



Enhancing
Safety +
Productivity



Vaporgard™ LED Series

Leading the way in LED technology
for industrial and hazardous applications

**25W
LED REPLACES
100-200W
INCANDESCENT**

High-performance, high-brightness Vaporgard™ 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)**.

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 light sources, LED 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.

Traditional Incandescent



Vaporgard LED



- 85% reduction in energy consumption costs
- 20X the life of incandescent lamps
- 50% lower profile than incandescent luminaires



Application

You're faced with high energy and maintenance costs related to your current incandescent lighting fixtures. In addition, you're worried about upcoming legislation to ban incandescent lighting fixtures in your jurisdiction. You need a solution which will not only reduce operating expenses, but also replace your current incandescent fixtures prior to government regulations going into effect.

Old Way:

Replace your current incandescent fixtures with a higher wattage luminaire that falls outside of the power range of the pending government regulations on incandescent lamps. Light output has increased, however, energy costs have gone up 30%, maintenance costs are still an issue, and future regulations may require another change.

New Way:

Install Vaporgard LED luminaires to realize an 85% reduction in energy consumption and slash maintenance costs associated with lamp replacement. The Vaporgard LED is designed to easily adapt to existing mounting modules for ease of installation. That, along with a 20X longer life, makes Vaporgard LED an ideal replacement for incandescent light sources.

Benefit:

Realize \$50K per year in energy and maintenance savings by installing Vaporgard LED luminaires. Qualify for rebate incentives with local municipalities and federal programs. Take advantage of the robust, low profile design by installing in those "tough to get to" locations.

The Vaporgard™ 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 and regulatory standards

Installation and replacement made simple

This contractor-friendly design is ideal for both retrofit and new construction applications. These luminaires are installed using the same wall and ceiling mounting modules as existing Vaporgard fixtures.



Safe, reliable heat transfer

Heatsink - engineered to safely and effectively remove heat from the LED and the driver, while providing durable protection for the optical elements of the fixture. This unique design increases overall flexibility of the luminaire by reducing both driver temperature and junction temperature of the LED arrays.



Easy Maintenance and Component Replacement

The compact and modular design of the Vaporgard LED allows for both easy component replacement and future upgrade.

Unique domeless, low profile design

Unique domeless, low profile design for low mounting heights and confined spaces where incandescent and HID based luminaires are too large to fit the mechanical envelope required.

LED Arrays

Four high power multi-die LED arrays provide instant on and full illumination throughout specified operational temperature range. Since LEDs contain no filament or lamp, the fixture can survive even the harshest environmental conditions and exposure to high, repeated vibration.



Vaporgard™ LED Series



THE VAPORGARD LED FAMILY

V2LC/UNV - Cool White Color Temperature

The V2LC/UNV Luminaire provides uniform crisp, white light and is suitable for lower mounting heights, confined spaces, tunnels, or utility rooms. Using four high power, high brightness LED arrays, this fixture can deliver similar light levels to 150 watt incandescent.



V2LW/UNV - Warm White Color Temperature

The V2LW/UNV Luminaire provides similar benefits as the cool white version, but with a color rendering more consistent with a warm incandescent or HPS lamp source. Perfect for situations where Vaporgard LED will be installed next to a warmer color light source.



DC Power Supply - Available for Applications Requiring DC Power

For applications with DC power requirements such as solar or back-up battery. The DC power supply is suitable for 12VDC through 24VDC.

APPLICATIONS

Vaporgard LED Luminaires are ideal for use in:

- Wet, dirty, dusty, corrosive, hot/cold conditions
- Hazardous locations
- Confined space or low ceiling areas, such as tunnels, utility rooms, over doorways or entries, top of landings, etc.
- Areas requiring frequent on/off of lights
- Areas where maintenance is difficult or challenging
- Areas requiring shatter-protected products, such as food processing facilities
- Outdoor wall or ceiling mounted area illumination
- Low mounting heights

VAPORGARD LED BENEFITS

Enhance safety and productivity

- Instant illumination and re-strike
- T4A rated at 55°C (AC unit only), T5 at 40°C - safely operate in the most hazardous locations
- Cold temperature operation; no warm-up time
- Multi-die LED arrays improve reliability
- Lightweight, low profile, and cool surface temperatures
- Driver with internal fusing for branch circuit protection

