferrite cores are: Fair-Rite P/N 0431167281.

Temperature codes, UNV34 driver:

| UNV34: VMVL-3 to VMVL-11                    | 40°C | 55°C | 65°C |
|---|------|------|------|
| Class I, Division 2                         | T5   | T5*  | T4A  |
| Class II, Division 1                        | T6   | T6   | T5   |
| Simultaneous rating Class I, Division 1 & 2 | T4A  | T4   | T3C  |

\* TCode is T4A for VMVL-11 with R1, R3 Optics

| UNV34: VMVL-7, 9, & 11-S892                 | 40°C | 55°C | 65°C |
|---|------|------|------|
| Class I, Division 2                         | T5   | T5*  | T4A  |
| Class II, Division 1                        | T6   | T6   | T5   |
| Simultaneous rating Class I, Division 1 & 2 | T4A  | T4   | T3C  |

\* TCode is T4A for VMVL-11-S892 with R1, R3 Optics

| UNV34: VMVL-13                              | 40°C | 55°C |
|---|------|------|
| Class I, Division 2                         | T4A  | T4A  |
| Class II, Division 1                        | T6   | T6   |
| Simultaneous rating Class I, Division 1 & 2 | T4A  | T4A  |

| UNV34: VMVL-13-S892                         | 40°C | 55°C |
|---|------|------|
| Class I, Division 2                         | T4A  | T4A  |
| Class II, Division 1                        | T6   | T6   |
| Simultaneous rating Class I, Division 1 & 2 | T4A  | T4A  |



# Ordering information

Part number example: **VMVL-3-N-2A-R1-G-UNV1-S831-S891**

Champ VMVL, 3,000 lumens, 4000K neutral white, ¾" pendant mount, Type I optics, wire guard, 100-277 VAC driver, safety cable, diffused glass lens

## VMVL - 3 - N - 2A - R1 - G - UNV1 - S831 - UPLT

### Light source/intensity

|            |                       |
|------------|-----------------------|
| <b>3</b>   | 3,250 nominal lumens  |
| <b>5</b>   | 5,537 nominal lumens  |
| <b>7</b>   | 7,442 nominal lumens  |
| <b>9</b>   | 9,234 nominal lumens  |
| <b>11</b>  | 11,114 nominal lumens |
| <b>13*</b> | 13,100 nominal lumens |
| <b>A</b>   | Amber - 5,200 lumens  |
| <b>G</b>   | Green - 4,300 lumens  |

\*For 13L models, add "-M2" suffix at the end of the part number.  
Example: VMVL-13-2A-R1-UNV1-S831-M2

### Color temperature

|              |  |
|--------------|--|
| <b>BLANK</b> | 5000K, 70 CRI ( <i>cool white</i> )    |
| <b>N*</b>    | 4000K, 70 CRI ( <i>neutral white</i> ) |
| <b>W</b>     | 3000K, 80 CRI ( <i>warm white</i> )    |

\*Consult factory for lead time.  
\*\*5700K and 6500K are available upon request; consult factory.  
\*\*\*Not available for Amber or Green LED.

### Mounting

|              |                            |
|--------------|----------------------------|
| <b>BLANK</b> | No mounting module         |
| <b>J</b>     | 1-½" stanchion, 25° angled |
| <b>P</b>     | 1-½" stanchion, straight   |
| <b>2A</b>    | ¾" pendant                 |
| <b>3A</b>    | 1" pendant                 |
| <b>20A</b>   | 20mm pendant               |

|            |                     |
|------------|---------------------|
| <b>25A</b> | 25mm pendant        |
| <b>2B</b>  | ¾" cone pendant     |
| <b>3B</b>  | 1" cone pendant     |
| <b>2HA</b> | ¾" flexible pendant |
| <b>2C</b>  | ¾" ceiling          |
| <b>3C</b>  | 1" ceiling          |

|             |              |
|-------------|--------------|
| <b>20C</b>  | 20mm ceiling |
| <b>25C</b>  | 25mm ceiling |
| <b>2TW</b>  | ¾" wall      |
| <b>3TW</b>  | 1" wall      |
| <b>20TW</b> | 20mm wall    |
| <b>25TW</b> | 25mm wall    |

