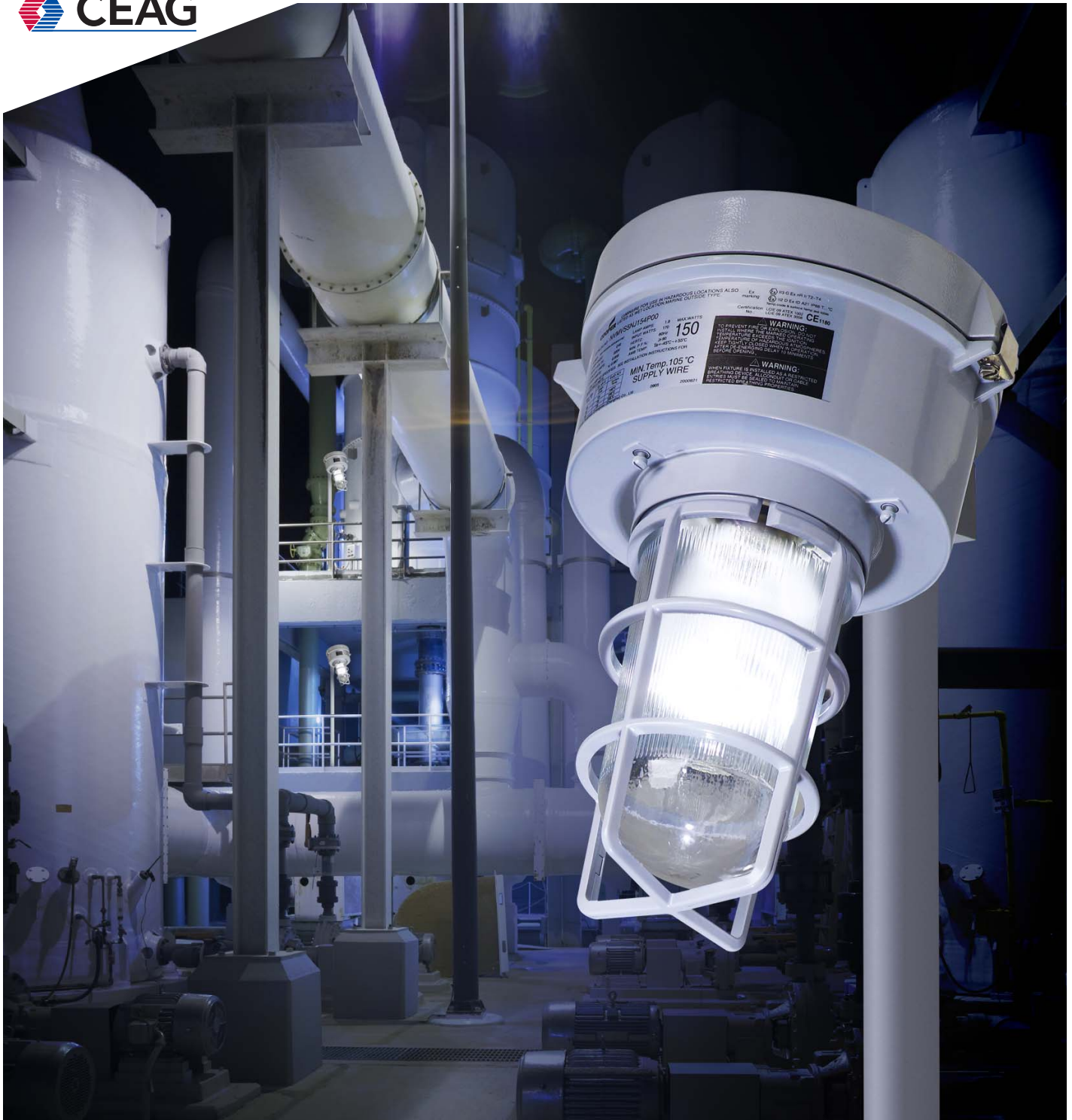




Champ® NVMV Series

Ex-Protected Luminaire for IEC and ATEX Applications

Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

Cost-effective, energy-efficient luminaires suitable for global applications and specifications.



Cooper Crouse-Hinds lighting products build upon over 100 years of harsh and hazardous expertise.

Our global product offering provides energy-efficient solutions that reduce total cost of ownership for our customers through superior photometry, optical light sources and luminaire placement. Our breadth of product, along with outstanding services and know-how, allow us to partner with customers in any application, providing lighting solutions that enhance productivity without ever sacrificing safety.

KEY PRODUCT DIFFERENTIATORS

- **One product offering for global applications.** The Champ® family has the required IEC and ATEX certifications to provide solutions for specification requirements around the world.
- **Restricted breathing (Ex nR) protection is standard.** This provides better T-ratings, as gases will not enter the lamp chamber and control gear housing.
- **Identical mounting cover for IEC and NEC applications** - regardless of wattage, options and accessories. Reduce inventory costs and provide greater flexibility for engineering designers, customers and distributors.
- HPS lamps restrike in 10-30 seconds with the **instant restrike option (IR)** should lamp extinguish due to system voltage drop or momentary loss. Optional built-in cut-off feature will shut off the instant restrike to avoid continuous high energy pulsing when lamp is inoperative or nearing end of life (pending).
- **Available with the Champ Quick-Clip.** Quick-Clip secures the housing to the cover, providing faster, easier, and safer luminaire installation.





PRODUCT FAMILY OVERVIEW

The Champ NVMV design is optimized for Zone 2 gas applications (with standard restricted breathing Ex nR protection), as well as Zone 21 dust applications.

Champ NVMV Series provides an integrated ballast with thermal cut-off functionality incorporated into the control gear. In the event of abnormal temperatures or when the lamp approaches end of life, the cut-off functionality protects the ballast from overheating or burning out.



**NVMV 70W - 250W
(Small Housing)**



**NVMV 250W - 400W
(Large Housing)**

NVMV CERTIFICATIONS

Application in Zone 2 area acc. IEC 60079-15

- Marking to 94/9/EC:  II 3 G Ex nR II T*...Gc
- EC – Type examination: LCIE 09 ATEX 1002

Application in Zone 21 and 22 areas acc. IEC 61241-1

- Marking to 94/9/EC:  II 2 D Ex t IIIIC T...°C(*) Db IP66
- EC – Type examination: LCIE 09 ATEX 3008

General per both application Zone 2 and 21

- Temperature ambient of use: -45°C to +55°C
- Electromagnetic compatibility: EN 61000-6-4
- Degree of protection: acc. EN 60529 IP66

APPLICATIONS

IEC and ATEX certifications allow you to specify the NVMV for key geographical markets to serve key industries:

<i>Latin America</i>	Refining, land-based drilling, chemical
<i>Pacific Rim</i>	Offshore drilling, EPC designing, petrochemical, chemical, refining, power generating, shipbuilding, heavy industries
<i>Middle East</i>	Oil and gas extractions, refining, petrochemical, chemical
<i>North America</i>	LNG, offshore developments, EPC designing, petrochemical, chemical, power generating, heavy industries
<i>Asia</i>	LNG, offshore drilling, refining, petrochemical
<i>Australia</i>	Oil and gas exploration, LNG, offshore drilling, power generating
<i>Africa</i>	Exploration and oil extraction, LNG, offshore drilling
<i>Europe</i>	Refining, LNG, petrochemical, chemical, EPC designing

NVMV Ex-Protected Luminaires are suitable for applications in Zone 2 / Zone 21 / Zone 22

- In manufacturing plants, refineries, chemical, petrochemical, and other industrial process facilities, waste or sewage treatment facilities, dockside and other heavy industrial applications
- In areas where combustible dusts or fibers may be present
- In areas where ignitable concentrations of flammable gases or vapors will be present
- In installations where moisture, dirt, dust, vibration, corrosion and rough usage are problematic

Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

NVMV STANDARD SPECIFICATIONS

	GAS	DUST
TYPE OF PROTECTION	Ex nR II T...Gc	Ex t IIIC T...°C Db IP66
COMPLIANCE	EN 60079-0, EN 60079-15	EN 60079-0, EN 61241-1
ATEX CLASSIFICATION	Ex II 3 G	Ex II 2 D
ATEX CERTIFICATE	LCIE 09 ATEX 1002	LCIE 09 ATEX 3008
AREA CLASSIFICATION	Zone 2 acc. IEC 60079-10-1	Zone 21 and 22 acc. IEC 60079-10-2
MATERIALS AND FINISHES	- Ballast housing and mountings - copper-free aluminum - Exterior hardware - stainless steel (type 304) - Reflectors (dome and angle) - Krydon® fiberglass-reinforced polyester - Globes - heat and impact-resistant glass - Guards - copper-free aluminum and stainless steel (large housing - stainless steel only)	
ENTRY	Up to 4 x M20, M25, M32, ½" NPT and ¾" NPT & 1" NPT cable entries (1 ½" NPT for stanchion only)	
TERMINATION	3 Core 6mm² max. (standard); 6 x 6mm² for looping (available upon request)	
INSTALLATION	Ceiling Mount, Wall Mount, Stanchion Mount, Pendant Mount	
LAMP HOLDER	E27 or E40	
LAMP TYPE	HSE/HST (high pressure sodium lamp) and HIE (metal halide lamp)	
LAMP POWER	70W, 100W, 150W, 250W, and 400W	
CONTROL GEAR	Integrated ballast, thermal cut-off functionality incorporated into control gear	
RE-LAMPING	Access via restricted breathing lamp chamber	
BURNING POSITION	Base up; up to 25° off vertical	
INGRESS PROTECTION	IP66 to EN 60529	
WEIGHTS	See pages 7 and 10	
ELECTRICAL SUPPLY	220, 230, 240V 50Hz and 220, 230V 60Hz	

CERTIFICATION DECODING

"Type of Protection" refers to luminaire construction

"ATEX Classification" refers to application

Ex nR II T...Gc – Explosion Protected Restricted Breathing Enclosure

Ex t IIIC T...°C Db IP66 – Explosion Protected, Protected by Enclosure from Dust Ingress

Example: Ex II 3G i.e.

Ex (or Ex) – Explosion protected in accordance with ATEX

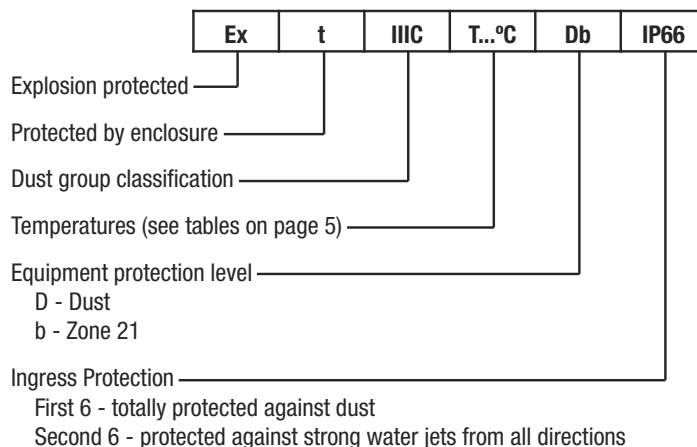
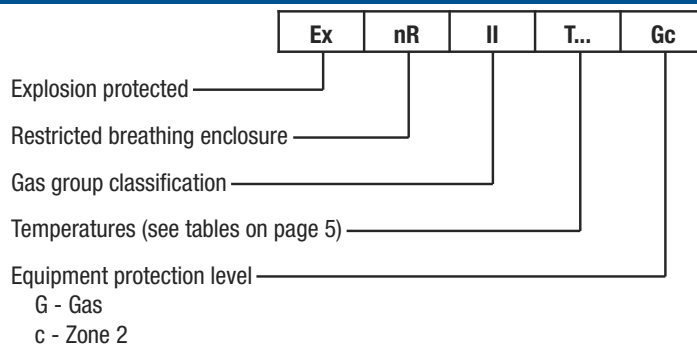
II – Group II surface industries (above ground)

3 – Category 3 equipment (suitable for use in Zone 2)

Note: Category 2 is suitable for use in Zone 1

G – Suitable for atmosphere containing gas

Note: D is suitable for atmospheres containing dust



TEMPERATURE PERFORMANCE

Refer to temperature performance data tables (below) to select luminaire that is suitable for your area specifications. These numbers are the maximum surface temperature of the luminaire.

Note: T3 – maximum surface temperature 200°C
T4 – maximum surface temperature 135°C

For example: atmospheres that contain gasoline and have an ignition temperature of 536°C, any fixture with the T-rating in this table can be used.

Atmospheres that contain diethyl ether and have an ignition temperature of 160°C require a luminaire with T4 ratings.

NVMV 70W - 250W (Small Housing)												
					GAS (Class I, Zone 2) Ex nR II T...Gc				DUST (Class II, Zone 21) Ex t IIIC T...Db			
Catalog Number Example [†]	Watts	Lamp Type	Rated Ambient °C	Lamp Holder	With G34 Globe Only	With G251 Globe Only	With G34 Globe and Reflector	With G251 Globe and Reflector	With G34 Globe Only	With G251Globe Only	With G34 Globe and Reflector	With G251 Globe and Reflector
NVMVS1MC075*00	70W	HSE/ HST (HPS)	40	E27	T4	T4	T4	T4	99°C	109°C	104°C	109°C
			50		T4	T4	T4	T4	109°C	119°C	114°C	119°C
			55		T4	T4	T4	T4	114°C	124°C	119°C	124°C
NVMVS1MC105*00	100W		40	E40	T4	T4	T4	T4	99°C	117°C	104°C	128°C
			50		T4	T4	T4	T3	109°C	127°C	114°C	138°C
			55		T4	T3	T4	T3	114°C	132°C	119°C	143°C
NVMVS1MC155*00	150W		40	E40	T4	T3	T3	T3	122°C	140°C	140°C	140°C
			50		T3	T3	T3	T3	132°C	150°C	150°C	150°C
			55		T3	T3	T3	T3	137°C	155°C	155°C	155°C
NVMVS1MC255*00	250W		40	E40	T3	T3	T3	T2	168°C	174°C	189°C	218°C
			50		T3	T3	T2	T2	178°C	184°C	199°C	228°C
			55		T3	T3	T2	T2	183°C	189°C	204°C	233°C
NVMVM1MC075*00	70W	HIE (MH)	40	E27	T4	T4	T4	T4	99°C	109°C	104°C	109°C
			50		T4	T4	T4	T4	109°C	119°C	114°C	119°C
			55		T4	T4	T4	T4	114°C	124°C	119°C	124°C
NVMVM1MC105*00	100W		40	E27	T4	T4	T4	T4	99°C	117°C	104°C	128°C
			50		T4	T4	T4	T3	109°C	127°C	114°C	138°C
			55		T4	T3	T4	T3	114°C	132°C	119°C	143°C
NVMVM1MC155*00	150W		40	E27	T4	T3	T3	T3	122°C	140°C	140°C	140°C
			50		T3	T3	T3	T3	132°C	150°C	150°C	150°C
			55		T3	T3	T3	T3	137°C	155°C	155°C	155°C
NVMVM1MC255*00	250W		40	E40	T3	T3	T3	T2	168°C	194°C	189°C	218°C
			50		T3	T2	T2	T2	178°C	204°C	199°C	228°C
			55		T3	T2	T2	T2	183°C	209°C	204°C	233°C

[†]Cat No. – Shown with M20 Ceiling Mount, /230V, 50 Hz.

NVMV 250W - 400W (Large Housing)								
					GAS (Class I, Zone 2) Ex nR II T...Gc		DUST (Class II, Zone 21) Ex t IIIC T...Db	
Catalog Number Example	Watts	Lamp Type	Rated Ambient °C	Lamp Holder	With G303 Globe Only	With G303 Globe and Reflector	With G303 Globe Only	With G303 Globe and Reflector
NVMVS1MC255+L0	250W	HSE/ HST (HPS)	40	E40	T3	T3	137°C	137°C
			50		T3	T3	147°C	147°C
			55		T3	T3	152°C	152°C
NVMVS1MC405+L0	400W		40	E40	T3	T3	159°C	175°C
			50		T3	T3	169°C	185°C
			55		T3	T3	174°C	190°C
NVMVM1MC255+L0	250W	HIE (MH)	40	E40	T3	T3	137°C	137°C
			50		T3	T3	147°C	147°C
			55		T3	T3	152°C	152°C
NVMVM1MC405+L0	400W		40	E40	T3	T3	159°C	193°C
			50		T3	T2	169°C	203°C
			55		T3	T2	174°C	208°C

Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

ORDERING INFORMATION

Ordering Example: to complete part number, select ordering options from tables below and display them in the following order.

