



Enhancing
Safety +
Productivity



Now
cUL
Listed!

Champ® VMV LED Series Luminaires

Leading the way in LED technology
for industrial and hazardous applications

 **COOPER** Crouse-Hinds



Champ® VMV LED Series Luminaires

High-performance, high-brightness Champ® VMV LED luminaire – brilliantly combining safety, reliability and energy efficiency.

The world's most demanding environments need smart new lighting ideas and innovative approaches to enhancing safety. You need lighting that cuts the overall cost of ownership. Lighting that improves energy efficiency and lives up to ever-escalating environmental standards.

You need all of this innovation from a single source. It could only be: Cooper Crouse-Hinds®.

Introducing ESP solutions.



For more than 100 years, Cooper Crouse-Hinds has exceeded customer expectations when it comes to new ideas and technological advancements.

Today, as the electrical industry's global leader for hazardous environments, we continue to reach beyond the expected – especially with our commitment to **ESP (Enhancing Safety & Productivity)**.

The problem that never happens. That's the goal behind ESP – smarter, more powerful solutions enhancing safety and productivity in your world.

Time to look at LEDs in a whole new light.

Dramatic advances in LED technology have broadened the applicability of this type of illumination, creating an exciting new option for hazardous, industrial and other highly demanding locations. Compared to traditional HID (high intensity discharge) technologies, LED light sources can deliver longer life, enhanced energy efficiency, greater eco-friendliness, lowered maintenance demands and equal or better quality of light.

Innovative applications for this exciting technology are a natural fit for us, and LED lighting solutions have rapidly become an integral part of our vision.



Application 1

You're faced with high maintenance and operating costs within your petrochemical facility. In addition, frequent lamp failures pose a safety concern where continuous lighting is required. You're tasked with identifying a lighting solution that reduces ownership costs while maintaining similar or improved light levels.

Old Way:

Conventional 175-Watt Metal Halide luminaires are installed throughout the facility and operate continuously. Regular maintenance is required to replace burned-out lamps. Additionally, the high cost of energy is having an unfavorable impact on your operational budget.

New Way:

Install 98-Watt Champ® VMV LED luminaires. Benefit immediately from the long life and energy efficient LED light source. The LED Champ luminaire is designed to easily adapt to existing mounting modules for ease of installation.

Benefit:

Realize a potential \$325K in energy and maintenance cost savings per year by making the change to Champ® VMV LED. Receive positive PR from utilizing an eco-friendly light source that supports your corporate initiatives.

The Champ® VMV LED Series is a perfect example of Cooper Crouse-Hinds innovation.

Enhance safety and productivity
Reduce energy consumption

Cut overall cost of ownership
Meet rising environmental standards

Installation and replacement made simple

Modular design - This contractor-friendly design is ideal for both retrofit and new construction applications. These luminaires are installed in the same manner and use the same mounting modules as existing Champ® Series luminaires. The compact modular design of the VMVL allows for easy component replacement and future upgrade.



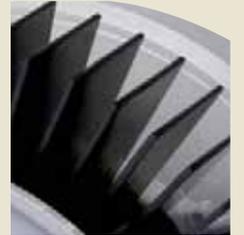
High efficiency and lumen output

Driver module assembly - High efficiency LED drivers provide regulated current to the LEDs. The LED drivers are designed to provide reliable operation in the harshest environments.



Safe, reliable heat transfer

Heatsink - A durable extrusion provides safe and effective heat transfer from the LED assembly to the outside environment, ensuring low LED junction temperature, reliability and sustained lumen performance. The vertical fin design facilitates airflow and dust shedding.



NEMA 4X Rated

LED Housing Assembly - The LED housing is constructed of durable die cast aluminum providing an efficient thermal path to the heatsink assembly. The impact resistant lens is sealed from the outside environment and provides ingress protection against water and dust. Multi-die LED arrays are used to provide energy efficient, long-life white light.



S896 Optional teflon coating

This optional teflon coating on lens provides additional shatter protection.



