

Champ VMV LED connected luminaires

An Eaton Intelligent Power™ solution

cULus Cl. I, Div. 2, Groups A, B, C, D
cULus Cl. I, Zone 2, nA nR
cULus Cl. II, Groups E, F, G
cULus Cl. III

UL/CSA
IEC/EN
Wet Locations
Type 4X; IP66

2L

2L

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

Eaton's Crouse-Hinds Division now has an innovative and reliable solution that optimizes your industrial lighting applications based on space and specific usage requirements.

Combining our advanced LED lighting fixtures with communications and sensing technology, we put full lighting control at your fingertips, allowing you to maximize energy savings and minimize maintenance costs.

Model	Typical lumens (Type V) ^A	Watts	Lumens per watt	Equivalent HID luminaire	Typical energy savings / lifetime
VMV3L	3,531	29	122	70W-100W	Up to 77%
VMV5L	5,256	41	129	100W-150W	Up to 67%
VMV7L	7,120	54	131	150W-175W	Up to 67%
VMV9L	9,134	74	124	250W-320W	Up to 74%
VMV11L	11,034	89	123	320W-400W	Up to 74%

Applications:

- Suited for customer specifically seeking to optimize benefits from control features such as scheduling, occupancy sensing, dimming, etc.
- Convenient centralized controls through software (scheduling, dimming, etc.) instead of circuit level control
- Where opportunities exist for optimizing light levels and minimizing energy usage and run time
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Manufacturing plants; heavy industrial, chemical, food and beverage facilities; mining; platforms; loading docks; tunnels; outdoor wall and pole mounted areas

Connected lighting benefits:

Eliminate over-usage of lights

- Optimize facility illumination by using light where and when you need it
- Up to 80% more efficient than standard LED luminaires^B
- Up to two times more fixture life due to reduced run time^B
- Reduced maintenance
- Reduced light pollution

Flexible and intuitive software controls

- Tune light output to meet safety and task needs – light where you need it
- Permission-based user control for added security
- Software alarms that notify on fixture, sensor and radio issues
- Ability to group fixtures by area for zone based control

Certifications and compliances:

- DesignLights Consortium® (pending)

NEC/CEC/ROW:

- cULus Class I, Division 2, Groups A, B, C, D
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- cULus Class II, Groups E, F, G
- cULus Class III
- cULus Zone 21 tb
- Simultaneous Presence
- Wet locations, Type 4X, IP66
- Marine listed
- R/C for sensor and controller
- ATEX/IECEx nA, nR, ia (pending)
- CE (pending)

National Fire Protection Association (NFPA):

- NEC NFPA 70

UL standards:

- UL1598; UL1598A; UL8750; UL844; UL60079-0; UL60079-11; UL60079-15; UL60730; UL913; UL50; UL50E

ISA12.12.01:

- Non-incendive equipments

CSA standards:

- cUL Listed to CSA standard C22.2 No. 250 (for Luminaires)
- cUL Listed to CSA standard C22.2 No. 137 (Electric Luminaires for Hazardous Locations)
- CSA 60079-11
- CSA 60079-0

IEC/EN standards (pending):

- IEC/EN 60079-0, IEC/EN 60079-15, IEC/EN 60079-11, IEC/EN 60079-31
- IEC 60529
- IEC 60598

National Electrical Manufacturers Association (NEMA):

- NEMA 250



Standard materials:

- Lamp housing and adapter – die cast aluminum with Corro-free epoxy powder coat
- Lens – heat- and impact-resistant glass
- Gaskets – silicone (non-silicone gasket available – consult factory)
- External hardware – stainless steel
- Factory sealed, no external seals required

Accessories (ordered separately):

Description	Cat. #
• Trunnion mount kit with pin.....	VMVL S812 K1
<i>Available with ceiling mount only</i>	

LED system:

- High intensity discrete power emitters
- Cool white (5000K, 70 CRI) (standard); warm white (3000K, 80 CRI) (optional)
- Custom Type I, III and V optics available

Fixture life^o:

- Rated life of 60,000 hours at 55°C and 50,000 hours at 65°C operating ambient and 24/7 continuous operation for 365 days
- Up to twice the economic life than conventional LED at 25°C ambient
- L70 >100,000 hours at 55°C

Drivers:

Option	Voltage
/UNV1	120-277 VAC, 50/60 Hz; 108-250 VDC, 50/60 Hz

Photometrics:

- Refer to www.eaton.com (under the Resources tab of each product family) for specific photometric IES files

^ATolerance +/- 10%.