Reduce operation and maintenance costs

- 25 watt LED system can save up to 85% in energy costs
- 50K hours rated life can provide >10 years of maintenance-free lighting
- No Mercury or hazardous chemicals - eliminates disposal concerns
- Mounts to existing Vaporgard mounting modules

Reliable performance in any environment

- Shock- and vibration-resistant
- Teflon coated lens (suffix S896) option for increased safety in food processing facilities
- Low starting temperature: -30°C
- Operating ambient: -40°C to 55°C (High Temperature Option)
- Dark sky compliant

CERTIFICATIONS AND COMPLIANCES

NEC and CEC:

- Class I, Division 2, Groups A, B, C, D

UL Standards:

- UL844
- UL1598
- UL1598A

CSA Standard:

- CSA C22.2 No. 137

LED ARRAY

- (4) High brightness LED arrays
- Cool white (5600K), CRI 65
- Warm white (3200K), CRI 82
- 70% lumen maintenance (L_{70}) at 50K hours
- Junction temperature $T_j < 90^\circ\text{C}$ ensures long life
- Array complies with requirements of IEC LM80

LED DRIVER

- Constant current regulated power supply
- 90VAC - 264VAC, 277VAC, 50/60Hz
- Internal fusing
- Active power factor correction, >0.9
- Low harmonic distortion, $<20\%$
- Low inrush current <20 amps
- EMC compliant to 47CFR, Part 2, Part 15
- 12VDC/24VDC option available

OPTIONS

Suffix to add to Catalog No.

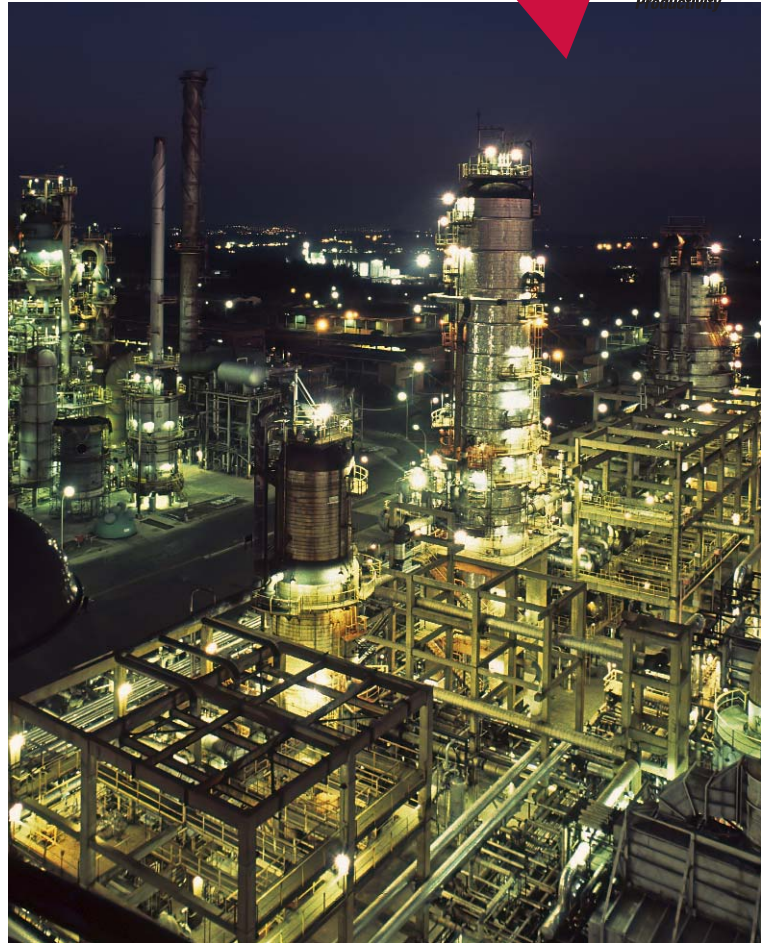
Frosted lens reduces glare in applications where the user may have direct visual contact with the light source **S891**

Teflon coating on lens provides additional shatter protection for applications in food and beverage facilities **S896**

