ESP

Enhancing Safety + Productivity

Champ® VMV LED Series Luminaires

Leading the way in LED technology for industrial and hazardous applications

COOPER Crouse-Hinds

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.

COOPER Crouse-Hinds

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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

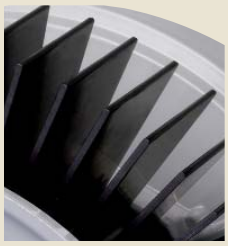
Installation and replacement made simple

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 are designed to provide reliable operation in even the harshest environments. Various AC and DC input voltage options are available to suit virtually any drive requirement.

Safe, reliable heat transfer



Heat sink - 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.

Type 4X Rated

LED Housing Assembly - The LED housing is constructed of durable die cast aluminum, providing an efficient thermal path to the heat sink 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.

Flexible Options Available

Warm (W) and cool white color temperature available
Diffuse lens (suffix S891)
Teflon coating (suffix S896)
Polycarbonate lens (suffix S903)

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. Five versions of the Champ VMV LED are available, providing ideal solutions for a wide range of applications.

Champ Model	Equivalent HID Luminaire	Typical Energy Savings / Lifetime
VMV3L	70W-100W	
VMV5L	100W-150W	
VMV7L	150W-175W	
VMV9L	175W-200W	
VMV11L	200W-400W	

Up to 58% reduction in energy costs and 60,000 hours of continuous operation!

LED SYSTEM

- High brightness light emitting diode (LED) arrays
- Color temperature: 3000K (CRI 82) and 5600K (CRI 65) options available
- Advanced heat sink design ensures LED does not exceed manufacturer's temperature ratings across all specified ambient conditions
- Array complies with requirements of IEC LM-80

APPLICATIONS

- Five lumen outputs allow for installation in numerous mounting heights
- 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
- Type 4X, marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels; outdoor wall and stanchion mounted general area lighting

Champ® VMV LED Series Luminaires

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DRIVERS

Model	3L - 9L	11L
Standard	90-305 VAC, 50/60 Hz; 108-250 VDC	100-240, 277 VAC
Option 1	347 VAC Model	347 VAC Kit Available
Option 2	480 VAC Model	480 VAC Kit Available

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 warm-up 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 -40ºC to 55ºC
- 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

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, Type 4X, IP66

UL Standards

- UL 844
- UL1598 luminaires, UL1598A marine

CSA Standard

- CSA C22.2 No. 137

c UL us

IECEx/ATEX

- Ex II 3 G Ex nA II (T4 at 55ºC)
- Ex II 3 G Ex nA II (T5 at 40ºC)
- EN60079-0:2006, EN60079-15:2006

OPTIONS

	Suffix to add to Catalog No.
Quick Clip for quick installation	**S890**
Diffuse lens reduces glare in applications where the user may have direct visual contact with the light source	**S891**
Teflon coating on lens for additional shatter protection	**S896**
Polycarbonate lens available in applications where glass is prohibited	**S903**

ELECTRICAL RATINGS

	VMV3L	VMV5L	VMV7L	VMV9L	VMV11L
Voltage Range, VAC	100-277V	100-277V	100-277V	100-277V	100-240, 277V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input Power	47 Watts	70 Watts	98 Watts	98 Watts	137 Watts
Input Amps (Max.)	0.5	0.7	0.98	0.98	1.4
Voltage Range, VDC	108-250	108-250	108-250	108-250	Not Available
Power Factor	>0.85	>0.85	>0.85	>0.85	>0.85

