

VRDN

LED Area, Site and Roadway Luminaire

LUMARK



EATON

Powering Business Worldwide

Innovation you can rely on™



Innovation...Evolution.

Superior, Affordable Performance in LED Area, Site and Roadway Lighting

With industry-leading, patented optics in a scalable package, the VRDN LED area, site and roadway luminaire delivers state-of-the-art optical control, low maintenance costs and rugged construction in a modern style. The VRDN luminaire provides warm, white light with superior color rendering and uniform illumination to the targeted surface while providing greater than 67 percent in energy and maintenance savings over traditional HID solutions. Whether the application is a roadway or industrial/municipal parking lot, the VRDN luminaire is the choice for superior energy efficiency with unbeatable economics.

Engineered for Performance and Reliability

Superior illumination, low maintenance, long life and low cost of ownership are critical factors when lighting public spaces and roadways. The VRDN luminaire is ideal for retrofit and new construction projects, and it can be tailored to meet your specific needs without compromising on features. A single basic housing accommodates a wide range of lumen packages, ranging from 3,775 to 9,315 delivered lumens. The 4000K CCT / 70 CRI is standard with 5700K / 70 CRI and 3000K / 70 CRI options available. The LEDs are enclosed in IP66 rated optical enclosure and the fixture is UL wet location listed and 3G vibration rated. With an IP66 housing option available the VRDN luminaire provides exceptional durability and long term reliability.



Designed for Durability and Ease of Installation

The VRDN luminaire is designed to install easily, meet your performance requirements, and reduce your energy and maintenance costs. A tool-less, removable driver door and quick electrical disconnects allow nearly effortless installation and maintenance. The available 10kV UL 1449 surge protector provides state of the art protection against voltage spikes, while a super TGIC polyester powder-coat finish provides years of worry-free ownership.

Design Features

The VRDN luminaire is designed to provide superior optical performance combined with a variety of control options in a package that's easy to install and maintain. Industry-leading AccuLED Optics™ technology ensures maximum pole spacing and uniformity when replacing 50-150W MH and HPS fixtures.

Construction

- Rugged, die-cast aluminum housing
- Tool-less entry with hinged, removable power door, for ease of maintenance
- 3G vibration rated
- IP66 rated LED optical enclosure
- UL/cUL wet location rated housing (IP66 housing optional)

Electrical

- -40°C to 40°C ambient operating temperature range; 50°C high ambient option available
- 10kV/10kA, UL 1449 surge protection available
- 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation
- Quick electrical disconnects for tool-less removal of power door

Optical

- Type II, III and V distributions
- Wide range of lumen packages; replaces 50-150W HPS and MH luminaires in most area, site and roadway applications
- Greater than 90 percent lumen maintenance at 50,000 hours
- AccuLED Optics technology provide precise, uniform lighting

Controls

- Controls-ready when equipped with ANSI 7-PIN twistlock photocontrol receptacle. 3-PIN twistlock photocontrol receptacle available
- Available with dimming motion control (0-10V dimming)
- Optional integrated sensor for occupancy and dimming
- Optional wireless control and monitoring system

Mounting

- Standard two-bolt/one bracket slipfitter with cast-in pipe stop
- Optional four-bolt/two-clamp mounting available
- Optional 15" straight arm with round pole adapter

Finish

- Five-stage super TGIC paint resists extreme weather conditions while providing optimal color and gloss retention. Available in grey, bronze, black, dark platinum, graphite metallic or white

Warranty

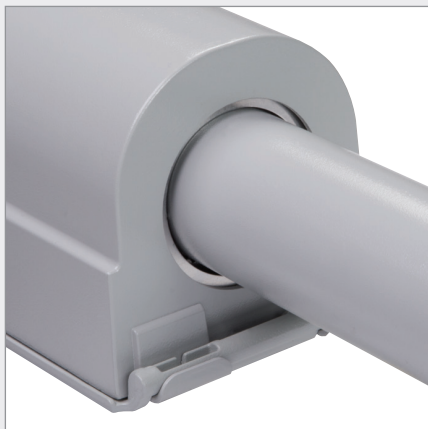
- Five-year warranty

Optional Features



Surge Protection

UL 1449 Listed 10kV/10kA surge protection against common (line-to-ground) and differential (line-to-line) mode surge.