### Lens guard

|              |            |
|--------------|------------|
| <b>BLANK</b> | No guard   |
| <b>G</b>     | Wire guard |

### Optics

|              |  |
|--------------|--|
| <b>BLANK</b> | Type V optic standard  |
| <b>R1</b>    | Type I optic ( <i>all mounts minus ceiling</i> )   |
| <b>R1A*</b>  | Type I optic ( <i>ceiling with conduit 45° counterclockwise from top hat hinge</i> )     |
| <b>R1B*</b>  | Type I optic ( <i>ceiling with conduit 135° clockwise from top hat hinge</i> )           |
| <b>R3</b>    | Type III optic ( <i>all mounts minus ceiling</i> )                                       |
| <b>R3AP*</b> | Type III optic ( <i>select when using Appleton® top hat adapter with Champ fixture</i> ) |
| <b>R3A1*</b> | Type III optic ( <i>ceiling with conduit 45° counterclockwise from top hat hinge</i> )   |
| <b>R3A2*</b> | Type III optic ( <i>ceiling with conduit 135° clockwise from top hat hinge</i> )         |
| <b>R3B1*</b> | Type III optic ( <i>ceiling with conduit 45° clockwise from top hat hinge</i> )          |
| <b>R3B2*</b> | Type III optic ( <i>ceiling with conduit 135° counterclockwise from top hat hinge</i> )  |

\*Available with ceiling mount modules only.

### Accessories & options†

|              |  |
|--------------|--|
| <b>S812</b>  | Trunnion mount kit with pin ( <i>available with ceiling mount only</i> ) |
| <b>S831</b>  | Safety cable   |
| <b>S890</b>  | Quick clip   |
| <b>S892*</b> | Redundant driver   |
| <b>TB6**</b> | Six-pole terminal block  |

†Ordered with fixture or available separately.

\*Available for VMVL-7, 9, 11 and 13 only

\*\*For NEC/CEC only.

### Voltage‡

|              |                                    |
|--------------|------------------------------------|
| <b>UNV1</b>  | 100-277 VAC, 50/60 Hz; 127-250 VDC |
| <b>UNV34</b> | 347-480 VAC, 50/60 Hz              |

‡IEC voltage; 100-240 VAC at 50/60 Hz.

### Lens material

|               |                        |
|---------------|------------------------|
| <b>BLANK</b>  | Clear glass            |
| <b>S891</b>   | Diffused glass         |
| <b>S896*</b>  | Teflon coated lens     |
| <b>S903</b>   | Polycarbonate          |
| <b>UPLT**</b> | Uplight refractor lens |

\*For NEC/CEC only.

