

Champ VMVL

LED lighting for hazardous areas

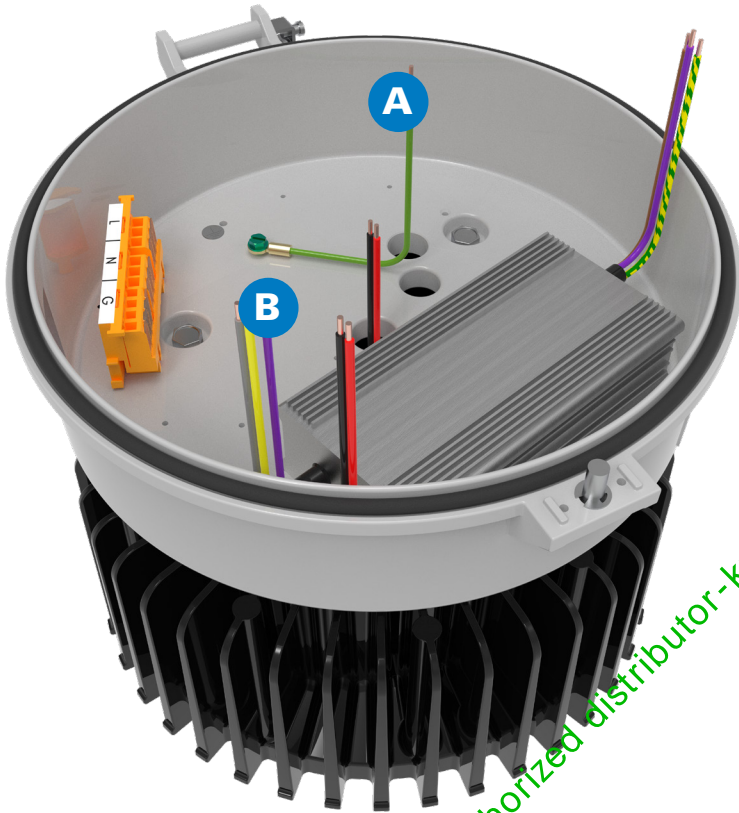
Safe. Reliable. Efficient.
3,000 to 13,000 lumens



Powering Business Worldwide

Design features

Our Champ VMVL high lumen LED is a field-proven design that helps ensure safety, reliability and performance in harsh and heavy industrial areas. The new form factor is engineered to deliver more operational value and better total cost of ownership.



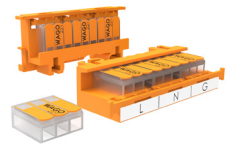
INSTALLATION EASE

A Easy access

- Separate driver compartment enables faster installation, access to wiring and field maintenance

B Lever lock connectors and terminal blocks

- Plug and play wiring simplifies and speeds installations



C Versatile mounting options

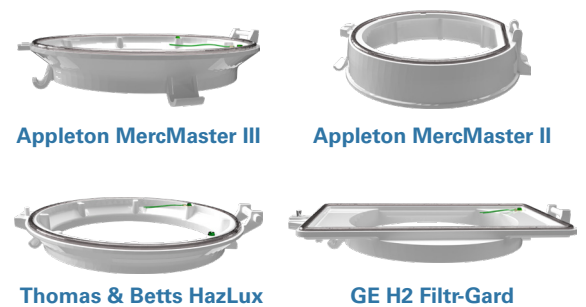
- Seven mounting options help ensure that the fixtures are installed in the correct location to properly light your facility
- Compatible with previous generation Champ HID and LED mounting modules
- Four mounting adapters for easy retrofit to popular industry fixtures

Mounting modules



C

Mounting adapters



LONG-LIFE RELIABILITY

D Thermal management

- Heat fins help ensure proper air flow and facilitate dust-shedding for effective heat dissipation and thermal management of LED engine



E Performance in extreme environments

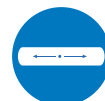
- Operating ambient: -40°C to 65°C
- Type 4X, IP66
- 6kV surge protection
- Corrosion-resistant aluminum housing with Corro-free™ epoxy powder coating
- Vibration tested in accordance with Section 33 of UL844
- Impact tested in accordance with Section 68 of UL844