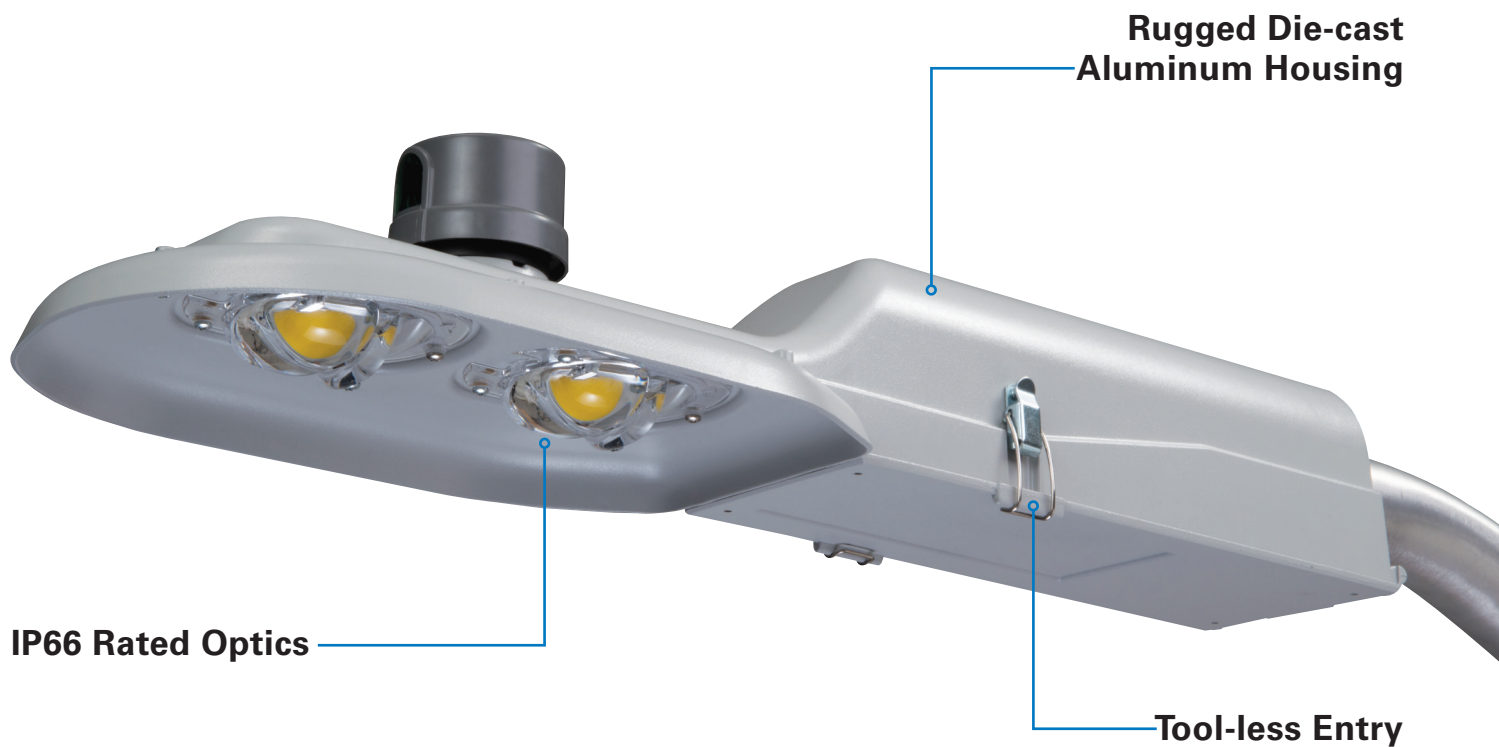
15" Straight Arm

Optional 15" straight pole mount arm available with round pole adapter and mounting hardware included.



7-PIN NEMA Twistlock Photocontrol Receptacle

ANSI C136.41 compliant. Enables wireless dimming when used with compatible photocontrol.



Ease of Installation and Maintenance

Superior performance comes with years of low-cost, low-hassle ownership. With lumen maintenance and life expectancy far beyond traditional HID light sources, regular and time-consuming service visits are a thing of the past. The driver is mounted on the power door and is easily accessible by stainless steel latches requiring no tools. The door is small enough to hold in one hand, making field replacement quick and easy.



Tool-less Access

Stainless steel latches provide easy, tool-less access to the electrical compartment.



Hinged, Removable Power Door

Driver is mounted to door. Integral hinge allows door to hang securely while making wire connections and can be easily removed without the use of tools.