\*\*Recommended for use with Type V optic

## Accessories (ordered separately)

### Replacement driver kits

|   |   |
|---|---|
| <b>VMVL-3-5-7L-UNV1-DRIVER KIT</b>          | UNV1 replacement driver kit for VMVL-3, -5 and -7       |
| <b>VMVL-9-11L-UNV1-DRIVER KIT</b>           | UNV1 replacement driver kit for VMVL-9 and -11          |
| <b>VMVL-96W-13L-UNV1-M2-DRIVER-REPL-KIT</b> | UNV1 replacement driver kit for VMVL-13                 |
| <b>VMVL-3L-5L-UNV34-DRIVER-KIT</b>          | UNV34 replacement driver kit for VMVL-3 and -5          |
| <b>VMVL-7L-UNV34-DRIVER-KIT</b>             | UNV34 replacement driver kit for VMVL-7                 |
| <b>VMVL-9L-UNV34-DRIVER-KIT</b>             | UNV34 replacement driver kit for VMVL-9                 |
| <b>VMVL-11L-UNV34-DRIVER-KIT</b>            | UNV34 replacement driver kit for VMVL-11                |
| <b>VMVL-13-M2-DRIVER-KIT</b>                | UNV34 replacement driver kit for VMVL-13                |
| <b>VMVL-7L-S892-UNV1-DRIVER-KIT</b>         | UNV1 replacement redundant driver kit for VMVL-7        |
| <b>VMVL-9L-11L-S892-UNV1-DRIVER-KIT</b>     | UNV1 replacement redundant driver kit for VMVL-9 and 11 |
| <b>VMVL-13-UNV1-S892-M2-DRIVER-KIT</b>      | UNV1 replacement redundant driver kit for VMVL-13       |
| <b>VMVL-7L-S892-UNV34-DRIVER-KIT</b>        | UNV34 replacement redundant driver kit for VMVL-7       |
| <b>VMVL-9L-S892-UNV34-DRIVER-KIT</b>        | UNV34 replacement redundant driver kit for VMVL-9       |
| <b>VMVL-11L-S892-UNV34-DRIVER-KIT</b>       | UNV34 replacement redundant driver kit for VMVL-11      |
| <b>VMVL-13-UNV34-S892-M2-DRIVER-KIT</b>     | UNV34 replacement redundant driver kit for VMVL-13      |
| <b>VMVL-AL-GL-UNV1-DRIVER-KIT</b>           | UNV1 replacement driver kit for amber or green models   |

### Mounting & hardware

|                         |   |
|-------------------------|---|
| <b>VMVL S812 K1</b>     | Trunnion mount kit with pin*            |
| <b>VMVL S812 K1 DBR</b> | PVC coated trunnion mount kit with pin* |
| <b>VMVL S831 K1</b>     | Safety cable                            |
| <b>VMVL S890 K1</b>     | Quick Clip                              |

\*Available with ceiling mounted modules only.

### Mounting adapters

|              |   |
|--------------|---|
| <b>CHMM1</b> | Mounting adapter for Appleton MercMaster III mounts |
| <b>CHMM2</b> | Mounting adapter for MercMaster II mounts           |
| <b>CHMM3</b> | Mounting adapter for Thomas & Betts HazLux mounts   |
| <b>CHMM4</b> | Mounting adapter for GE H2 Filtr-Gard mounts        |

### Photocells

|                   |                     |
|-------------------|---------------------|
| <b>D2S20</b>      | Photocell, 120V     |
| <b>D2S208 277</b> | Photocell, 208-277V |

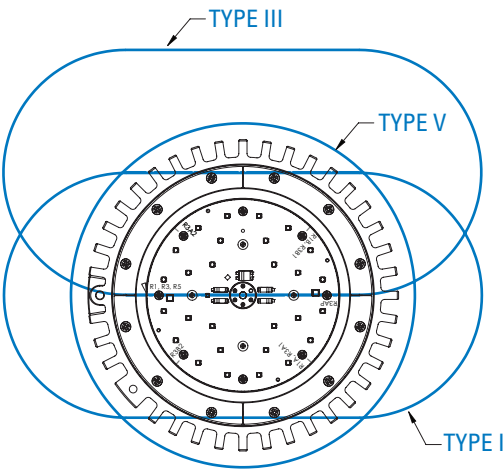
### Lens guard

|              |                 |
|--------------|-----------------|
| <b>P3001</b> | Wire guard      |
| <b>P3003</b> | UPLT wire guard |