Champ® VMV LED Series Luminaires

Champ® VMV LED offers new solutions for old challenges.



It is a new era for Champ® luminaires. This luminaire provides the same durability and reliability of a traditional Champ luminaire, coupled with the low cost of ownership and energy efficiency of Cooper Crouse-Hinds LED technology. High-performance LEDs and a solid-state electronic driver provide light where you need it, at a fraction of the operating cost of HID technologies.

THE CHAMP VMV LED FAMILY

VMV LED Series luminaires are designed to provide full-spectrum, crisp white light with a true IES type V distribution. This white light output provides the human eye with better visual acuity compared to the poor rendering and color quality produced by a typical HPS fixture. Three versions of the Champ VMV LED are available, providing ideal solutions for a wide range of applications.

VMV5L - Ideal for Low-light Applications

The VMV5L luminaire is ideal for locations requiring lower light levels. This fixture provides light output equivalent to many 100W - 150W high pressure sodium (HPS) luminaires.

VMV7L - Wide Area Illumination

The VMV7L luminaire is designed for wide area illumination and for mounting heights of greater than 12 feet. Using less than 100 watts the VMV7L provides light output equivalent to many 175W metal halide (MH) fixtures, while providing 60,000 hours of illumination; over 6 times the life of a typical MH luminaire.

VMV9L - High Lumen Output

The high output VMV9L provides increased lumen performance at the same power level of the 7L model. The VMV9L uses advanced LED technology to achieve a higher lumen/watt rating and can be used for mounting heights up to 20 feet.

LED SYSTEM

- High brightness light emitting diode (LED) arrays
- Color temperature: 5500°k to 6500°k (CCT)
- 70% lumen maintenance at 60,000 hours
- CRI > 75

APPLICATIONS

- Wide area illumination at mounting heights from 12 to 20 feet
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- NEMA 4X, marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels

DRIVERS

- 90VAC - 264VAC, 50/60HZ
- 277VAC option available
- High efficiency 88% at maximum load
- Inherent thermal protection
- Line transient protection
 - 2KV line to line, 4KV line to ground

CHAMP VMV LED BENEFITS

Enhance safety and productivity

- Instant illumination and restrike
- Better visibility with crisp white light
- T5 temperature rating – safely operate in the most hazardous environments
- Cold temperature operation / no warmup required
- “No lights-out” feature – if a single LED fails, circuit provides enough useable light to remaining LEDs

Reduce operation and maintenance costs

- Easy installation - compact modular fixture attaches onto existing Champ mounting module
- Energy efficient technology use up to ½ the power of standard HID luminaires
- Provides up to 60,000 hours rated life – eliminates need for frequent lamp replacement
- Contains no mercury or other hazardous substances

Reliable performance in any environment

- 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 55°C
- Low temperature starting -30°C
- Dark sky compliant

STANDARD MATERIALS

- Lamp housing and adapter – copper-free aluminum with Corro-free™ epoxy powder coat.
- Extrusion - aluminum with black anodized finish
- Lens – heat and impact-resistant glass
- Gaskets – silicone
- External hardware – stainless steel
- Factory sealed, no external seals required

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CERTIFICATIONS & COMPLIANCES

NEC and CEC

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2
- Class II, Groups E, F, G
- Class III
- Simultaneous Presence
- Wet location, NEMA 4X, IP66

UL Standards

- UL 844
- UL1598 luminaires, UL1598A marine

CSA Standard

- CSA C22.2 No. 137



OPTIONS

Teflon coating on lens
for additional shatter protection

Suffix to add to Catalog No.
S896

ELECTRICAL RATINGS

| | VMV5L | VMV7L | VMV9L |
|---------------------|------------|------------|------------|
| Voltage Range, VAC* | 120V -240V | 120V -240V | 120V -240V |
| Frequency | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz |
| Input Power | 70 Watts | 98 Watts | 98 Watts |
| Input Amps. | 0.6 / 0.3 | 0.9 / 0.5 | 0.9 / 0.5 |
| Power Factor | >.85 | >.85 | >.85 |
| Replaces up to | 150W HPS | 175W MH | 175W MHPS |

* 277V option available for cUL.