LIGHT PERFORMANCE & QUALITY

F Custom optics & colors

- Type V optics with wide, medium and narrow beam pattern options for ultimate flexibility
- Directs light where you need it, helping eliminate gaps and dark spots
- Can potentially reduce the number of light fixtures required in your application
- 3000K-WARM and 5000K-COOL color options available



TYPE I



TYPE V



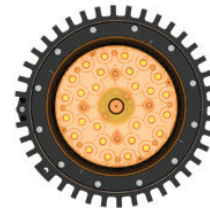
TYPE III



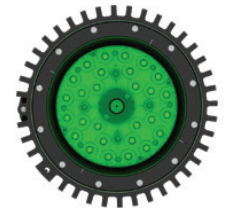
5000K – COOL



3000K – WARM



AMBER



GREEN

G Multiple lens options

- Clear glass lens standard, diffused glass, clear polycarbonate and upright refractor lens lenses optional



Clear



Diffused



Upright refractor

General specifications

Additional features:

- Installation flexibility: seven mounting module styles help ensure that the fixtures are installed in the correct location to properly light your facility
- 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 [terms & conditions](#) on Eaton.com for Crouse-Hinds series solutions.

Standard materials:

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

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

**Only available for 9L - 13L models.

Enhanced Surge Protection:

- Standard: 6kV IEC rated (6 kV/3kA L-L, 10 kV/0.83kA L-G)
- SG1 option: 6kV IEC & ANSI rated (6kV/3kA L-L & L-G)

Colored LED options:

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

Photometrics:

For IES photometric files, please refer to the resource tab of the [VMVL LED product page](#) on Eaton.com

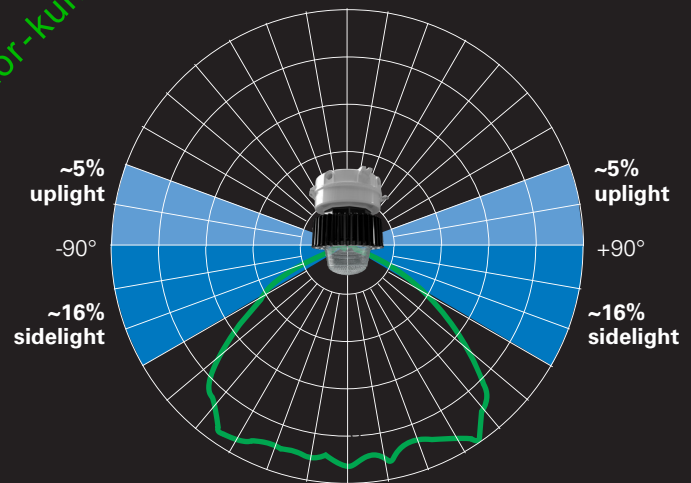


Uplight refractor lens now available



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:
[Eaton.com/Champ](#)

Certifications & 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, 127-250VDC.

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 T5 Gc -40°C to +65°C
- Ⓢ II 2 D Ex tb IIIC T92°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

More Champ solutions available



Champ VMVL
LED high bay

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



Champ FMVA
LED floodlights

Safe. Reliable. Efficient.
3,000 to 50,000 lumens

Electrical specifications – UNV1

Electrical ratings:

Model	Weight lbs. (kg.)	Nominal lumens*	Efficacy	Wattage	Voltage	Amps	Power factor	THD	Surge protection
VMVL-3-UNV1	19.00 (8.62)	3,302	122 lm/W	27	100-277 VAC, 50/60 Hz; 127-250 VDC	0.27-0.10	0.90	<15%	6 kV
VMVL-5-UNV1	19.00 (8.62)	5,412	126 lm/W	43	100-277 VAC, 50/60 Hz; 127-250 VDC	0.45-0.16	0.90	<15%	6 kV
VMVL-7-UNV1	19.00 (8.62)	7,327	129 lm/W	57	100-277 VAC, 50/60 Hz; 127-250 VDC	0.61-0.21	0.90	<15%	6 kV
VMVL-7-UNV1-S892	19.00 (8.62)	7,327	122 lm/W	60	100-277 VAC, 50/60 Hz; 127-250 VDC	0.60-0.23	0.90	<15%	6 kV
VMVL-9-UNV1	19.20 (8.70)	9,229	123 lm/W	75	100-277 VAC, 50/60 Hz; 127-250 VDC	0.76-0.26	0.90	<15%	6 kV
VMVL-9-UNV1-S892	19.20 (8.70)	9,229	115 lm/W	80	100-277 VAC, 50/60 Hz; 127-250 VDC	0.80-0.29	0.90	<15%	6 kV
VMVL-11-UNV1	19.20 (8.70)	11,266	122 lm/W	92	100-277 VAC, 50/60 Hz; 127-250 VDC	0.92-0.32	0.90	<15%	6 kV
VMVL-11-UNV1-S892	19.20 (8.70)	11,266	114 lm/W	97	100-277 VAC, 50/60 Hz; 127-250 VDC	0.97-0.35	0.90	<15%	6 kV
VMVL-13-UNV1	19.20 (8.70)	13,093	142 lm/W	92	100-277 VAC, 50/60 Hz; 127-250 VDC	1.10-0.42	0.90	<15%	6 kV
VMVL-13-UNV1-S892	19.20 (8.70)	13,093	132 lm/W	99	100-277 VAC, 50/60 Hz; 127-250 VDC	1.10-0.36	0.90	<15%	6 kV

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 AEx ec mb; Ex ec mb	T5	T5*	T4
Class III, Div. 1 Class II, Div. 1, Groups E, F, G Zone 21, AEx tb IIIC	T72	T72	T92

* T-Code is T4 for VMVL-11 with R1, R3 Optics

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 AEx ec mb; Ex ec mb	T5	T4
Class III, Div. 1 Class II, Div. 1, Groups E, F, G Zone 21, AEx tb IIIC	T64	T77

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 AEx ec mb; Ex ec mb	T4	T4	T4
Class III, Div. 1 Class II, Div. 1, Groups E, F, G Zone 21 AEx tb IIIC	T72	T87	T92

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 AEx ec mb; Ex ec mb	T4	T4
Class III, Div. 1 Class II, Div. 1, Groups E, F, G Zone 21 AEx tb IIIC	T64	T77

Electrical specifications – UNV34

Electrical ratings:

Model	Weight lbs. (kg.)	Nominal lumens*	Efficacy	Wattage	Voltage	Amps	Power factor	THD	Surge protection
VMVL-3-UNV34	19.00 (8.62)	3,250	116 lm/W	28	347-480 VAC, 50/60 Hz	0.08-0.06	0.90	<15%	6 kV
VMVL-5-UNV34	19.00 (8.62)	5,537	125 lm/W	44	347-480 VAC, 50/60 Hz	0.13-0.09	0.90	<15%	6 kV
VMVL-7-UNV34	19.00 (8.62)	7,442	130 lm/W	57	347-480 VAC, 50/60 Hz	0.16-0.12	0.90	<15%	6 kV
VMVL-7-UNV34-S892	19.00 (8.62)	7,442	122 lm/W	61	347-480 VAC, 50/60 Hz	0.18-0.13	0.90	<15%	6 kV
VMVL-9-UNV34	19.20 (8.70)	9,234	136 lm/W	68	347-480 VAC, 50/60 Hz	0.20-0.14	0.90	<15%	6 kV
VMVL-9-UNV34-S892	19.20 (8.70)	9,234	126 lm/W	73	347-480 VAC, 50/60 Hz	0.22-0.15	0.90	<15%	6 kV
VMVL-11-UNV34	19.20 (8.70)	11,114	134 lm/W	83	347-480 VAC, 50/60 Hz	0.24-0.17	0.90	<15%	6 kV
VMVL-11-UNV34-S892	19.20 (8.70)	11,114	129 lm/W	86	347-480 VAC, 50/60 Hz	0.25-0.18	0.90	<15%	6 kV
VMVL-13-UNV34	19.20 (8.70)	13,100	143 lm/W	91	347-480 VAC, 50/60 Hz	0.29-0.17	0.90	<15%	6 kV
VMVL-13-UNV34-S892	19.20 (8.70)	13,100	136 lm/W	96	347-480 VAC, 50/60 Hz	0.31-0.19	0.90	<15%	6 kV