# Optics options

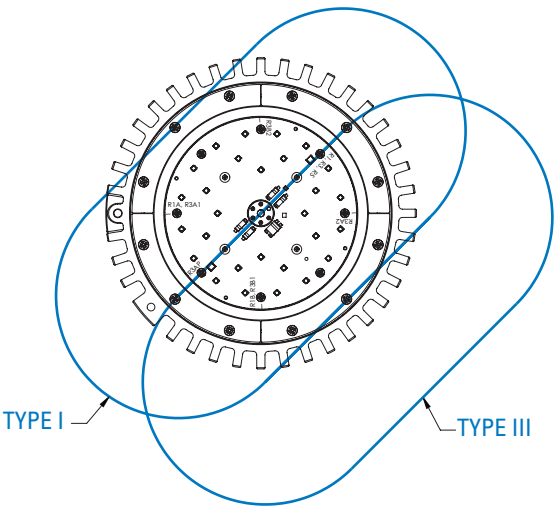
## R1, R3 and BLANK

Type I, III and V optics with all mounts minus ceiling



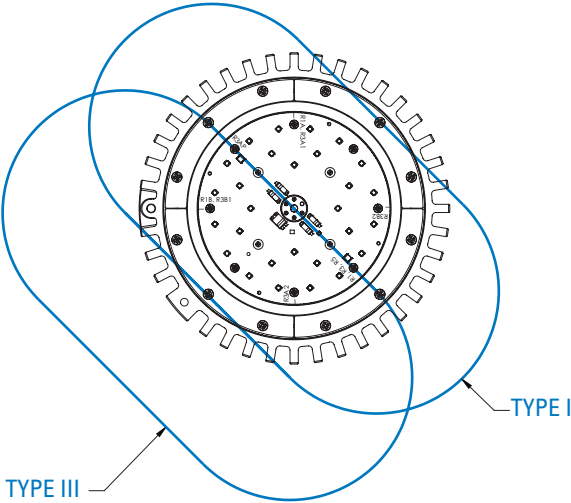
## R1A and R3A1

Type I and Type III ceiling mount only



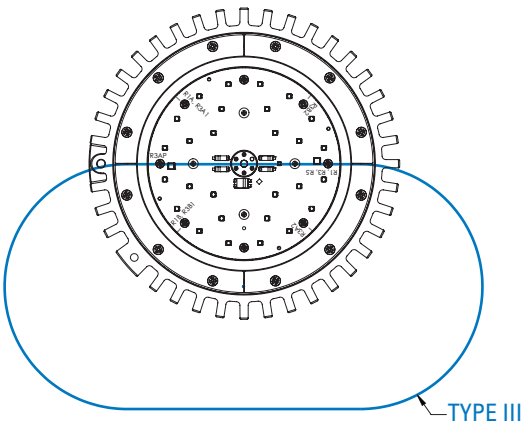
## R1B and R3B1

Type I and Type III ceiling mount only



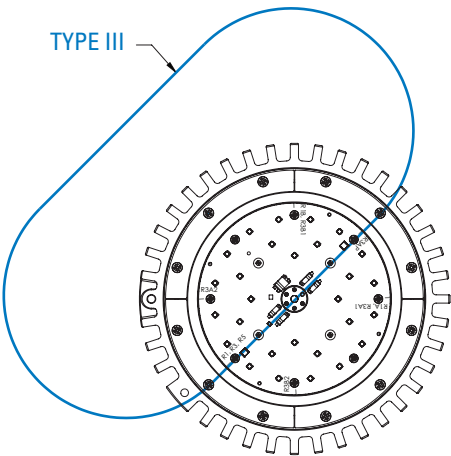
## R3AP

Type III wall mount



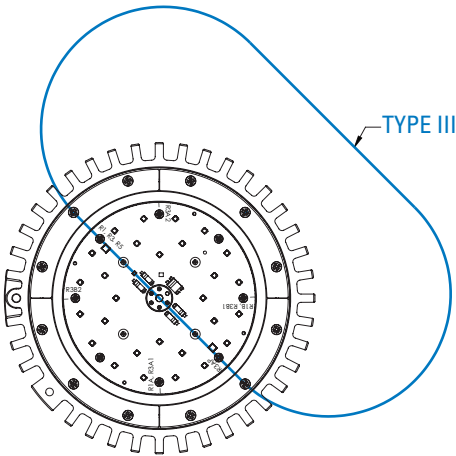
## R3A2

Type III ceiling mount only



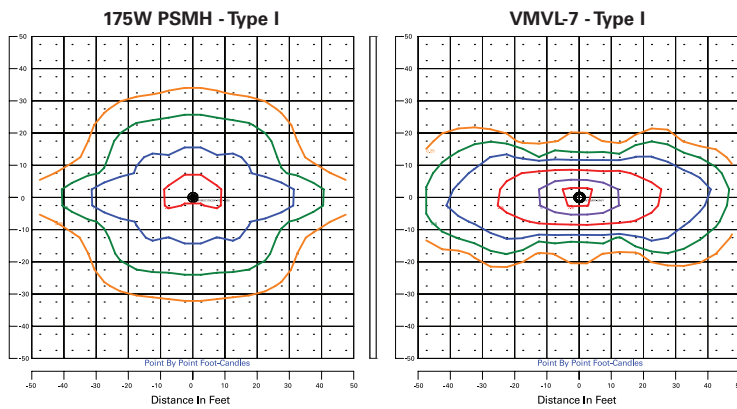
## R3B2

Type III ceiling mount only





# Photometric comparison at 15 ft. mounting height

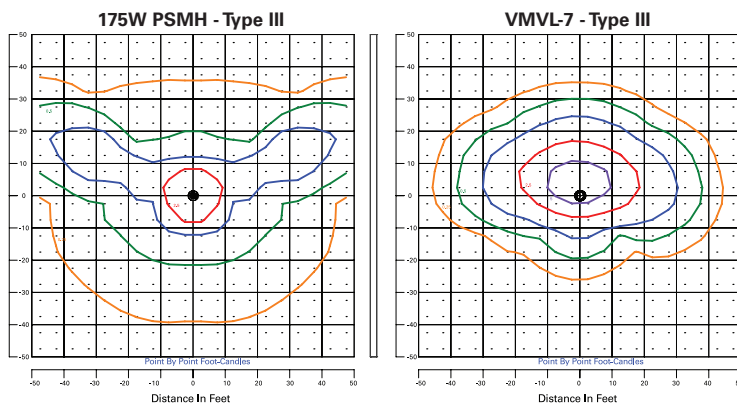


## Type I optical pattern



### Calculation summary

| Label            | Calc. type (in Fc) | Avg. | Max. | Min. |
|------------------|--------------------|------|------|------|
