

## DESCRIPTION

The Verdeon C-Series LED roadway luminaire combines optical performance, energy efficiency, and outstanding versatility to meet the requirements of any roadway application. Advanced optical technology delivers unparalleled uniformity, scalability, and budget-beating operating costs for municipal streets and highways.

<b>Catalog #</b>		<b>Type</b>	
<b>Project</b>			
<b>Comments</b>		<b>Date</b>	
<b>Prepared by</b>			

## SPECIFICATION FEATURES

### Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

### Optics

Optics are precisely designed to shape the distribution maximizing efficiency and fixture spacing. Offered standard in 4000K (+/- 275K) CCT and 70 CRI. Optional 3000K CCT (70 CRI) and 2700K CCT (80 CRI) are available.

### Electrical

120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard 0-10V dimming with 6kV/3kA, and 10kV/10kA common- and differential- mode surge protection available. Thermal management

transfers heat away from the LED source for optimal efficiency, light output and lumen maintenance. Operates in ambient temperatures from -40°C to 40°C. 50°C HA (high ambient) option available. Standard three-position tunnel type terminal block. LED modules are IP66 rated.

### Mounting

Two-bolt/one-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps. Four-bolt/two-clamp mounting option. Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm available with round pole adapter and mounting hardware included.

### Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult your lighting representative at Eaton for a complete selection of standard colors.

### Warranty

Five-year warranty.



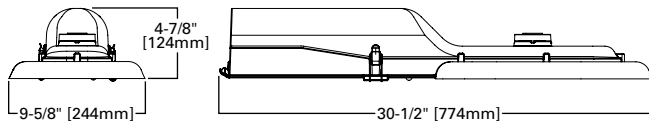
## VERD VERDEON (C-SERIES)

LED

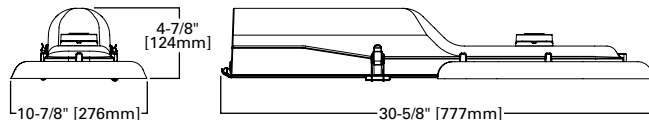
ROADWAY LUMINAIRE

## DIMENSIONS

### VERD

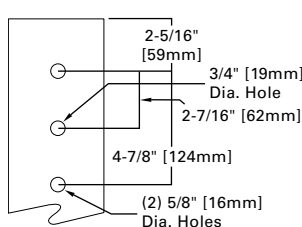


### VERD-G



## ARM DRILLING

### TYPE "M"



## OPTIONAL ARM

### 15" Straight Arm



## CERTIFICATION DATA

UL and cUL Wet Location Listed  
IP66-Rated Optics  
3G Vibration Rated  
ISO 9001  
DesignLights Consortium® Qualified\*

## ENERGY DATA

**Electronic LED Driver**  
0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 and 60Hz, 347V 60Hz, 480V 60Hz  
-40°C Minimum Temperature Rating  
+40°C Ambient Temperature Rating