NVMV	S	1M	C	07	5	P	0	0	/OPTION
Series	Lamp Type	Entry	Mounting	Wattage	Voltage	Guard	Body	Standard	Options

EXAMPLE OF COMPLETED PART NUMBER - SMALL BODY: NVMVS1MC075P00

NVMV	S	1M	C	07	5	P	0	0
Series	Lamp	Entry	Mounting*	Wattage	Voltage	Guard	Body	
NVMV Luminaire IEC Gear	S=HSE/ HST (HPS) M=HIE (MH)	1M=M20 2M=M25 3M=M32 1N=½" NPT 2N=¾" NPT 3N=1" NPT 5N=1 ½" NPT (For Stanchion)	C=Ceiling W=Wall J=Stanchion	07=70W 10=100W 15=150W 25=250W	3=220V/50Hz 5=230V/50Hz 6=240V/50Hz 4=220V/60Hz 7=230V/60Hz	O=without Guard G34 globe P=G251 Globe with P22 alum. guard S=G251 Globe with P22 SS304 guard	O=Small body	O=Standard

EXAMPLE OF COMPLETED PART NUMBER - LARGE BODY: NVMVS1MC255PL0

NVMV	S	1M	C	25	5	P	L	0
Series	Lamp	Entry	Mounting*	Wattage	Voltage	Guard	Body	
NVMV Luminaire IEC Gear	S=HSE/ HST (HPS) M=HIE (MH)	1M=M20 2M=M25 3M=M32 1N=½" NPT 2N=¾" NPT 3N=1" NPT 5N=1 ½" NPT (For Stanchion)	C=Ceiling W=Wall J=Stanchion	25=250W 40=400W	3=220V/50Hz 5=230V/50Hz 6=240V/50Hz 4=220V/60Hz 7=230V/60Hz	O=without Guard G303 globe P=G303 Globe with P33 SS guard	L=Large body	O=Standard

*For pendant mounting, order ceiling mount with pendant bracket accessory - please consult factory.

OPTIONS AND ACCESSORIES

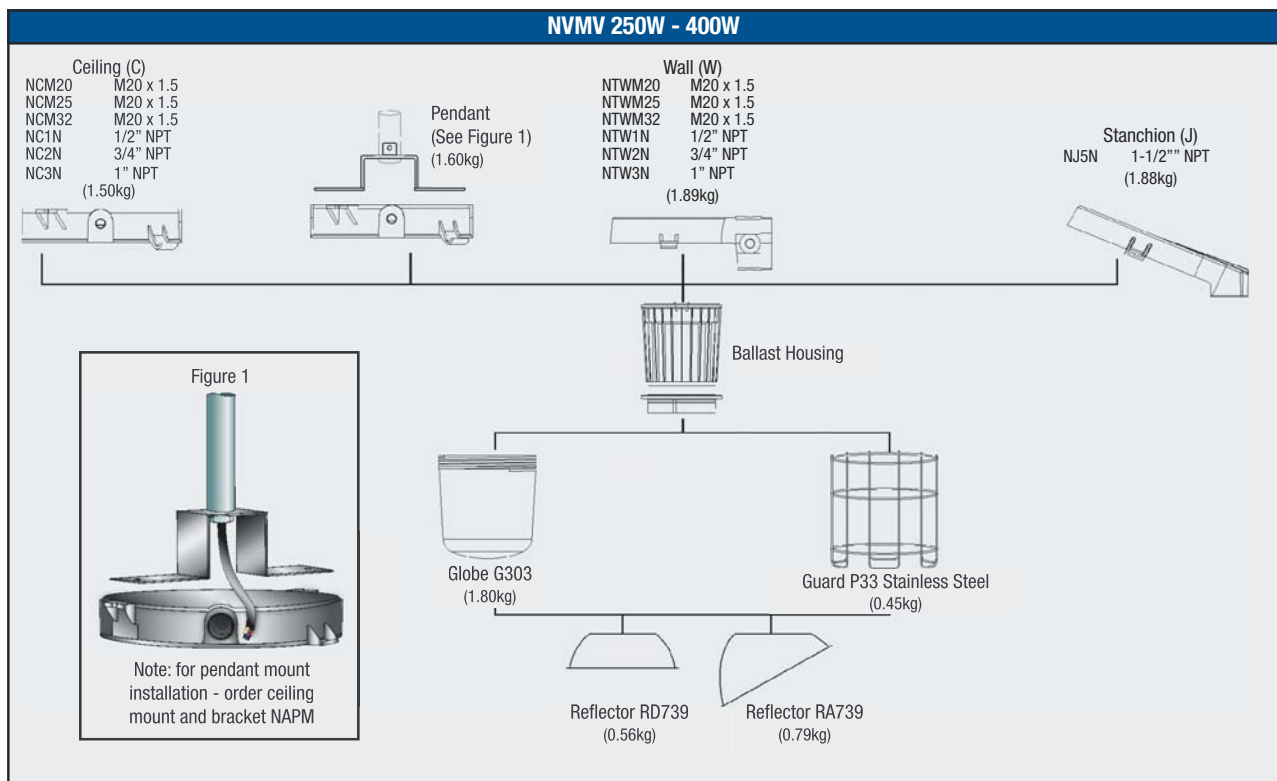
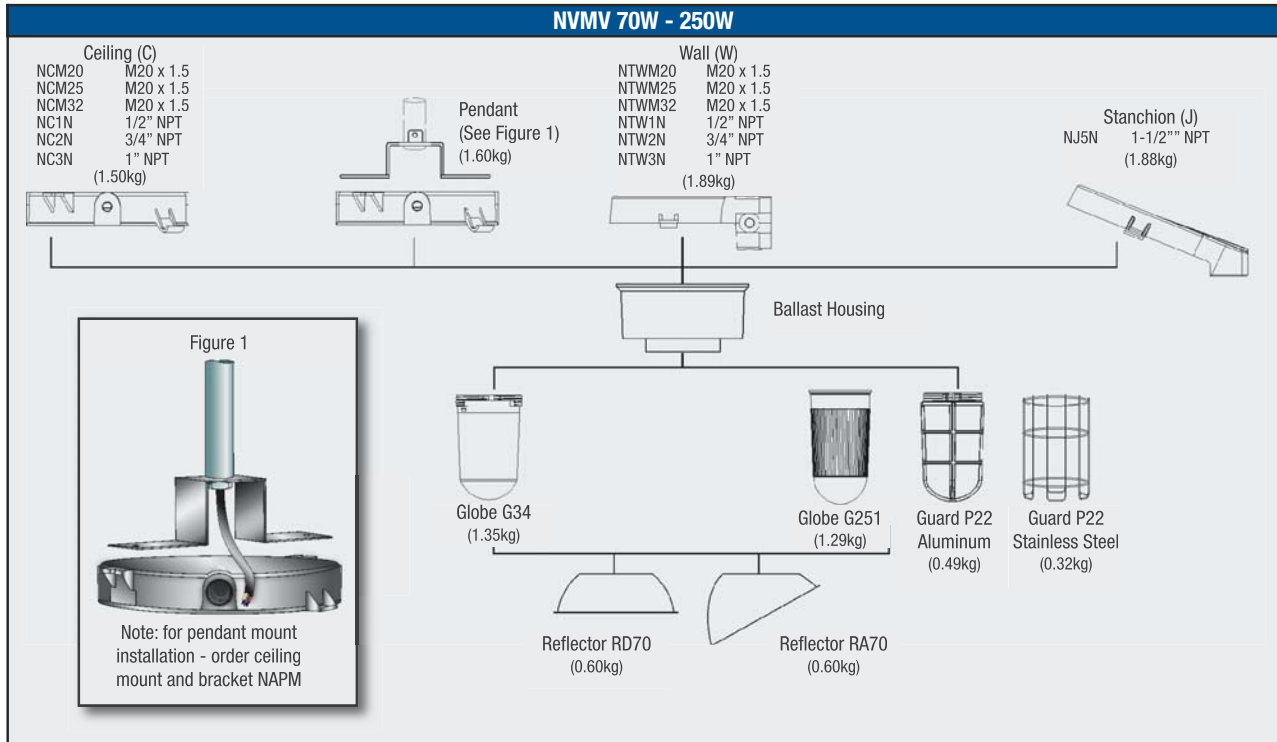
/IR	Instant restrike (100W HPS & 150W HPS) (alternative solution to dual arc lamps)
/RD70	Dome reflector - small housing
/RA70	30° angle reflector - small housing
/RD739	Dome reflector - large housing
/RA739	30° angle reflector - large housing
/S890	Champ Quick-Clip

CHAMP® QUICK-CLIP 1-2-3

Step 1.	Wire the luminaire.	
Step 2.	With one hand on your ladder for safety, simply swing the housing closed until the Quick-Clip attaches to the cover.	
Step 3.	With both hands free, effortlessly tighten the screw.	