| VMV 175W MH grid | Illuminance        | 0.45 | 2.8  | 0.0  |
| VMV LED grid     | Illuminance        | 0.62 | 8.0  | 0.0  |

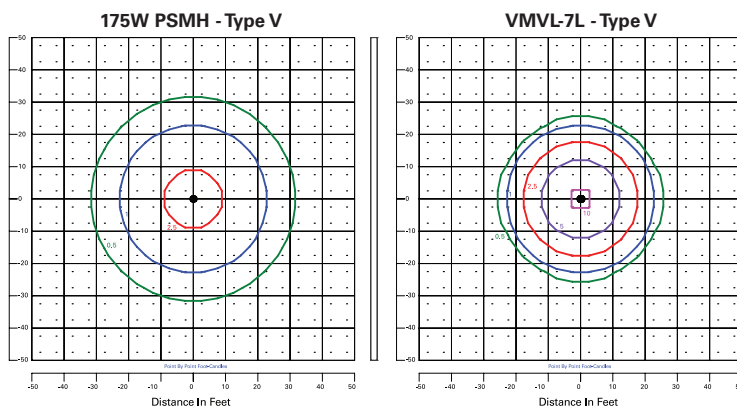


## Type III optical pattern

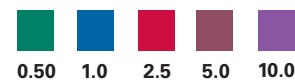


### Calculation summary

| Label            | Calc. type (in Fc) | Avg. | Max. | Min. |
|------------------|--------------------|------|------|------|
| VMV 175W MH grid | Illuminance        | 0.53 | 3.2  | 0.1  |
| VMV LED grid     | Illuminance        | 0.61 | 7.5  | 0.0  |



## Type V optical pattern



### Calculation summary

| Label            | Calc. type (in Fc) | Avg. | Max. | Min. |
|------------------|--------------------|------|------|------|
| VMV 175W MH grid | Illuminance        | 0.51 | 2.8  | 0.1  |
| VMV LED grid     | Illuminance        | 0.69 | 10.1 | 0.0  |

