



Lumec **Capella LED** roadway luminaires blend seamlessly into soft architectural urban and roadway surroundings, as well as more rectilinear settings. With graceful curves and sweeping lines, it contributes to the beautification of any environment and enhances the visual impact of any project.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Quantity: _____
 Notes: _____

Ordering guide

Example: CPLS-72W32LED3K-G3-LE2F-UNV-DMG-GY3

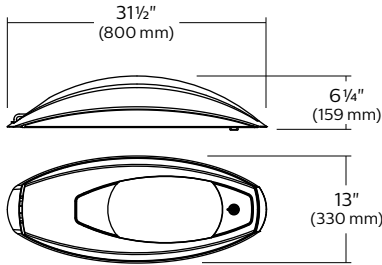
Series	LED module	Generation	Optical system	Lens	Voltage	Driver options	Luminaire options	Accessories	Finish
CPLS		G3							
CPLS Small	3000K CPLS-14W16LED3K CPLS-20W16LED3K CPLS-25W16LED3K 14W16LED3K 20W16LED3K 25W16LED3K 30W16LED3K 35W32LED3K 55W32LED3K 55W48LED3K 72W32LED3K 80W48LED3K 4000K CPLS-14W16LED4K CPLS-20W16LED4K CPLS-25W16LED4K 14W16LED4K 20W16LED4K 25W16LED4K 30W16LED4K 35W32LED4K 55W32LED4K 55W48LED4K 72W32LED4K 80W48LED4K	G3 Generation 3	LE2 Type II (ASYM) LE3 Type III (ASYM) LE4 Type IV (ASYM) LE5¹ Type V (SYM)	F Flat lens S Sag lens	UNV 120-277VAC HVU 347-480VAC	AST² Pre-set driver for progressive start-up CDMGE25^{2,4} 8 hrs. 25% reduction CDMGE50^{2,4} 8 hrs. 50% reduction CDMGE75^{2,4} 8 hrs. 75% reduction CDMGM25^{2,4} 6 hrs. 25% reduction CDMGM50^{2,4} 6 hrs. 50% reduction CDMGM75^{2,4} 6 hrs. 75% reduction CDMGS25^{2,4} 4 hrs. 25% reduction CDMGS50^{2,4} 4 hrs. 50% reduction CDMGS75^{2,4} 4 hrs. 75% reduction CLO² Pre-set driver to manage lumen depreciation DMG^{2,4,5} 0-10V DALI⁴ Digitally Adressable Lighting Interface OTL² Pre-set driver to signal end of life of the lamp	API Factory Installed NEMA label, ANSI C136.15 compliant HS House Side Shield, 1 per 16 LED light engine PH⁶ Button type Photoelectric Cell RCD³ Receptacle for twist-lock photocell or shorting cap, 5-pin (standard) RCD7³ Receptacle for twist-lock photocell or shorting cap, 7-pin (optional) SP2 20kV/20kA surge protector	PH8² Twist-lock Photoelectric Cell, UNV (120-277VAC) PH8/347 Twist-lock Photoelectric Cell, (347VAC) PH8/480 Twist-lock Photoelectric Cell, (480VAC) PHXL² Twist-lock Photoelectric Cell, extended life, UNV (120-277VAC) PH9 Shorting cap	BK Black BR Bronze GY3 Grey WH White

- Not available with HS option.
- 347V and 480V not available.
- Use of photoelectric cell or shorting cap is required to ensure proper illumination.
- Dimming choices: Select either DMG,DALI or one of the CDMG options.
- Please note this integrated feature come standard with Capella.
- One of the following voltage need to be specified with this option: 120,208,240,277,347 or 480.