High temperature option allows operation up to 55°C ambient temperature (AC unit only) **S902**

ELECTRICAL RATINGS

	SERIES			
	V2LC/UNV	V2LW/UNV	V2LC/DC	V2LW/DC
Voltage	90-264VAC, 277VAC	90-264VAC, 277VAC	12-24VDC	12-24VDC
Input Power (Watts)	25	25	25	25
Input Current	0.23 / 0.10	0.23 / 0.10	2.1 / 1.0	2.1 / 1.0
Power Factor	>0.9	>0.9	N/A	N/A
THD (I) (%)	$<20\%$	$<20\%$	N/A	N/A
Maintained Lumens	1600	1400	1600	1400
Efficacy, LPW	64	56	64	56
Color Temperature	5600K	3200K	5600K	3200K



Vaporgard™ LED Series

ORDERING INFORMATION

Mounting Style	Cool White		Warm White	
	AC Drive	DC Drive	AC Drive	DC Drive
½" Pendant	V2LCA1/UNV	V2LCA1/DC	V2LWA1/UNV	V2LWA1/DC
¾" Pendant	V2LCA2/UNV	V2LCA2/DC	V2LWA2/UNV	V2LWA2/DC
1" Pendant	V2LCA3/UNV	V2LCA3/DC	V2LWA3/UNV	V2LWA3/DC
¾" Wall with Junction Box	V2LCHBF2/UNV	V2LCHBF2/DC	V2LWHBF2/UNV	V2LWHBF2/DC
½" Ceiling	V2LCHF1/UNV	V2LCHF1/DC	V2LWHF1/UNV	V2LWHF1/DC
¾" Ceiling	V2LCHF2/UNV	V2LCHF2/DC	V2LWHF2/UNV	V2LWHF2/DC
¾" Wall	V2LCHT2/UNV	V2LCHT2/DC	V2LWHT2/UNV	V2LWHT2/DC
Adapter Only*	V2LCHR/UNV	V2LCHR/DC	V2LWHR/UNV	V2LWHR/DC

*For use when wall mount or ceiling mount box is already installed.

WEIGHTS

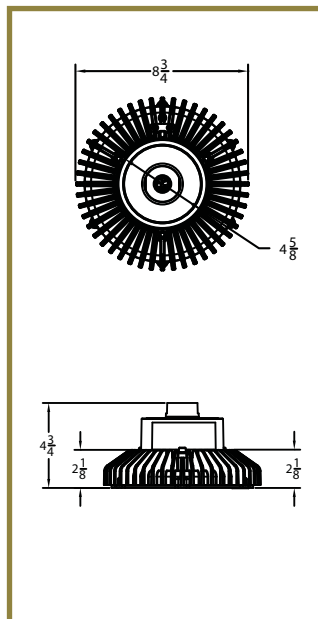
LUMINAIRE & MOUNTING MODULE WEIGHT	LBS.
Pendant Mount	5.7
Ceiling Mount	6.8
Wall Mount	7.9

AMBIENT TEMPERATURE

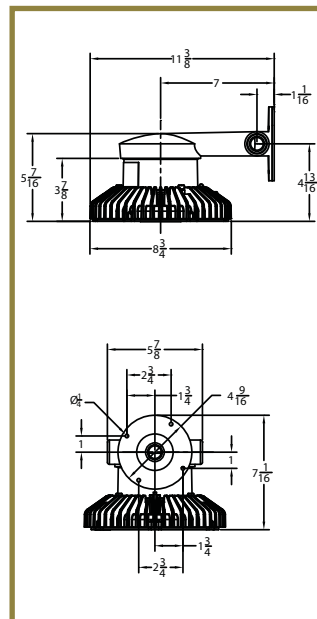
	MAX TEMP. °C	TEMP. RATING
V2L/UNV	40	T5
V2L/UNV S902	55	T4A
V2L/DC	40	T5