Energy Savings

Energy Savings and Environmental Stewardship

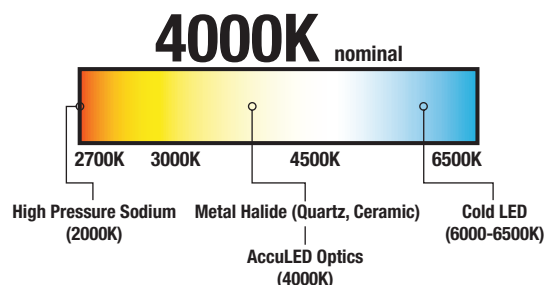
The simplest and most effective way to reduce a lighting fixture's impact on the environment is to minimize its energy consumption. By incorporating solid state lighting technology, the VRDN luminaire provides energy and maintenance savings up to 88 percent when compared to standard HID solutions. In addition to energy savings, the VRDN luminaire is RoHS compliant.

Long Life

With minimal ten-year lumen depreciation, the VRDN luminaire operates many times longer than traditional HID fixtures. The VRDN luminaire was deliberately designed with an electrical compartment that is isolated from the LED modules in order to optimize thermal dissipation of both the LED modules and electrical components insuring long operating life of all the fixture components.

Warm White Color

Lighting designers, architects and specifying engineers have long preferred light sources that provide a balanced spectral power distribution and warm white light. Many LED solutions standardize on a cool blue 5000-6000K correlated color temperature (CCT) to maximize lumen output. The VRDN luminaire provides warm white light at a standard 4000K CCT without sacrificing lumen output.



Reduced Energy Consumption

Operating and maintenance costs of a lighting system are dramatically impacted by the specified lamp source, system power consumption and the duration time of operation. Total system input watts and fixture operating life should be the driving considerations when addressing energy consumption and total cost of ownership. Energy savings increase when energy consumption is reduced and maintenance intervals are extended.

Annualized Energy and Maintenance Savings / Cost Comparison

Product	Hours Days / Year	Life (Hours) ¹	System Wattage	Cost / Year at \$.10 kWh ²	Annual Maintenance Cost ³	Total Energy Cost/Fixture and Maintenance	Annual Savings Per Fixture	Savings (Percent)
VRDN LED Luminaire	9 / 3,285	60,000	35W	\$11.50	\$0.00	\$11.50	\$84.89	88%
100W Metal Halide		20,000	129W	\$41.39	\$55.00	\$96.39		
VRDN LED Luminaire	9 / 3,285	60,000	63W	\$20.70	\$0.00	\$20.70	\$99.05	83%
150W Metal Halide		20,000	190W	\$62.42	\$57.33	\$119.75		
VRDN LED Luminaire	9 / 3,285	60,000	91W	\$29.89	\$0.00	\$29.89	\$160.40	84%
250W Metal Halide		12,000	285W	\$93.62	\$96.67	\$190.29		

NOTE: ¹ Lamp life for non-LED sources is defined as 50% failures. ² Cost = (Watts x 9 hours per day x 365 days per year)/1000 = Daily Kilowatt hour (kWh). kWh x 0.10 cents/kWh = Cost/Year at .10 kWh. ³ Relamping cost is calculated based on an average relamping of each fixture over a period of nine years.

Energy Savings / Equivalency / Cross Reference Guide

HID Source	HID Wattage	HID Life (Hours)	LED Fixture Replacement	LED Wattage	LED Life (Hours per TM-21)	HID vs. LED Energy Savings (Percent)
100W MH	129W	20,000	VRDN LED A018	35W	60,000	73%
150W MH	190W	20,000	VRDN LED A01	63W	60,000	67%
250W MH	295W	12,000	VRDN LED A02	91W	60,000	69%