CPLS Capella LED (small)

Roadway

Dimensions



CPLS (flat lens)

EPA: 0.47 sq. ft.
Weight: 30 lbs (13.6 kg)

LED Wattage and Lumen Values: for CPLS with Flat lens

Ordering Code: Flat lens (3000K)	Total LEDs	LED current (mA)	Average System Wattage ¹ (W)	LE2F			LE3F			LE4F			LE5F		
				Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating
14W16LED3K-G3-x	16	250	13	1439	111	B1-U0-G0	1407	108	B0-U0-G0	1407	108	B0-U0-G1	1419	109	B1-U0-G0
20W16LED3K-G3-x	16	350	20	2441	122	B1-U0-G1	2387	119	B1-U0-G0	2388	119	B1-U0-G1	2407	120	B2-U0-G1
25W16LED3K-G3-x	16	450	24	3051	127	B1-U0-G1	2983	124	B1-U0-G1	2984	124	B1-U0-G1	3008	125	B2-U0-G1
30W16LED3K-G3-x	16	530	29	3473	119	B1-U0-G1	3414	117	B1-U0-G1	3340	114	B1-U0-G1	3318	113	B2-U0-G1
35W32LED3K-G3-x	32	350	37	4595	124	B1-U0-G1	4493	121	B1-U0-G1	4494	121	B1-U0-G1	4530	122	B3-U0-G1
55W32LED3K-G3-x	32	530	54	6591	122	B2-U0-G1	6444	119	B1-U0-G1	6446	119	B1-U0-G2	6498	120	B3-U0-G2
72W32LED3K-G3-x	32	700	73	8314	114	B2-U0-G2	8128	111	B2-U0-G2	8130	111	B2-U0-G2	8195	112	B3-U0-G2
55W48LED3K-G3-x	48	350	55	6893	125	B2-U0-G1	6739	122	B1-U0-G2	6741	122	B1-U0-G2	6795	123	B3-U0-G2
80W48LED3K-G3-x	48	530	81	9888	123	B2-U0-G2	9666	120	B2-U0-G2	9670	120	B2-U0-G2	9748	121	B4-U0-G2

Ordering Code: Flat lens (4000K)	Total LEDs	LED current (mA)	Average System Wattage ¹ (W)	LE2F			LE3F			LE4F			LE5F		
				Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating
14W16LED4K-G3-x	16	250	13	1552	119	B1-U0-G0	1518	117	B0-U0-G0	1518	117	B0-U0-G1	1530	118	B1-U0-G0
20W16LED4K-G3-x	16	350	20	2633	132	B1-U0-G1	2575	129	B1-U0-G1	2575	129	B1-U0-G1	2596	130	B2-U0-G1
25W16LED4K-G3-x	16	450	24	3291	137	B1-U0-G1	3218	134	B1-U0-G1	3218	134	B1-U0-G1	3244	135	B2-U0-G1
30W16LED4K-G3-x	16	250	29	3746	128	B1-U0-G1	3663	125	B1-U0-G1	3664	125	B1-U0-G1	3693	126	B2-U0-G1
35W32LED4K-G3-x	32	350	37	4956	134	B1-U0-G1	4846	131	B1-U0-G1	4847	131	B1-U0-G1	4886	132	B3-U0-G1
55W32LED4K-G3-x	32	530	54	7109	132	B2-U0-G1	6951	129	B1-U0-G2	6953	129	B1-U0-G2	7009	130	B3-U0-G2
72W32LED4K-G3-x	32	700	73	8966	123	B2-U0-G2	8766	120	B2-U0-G2	8769	120	B2-U0-G2	8839	121	B4-U0-G2
55W48LED4K-G3-x	48	350	55	7435	135	B2-U0-G1	7269	132	B1-U0-G2	7271	132	B1-U0-G2	7329	133	B3-U0-G2
80W48LED4K-G3-x	48	530	81	10664	132	B2-U0-G2	10426	129	B2-U0-G2	10429	129	B2-U0-G2	10513	130	B4-U0-G2

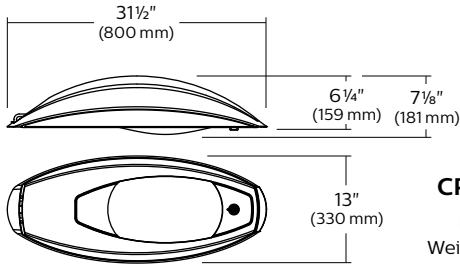
Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout.

Note: Some data may be scaled based on tests on similar but not identical luminaires.