DIMENSIONS

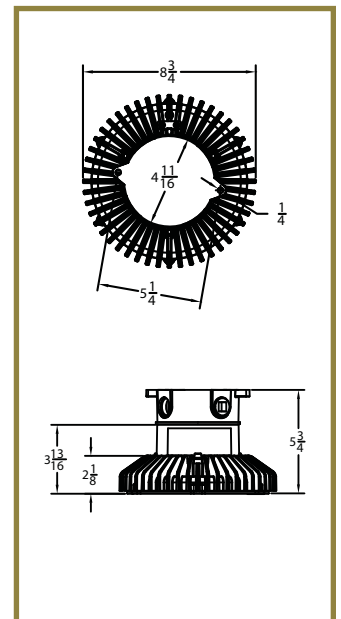
PENDANT



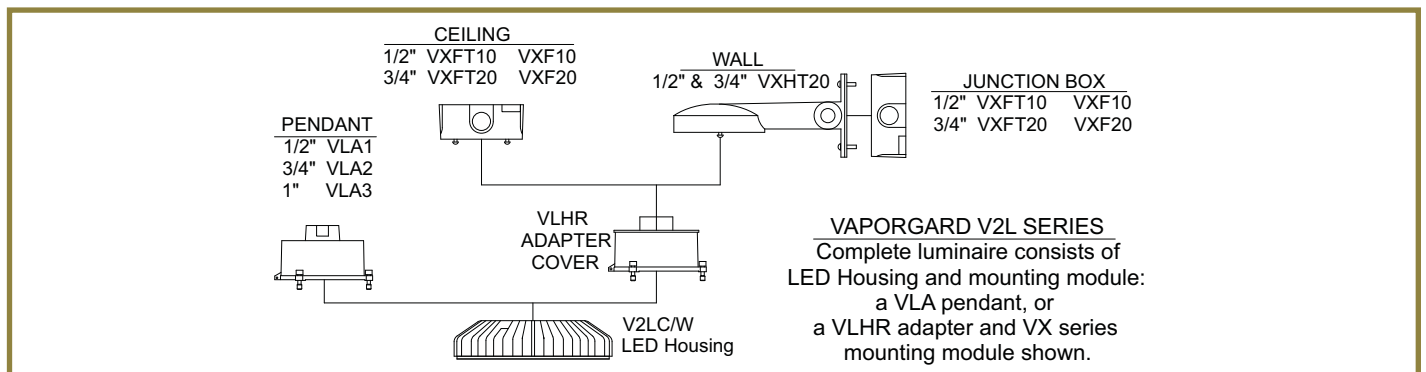
WALL



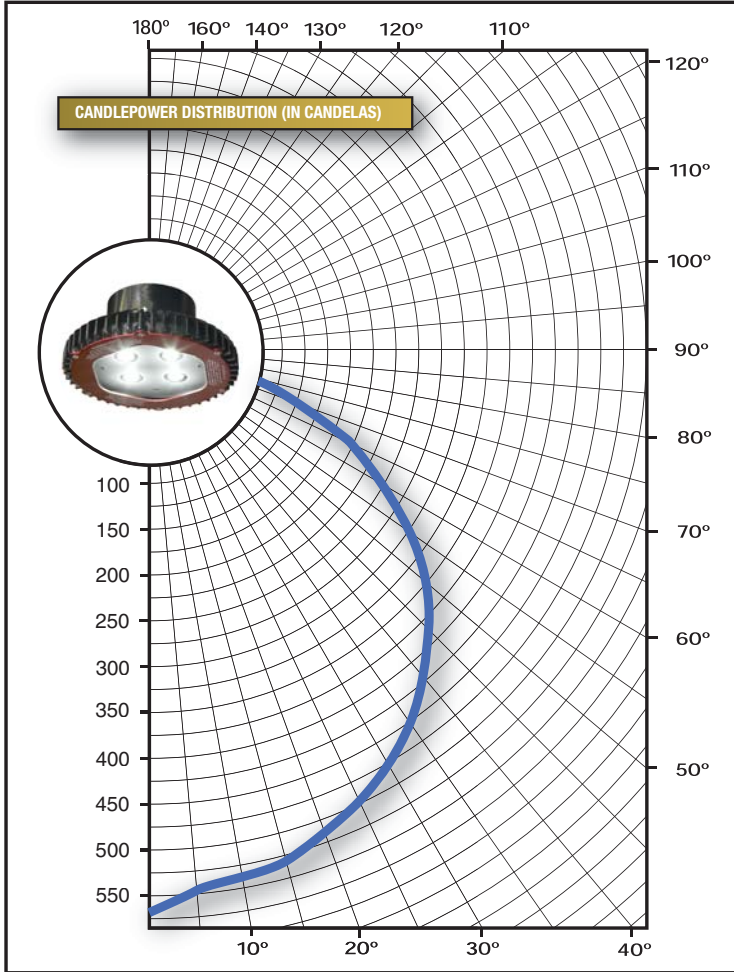
CEILING



FAMILY TREE



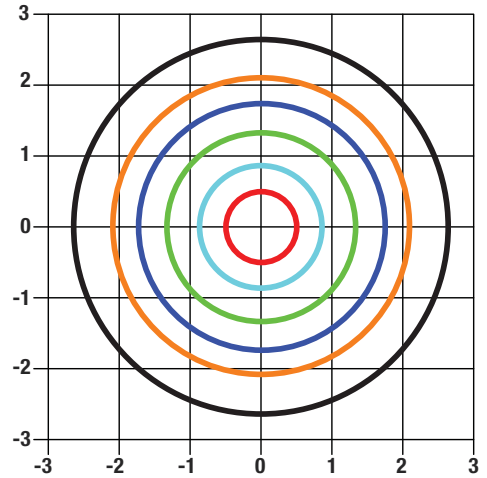
Vaporgard™ LED (25 Watt)



CANDELAS ZONAL LUMENS

VERTICAL ANGLE	FRONT SIDE	ZONE	WITH LUMENS	% LUMEN
0	564	0-10	52	3%
5	545	10-20	150	10%
15	530	20-30	230	15%
25	500	30-40	282	18%
35	452	40-50	297	19%
45	385	50-60	269	17%
55	301	60-70	194	12%
65	197	70-80	85	6%
75	80	80-90	6	0%
85	1	90-100	0	0%
90	0	100-120	0	0%
Total			1565	100%

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	F
6'	10.00	5.00	2.00	1.00	0.50	0.20
8'	5.62	2.81	1.13	0.56	0.28	0.11
10'	3.60	1.80	0.72	0.36	0.18	0.07
12'	2.50	1.25	0.50	0.25	0.13	0.05
14'	1.84	0.92	0.37	0.18	0.09	0.04

For more information:

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

U.S. (Global Headquarters):

Cooper Crouse-Hinds

Wolf & Seventh North Streets
Syracuse, NY 13221
(866) 764-5454
FAX: (315) 477-5179
FAX Orders Only: (866) 653-0640
crouse.customerctr@cooperindustries.com

Canada:

Cooper Crouse-Hinds Canada

Toll Free: 800-265-0502
FAX: (800) 263-9504
FAX Orders only: (866) 653-0645