## EPA

**Effective Projected Area** (Sq. Ft.): 0.5

## SHIPPING DATA

**Approximate Net Weight:**  
12.5 lbs. (5.7 kgs.)



**POWER AND LUMENS - VERD**

Light Engine	C013	C015	C016	C018	C01	C01H	C026	C028	C029	C02	C02H6	C02H8	C02H		
Power (Watts)	24	30	39	50	56	73	62	73	81	90	98	110	120		
Wattage Label	20	30	40	50	60	70	60	70	80	90	100	110	120		
Current (A) @ 120V	0.20	0.25	0.32	0.42	0.47	0.61	0.52	0.61	0.68	0.75	0.82	0.92	1.00		
Current (A) @ 277V	0.10	0.12	0.15	0.19	0.22	0.28	0.24	0.28	0.30	0.34	0.37	0.41	0.45		
Power (Watts)	--	34	43	54	54	73	62	72	80	89	99	110	119		
Wattage Label	--	30	40	50	50	70	60	70	80	90	100	110	120		
Current (A) @ 347V	--	0.08	0.10	0.12	0.16	0.22	0.19	0.22	0.24	0.27	0.29	0.32	0.35		
Current (A) @ 480V	--	0.06	0.07	0.09	0.13	0.17	0.14	0.17	0.18	0.20	0.21	0.23	0.25		
<b>Optics</b>															
<b>T1</b>	4000K (70 CRI)	3,183	4,146	5,122	6,286	7,525	9,359	8,499	9,819	10,677	11,586	12,224	14,682	15,640	
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	3000K (70 CRI)	3,097	4,035	4,985	6,117	7,323	9,108	8,271	9,555	10,391	11,275	11,896	14,287	15,219	
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	2700K (80 CRI)	2,805	3,654	4,514	5,539	6,629	8,245	7,489	8,653	9,409	10,210	10,772	12,933	13,777	
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2
<b>T2</b>	4000K (70 CRI)	3,026	3,942	4,870	5,976	7,154	8,898	8,080	9,335	10,151	11,015	11,622	13,958	14,869	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	
	3000K (70 CRI)	2,945	3,836	4,739	5,816	6,962	8,659	7,863	9,085	9,879	10,719	11,310	13,583	14,469	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	
	2700K (80 CRI)	2,667	3,474	4,292	5,266	6,302	7,838	7,120	8,226	8,945	9,707	10,241	12,296	13,098	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	
<b>T3</b>	4000K (70 CRI)	3,021	3,936	4,862	5,967	7,143	8,884	8,068	9,321	10,135	10,998	11,604	13,936	14,846	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	
	3000K (70 CRI)	2,940	3,830	4,732	5,807	6,951	8,645	7,851	9,070	9,863	10,703	11,293	13,562	14,447	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	
	2700K (80 CRI)	2,662	3,468	4,285	5,258	6,292	7,826	7,109	8,213	8,931	9,692	10,226	12,277	13,078	
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	
<b>T4</b>	4000K (70 CRI)	2,981	3,884	4,798	5,888	7,048	8,766	7,960	9,197	10,001	10,852	11,450	13,751	14,649	
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	
	3000K (70 CRI)	2,901	3,779	4,669	5,730	6,859	8,531	7,747	8,950	9,732	10,561	11,143	13,382	14,255	
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	
	2700K (80 CRI)	2,627	3,422	4,228	5,188	6,209	7,722	7,015	8,104	8,813	9,563	10,090	12,114	12,905	
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	
<b>T5</b>	4000K (70 CRI)	3,084	4,018	4,963	6,090	7,291	9,068	8,235	9,514	10,345	11,226	11,845	14,225	15,154	
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	
	3000K (70 CRI)	3,001	3,910	4,830	5,927	7,095	8,825	8,014	9,259	10,068	10,925	11,527	13,843	14,746	
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	
	2700K (80 CRI)	2,718	3,540	4,374	5,367	6,423	7,989	7,257	8,384	9,117	9,893	10,438	12,531	13,349	
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	

NOTE: Lumen output for AP Grey fixture color, 120-277V.

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (50,000 hours)	TM-21 Lumen Maintenance (75,000 hours)	TM-21 Lumen Maintenance (100,000 hours)	Theoretical L70 (Hours)
20°C - 50°C	>92%	>89%	>86%	>242,000

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**POWER AND LUMENS - VERD-G**