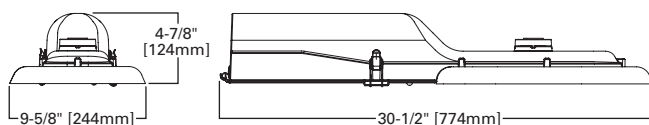
Ordering Information

Sample Number: VRDN-A02-E-UNV-T3-PER-AP

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution
VRDN	A01 =1 LED, Full Output A018 =1 LED, Approximately 80% Output A016 =1 LED, Approximately 60% Output A02 =2 LEDs, Full Output A028 =2 LEDs, Approximately 80% Output	E =Non-Dimming D =Dimming (0-10V)	UNV =Universal (120-277V) 347 =347V 480 =480V ⁴	T2 =Type II T3 =Type III T5 =Type V
Options (Add as Suffix)			Color	Accessories (Order Separately)
7030 =70 CRI / 3000K CCT ⁵ 7060 =70 CRI / 5700K CCT ⁵ PER =NEMA 3-PIN Twistlock Photocontrol Receptacle ⁶ PER7 =NEMA 7-PIN Twistlock Photocontrol Receptacle ^{6,7} 10K =10kV UL 1449 Surge Protective Device IP66 =IP66 Rated Housing HA =50°C High Ambient Temperature MS/DIM-L08 =Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{7,8,9} MS/DIM-L20 =Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height ^{7,8,9} MS/DIM-L40 =Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height ^{7,8,9} DIMRF-LN =Factory Installed LumaWatt RF Dimming Control System (Mounting Height 16' and Up) ^{10,11} DIMRF-LW =Factory Installed LumaWatt RF Dimming Control System (Mounting Height below 16') ^{10,11} K =Level Indicator 4B =Four-bolt, Two-clamp Mounting A15 =Arm Included (15' Straight Arm) ¹²			AP =Grey (Standard) BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White	OA1223 =10kV/10kA UL 1449 Surge Module Replacement OA/RA1013 =Photocontrol Shorting Cap OA/RA1014 =NEMA Photocontrol - 120V OA/RA1016 =NEMA Photocontrol - Multi-Tap OA/RA1027 =NEMA Photocontrol - 480V OA/RA1201 =NEMA Photocontrol - 347V FSIR-100 =Wireless Configuration Tool for Motion Sensor ¹³ A15-XX =15' Straight Arm ¹⁴ HS-VERD =Verdeon House Side Shield

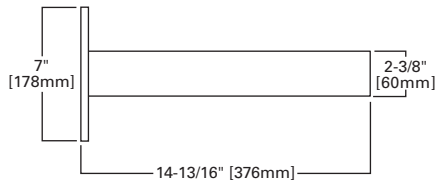
NOTES: **1** DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. **2** Standard 4000K CCT and 70 CRI. **3** Consult factory for driver surge protection values. **4** Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). **5** Extended lead times apply. Use dedicated IES files for 3000K and 5700K when performing layouts. These files are published on the VRDN luminaire product page on the website. **6** Not available with MS/DIM or DIMRF options. **7** Must specify dimming driver. **8** Not available with 4B option. Sensor mounted externally. Consult factory for more information. **9** The FSIR-100 accessory is required to adjust parameters. **10** LumaWatt wireless sensors are factory installed and require network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See website for LumaWatt application information. **11** LumaWatt wireless system is not available with photocontrol receptacle (not needed). **12** Round pole adapter and mounting hardware included. "M" drill pattern. **13** This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information. **14** Replace XX with finish color.

Dimensions



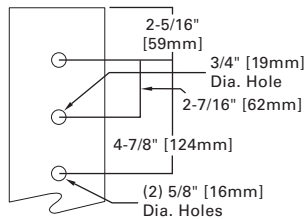
Optional Arm

15" Straight Arm



Arm Drilling

TYPE "M"



Additional Information

Compliances	Technical Data (Electronic Driver)	EPA (Effective Projected Area - Square Feet)	Shipping Data (Approximate Net Weight)
UL and cUL Wet Location Listed IP66-Rated Optics 3G Vibration Rated ISO 9001 DesignLights Consortium® Qualified ¹	+40°C (104°F) Ambient Temperature Rating -40°C (-40°F) Ambient Temperature Rating >0.9 Power Factor <20% Total Harmonic Distortion 120-277V 50/60Hz 347V 60Hz, 480V 60Hz ²	0.5	20 lbs. (9.1 kgs.)

NOTES: **1** DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. **2** 480V is compatible for use with 480V Wye systems only.



IP66
Rated



**Our Lighting
Product Lines**

Halo
Halo Commercial
Portfolio
Iris
RSA
Metalux
Corelite
Neo-Ray
Fail-Safe
MWS
Ametrix
Shaper
io
Lumark
McGraw-Edison
Invue
Lumière
Streetworks
AtLite
Sure-Lites

**Our Controls
Product Lines**

Greengate
iLumin
Zero 88
Fifth Light Technology
iLight (International Only)

Eaton

1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Canada Sales

5925 McLaughlin Road
Mississauga, Ontario L5R 1B8
P: 905-501-3000
F: 905-501-3172

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