Champ® VMV LED Series Luminaires

ORDERING INFORMATION

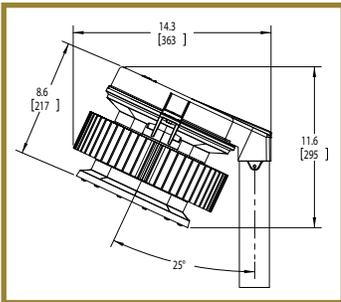
Optional Teflon coating available on lens for additional shatter protection. Add S896 to Catalog Number

| MOUNTING STYLE | HUB SIZE (IN.) | 5L SERIES | 7L SERIES | 9L SERIES |
|--------------------------------|----------------|-----------------|-----------------|-----------------|
| Luminaire Less Mounting Module | ---- | VMV5LDM1/UNV | VMV7LDM1/UNV | VMV9LDM1/UNV |
| Pendant | 3/4 | VMV5L2ADM1/UNV | VMV7L2ADM1/UNV | VMV9L2ADM1/UNV |
| Pendant | 1 | VMV5L3ADM1/UNV | VMV7L3ADM1/UNV | VMV9L3ADM1/UNV |
| Flexible Pendant | 3/4 | VMV5L2HADM1/UNV | VMV7L2HADM1/UNV | VMV9L2HADM1/UNV |
| Ceiling Mount Thru Feed | 3/4 | VMV5L2CDM1/UNV | VMV7L2CDM1/UNV | VMV9L2CDM1/UNV |
| Ceiling Mount Thru Feed | 1 | VMV5L3CDM1/UNV | VMV7L3CDM1/UNV | VMV9L3CDM1/UNV |
| Wall Mount Thru Feed | 3/4 | VMV5L2TWD1/UNV | VMV7L2TWD1/UNV | VMV9L2TWD1/UNV |
| Wall Mount Thru Feed | 1 | VMV5L3TWD1/UNV | VMV7L3TWD1/UNV | VMV9L3TWD1/UNV |
| Stanchion 25° | 1-1/2 | VMV5LJDM1/UNV | VMV7LJDM1/UNV | VMV9LJDM1/UNV |
| Stanchion | 1-1/2 | VMV5LPDM1/UNV | VMV7LPDM1/UNV | VMV9LPDM1/UNV |

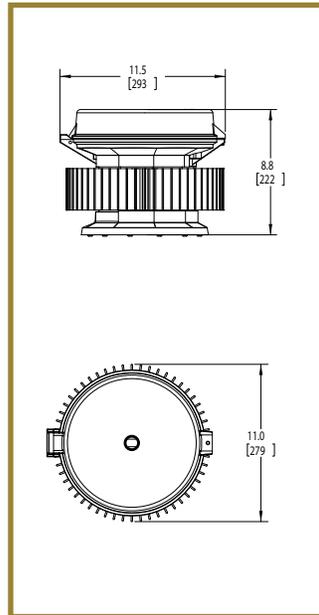
* CEC/CSA (cUL) - Add suffix M2 to catalog number. Example VMV7LDM1/UNV M2