Light Engine	G-C028	G-C029	G-C02	G-C02H	
Power (Watts)	103	121	138	155	
Wattage Label	100	120	140	160	
Current (A) @ 120V	0.86	1.01	1.15	1.29	
Current (A) @ 277V	0.38	0.45	0.51	0.57	
Power (Watts)	101	123	136	154	
Wattage Label	100	120	140	150	
Current (A) @ 347V	0.30	0.36	0.40	0.45	
Current (A) @ 480V	0.22	0.25	0.28	0.33	
<b>Optics</b>					
<b>T1</b>	4000K (70 CRI)	14,476	16,613	18,327	20,321
	BUG Rating	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	3000K (70 CRI)	14,088	16,167	17,835	19,776
	BUG Rating	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	2700K (80 CRI)	12,756	14,639	16,150	17,908
	BUG Rating	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
<b>T2</b>	4000K (70 CRI)	13,524	15,520	17,122	18,985
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
	3000K (70 CRI)	13,161	15,104	16,663	18,476
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
	2700K (80 CRI)	11,918	13,676	15,088	16,730
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
<b>T3</b>	4000K (70 CRI)	13,592	15,598	17,208	19,080
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
	3000K (70 CRI)	13,227	15,179	16,746	18,568
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3
	2700K (80 CRI)	11,977	13,745	15,164	16,814
	BUG Rating	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2
<b>T4</b>	4000K (70 CRI)	13,384	15,359	16,945	18,788
	BUG Rating	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4
	3000K (70 CRI)	13,025	14,947	16,490	18,284
	BUG Rating	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4
	2700K (80 CRI)	11,794	13,535	14,932	16,557
	BUG Rating	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4
<b>T5</b>	4000K (70 CRI)	13,896	15,947	17,593	19,507
	BUG Rating	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G4
	3000K (70 CRI)	13,523	15,519	17,121	18,984
	BUG Rating	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G4
	2700K (80 CRI)	12,245	14,053	15,503	17,190
	BUG Rating	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (50,000 hours)	TM-21 Lumen Maintenance (75,000 hours)	TM-21 Lumen Maintenance (100,000 hours)	Theoretical L70 (Hours)
20°C - 50°C	>92%	>89%	>86%	>242,000

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**CONTROL OPTIONS**

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**Photocontrol (4 and 4N7)**

Photocontrol receptacles (4 and 4N7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with ANSI C136.41 7-pin standards can be utilized with the 4N7 receptacle.

**ConnectWorks (4N7)**

The ConnectWorks™ Connected Lighting System powered by CIMCON features a 7-pin compatible “plug-and-play” wireless controller to provide intelligent ON/OFF switching, dimming control, GPS capabilities, utility-grade power metering, analog and digital sensor capabilities and real-time status and health monitoring of all lighting assets. Universal voltage (120-277V) luminaires with a 7-pin twistlock photocontrol receptacle are compatible with the iSLC-3100-7P intelligent wireless lighting controller (iSLC). 480V luminaires with 7-pin twistlock photocontrol receptacles are compatible with the iSLC-3100-7P-480 intelligent wireless lighting controller. Please consult your Eaton representative for ConnectWorks compatibility with 347V luminaires.

**Dimming Occupancy Sensor (MS/DIM-LXX)**

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. These occupancy sensors include an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8' - 40'.

**LumaWatt Pro Wireless Control and Monitoring (LWR-LW and LWR-LN)**

Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting. For additional details, refer to the LumaWatt Pro product guides.