ORDERING INFORMATION - NEC AND CEC

MOUNTING STYLE	3L SERIES	5L SERIES	7L SERIES	9L SERIES	11L SERIES
Luminaire Less Mounting Module	VMV3LDM2/UNV1	VMV5LDM2/UNV1	VMV7LDM2/UNV1	VMV9LDM2/UNV1	VMV11LDM1/UNV
¾" Pendant	VMV3L2ADM2/UNV1	VMV5L2ADM2/UNV1	VMV7L2ADM2/UNV1	VMV9L2ADM2/UNV1	VMV11L2ADM1/UNV
1" Pendant	VMV3L3ADM2/UNV1	VMV5L3ADM2/UNV1	VMV7L3ADM2/UNV1	VMV9L3ADM2/UNV1	VMV11L3ADM1/UNV
¾" Flexible Pendant	VMV3L2HADM2/UNV1	VMV5L2HADM2/UNV1	VMV7L2HADM2/UNV1	VMV9L2HADM2/UNV1	VMV11L2HADM1/UNV
¾" Ceiling Mount Thru Feed	VMV3L2CDM2/UNV1	VMV5L2CDM2/UNV1	VMV7L2CDM2/UNV1	VMV9L2CDM2/UNV1	VMV11L2CDM1/UNV
1" Ceiling Mount Thru Feed	VMV3L3CDM2/UNV1	VMV5L3CDM2/UNV1	VMV7L3CDM2/UNV1	VMV9L3CDM2/UNV1	VMV11L3CDM1/UNV
¾" Wall Mount Thru Feed	VMV3L2TWDM2/UNV1	VMV5L2TWDM2/UNV1	VMV7L2TWDM2/UNV1	VMV9L2TWDM2/UNV1	VMV11L2TWDM1/UNV
1" Wall Mount Thru Feed	VMV3L3TWDM2/UNV1	VMV5L3TWDM2/UNV1	VMV7L3TWDM2/UNV1	VMV9L3TWDM2/UNV1	VMV11L3TWDM1/UNV
1 ½" Stanchion 25°	VMV3LJDM2/UNV1	VMV5LJDM2/UNV1	VMV7LJDM2/UNV1	VMV9LJDM2/UNV1	VMV11LJDM1/UNV
1 ½" Stanchion	VMV3LPDM2/UNV1	VMV5LPDM2/UNV1	VMV7LPDM2/UNV1	VMV9LPDM2/UNV1	VMV11LPDM1/UNV

For 347 VAC option, replace DM2/UNV1 with DM3/347. For 480 VAC option, replace DM2/UNV1 with DM4/480. **NOTE: Requires additional enclosure for use with 11L series.** For warm white color temperature, use W designation after luminaire style (Example: VMV3L**W**DM2/UNV1). **NOTE: Not available for 9L series.**

ORDERING INFORMATION - IECEx/ATEX

MOUNTING STYLE	3L SERIES	5L SERIES	7L SERIES	9L SERIES	11L SERIES
Luminaire Less Mounting Module	PENDING	NVMV5LDM1/UNV	NVMV7LDM1/UNV	NVMV9LDM1/UNV	PENDING
¾" Pendant	PENDING	NVMV5L2ADM1/UNV	NVMV7L2ADM1/UNV	NVMV9L2ADM1/UNV	PENDING
1" Pendant	PENDING	NVMV5L3ADM1/UNV	NVMV7L3ADM1/UNV	NVMV9L3ADM1/UNV	PENDING
¾" Flexible Pendant	PENDING	NVMV5L2HADM1/UNV	NVMV7L2HADM1/UNV	NVMV9L2HADM1/UNV	PENDING
¾" Ceiling Mount Thru Feed	PENDING	NVMV5L2CDM1/UNV	NVMV7L2CDM1/UNV	NVMV9L2CDM1/UNV	PENDING
1" Ceiling Mount Thru Feed	PENDING	NVMV5L3CDM1/UNV	NVMV7L3CDM1/UNV	NVMV9L3CDM1/UNV	PENDING
¾" Wall Mount Thru Feed	PENDING	NVMV5L2TWDM1/UNV	NVMV7L2TWDM1/UNV	NVMV9L2TWDM1/UNV	PENDING
1" Wall Mount Thru Feed	PENDING	NVMV5L3TWDM1/UNV	NVMV7L3TWDM1/UNV	NVMV9L3TWDM1/UNV	PENDING
1 ½" Stanchion 25°	PENDING	NVMV5LJDM1/UNV	NVMV7LJDM1/UNV	NVMV9LJDM1/UNV	PENDING
1 ½" Stanchion	PENDING	NVMV5LPDM1/UNV	NVMV7LPDM1/UNV	NVMV9LPDM1/UNV	PENDING