^BAssuming 24/7 operation base case for LED.

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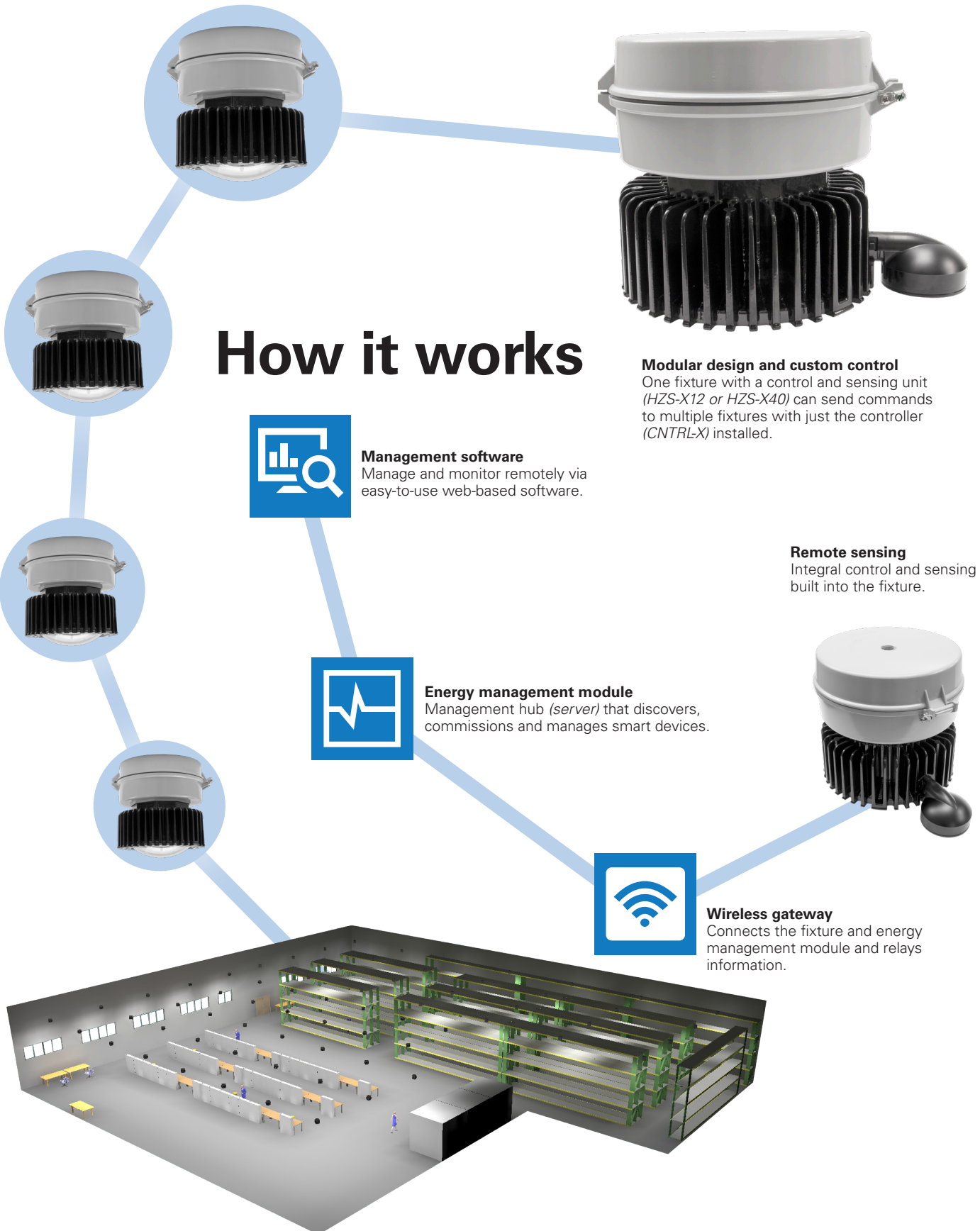
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How it works



Management software
Manage and monitor remotely via easy-to-use web-based software.