DIMENSIONS

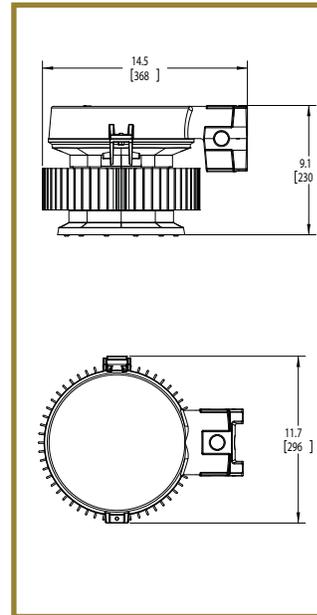
STANCHION



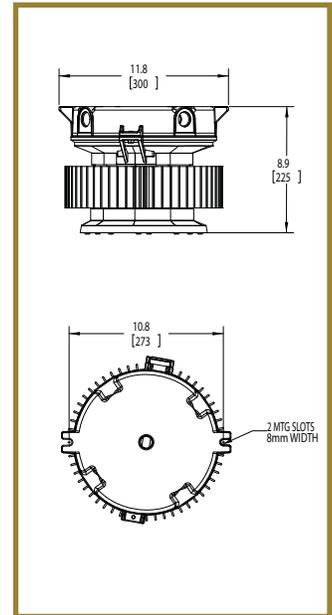
PENDANT



WALL



CEILING



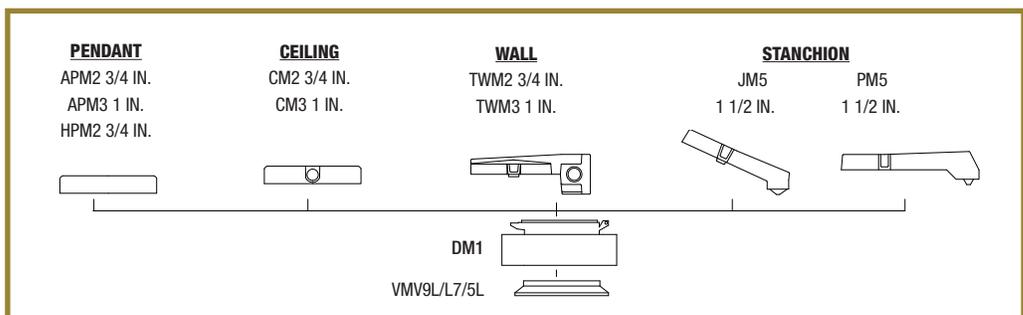
WEIGHTS

| NET LUMINAIRE WEIGHT: | | 17.8 LBS |
|----------------------------|--|----------|
| Mounting Module add (lbs.) | | |
| Pendant | | 1.25 |
| Flexible Pendant | | 1.50 |
| Ceiling | | 2.75 |
| Wall | | 4.50 |
| Angle Stanchion | | 3.50 |
| Straight Stanchion | | 4.50 |

AMBIENT TEMPERATURE

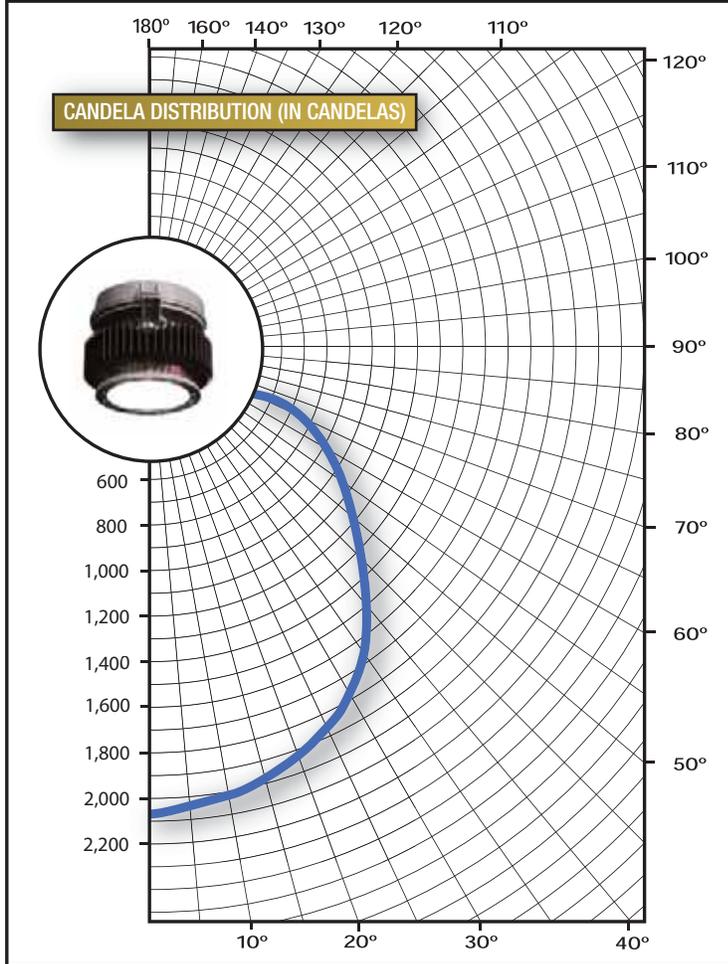
| | MAX TEMP °C | CL. I, DIV. 2 | CL. II, DIV. 1 & 2 / CL. III / SIMU. PRESENCE |
|-------|-------------|---------------|---|
| VMV5L | 40 | T5 | T4A |
| | 55 | T4A | T4 |
| VMV7L | 40 | T5 | T4A |
| | 55 | T4A | T4 |
| VMV9L | 40 | T5 | T4A |
| | 55 | T4A | T4 |