CPLS Capella LED (small)

Roadway

Dimensions



CPLS (sag lens)

EPA: 0.47 sq. ft.
Weight: 30 lbs (13.6 kg)

LED Wattage and Lumen Values: for CPLS with Sag Lens

Ordering Code: Sag lens (3000K)	Total LEDs	LED current (mA)	Average System Wattage ¹ (W)	LE2S			LE3S			LE4S			LE5S		
				Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating
14W16LED3K-G3-x	16	250	13	1470	113	B1-U0-G0	1450	112	B0-U0-G0	1424	110	B0-U0-G1	1475	113	B1-U0-G0
20W16LED3K-G3-x	16	350	20	2494	125	B1-U0-G1	2460	123	B1-U0-G1	2416	121	B1-U0-G1	2503	125	B2-U0-G1
25W16LED3K-G3-x	16	450	24	3117	130	B1-U0-G1	3075	128	B1-U0-G1	3020	126	B1-U0-G1	3128	130	B2-U0-G1
30W16LED3K-G3-x	16	530	29	3542	121	B1-U0-G1	3493	119	B1-U0-G1	3416	117	B1-U0-G1	3439	117	B2-U0-G1
35W32LED3K-G3-x	32	350	37	4695	127	B1-U0-G1	4631	125	B1-U0-G1	4548	123	B1-U0-G1	4711	127	B3-U0-G1
55W32LED3K-G3-x	32	530	54	6734	125	B2-U0-G1	6643	123	B1-U0-G2	6524	121	B1-U0-G2	6758	125	B3-U0-G2
72W32LED3K-G3-x	32	700	73	8493	116	B2-U0-G2	8378	115	B2-U0-G2	8228	113	B1-U0-G2	8521	117	B4-U0-G2
55W48LED3K-G3-x	48	350	55	7043	128	B2-U0-G1	6948	126	B1-U0-G2	6823	124	B1-U0-G2	7066	128	B3-U0-G2
80W48LED3K-G3-x	48	530	81	10101	125	B2-U0-G2	9965	124	B2-U0-G2	9786	121	B2-U0-G2	10135	126	B4-U0-G2

Ordering Code: Sag lens (4000K)	Total LEDs	LED current (mA)	Average System Wattage ¹ (W)	LE2S			LE3S			LE4S			LE5S		
				Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating	Lumen Output ²	Efficacy (LPW)	BUG Rating
14W16LED4K-G3-x	16	250	13	1586	122	B1-U0-G0	1565	120	B0-U0-G0	1537	118	B0-U0-G1	1592	122	B1-U0-G0
20W16LED4K-G3-x	16	350	20	2691	135	B1-U0-G1	2654	133	B1-U0-G1	2607	130	B1-U0-G1	2700	135	B2-U0-G1
25W16LED4K-G3-x	16	450	24	3363	140	B1-U0-G1	3317	138	B1-U0-G1	3258	136	B1-U0-G1	3374	141	B3-U0-G1
30W16LED4K-G3-x	16	250	29	3821	130	B1-U0-G1	3769	129	B1-U0-G1	3702	126	B1-U0-G1	3834	131	B2-U0-G1
35W32LED4K-G3-x	32	350	37	5064	137	B1-U0-G1	4996	135	B1-U0-G1	4907	133	B1-U0-G2	5082	137	B3-U0-G1
55W32LED4K-G3-x	32	530	54	7264	135	B2-U0-G1	7165	133	B1-U0-G2	7038	130	B1-U0-G2	7289	135	B3-U0-G2
72W32LED4K-G3-x	32	700	73	9161	125	B2-U0-G2	9037	124	B2-U0-G2	8876	122	B2-U0-G2	9193	126	B4-U0-G2
55W48LED4K-G3-x	48	350	55	7596	138	B2-U0-G1	7493	136	B1-U0-G2	7360	134	B1-U0-G2	7623	138	B3-U0-G2
80W48LED4K-G3-x	48	530	81	10896	135	B2-U0-G2	10748	133	B2-U0-G2	10557	131	B2-U0-G2	10934	136	B4-U0-G2

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout.

Note: Some data may be scaled based on tests on similar but not identical luminaires.