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-W-2A-R1-G-UNV1-S831-S891**

Champ VMVL, 3,000 lumens, 3000K warm white, ¾" pendant mount, Type I optics, wire guard, 100-277 VAC driver, safety cable, diffused glass lens

VMVL - 3 - W - 2A - R1 - G - UNV1 - S831 - UPLT

Light source/intensity	
3	3,250 nominal lumens
5	5,537 nominal lumens
7	7,442 nominal lumens
9	9,234 nominal lumens
11	11,114 nominal lumens
13*	13,100 nominal lumens
A	Amber - 5,200 lumens
G	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	
BLANK	5000K, 70 CRI (cool white)
N*	4000K, 70 CRI (neutral white)
W	3000K, 80 CRI (warm white)

*Consult factory for lead time. Only available for 9L - 13L models.

**5700K and 6500K are available upon request; consult factory.

***Not available for Amber or Green LED.

Mounting	
BLANK	No mounting module
J	1-½" stanchion, 25° angled
P	1-½" stanchion, straight
2A	¾" pendant
3A	1" pendant
20A	20mm pendant

25A	25mm pendant
2B	¾" cone pendant
3B	1" cone pendant
2HA	¾" flexible pendant
2C	¾" ceiling
3C	1" ceiling

Lens guard	
BLANK	No guard
G	Wire guard

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

*Available with ceiling mount modules only.

Accessories & options†	
S812	Trunnion mount kit with pin (available with ceiling mount only)
S831	Safety cable
S890	Quick clip
S892*	Redundant driver
SG1***	Enhanced ANSI compliant surge rating
TB6**	Six-pole terminal block

†Ordered with fixture or available separately.

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

**For NEC/CEC only.

***Not available on 11L, 13L and all UNV34 models.

Voltage†	
UNV1	100-277 VAC, 50/60 Hz; 127-250 VDC
UNV34	347-480 VAC, 50/60 Hz

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

Lens material	
BLANK	Clear glass
S891	Diffused glass
S903	Polycarbonate
UPLT*	Uplight refractor lens

**For use with Type V optic only.

Accessories (ordered separately)

Replacement driver kits

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

Mounting & hardware

VMVL S812 K1	Trunnion mount kit with pin*
VMVL S812 K1 DBR	PVC coated trunnion mount kit with pin*
VMVL S831 K1	Safety cable
VMVL S890 K1	Quick Clip

*Available with ceiling mounted modules only.

Mounting adapters

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

Lens guard

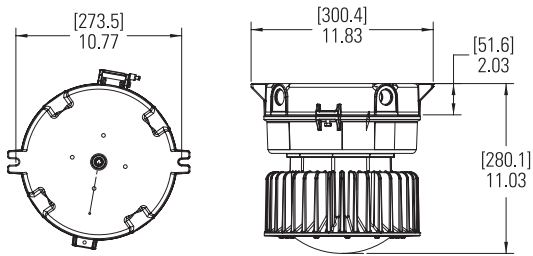
PA3001	Wire guard
P3003	UPLT wire guard

Photocells

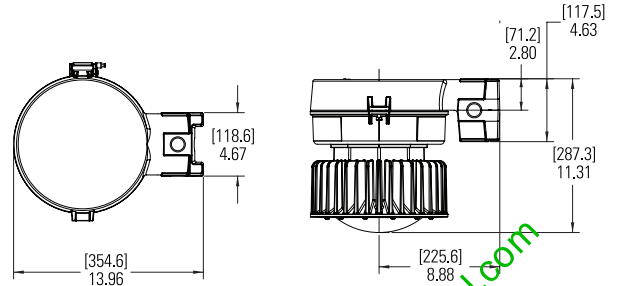
D2S20	Photocell, 120V
D2S208 277	Photocell, 208-277V

Mounting modules and dimensions:

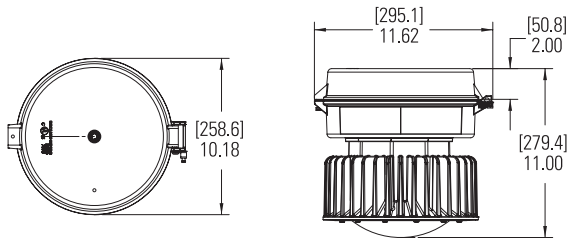
Ceiling



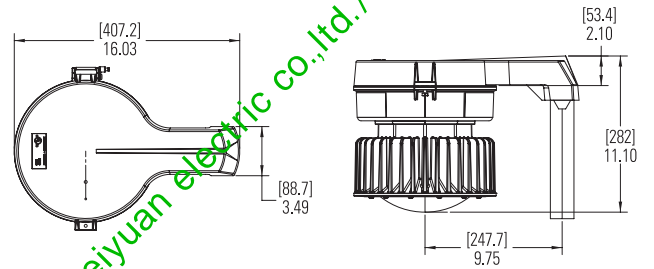
Wall



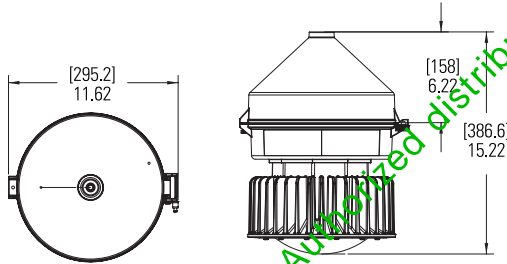
Pendant



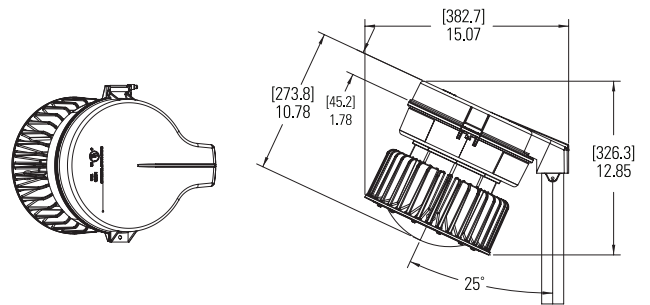
Stanchion - straight



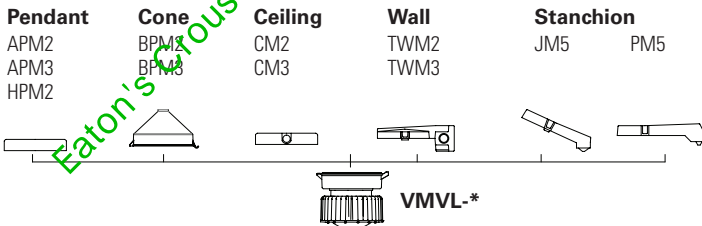
Cone pendant



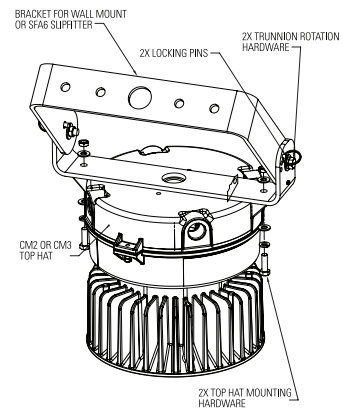
Stanchion - 25° angled



Mounting series



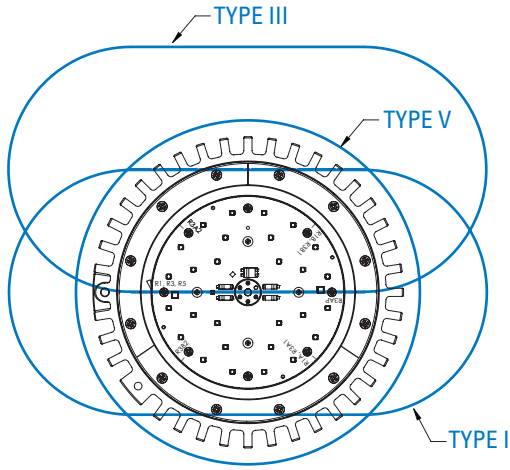
Trunnion



Optics options