Energy management module
Management hub (*server*) that discovers, commissions and manages smart devices.



Wireless gateway
Connects the fixture and energy management module and relays information.

Modular design and custom control
One fixture with a control and sensing unit (*HZS-X12 or HZS-X40*) can send commands to multiple fixtures with just the controller (*CNTRL-X*) installed.

Remote sensing
Integral control and sensing built into the fixture.

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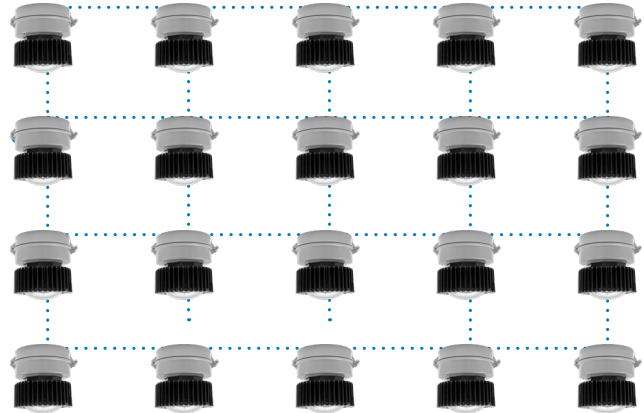
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Design features:

Safety and security:

- Fully certified for Class I, Division 2 hazardous rated areas
- Powered by SmartMesh® WirelessHART technology
- Permission-based user control to ensure software security

SmartMesh WirelessHART technology:

- Better reliability, security and power management versus other wireless protocols
- Developed as a multi-vendor, interoperable wireless technology
- Field-proven and robust even in the harshest environments

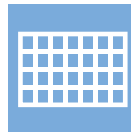
Controller:

- Controls lighting levels per pre-defined settings (scheduling, dimming, etc.)
- Sends system notifications/alerts on fixture, sensor and radio
- Provides energy metering capability
- Field replaceable

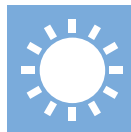
Integral sensor:

- Detects and measures area occupancy, lighting levels and ambient temperatures
- Field install in minutes
- Upgradable to accommodate future customer needs and functionality
- Up to 40 ft. sensor range

Connected lighting functionality:



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.

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Electrical ratings:

	VMV3L	VMV5L	VMV7L	VMV9L	VMV11L
Voltage range, UNV1 (VAC 50/60 Hz)	120-277	120-277	120-277	120-277	120-277
Voltage range, UNV1 (VDC 50/60 Hz)	108-250	108-250	108-250	108-250	108-250
Input power (watts)	29	41	54	74	89
Input amps at 120-277 VAC	0.24 - 0.11	0.34 - 0.16	0.45 - 0.23	0.61 - 0.31	0.74 - 0.41
Power factor	>0.90	>0.90	>0.90	>0.90	>0.90
Total harmonic distortion (THD)	<20%	<20%	<20%	<20%	<20%

Temperature performance data:

Lamp / lumen output	Driver type	Ambient temp. °C	Class I, Div. 2	Class II, Div. 1	Simultaneous rating	Class I, Zone 2	Class III, Div. 1
							Class II, Div. 1, Groups E, F, G
					Class I, Div. 2; Div. 1	AEx nA nR; Ex nA nR	Zone 21, AEx tb IIIC
3L, 5L, 7L, 9L, 11L	/UNV1	40	T5	T5	T3C	T6	T66°C
3L, 5L, 7L, 9L, 11L	/UNV1	55	T5	T4A	T3A	T5	T83°C
3L, 5L, 7L, 9L, 11L	/UNV1	65	T4A	T4A	T3A	T4	T92°C

Net luminaire weights:

Model [ⓐ]	Lbs.	Kg.
VMV3L-11L CTRL-X/UNV1	21.50	9.75
VMV3L-11L HZS-X12/UNV1	22.00	9.98
VMV3L-11L HZS-X40/UNV1	22.00	9.98
Add mounting modules:		
Pendant	1.25	0.57
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

[ⓐ]Tolerance +/- 10%.