LUMINAIRE BREAKDOWN INTO COMPONENT PARTS

Choose component parts below based on ordering information on page 6. Components can be ordered separately or as replacement parts.



Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

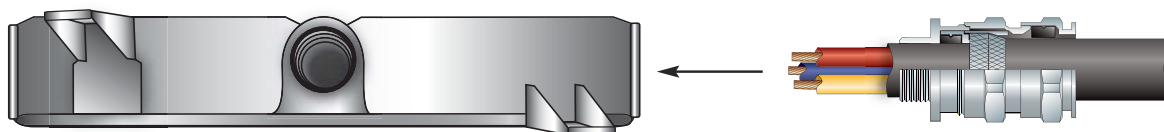
CABLING OPTIONS (for additional cable gland options, please see Cooper Crouse-Hinds Global Cable Gland Solutions catalog)

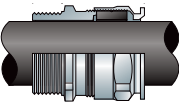
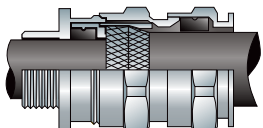
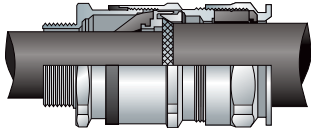
To terminate electrical wiring and cords, use cable glands wiring method example below:

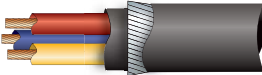
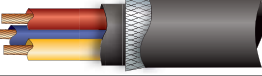
Correctly selected cable gland must:

- 1) Mate correctly with type of cable used
- 2) Mate correctly with outside diameter of cable used
- 3) Be suitable with area classifications
- 4) Be ATEX certified
- 5) Be IP66 rated
- 6) Have a male end thread that mates correctly with cover thread

Refer to thread sizes in ordering table on page 6



CABLE GLAND EXAMPLES	
ADE 1F	 Non-armoured gland for use with non-armoured cable
ADE 4F*	 Armoured gland for use with SWA, SWB, STA, braided marine shipboard, and lead sheathed cables (with addition of earthing washer)
ADE 6F*	 Armoured gland for use with SWA, SWB, STA, and braided marine shipboard cables

CABLE EXAMPLES	
Non-armoured	
Steel wire armoured (SWA)	
Steel wire braided (SWB)	
Steel tape armoured (STA)	
Braided marine shipboard	
Lead sheathed	

*Example shown with SWB cable.

Note - To view our complete offering of global cable glands for hazardous and industrial environments, please visit www.crouse-hinds.com/cableglands

LAMP SELECTION GUIDE

Refer to the table below to select catalog number for lamp per lamp manufacturer.

WATTAGE	LAMP TYPE	LAMP BASE	MANUFACTURER		
			GE LAMP	OSRAM LAMP	PHILIPS LAMP
70W	HSE/HST (HPS)	E27	LU70/90/T/27 LU70/90/D/27 LU70/90/XO/T/27	NAV-T 70 NAV-E 70 NAV-T 70 SUPER 4Y	SON70WES SONT70WES SONPLUS70WES
100W	HSE/HST (HPS)	E40	LU100/100/MO/T/40 LU100/100/D/40 LU100/100/XO/T/40	NAV-T 100 SUPER 4Y NAV-E 100 SUPER 4Y	SONT100WES SONPLUS100WGES
150W	HSE/HST (HPS)	E40	LU150/100/T/40 LU150/100/D/40 LU150/150/XO/T/40	NAV-T 150 NAV-E 150 NAV-T 150 SUPER 4Y NAV-E 150 SUPER 4Y	SON150WGES SONT150WES SONPLUS150WGES
250W	HSE/HST (HPS)	E40	LU250/T/40 LU250/D/40 LU250/XO/T/40	NAV-T 250 NAV-E 250 NAV-T 250 SUPER 4Y NAV-E 250 SUPER 4Y	SON250WGES SONT250WGES SONPLUS250WGES
400W	HSE/HST (HPS)	E40	LU400/T/40 LU400/D/40 LU400/XO/T/40	NAV-T 400 NAV-E 400 NAV-T 400 SUPER 4Y NAV-E 400 SUPER 4Y	SON400WGES SONT400WGES SONPLUS400WGES
70W	HIE (MH)	E27	ARC70/E/U/740/E27 CMH70/TT/UVC/830/E27 CMH70/E/UVC/830/E27/C	HQI-E 70/NDL	MH70WES
100W	HIE (MH)	E27	ARC100/E/U/740/E27 CMH100/E/UVC/830/E27/C	HQI-E 100/NDL	MH100WES
150W	HIE (MH)	E27	ARC150/E/U/740/E27 CMH150/TT/UVC/830/E40	HQI-E150/NDL	MH150WES
250W	HIE (MH)	E40	ARC250/T/U/740/E40	HQI-E 250/D HQI-T-250/D	HPIPLUS250WBUGES HPITPLUS250WGES
400W	HIE (MH)	E40	ARC400/T/U/740/E40	HQI-E 400/D HQI-T 400/N	HPIPLUS400WBUGES HPITPLUS400WGES

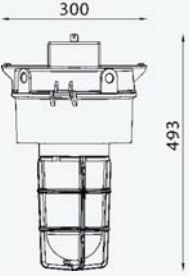
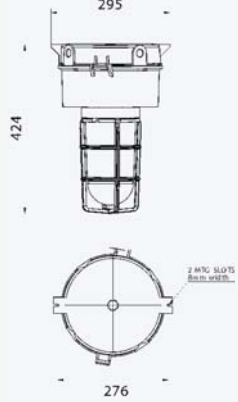
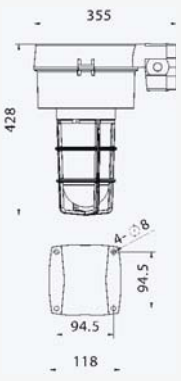
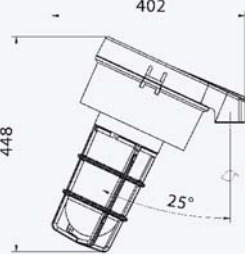
CIRCUIT SIZING

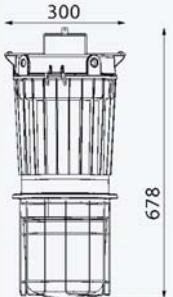
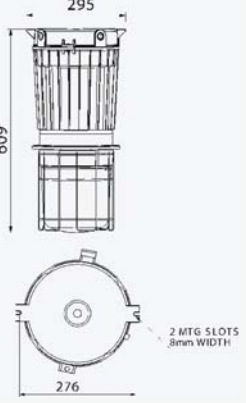
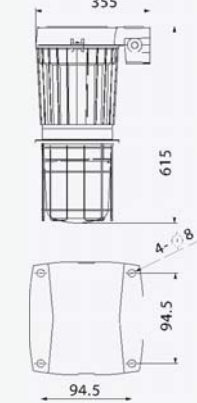
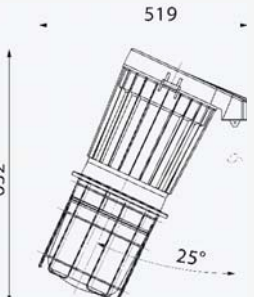
Refer to the table below for line currents that will assist in sizing of the circuit branch.