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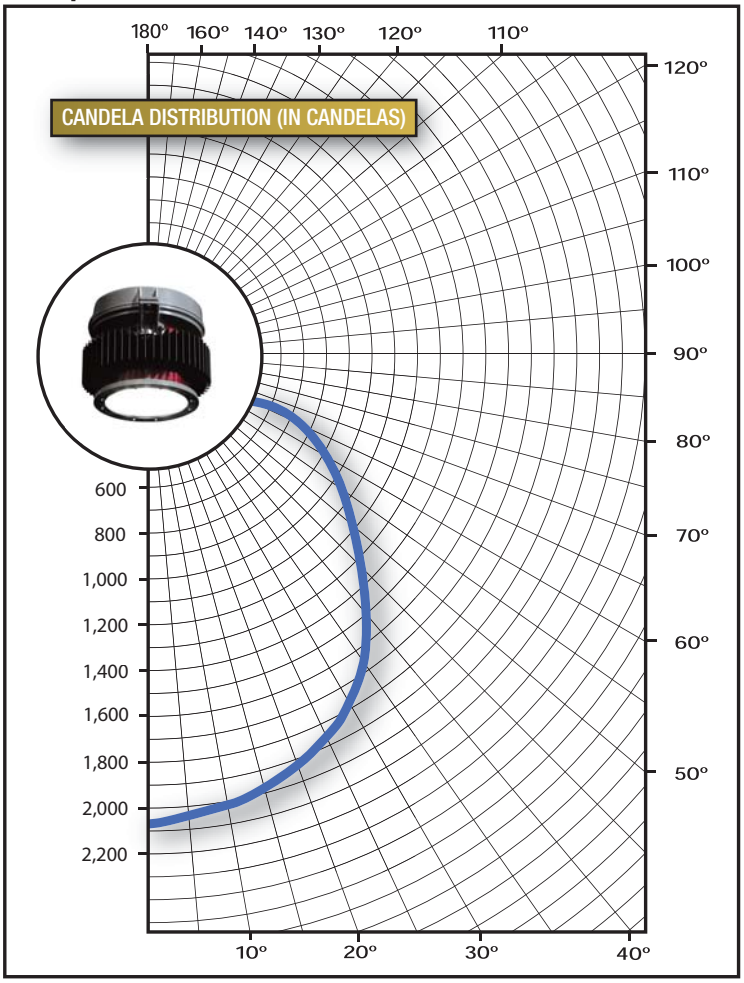
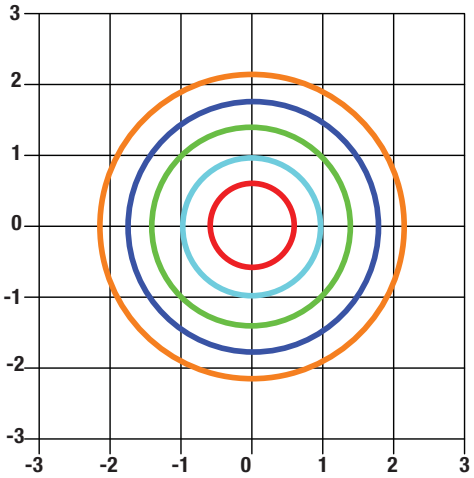
Champ® LED 98 Watt* - VMV7L



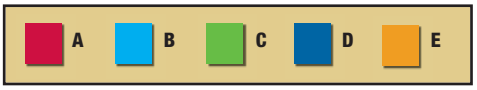
CANDELAS ZONAL LUMENS

VERTICAL ANGLE	FRONT SIDE	ZONE	WITH LUMENS	% LUMEN
0	2062	0-10	195	4%
5	2050	10-20	565	10%
15	1994	20-30	863	15%
25	1873	30-40	1039	18%
35	1688	40-50	1087	19%
45	1423	50-60	976	17%
55	1091	60-70	690	12%
65	698	70-80	277	5%
75	261	80-90	14	0%
85	4	90-100	0	0%
90	0	100-120	0	0%
		Total	5706	100%