CPLS Capella LED (small)

Roadway

Specifications

Housing

Made of cast 356 Aluminum alloy 0.180 (4.6mm) minimum thickness. The mounting means includes one bracket made of stamped galvanized-steel (12ga.). Fits on a 2" (51mm) to 3/8" (60mm) OD by 9" (229mm) minimum long tenon, fixed by 3/8-16 UNC steel zinc plated bolts. The housing is complete with a ground lug and a terminal block that accepts (#8 max.) wires from the primary circuit.

Access-Mechanism: Quarter-turn pressure locking system made of die cast aluminum. Offers tool-free access to the inside of the luminaire. An embedded memory-retentive gasket ensure weatherproofing.

Light Engine

Composed of 5 main components: Heat Sink, Lens, LED Module, Optical System, Driver. Electrical components are RoHS compliant. LEDs tested by ISO 17025 2005 accredited lab in accordance with IESNA LM 80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM 21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Lens: Made of soda-lime clear tempered glass curved or flat lens, mechanically assembled and sealed onto the lower part of the heat sink.

LED Module: Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical. 3000 Kelvin also available.

Optical System: Composed of high performance optical polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM 63, LM 79 and TM 15 (IESNA) certifying its photometric performance. 0% uplight and U0 per IESNA TM-15. Dark Sky compliant when 3000K and Flat lens are used.

Driver: High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC or 347 to 480 VAC rated for both application line to line or line to neutral, Class I or II, THD of 20% max. Driver comes with dimming compatible 0-10 volts. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Driver Options

AST: Pre-set driver for progressive start-up of LED module(s) to optimize energy management and enhance visual comfort at start-up.

CLO: Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the LED module.

DALI: Pre-set driver compatible with the DALI control system.

OTL: Pre-set driver to signal end of life of the LED module(s) for better fixture management.

CDMG: Dynadimmer standard dimming functionalities including pre-programmed scenarios to suit many applications and needs from safety to maximum energy savings.

Safety Mode:

CDMGS25: 4 hours, 25% power dimming

CDMGS50: 4 hours 50% power dimming

CDMGS75: 4 hours 75% power dimming

Median Mode:

CDMGM25: 6 hours 25% power dimming

CDMGM50: 6 hours 50% power dimming

CDMGM75: 6 hours 75% power dimming

Economy Mode:

CDMGE25: 8 hours 25% power dimming

CDMGE50: 8 hours 50% power dimming

CDMGE75: 8 hours 75% power dimming

Luminaire Options

HS: House side shield, 1 per 16 LED light engine.

SP2: 20kV / 20kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

RCD*: (standard) Receptacle with 5 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Starsense node or photoelectric cell or a shorting cap.

RCD7*: (optional) Receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Starsense node or photoelectric cell or a shorting cap.

PH: (optional) Button type photo-cell.

Please note: Additional hardware will be required to utilize the additional 2 pins on this receptacle.

* Use of photoelectric cell or shorting cap is required to ensure proper illumination.

Accessories

PH8: Twist-lock Photoelectric Cell, UNV (120-277VAC).

PH8/347: Twist-lock Photoelectric Cell, HVU (347VAC).

PH8/480: Twist-lock Photoelectric Cell, HVU (480VAC).

PHXL: Twist-lock Photoelectric Cell, extended life, UNV (120-277VAC).

PH9: Shorting cap.

Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, System Reliability Tool, Advance data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

Wiring

The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

Hardware

All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish

In accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 3000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

CPLS Capella LED (small)

Roadway

Specifications (continued)

LED products manufacturing standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340 5 1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Vibration Resistance

The CPLS meets the ANSI C136.31, American National Standard for Roadway Luminaire Vibration specifications for Normal applications (Tested for 1.5G over 100 000 cycles by an independent lab).

Certifications and Compliance

cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires. RoadStar LED roadway luminaires are DesignLights Consortium qualified. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

Limited Warranty

10-year limited warranty.
See Signify.com/warranties for details and restrictions.

LED Performance

Predicted lumen depreciation data ¹				
Ambient Temperature (°C)	Driver mA	Calculated L ₇₀ hours ^{1,2}	L ₇₀ per TM-21 ^{2,3}	Lumen Maintenance % @ 60,000 hours
25°C	700 mA	>100,000	>60,000	93%

1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
2. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours.