[ⓓ]Tolerance +/- 1 lb.

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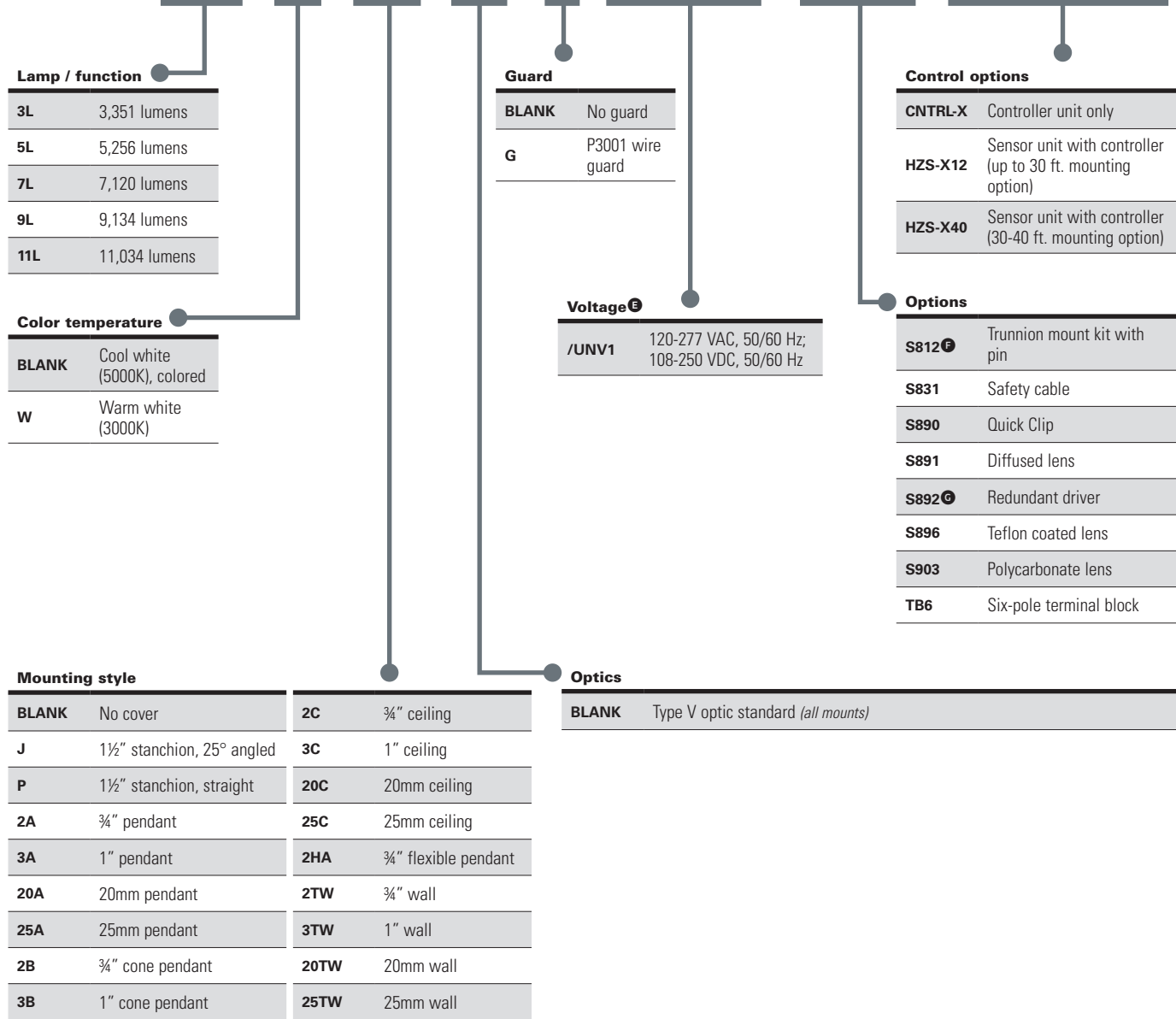
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Ordering information:

Part number example

VMV11LW2AR1G/UNV1 S890 CNTRL-X

VMV 11L W 2A R1 G /UNV1 S890 CNTRL-X



^E UNV34 not available.

^F Available with ceiling mount only.

^G Available with 5L, 7L and 9L models. Redundant driver standard on 11L model. 7L = 6,616 lumens with S892 suffix.

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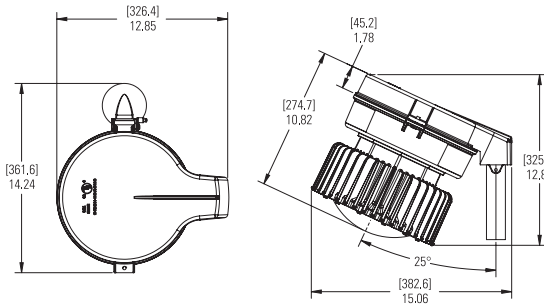
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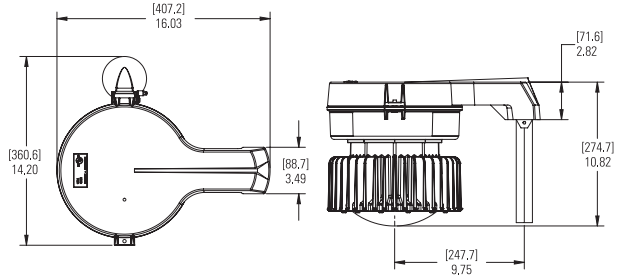
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Dimensions:

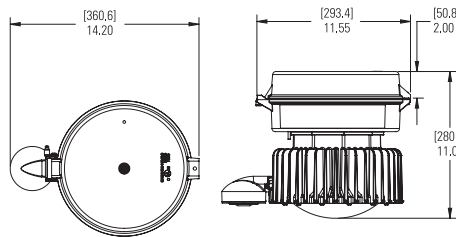
Stanchion - 25° angled



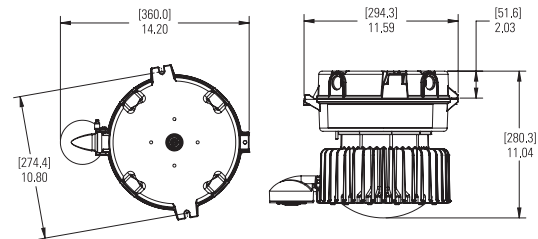
Stanchion - straight



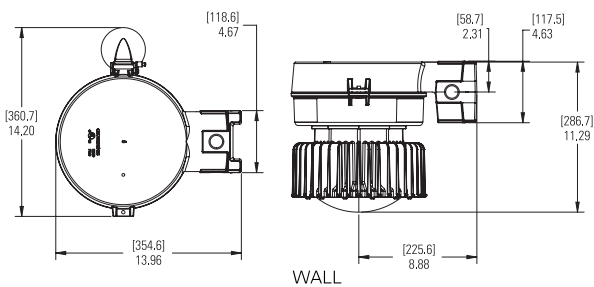
Pendant



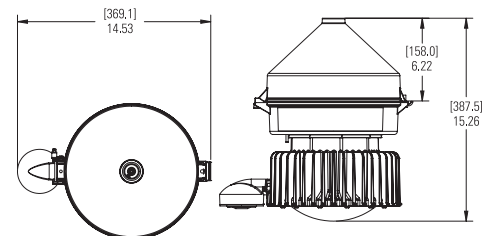
Ceiling



Wall



Cone pendant



Trunnion