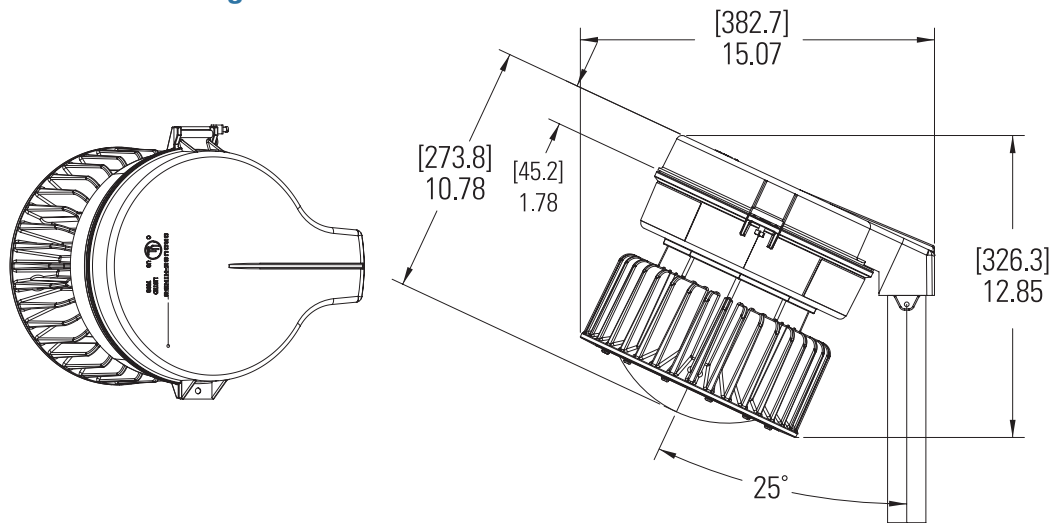
Higher average footcandles, uniformity and distribution coverage with less than half the lumens and energy consumption compared to 175W metal halide

| Actual lumens (nominal†) | VMVL-3 | VMVL-5 | VMVL-7 | VMVL-9 | VMVL-11 |
|--------------------------|--------|--------|--------|--------|---------|
| Type I                   | 3,360  | 5,045  | 6,844  | 8,823  | 10,730  |
| Type III                 | 3,309  | 4,468  | 6,741  | 8,618  | 10,660  |
| Type V                   | 3,250  | 5,537  | 7,442  | 9,234  | 11,114  |

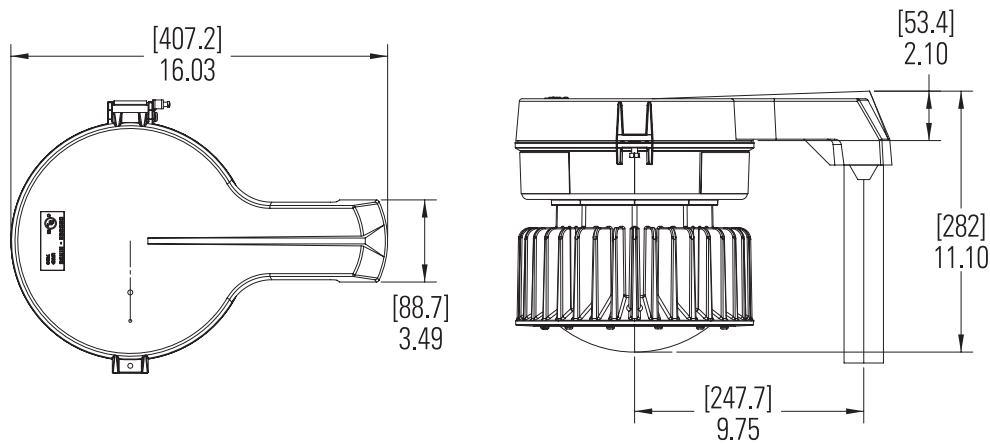
†Tolerance +/- 10%.