Mexico/Latin America/Caribbean:

Cooper Crouse-Hinds, S.A. de C.V.

52-555-804-4000
FAX: 52-555-804-4020
mxmercadotecnia@cooperindustries.com

Europe (Germany):

Cooper Crouse-Hinds GmbH

49 (0) 6271 806-500
49 (0) 6271 806-476
sales.CCH.de@cooperindustries.com

Middle East (Dubai):

Cooper Crouse-Hinds LLC

971 4 4272500
FAX: 971 4 4298521
sales.CCH.me@cooperindustries.com

Singapore:

Cooper Crouse-Hinds Pte. Ltd.

65-6297-4849
FAX: 65-6297-4819
chsi-sales@cooperindustries.com

China:

Cooper Crouse-Hinds Pte. Ltd.

86-21-2899-3600
FAX: 86-21-2899-4055
cchsales@cooperindustries.com

Korea:

Cooper Crouse-Hinds Korea

82 2 538 3425
82 2 538 3505
CCHK-sales@cooperindustries.com

Australia:

Cooper Electrical Australia

61-2-8787-2777
FAX: 61-2-9609-2342
CEASales@cooperindustries.com

India:

Cooper India Pvt. Ltd.

91-124-4683888
FAX: 91-124-4683899
cchindia@cooperindustries.com

www.crouse-hinds.com

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Your Authorized Cooper Crouse-Hinds Distributor is:

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Cooper Industries, Ltd.
600 Travis, Ste. 5800
Houston, TX 77002-1001
P: 713-209-8400
www.cooperindustries.com