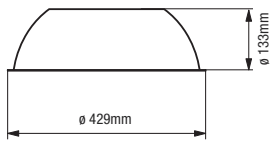
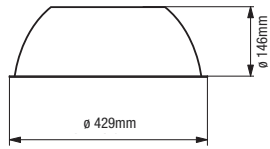
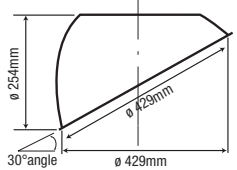
FITTING TYPE AND WATTAGE	RUNNING CURRENT					STARTING CURRENT					OPEN CIRCUIT CURRENT				
	220V 50HZ	220V 60HZ	230V 50HZ	230V 60HZ	240V 50HZ	220V 50HZ	220V 60HZ	230V 50HZ	230V 60HZ	240V 50HZ	220V 50HZ	220V 60HZ	230V 50HZ	230V 60HZ	240V 50HZ
HPS/MH - 70W	0.42A	0.42A	0.40A	0.40A	0.39A	0.53A	0.53A	0.50A	0.50A	0.50A	0.87A	1.04A	0.91A	1.09A	0.95A
HPS/MH - 100W	0.58A	0.58A	0.57A	0.56A	0.54A	0.73A	0.73A	0.71A	0.70A	0.70A	0.87A	1.04A	0.91A	1.09A	0.95A
HPS/MH - 150W	0.86A	0.86A	0.82A	0.82A	0.79A	1.08A	1.08A	1.03A	1.00A	1.00A	1.31A	1.57A	1.36A	1.64A	1.42A
HPS/MH - 250W	1.36A	1.36A	1.31A	1.30A	1.25A	2.04A	2.04A	1.97A	1.95A	1.88A	1.31A	1.57A	1.36A	1.64A	1.42A
HPS/MH - 400W	2.14A	2.15A	2.07A	2.06A	1.98A	3.21A	3.23A	3.11A	3.09A	2.97A	1.81A	2.18A	1.90A	2.27A	1.98A

Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

DIMENSIONS

NVMV 70W - 250W			
Pendant (7.7kg)	Ceiling (7.6kg)	Wall (8.0kg)	Stanchion (8.0kg)
			

NVMV 250W - 400W			
Pendant (21.1kg)	Ceiling (21.0kg)	Wall (21.4kg)	Stanchion (21.4kg)
			

REFLECTOR DIMENSIONS		
RD70 (for 70W - 250W)	RD739 (for 250W - 400W)	RA70 and RA739 (Small & Large Housing)
 (0.60kg)	 (0.56kg)	 (RA70 - 0.60kg; RA739 - 0.79kg)

LIGHTING APPLICATION AND DESIGN

Lighting layouts, analysis and designs from Cooper Crouse-Hinds deliver a real competitive advantage.

In the past, engineers had to calculate lighting layouts and design using complex mathematical formulas – also known as the “Lumen Method” and “Point-By-Point” Method. Today, there are software programs that can easily run these calculations very quickly.

Lighting layouts, analysis and designs from Cooper Crouse-Hinds deliver a real competitive advantage. For over 100 years Cooper Crouse-Hinds has been providing hazardous area lighting solutions. Our light fittings are manufactured to the highest standards and will provide years of reliable service and performance under the harshest conditions.

LIGHTING SOFTWARE

Cooper Crouse-Hinds’ LUXICON® software program makes it very easy to perform lighting calculations and professional quality designs. Our latest version, LUXICON® 2.5.25, is distributed free of charge and includes a tutorial to introduce users to its operation and several “Wizards” that will assist in a step-by-step process to create your own lighting design. You can also add in objects that will account for light inference caused by equipment, walls, and other obstructions in the work area. It will also provide detail point-by-point calculations and statistical analysis.

LIGHTING LAYOUT SERVICES

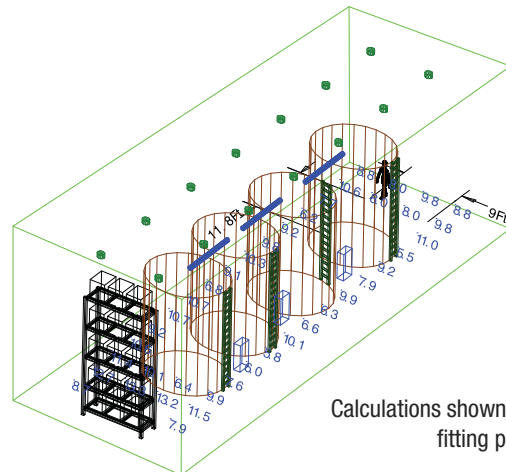
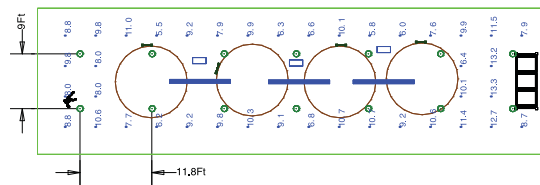
Need help with a more complex lighting design or analysis?

Then take advantage of our free lighting design service using AGi32® software.

Our lighting designers can provide you with lighting layouts for more complex projects that will interface with the latest version of AutoCAD drawings and will provide a more detailed lighting analysis.



Point-by-point light calculation in plan view



Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

PHOTOMETRY: LARGE HOUSING

For complete IES files and additional wattages, please log onto www.crouse-hinds.com and go to Services and Support > Photometric Information or contact Bob Wisniewski (e-mail: Bob.Wisniewski@cooperindustries.com).

NVMV 400 WATT HSE - GLOBE AND GUARD ONLY

LAMP: 400W HSE

LIGHT OUTPUT UP: 21.9%

LIGHT OUTPUT DOWN: 44.2%

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

UNIT:cd/klm

C0 /180

C90 /270

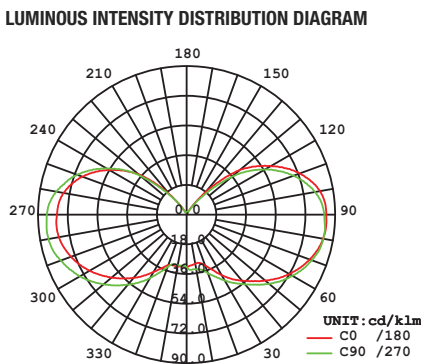
Ceiling	80%			70%			50%			30%			10%			0
Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
Floor	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
0	0.77	0.77	0.77	0.73	0.73	0.73	0.65	0.65	0.65	0.58	0.58	0.58	0.51	0.51	0.51	0.48
1	0.61	0.56	0.52	0.57	0.53	0.49	0.50	0.47	0.44	0.44	0.41	0.39	0.38	0.36	0.34	0.31
2	0.51	0.44	0.39	0.47	0.42	0.37	0.41	0.37	0.33	0.36	0.32	0.29	0.31	0.28	0.25	0.22
3	0.43	0.36	0.31	0.40	0.34	0.29	0.35	0.30	0.26	0.30	0.26	0.23	0.26	0.22	0.20	0.17
4	0.37	0.30	0.25	0.35	0.28	0.23	0.30	0.25	0.21	0.26	0.22	0.18	0.22	0.19	0.16	0.13
5	0.33	0.25	0.20	0.30	0.24	0.19	0.27	0.21	0.17	0.23	0.18	0.15	0.20	0.16	0.13	0.11
6	0.29	0.22	0.17	0.27	0.21	0.16	0.24	0.18	0.14	0.20	0.16	0.13	0.17	0.14	0.11	0.09
7	0.26	0.19	0.15	0.24	0.18	0.14	0.21	0.16	0.12	0.18	0.14	0.11	0.16	0.12	0.09	0.07
8	0.23	0.17	0.13	0.22	0.16	0.12	0.19	0.14	0.11	0.17	0.12	0.09	0.14	0.11	0.08	0.06
9	0.21	0.15	0.11	0.20	0.14	0.10	0.17	0.13	0.09	0.15	0.11	0.08	0.13	0.10	0.07	0.05
10	0.19	0.14	0.10	0.18	0.13	0.09	0.16	0.11	0.08	0.14	0.10	0.07	0.12	0.09	0.06	0.05

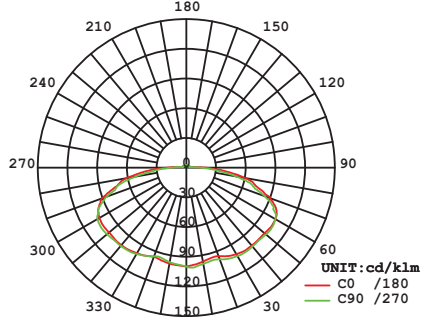
NVMV 400 WATT HSE - GLOBE AND DOME REFLECTOR	LAMP: 400W HSE						LIGHT OUTPUT UP: 1.6% LIGHT OUTPUT DOWN: 44.0%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.60	0.60	0.60	0.59	0.59	0.59	0.56	0.56	0.56	0.53	0.53	0.53	0.50	0.50	0.50	0.49
	1	0.50	0.47	0.45	0.49	0.46	0.44	0.46	0.44	0.42	0.44	0.42	0.41	0.42	0.40	0.39	0.38
	2	0.42	0.38	0.34	0.41	0.37	0.34	0.39	0.36	0.33	0.37	0.34	0.32	0.35	0.33	0.31	0.29
	3	0.36	0.31	0.27	0.35	0.31	0.27	0.33	0.29	0.26	0.32	0.28	0.25	0.30	0.27	0.25	0.23
	4	0.31	0.26	0.22	0.31	0.26	0.22	0.29	0.25	0.21	0.27	0.24	0.21	0.26	0.23	0.20	0.19
	5	0.28	0.22	0.18	0.27	0.22	0.18	0.25	0.21	0.18	0.24	0.20	0.17	0.23	0.20	0.17	0.16
	6	0.24	0.19	0.16	0.24	0.19	0.15	0.23	0.18	0.15	0.22	0.18	0.15	0.21	0.17	0.15	0.13
	7	0.22	0.17	0.13	0.21	0.17	0.13	0.20	0.16	0.13	0.19	0.16	0.13	0.19	0.15	0.13	0.11
	8	0.20	0.15	0.12	0.19	0.15	0.12	0.18	0.14	0.11	0.18	0.14	0.11	0.17	0.13	0.11	0.10
	9	0.18	0.13	0.10	0.18	0.13	0.10	0.17	0.13	0.10	0.16	0.12	0.10	0.15	0.12	0.10	0.09
	10	0.16	0.12	0.09	0.16	0.12	0.09	0.15	0.12	0.09	0.15	0.11	0.09	0.14	0.11	0.09	0.08