# Dimensions

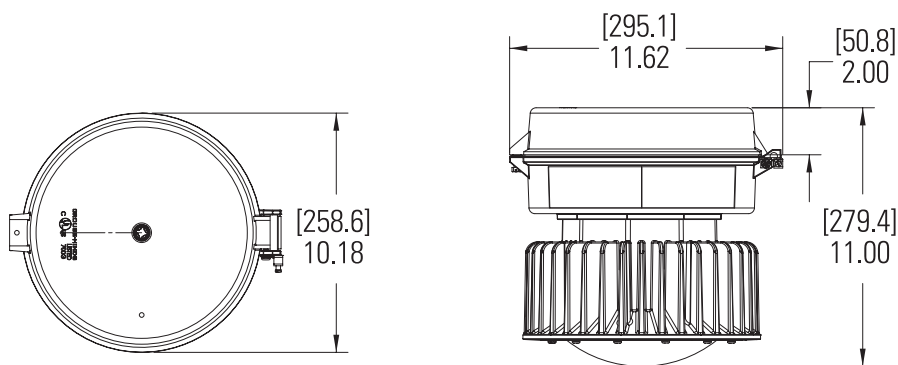
## Stanchion - 25° angled



## Stanchion - straight



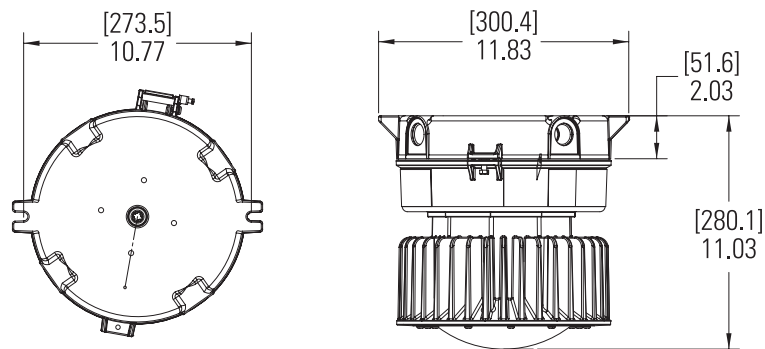
## Pendant



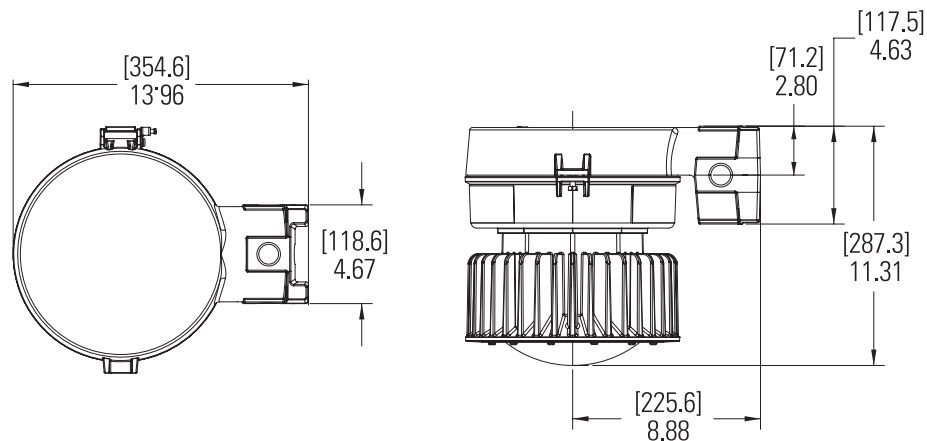


# Dimensions

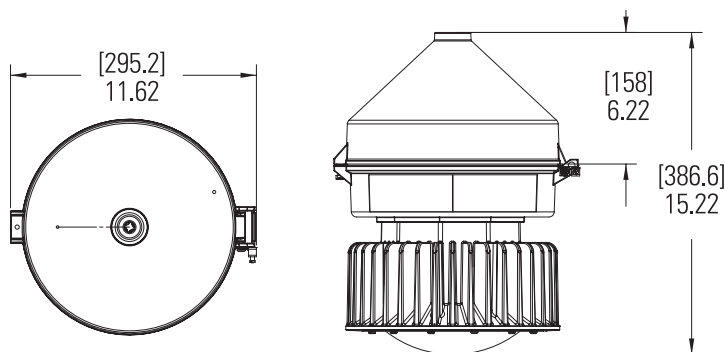
## Ceiling



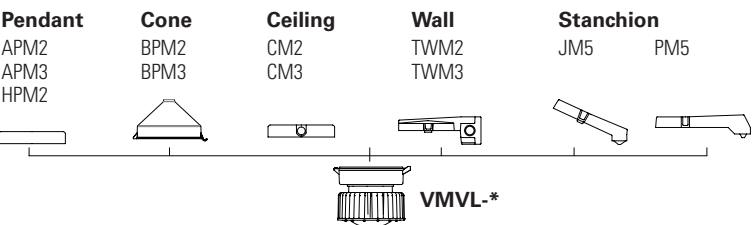
## Wall



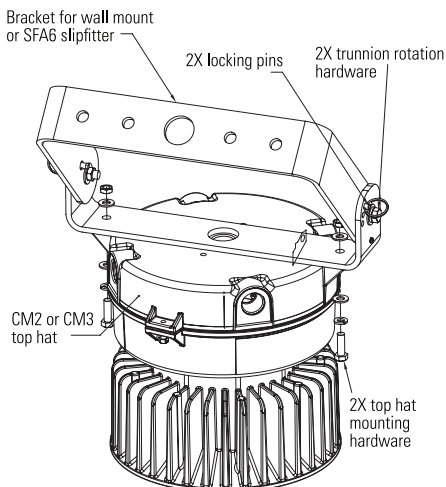
## Cone pendant



## Mounting module series



## Trunnion



## Notes





**U.S. (global headquarters):  
Eaton's Crouse-Hinds business**

1201 Wolf Street  
Syracuse, NY 13208

(866) 764-5454  
FAX: (315) 477-5179  
FAX Orders Only:  
(866) 653-0640

[crousecustomerctr@eaton.com](mailto:crousecustomerctr@eaton.com)

**Eaton's B-Line business**

509 West Monroe Street  
Highland, IL 62249

800-851-7415  
FAX: 618-654-1917  
[Eaton.com/b-lineseries](http://Eaton.com/b-lineseries)

**IEC Electrical**  
(CEAG products)

49 (0) 6271 806-500  
FAX: 49 (0) 6271 806-476

[Info-ex@eaton.com](mailto:Info-ex@eaton.com)

**Airport Lighting**

866-764-5454

[CrouseCustomerCTR@Eaton.com](mailto:CrouseCustomerCTR@Eaton.com)

**Mexico/Latin America/Caribbean**

52-555-804-4000  