**ORDERING INFORMATION**

Sample Number: VERD-C018-D-U-T2-4N7-AP

Product Family <sup>1</sup>	Light Engine <sup>2</sup>	Driver <sup>3</sup>	Voltage	Distribution
VERD=Verdeon	<b>C013</b> =1 LED, Approximately 30% Output <b>C015</b> =1 LED, Approximately 50% Output <b>C016</b> =1 LED, Approximately 60% Output <b>C018</b> =1 LED, Approximately 80% Output <b>C01</b> =1 LED, Full Output <b>C01H</b> =1 LED, High Lumen Output <b>C026</b> =2 LED, Approximately, 60% Output <b>C028</b> =2 LED, Approximately, 80% Output <b>C029</b> =2 LED, Approximately, 90% Output <b>C02</b> =2 LED, Full Output <b>C02H6</b> =2 LED, High Lumen, Approximately 60% Output <b>C02H8</b> =2 LED, High Lumen, Approximately 80% Output <b>C02H</b> =2 LED, High Lumen Output <b>G-C028</b> =Grande, 2 LED, High Lumen, Approximately 80% Output <b>G-C029</b> =Grande, 2 LED, Approximately 90% Output <b>G-C02</b> =Grande, 2 LED, Full Output <b>G-C02H</b> =Grande, 2 LED, High Lumen Output	<b>D</b> =Dimming (0-10V) <sup>4</sup>	<b>U</b> =Universal (120-277V) <b>8</b> =480V <sup>5</sup> <b>9</b> =347V	<b>T1</b> =Type I <b>T2</b> =Type II <b>T3</b> =Type III <b>T4</b> =Type IV <b>T5</b> =Type V
<b>Options</b> (Add as Suffix)			<b>Color</b>	<b>Accessories</b> (Order Separately)
<b>7030</b> =70 CRI / 3000K CCT <sup>7</sup> <b>8027</b> =80 CRI / 2700K CCT <sup>7</sup> <b>4</b> =NEMA Twistlock Photocontrol Receptacle <b>4N7</b> =NEMA 7-PIN Twistlock Photocontrol Receptacle <b>10K</b> =10kV UL 1449 Surge Protective Device <b>10MSP</b> =10kV MOV Surge Protective Device <b>IP66</b> =IP66 Rated Housing <b>HA</b> =50°C High Ambient Temperature <sup>8</sup> <b>MS/DIM-L08</b> =Motion Sensor for Dimming Operation, Maximum 8' Mounting Height <sup>9,10</sup> <b>MS/DIM-L20</b> =Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height <sup>9,10</sup> <b>MS/DIM-L40</b> =Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height <sup>9,10</sup> <b>LWR-LN</b> =Factory Installed LumaWatt RF Dimming Control System (Mounting Height 16' and Up) <sup>11,12</sup> <b>LWR-LW</b> =Factory Installed LumaWatt RF Dimming Control System (Mounting Height below 16') <sup>11,12</sup> <b>K</b> =Level Indicator <b>4B</b> =Four-bolt, Two-clamp Mounting <b>A15</b> =Arm Included (15" Straight Arm) <sup>13</sup> <b>HSS</b> = House Side Shield <sup>16</sup>			<b>AP</b> =Grey (Standard) <b>BZ</b> =Bronze <b>BK</b> =Black <b>DP</b> =Dark Platinum <b>GM</b> =Graphite Metallic <b>WH</b> =White	<b>OA1223</b> =10kV UL 1449 Surge Module Replacement <b>OA/RA1013</b> =Photocontrol Shorting Cap <b>OA/RA1014</b> =NEMA Photocontrol - 120V <b>OA/RA1016</b> =NEMA Photocontrol - Multi-Tap <b>OA/RA1027</b> =NEMA Photocontrol - 480V <b>OA/RA1201</b> =NEMA Photocontrol - 347V <b>FSIR-100</b> =Wireless Configuration Tool for Motion Sensor <sup>14</sup> <b>HS/VERD</b> =Verdeon House Side Shield <sup>16</sup> <b>VGS-F/B</b> =Vertical Glare Shield, Front/Back <sup>15</sup> <b>VGS-SIDE</b> =Vertical Glare Shield, Side

- NOTES:**
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
  - Standard 4000K CCT and 70 CRI.
  - Not available in 347V or 480V.
  - Consult factory for driver surge protection values.
  - Dimming leads will be capped except when 4N7 or motion sensor option is specified.
  - 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).
  - Extended lead times apply. Use dedicated IES files for 3000K and 2700K when performing layouts. These files are published on the VERD Verdeon luminaire product page on the website.
  - HA not compatible with G-C02H light engine.
  - Not available with 4B option. Sensor mounted externally. Consult factory for more information.
  - The FSIR-100 accessory is required to adjust parameters.
  - 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.
  - LumaWatt wireless system is not available with photocontrol receptacle (not required).
  - Round pole adapter and mounting hardware included. "M" drill pattern.
  - 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.
  - VGS-F/B not compatible with T1 or T5 distribution.
  - Option will come factory-installed. Must order one per optic as an accessory. House Side Shield not suitable for T5 distribution.