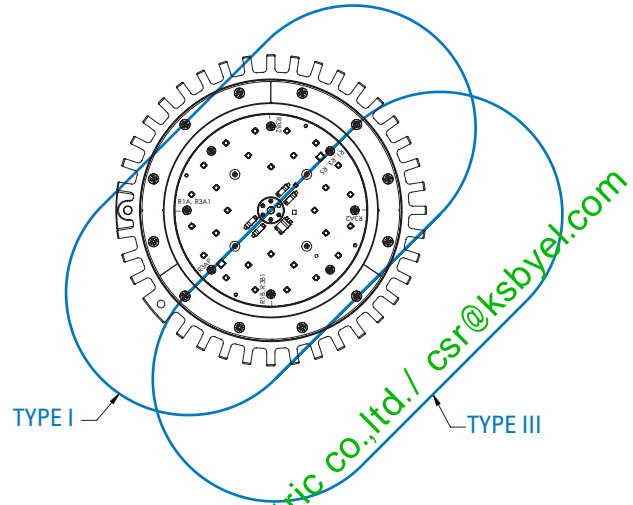
R1, R3 and BLANK

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



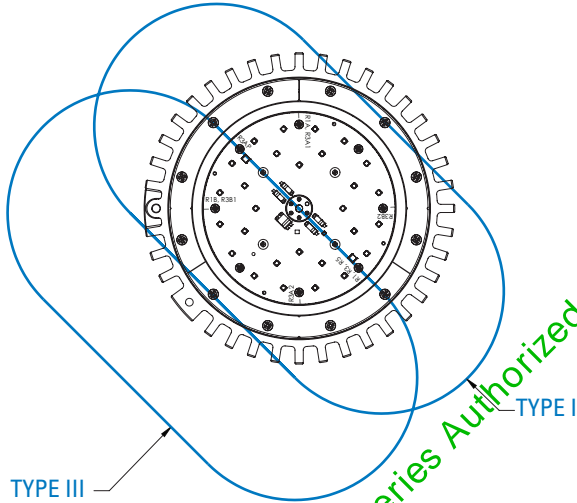
R1A and R3A1

Type I and Type III ceiling mount only



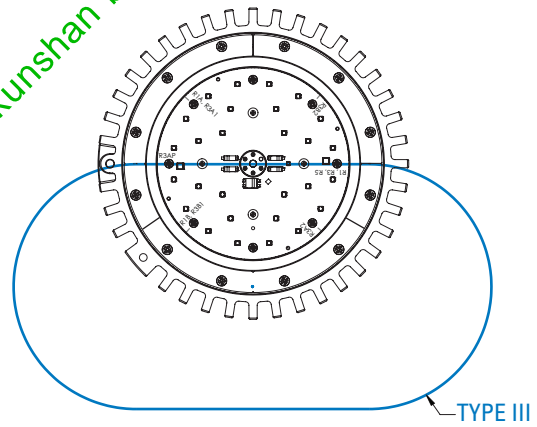
R1B and R3B1

Type I and Type III ceiling mount only



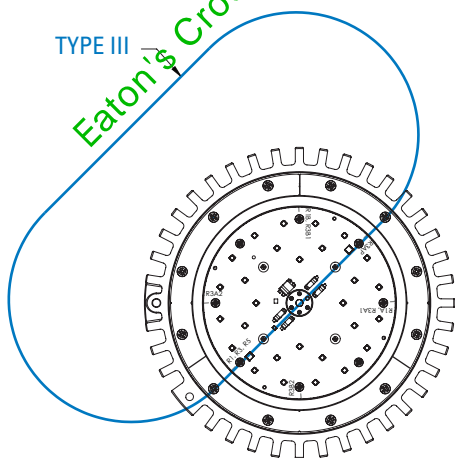
R3AP

Type III wall mount



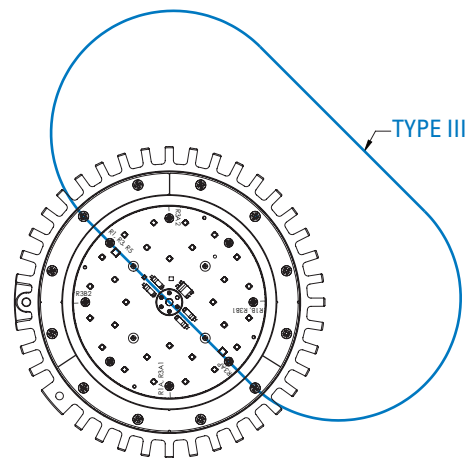
R3A2

Type III ceiling mount only