DISTANCE TO MOUNTING HEIGHT
Isofootcandle chart shows illuminance in footcandles 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

LUMEN OUTPUT FOR OTHER CHAMP® LED LUMINAIRES

Luminaire Series	System Watts	Lumens
VMV3L	47	3240
VMV5L	63	3778
VMV9L	98	6340
VMV11L	137	9720

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

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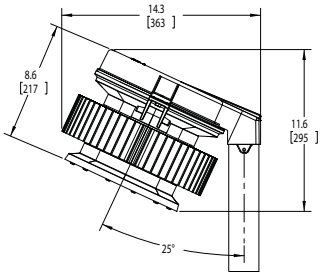
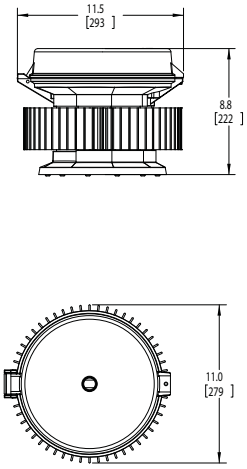
DIMENSIONS

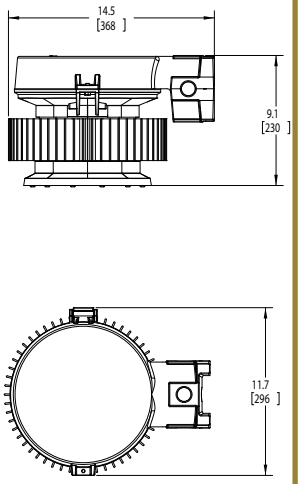
STANCHION



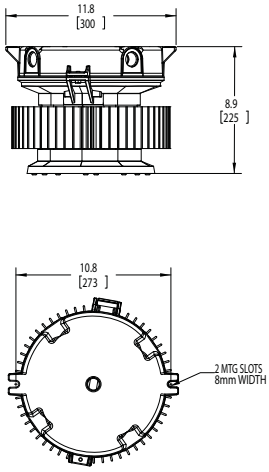
PENDANT



WALL



CEILING



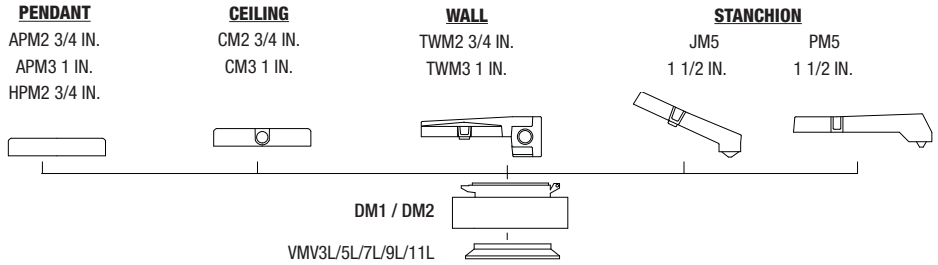
WEIGHTS

NET LUMINAIRE WEIGHT	17.8 lb.	8.07 kg.
Mounting Module (lb.)		
Pendant	1.25	0.57
Flexible Pendant	1.50	0.68
Ceiling	2.75	1.25
Wall	4.50	2.04
Angle Stanchion	3.50	1.59
Straight Stanchion	4.50	2.04

AMBIENT TEMPERATURE

	MAX. TEMP. °C	CL. I, DIV. 2	CL. II, DIV. 1 & 2 / CL. III / SIMU. PRESENCE	CL. I, ZONE 2
VMV3L	40	T5	T4A	T5
	55	T4A	T4	T4
VMV5L	40	T5	T4A	T5
	55	T4A	T4	T4
VMV7L	40	T5	T4A	T5
	55	T4A	T4	T4
VMV9L	40	T5	T4A	T5
	55	T4A	T4	T4
VMV11L	40	T4	T4	T4

FAMILY TREE



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