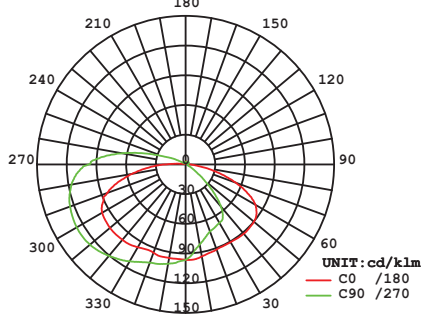
NVMV 400 WATT HSE - GLOBE AND 30° ANGLE REFLECTOR	LAMP: 400W HSE						LIGHT OUTPUT UP: 4.6% LIGHT OUTPUT DOWN: 39.5%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio									Coefficients of Utilization (CU)						
	0	0.60	0.60	0.60	0.58	0.58	0.58	0.54	0.54	0.54	0.51	0.51	0.51	0.47	0.47	0.47	0.46
	1	0.49	0.46	0.44	0.47	0.45	0.42	0.44	0.42	0.40	0.41	0.40	0.38	0.39	0.37	0.36	0.34
	2	0.42	0.37	0.34	0.40	0.36	0.33	0.37	0.34	0.31	0.35	0.32	0.30	0.33	0.30	0.28	0.27
	3	0.36	0.31	0.27	0.35	0.30	0.26	0.32	0.28	0.25	0.30	0.27	0.24	0.28	0.25	0.23	0.22
	4	0.31	0.26	0.22	0.30	0.25	0.22	0.28	0.24	0.21	0.26	0.23	0.20	0.25	0.22	0.19	0.18
	5	0.28	0.22	0.19	0.27	0.22	0.18	0.25	0.21	0.18	0.23	0.20	0.17	0.22	0.19	0.16	0.15
	6	0.25	0.19	0.16	0.24	0.19	0.16	0.22	0.18	0.15	0.21	0.17	0.14	0.20	0.16	0.14	0.13
	7	0.22	0.17	0.14	0.21	0.17	0.13	0.20	0.16	0.13	0.19	0.15	0.13	0.18	0.15	0.12	0.11
	8	0.20	0.15	0.12	0.19	0.15	0.12	0.18	0.14	0.11	0.17	0.14	0.11	0.16	0.13	0.11	0.10
	9	0.18	0.14	0.11	0.18	0.13	0.10	0.17	0.13	0.10	0.16	0.12	0.10	0.15	0.12	0.09	0.08
	10	0.17	0.12	0.10	0.16	0.12	0.09	0.15	0.12	0.09	0.14	0.11	0.09	0.14	0.11	0.09	0.08

PHOTOMETRY: LARGE HOUSING

For complete IES files and additional wattages, please log onto www.crouse-hinds.com and go to Services and Support > Photometric Information or contact Bob Wisniewski (e-mail: Bob.Wisniewski@cooperindustries.com).

NVMV 250 WATT HSE - GLOBE AND GUARD ONLY	LAMP: 250W HSE						LIGHT OUTPUT UP: 21.9% LIGHT OUTPUT DOWN: 44.2%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.75	0.75	0.75	0.70	0.70	0.70	0.60	0.60	0.60	0.52	0.52	0.52	0.44	0.44	0.44	0.40
	1	0.59	0.55	0.51	0.55	0.51	0.47	0.46	0.43	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.25
	2	0.49	0.43	0.38	0.45	0.40	0.35	0.38	0.34	0.30	0.32	0.28	0.25	0.26	0.23	0.21	0.17
	3	0.42	0.35	0.30	0.39	0.33	0.28	0.32	0.28	0.24	0.27	0.23	0.20	0.21	0.18	0.16	0.13
	4	0.36	0.29	0.24	0.33	0.27	0.22	0.28	0.23	0.19	0.23	0.19	0.16	0.18	0.15	0.12	0.10
	5	0.32	0.25	0.20	0.29	0.23	0.18	0.25	0.20	0.16	0.20	0.16	0.13	0.16	0.13	0.10	0.08
	6	0.28	0.22	0.17	0.26	0.20	0.16	0.22	0.17	0.13	0.18	0.14	0.11	0.14	0.11	0.08	0.06
	7	0.25	0.19	0.14	0.23	0.17	0.13	0.20	0.15	0.11	0.16	0.12	0.09	0.13	0.10	0.07	0.05
	8	0.23	0.17	0.12	0.21	0.15	0.11	0.18	0.13	0.10	0.15	0.11	0.08	0.12	0.09	0.06	0.04
	9	0.21	0.15	0.11	0.19	0.14	0.10	0.16	0.12	0.08	0.13	0.10	0.07	0.11	0.08	0.05	0.04
	10	0.19	0.13	0.09	0.17	0.12	0.09	0.15	0.10	0.07	0.12	0.09	0.06	0.10	0.07	0.05	0.03

NVMV 250 WATT HSE - GLOBE AND DOME REFLECTOR	LAMP: 250W HSE						LIGHT OUTPUT UP: 1.6% LIGHT OUTPUT DOWN: 44.0%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.64	0.64	0.64	0.62	0.62	0.62	0.59	0.59	0.56	0.56	0.56	0.53	0.53	0.53	0.53	0.52
	1	0.53	0.50	0.47	0.51	0.48	0.46	0.48	0.46	0.44	0.46	0.44	0.42	0.43	0.42	0.40	0.39
	2	0.44	0.40	0.36	0.43	0.39	0.35	0.41	0.37	0.34	0.38	0.35	0.33	0.36	0.34	0.32	0.30
	3	0.38	0.32	0.28	0.37	0.32	0.28	0.35	0.30	0.27	0.33	0.29	0.26	0.31	0.28	0.25	0.24
	4	0.33	0.27	0.23	0.32	0.27	0.23	0.30	0.26	0.22	0.28	0.25	0.21	0.27	0.24	0.21	0.19
	5	0.29	0.23	0.19	0.28	0.23	0.19	0.26	0.22	0.18	0.25	0.21	0.18	0.24	0.20	0.17	0.16
	6	0.26	0.20	0.16	0.25	0.20	0.16	0.24	0.19	0.16	0.22	0.18	0.15	0.21	0.18	0.15	0.14
	7	0.23	0.18	0.14	0.22	0.17	0.14	0.21	0.17	0.14	0.20	0.16	0.13	0.19	0.16	0.13	0.12
	8	0.21	0.16	0.12	0.20	0.15	0.12	0.19	0.15	0.12	0.18	0.14	0.12	0.18	0.14	0.11	0.10
	9	0.19	0.14	0.11	0.18	0.14	0.11	0.18	0.13	0.10	0.17	0.13	0.10	0.16	0.13	0.10	0.09
	10	0.17	0.13	0.10	0.17	0.13	0.10	0.16	0.12	0.09	0.16	0.12	0.09	0.15	0.11	0.09	0.08