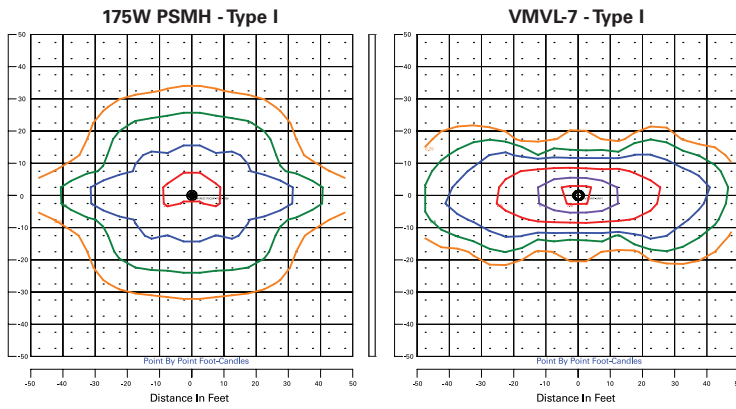


R3B2

Type III ceiling mount only



Photometric comparison at 15 ft. mounting height

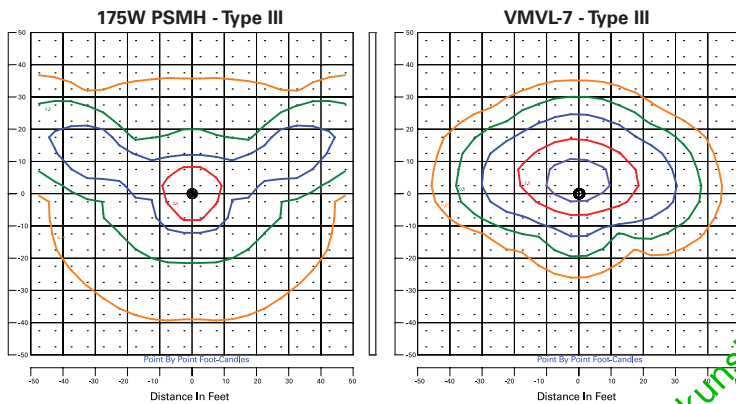


Type I optical pattern



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	8.7	0.0

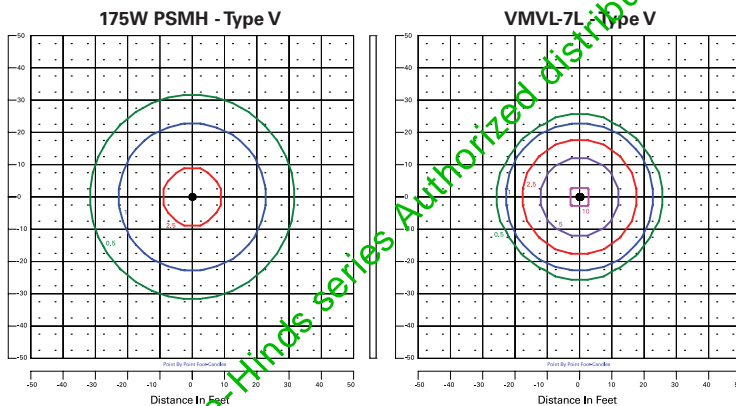


Type III optical pattern

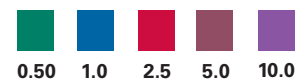


Calculation summary

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%.