FAX: 52-555-804-4020

[ventascentromex@eaton.com](mailto:ventascentromex@eaton.com)

**Haz Area Communications**  
(MEDC, Hernis, Oxalis, FHF Sonix)

44 (0) 1623 444400  
FAX: 44 (0) 1623 444531

[MEDCadmin@Eaton.com](mailto:MEDCadmin@Eaton.com)

**Canada**

Toll Free: 800-265-0502  
FAX: (800) 263-9504  
FAX Orders only: (866) 653-0645

**China**

86-21-2899-3600  
FAX: 86-21-2899-4055

[cchsales@cooperindustries.com](mailto:cchsales@cooperindustries.com)

**Process instrumentation**  
(MTL products)

44 (0) 1582 723633  
FAX: 44 (0) 1582 422283

[enquiry@mtl-inst.com](mailto:enquiry@mtl-inst.com)

**Eaton Middle East**

9714-8066100  
FAX: 9714-8894813

[CHBL-ME@eaton.com](mailto:CHBL-ME@eaton.com)

**Australia**

61-2-8787-2777  
FAX: 61-2-9609-2342

[CEASales@cooperindustries.com](mailto:CEASales@cooperindustries.com)

**For more information:**

If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
[Eaton.com](http://Eaton.com)

© 2023 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. 5488-0623  
June 2023

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.



Powering Business Worldwide