FAMILY TREE



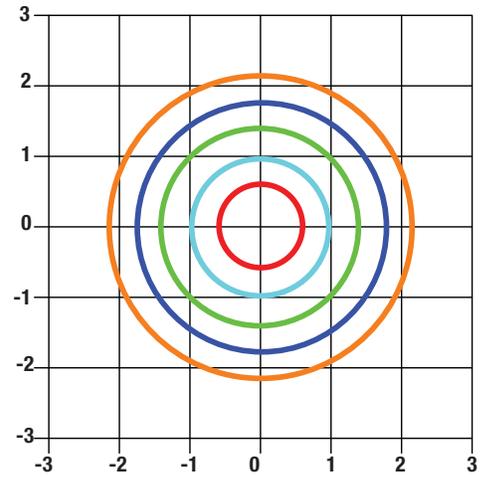
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Champ® LED 98 Watt* - VMV7L



| CANDELAS | | ZONAL LUMENS | |
|----------------|------------|--------------|-------------|
| VERTICAL ANGLE | FRONT SIDE | ZONE | WITH LUMENS |
| 0 | 2062 | 0-10 | 195 |
| 5 | 2050 | 10-20 | 565 |
| 15 | 1994 | 20-30 | 863 |
| 25 | 1873 | 30-40 | 1039 |
| 35 | 1688 | 40-50 | 1087 |
| 45 | 1423 | 50-60 | 976 |
| 55 | 1091 | 60-70 | 690 |
| 65 | 698 | 70-80 | 277 |
| 75 | 261 | 80-90 | 14 |
| 85 | 4 | 90-100 | 0 |
| 90 | 0 | 100-120 | 0 |
| Total | | | 5706 |

DISTANCE TO MOUNTING HEIGHT
Isofootcandle chart shows illuminance in foot-candles at ground level



ISOFOOTCANDLE CHART
Footcandle Values for Isofootcandle Lines



| Mtg. Hgt. | A | B | C | D | E |
|-----------|-------|------|------|------|------|
| 10' | 11.00 | 5.50 | 2.20 | 1.10 | 0.55 |
| 12' | 7.63 | 3.81 | 1.50 | 0.76 | 0.39 |
| 16' | 4.30 | 2.14 | 0.86 | 0.43 | 0.22 |
| 20' | 2.75 | 1.38 | 0.55 | 0.28 | 0.14 |
| 25' | 1.76 | 0.88 | 0.35 | 0.18 | 0.09 |

MULTIPLIERS FOR OTHER CHAMP® LED LUMINAIRES

| Luminaire Series | System Watts | Lumens |
|------------------|--------------|--------|
| VMV5L | 70 | 3778 |
| VMV9L | 98 | 6340 |

* Testing performed in accordance with IES LM-79-08

For more information:

If further assistance is required, please contact an authorized Cooper Crouse-Hinds Distributor, Sales Office, or Customer Service Department

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