NVMV 250 WATT HSE - GLOBE AND 30° ANGLE REFLECTOR	LAMP: 250W HSE						LIGHT OUTPUT UP: 4.6% LIGHT OUTPUT DOWN: 39.5%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.61	0.61	0.61	0.59	0.59	0.59	0.55	0.55	0.55	0.51	0.51	0.51	0.48	0.48	0.48	0.46
	1	0.50	0.47	0.44	0.48	0.45	0.43	0.45	0.42	0.40	0.41	0.40	0.38	0.39	0.37	0.36	0.34
	2	0.42	0.38	0.34	0.41	0.37	0.33	0.38	0.34	0.31	0.35	0.32	0.30	0.32	0.30	0.28	0.26
	3	0.36	0.31	0.27	0.35	0.30	0.26	0.32	0.28	0.25	0.30	0.27	0.24	0.28	0.25	0.23	0.21
	4	0.32	0.26	0.22	0.30	0.26	0.22	0.28	0.24	0.21	0.26	0.23	0.20	0.24	0.21	0.19	0.17
	5	0.28	0.23	0.19	0.27	0.22	0.18	0.25	0.21	0.18	0.23	0.20	0.17	0.22	0.19	0.16	0.15
	6	0.25	0.20	0.16	0.24	0.19	0.16	0.22	0.18	0.15	0.21	0.17	0.14	0.19	0.16	0.14	0.12
	7	0.22	0.17	0.14	0.22	0.17	0.14	0.20	0.16	0.13	0.19	0.15	0.13	0.18	0.14	0.12	0.11
	8	0.20	0.15	0.12	0.20	0.15	0.12	0.18	0.14	0.11	0.17	0.14	0.11	0.16	0.13	0.11	0.09
	9	0.18	0.14	0.11	0.18	0.14	0.11	0.17	0.13	0.10	0.16	0.12	0.10	0.15	0.12	0.09	0.08
	10	0.17	0.13	0.10	0.16	0.12	0.09	0.15	0.12	0.09	0.15	0.11	0.09	0.14	0.11	0.08	0.07

Champ® NVMV Series - Ex-Protected Luminaires for IEC and ATEX Applications

PHOTOMETRY: SMALL HOUSING

For complete IES files and additional wattages, please log onto www.crouse-hinds.com and go to Services and Support > Photometric Information or contact Bob Wisniewski (e-mail: Bob.Wisniewski@cooperindustries.com).

NVMV 150 WATT HSE - GLOBE AND GUARD ONLY

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

UNIT: cd/klm

C0 /180

C90 /270

LAMP: 150W HSE

LIGHT OUTPUT UP: 36.0%

LIGHT OUTPUT DOWN: 51.4%

Ceiling	80%			70%			50%			30%			10%			0
Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
Floor	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio									Coefficients of Utilization (CU)						
0	0.95	0.95	0.95	0.89	0.89	0.89	0.77	0.77	0.77	0.66	0.66	0.66	0.56	0.56	0.56	0.51
1	0.76	0.70	0.65	0.70	0.65	0.61	0.60	0.56	0.52	0.50	0.47	0.44	0.41	0.39	0.37	0.32
2	0.63	0.56	0.49	0.58	0.52	0.46	0.49	0.44	0.39	0.41	0.37	0.33	0.33	0.30	0.27	0.23
3	0.54	0.46	0.39	0.50	0.42	0.36	0.42	0.36	0.31	0.35	0.30	0.26	0.28	0.24	0.21	0.17
4	0.47	0.38	0.31	0.43	0.35	0.29	0.36	0.30	0.25	0.30	0.25	0.21	0.24	0.20	0.17	0.13
5	0.41	0.32	0.26	0.38	0.30	0.24	0.32	0.26	0.21	0.26	0.21	0.17	0.21	0.17	0.14	0.11
6	0.36	0.28	0.22	0.34	0.26	0.20	0.28	0.22	0.17	0.23	0.18	0.14	0.19	0.15	0.12	0.09
7	0.33	0.24	0.19	0.30	0.23	0.17	0.25	0.19	0.15	0.21	0.16	0.12	0.17	0.13	0.10	0.07
8	0.29	0.22	0.16	0.27	0.20	0.15	0.23	0.17	0.13	0.19	0.14	0.11	0.16	0.12	0.09	0.06
9	0.27	0.19	0.14	0.25	0.18	0.13	0.21	0.15	0.11	0.18	0.13	0.09	0.14	0.10	0.07	0.05
10	0.24	0.17	0.13	0.23	0.16	0.12	0.19	0.14	0.10	0.16	0.12	0.08	0.13	0.09	0.07	0.05

NVMV 150 WATT HSE - GLOBE AND DOME REFLECTOR	LAMP: 150W HSE									LIGHT OUTPUT UP: 2.4% LIGHT OUTPUT DOWN: 68.1%								
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM UNIT: cd/klm — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0	
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
	Floor	20%			20%			20%			20%			20%			0	
	RCR	RCR: Room Cavity Ratio									Coefficients of Utilization (CU)							
	0	0.83	0.83	0.83	0.81	0.81	0.81	0.77	0.77	0.73	0.73	0.73	0.70	0.70	0.70	0.68		
	1	0.70	0.66	0.63	0.68	0.65	0.61	0.64	0.62	0.59	0.61	0.59	0.57	0.58	0.56	0.55	0.53	
	2	0.59	0.53	0.49	0.58	0.52	0.48	0.55	0.50	0.46	0.52	0.48	0.45	0.49	0.46	0.43	0.42	
	3	0.51	0.44	0.39	0.49	0.43	0.38	0.47	0.41	0.37	0.44	0.40	0.36	0.42	0.38	0.35	0.33	
	4	0.44	0.37	0.32	0.43	0.36	0.31	0.41	0.35	0.30	0.39	0.34	0.30	0.37	0.33	0.29	0.27	
	5	0.39	0.32	0.26	0.38	0.31	0.26	0.36	0.30	0.26	0.34	0.29	0.25	0.33	0.28	0.25	0.23	
	6	0.34	0.27	0.22	0.34	0.27	0.22	0.32	0.26	0.22	0.31	0.25	0.21	0.29	0.25	0.21	0.19	
	7	0.31	0.24	0.19	0.30	0.24	0.19	0.29	0.23	0.19	0.28	0.22	0.19	0.26	0.22	0.18	0.17	
	8	0.28	0.21	0.17	0.27	0.21	0.17	0.26	0.21	0.17	0.25	0.20	0.16	0.24	0.19	0.16	0.15	
	9	0.26	0.19	0.15	0.25	0.19	0.15	0.24	0.19	0.15	0.23	0.18	0.14	0.22	0.18	0.14	0.13	
	10	0.23	0.17	0.13	0.23	0.17	0.13	0.22	0.17	0.13	0.21	0.16	0.13	0.20	0.16	0.13	0.11	

NVMV 150 WATT HSE - GLOBE AND 30° ANGLE REFLECTOR

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

UNIT: cd/klm

— C0 /180

— C90 /270

LAMP: 150W HSE

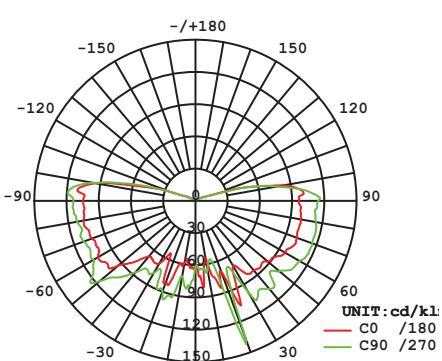
LIGHT OUTPUT UP: 7.6%

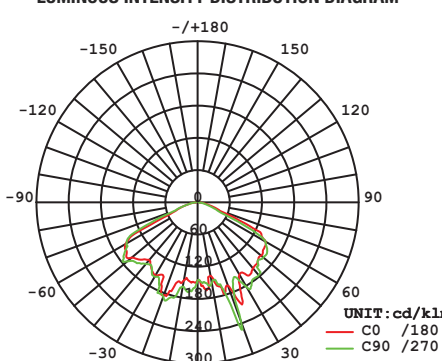
LIGHT OUTPUT DOWN: 64.3%

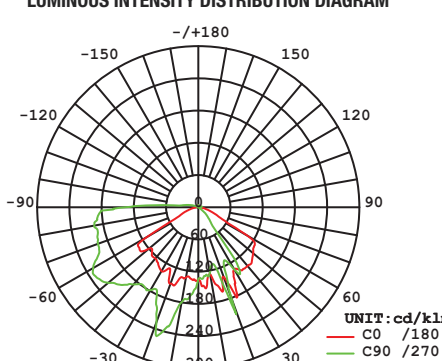
Ceiling	80%			70%			50%			30%			10%			0
Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
Floor	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio									Coefficients of Utilization (CU)						
0	0.84	0.84	0.84	0.81	0.81	0.81	0.76	0.76	0.76	0.71	0.71	0.66	0.66	0.66	0.64	
1	0.69	0.65	0.61	0.67	0.63	0.60	0.62	0.59	0.56	0.58	0.55	0.53	0.54	0.52	0.50	
2	0.59	0.53	0.48	0.57	0.51	0.46	0.53	0.48	0.44	0.49	0.45	0.42	0.46	0.43	0.40	
3	0.51	0.44	0.38	0.49	0.42	0.37	0.45	0.40	0.36	0.42	0.38	0.34	0.39	0.36	0.33	
4	0.44	0.37	0.32	0.43	0.36	0.31	0.40	0.34	0.30	0.37	0.32	0.28	0.35	0.31	0.27	
5	0.39	0.32	0.27	0.38	0.31	0.26	0.35	0.29	0.25	0.33	0.28	0.24	0.31	0.27	0.23	
6	0.35	0.28	0.23	0.34	0.27	0.22	0.32	0.26	0.22	0.30	0.25	0.21	0.28	0.23	0.20	
7	0.31	0.25	0.20	0.30	0.24	0.19	0.28	0.23	0.19	0.27	0.22	0.18	0.25	0.21	0.17	
8	0.28	0.22	0.17	0.28	0.21	0.17	0.26	0.20	0.17	0.24	0.20	0.16	0.23	0.19	0.15	
9	0.26	0.20	0.15	0.25	0.19	0.15	0.24	0.18	0.15	0.22	0.18	0.14	0.21	0.17	0.14	
10	0.24	0.18	0.14	0.23	0.17	0.14	0.22	0.17	0.13	0.21	0.16	0.13	0.20	0.15	0.12	

PHOTOMETRY: SMALL HOUSING

For complete IES files and additional wattages, please log onto www.crouse-hinds.com and go to Services and Support > Photometric Information or contact Bob Wisniewski (e-mail: Bob.Wisniewski@cooperindustries.com).

NVMV 150 WATT HIE - GLOBE AND GUARD ONLY	150W HIE						LIGHT OUTPUT UP: 36.0% LIGHT OUTPUT DOWN: 51.4%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/kl: — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.89	0.89	0.89	0.85	0.85	0.85	0.77	0.77	0.77	0.70	0.70	0.70	0.63	0.63	0.63	0.60
	1	0.69	0.64	0.59	0.66	0.61	0.57	0.59	0.55	0.51	0.53	0.49	0.47	0.47	0.44	0.42	0.39
	2	0.58	0.50	0.44	0.54	0.48	0.42	0.48	0.43	0.38	0.43	0.39	0.35	0.38	0.34	0.31	0.28
	3	0.49	0.41	0.34	0.46	0.39	0.33	0.41	0.35	0.30	0.36	0.31	0.27	0.32	0.28	0.24	0.21
	4	0.42	0.34	0.27	0.40	0.32	0.26	0.35	0.29	0.24	0.31	0.26	0.22	0.28	0.23	0.19	0.17
	5	0.37	0.29	0.23	0.35	0.27	0.22	0.31	0.25	0.20	0.28	0.22	0.18	0.24	0.20	0.16	0.14
	6	0.33	0.25	0.19	0.31	0.24	0.18	0.28	0.21	0.17	0.25	0.19	0.15	0.22	0.17	0.14	0.11
	7	0.29	0.22	0.16	0.28	0.21	0.16	0.25	0.19	0.14	0.22	0.17	0.13	0.20	0.15	0.12	0.10
	8	0.27	0.19	0.14	0.25	0.18	0.14	0.23	0.17	0.12	0.20	0.15	0.11	0.18	0.13	0.10	0.08
	9	0.24	0.17	0.12	0.23	0.16	0.12	0.21	0.15	0.11	0.18	0.14	0.10	0.16	0.12	0.09	0.07
	10	0.22	0.15	0.11	0.21	0.15	0.11	0.19	0.13	0.10	0.17	0.12	0.09	0.15	0.11	0.08	0.06

NVMV 150 WATT HIE - GLOBE AND DOME REFLECTOR	150W HIE						LIGHT OUTPUT UP: 2.4% LIGHT OUTPUT DOWN: 68.1%										
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/kl — C0 /180 — C90 /270	Ceiling	80%			70%			50%			30%			10%			0
	Wall	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
	Floor	20%			20%			20%			20%			20%			0
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)									
	0	0.74	0.74	0.74	0.72	0.72	0.72	0.69	0.69	0.69	0.66	0.66	0.66	0.63	0.63	0.63	0.62
	1	0.65	0.62	0.60	0.63	0.61	0.59	0.61	0.59	0.57	0.58	0.57	0.55	0.56	0.55	0.53	0.52
	2	0.56	0.52	0.48	0.55	0.51	0.48	0.53	0.49	0.46	0.51	0.48	0.45	0.49	0.46	0.44	0.43
	3	0.49	0.43	0.39	0.48	0.43	0.39	0.46	0.42	0.38	0.44	0.41	0.38	0.42	0.39	0.37	0.36
	4	0.43	0.37	0.33	0.42	0.37	0.32	0.40	0.36	0.32	0.39	0.35	0.32	0.37	0.34	0.31	0.30
	5	0.38	0.32	0.28	0.37	0.32	0.27	0.36	0.31	0.27	0.34	0.30	0.27	0.33	0.29	0.27	0.25
	6	0.34	0.28	0.24	0.33	0.28	0.24	0.32	0.27	0.23	0.31	0.26	0.23	0.30	0.26	0.23	0.22
	7	0.30	0.25	0.21	0.30	0.24	0.20	0.29	0.24	0.20	0.28	0.23	0.20	0.27	0.23	0.20	0.19
	8	0.27	0.22	0.18	0.27	0.22	0.18	0.26	0.21	0.18	0.25	0.21	0.18	0.25	0.21	0.18	0.16
	9	0.25	0.20	0.16	0.25	0.19	0.16	0.24	0.19	0.16	0.23	0.19	0.16	0.22	0.19	0.16	0.15
	10	0.23	0.18	0.14	0.23	0.18	0.14	0.22	0.17	0.14	0.21	0.17	0.14	0.21	0.17	0.14	0.13

NVMV 150 WATT HIE - GLOBE AND 30° ANGLE REFLECTOR LUMINOUS INTENSITY DISTRIBUTION DIAGRAM  UNIT: cd/kl — C0 /180 — C90 /270	150W HIE						LIGHT OUTPUT UP: 7.6% LIGHT OUTPUT DOWN: 64.3%									
	Ceiling		80%		70%		50%		30%		10%		0			
	Wall		50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
	Floor		20%		20%		20%		20%		20%		0			
	RCR	RCR: Room Cavity Ratio						Coefficients of Utilization (CU)								
	0	0.61	0.61	0.61	0.59	0.59	0.59	0.55	0.55	0.51	0.51	0.48	0.48	0.48	0.46	
	1	0.50	0.47	0.44	0.48	0.45	0.43	0.45	0.42	0.40	0.41	0.40	0.38	0.39	0.36	0.34
	2	0.42	0.38	0.34	0.41	0.37	0.33	0.38	0.34	0.31	0.35	0.32	0.30	0.32	0.30	0.26
	3	0.36	0.31	0.27	0.35	0.30	0.26	0.32	0.28	0.25	0.30	0.27	0.24	0.28	0.25	0.21
	4	0.32	0.26	0.22	0.30	0.26	0.22	0.28	0.24	0.21	0.26	0.23	0.20	0.24	0.21	0.17
	5	0.28	0.23	0.19	0.27	0.22	0.18	0.25	0.21	0.18	0.23	0.20	0.17	0.22	0.19	0.15
	6	0.25	0.20	0.16	0.24	0.19	0.16	0.22	0.18	0.15	0.21	0.17	0.14	0.19	0.16	0.12
	7	0.22	0.17	0.14	0.22	0.17	0.14	0.20	0.16	0.13	0.19	0.15	0.13	0.18	0.14	0.11
	8	0.20	0.15	0.12	0.20	0.15	0.12	0.18	0.14	0.11	0.17	0.14	0.11	0.16	0.13	0.11
	9	0.18	0.14	0.11	0.18	0.14	0.11	0.17	0.13	0.10	0.16	0.12	0.10	0.15	0.12	0.09
10	0.17	0.13	0.10	0.16	0.12	0.09	0.15	0.12	0.09	0.15	0.11	0.09	0.14	0.11	0.08	

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