



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: _____

Lamps: _____ Qty: _____

Notes: _____

Ordering guide

Example: CPLM-135W80LED4K-G3-LE2S-UNV-DMG-RCD-PH8-GY3

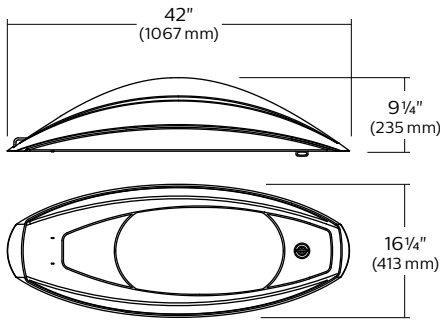
Series	LED module	Generation	Optical system	Lens	Voltage	Driver options	Luminaire options	Accessories	Finish
CPLM		G3							
CPLM Medium	3000K 55W48LED3K 70W64LED3K 80W48LED3K 90W80LED3K 108W48LED3K 110W64LED3K 110W96LED3K 135W80LED3K 145W64LED3K 160W96LED3K 180W80LED3K 4000K 55W48LED4K 70W64LED4K 80W48LED4K 90W80LED4K 108W48LED4K 110W64LED4K 110W96LED4K 135W80LED4K 145W64LED4K 160W96LED4K 180W80LED4K	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 CDMG525^{2,4} 4 hrs. 25% reduction CDMG550^{2,4} 4 hrs. 50% reduction CDMG575^{2,4} 4 hrs. 75% reduction CLO² Pre-set driver to manage lumen depreciation DMG^{2,4,5} 0-10V DALI⁴ Digitally Addressable 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 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

1. Not available with HS option.
2. 347V and 480V not available.
3. Use of photoelectric cell or shorting cap is required to ensure proper illumination.
4. Dimming choices: Select either DMG,DALI or one of the CDMG options.
5. Please note this integrated feature come standard with Capella.

CPLM Capella LED (medium)

Roadway

Dimensions



CPLM (flat lens)

EPA: 0.83sq. ft.
Weight: 55lbs (25kg)

LED Wattage and Lumen Values: for CPLM 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
55W48LED3K-G3-x	48	350	54.4	6854	126	B2-U0-G1	6758	124	B1-U0-G1	6689	123	B1-U0-G2	6559	121	B3-U0-G2
80W48LED3K-G3-x	48	530	81.3	9830	121	B2-U0-G2	9694	119	B2-U0-G2	9595	118	B2-U0-G2	9408	116	B4-U0-G2
108W48LED3K-G3-x	48	700	105.4	12398	118	B3-U0-G2	12226	116	B2-U0-G2	12100	115	B2-U0-G2	11865	113	B4-U0-G2
70W64LED3K-G3-x	64	350	72.5	9138	126	B2-U0-G2	9011	124	B2-U0-G2	8919	123	B2-U0-G2	8745	121	B3-U0-G2
110W64LED3K-G3-x	64	530	108.4	13108	121	B3-U0-G2	12925	119	B2-U0-G2	12793	118	B2-U0-G2	12544	116	B4-U0-G2
145W64LED3K-G3-x	64	700	140.6	16531	118	B3-U0-G2	16301	116	B3-U0-G2	16134	115	B3-U0-G3	15820	113	B4-U0-G2
90W80LED3K-G3-x	80	350	90.7	11218	124	B2-U0-G2	10995	121	B2-U0-G2	10800	119	B2-U0-G2	10971	121	B4-U0-G2
135W80LED3K-G3-x	80	530	135.5	16090	119	B3-U0-G2	15770	116	B3-U0-G2	15491	114	B3-U0-G2	15738	116	B4-U0-G2
180W80LED3K-G3-x	80	700	175.7	20293	115	B3-U0-G2	19890	113	B3-U0-G2	19538	111	B3-U0-G3	19849	113	B5-U0-G3
110W96LED3K-G3-x	96	350	108.8	13461	124	B3-U0-G2	13194	121	B2-U0-G2	12960	119	B2-U0-G2	13166	121	B4-U0-G2
160W96LED3K-G3-x	96	530	162.6	19308	119	B3-U0-G2	18925	116	B3-U0-G2	18590	114	B3-U0-G3	18885	116	B5-U0-G3

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
55W48LED4K-G3-x	48	350	54.4	7392	136	B2-U0-G1	7290	134	B1-U0-G2	7216	133	B1-U0-G2	7075	130	B3-U0-G2
80W48LED4K-G3-x	48	530	81.3	10603	130	B2-U0-G2	10457	129	B2-U0-G2	10349	127	B2-U0-G2	10148	125	B4-U0-G2
108W48LED4K-G3-x	48	700	105.4	13373	127	B3-U0-G2	13188	125	B2-U0-G2	13052	124	B2-U0-G2	12798	121	B4-U0-G2
70W64LED4K-G3-x	64	350	72.5	9857	136	B2-U0-G2	9720	134	B2-U0-G2	9620	133	B2-U0-G2	9433	130	B4-U0-G2
110W64LED4K-G3-x	64	530	108.4	14138	130	B3-U0-G2	13942	129	B2-U0-G2	13799	127	B2-U0-G2	13531	125	B4-U0-G2
145W64LED4K-G3-x	64	700	140.6	17831	127	B3-U0-G2	17584	125	B3-U0-G2	17404	124	B3-U0-G3	17065	121	B4-U0-G2
90W80LED4K-G3-x	80	350	90.7	12100	133	B3-U0-G2	11860	131	B2-U0-G2	11650	128	B2-U0-G2	11834	130	B4-U0-G2
135W80LED4K-G3-x	80	530	135.5	17356	128	B3-U0-G2	17011	126	B3-U0-G2	16710	123	B3-U0-G3	16975	125	B4-U0-G2
180W80LED4K-G3-x	80	700	175.7	21888	125	B3-U0-G3	21454	122	B3-U0-G3	21074	120	B3-U0-G3	21409	122	B5-U0-G3
110W96LED4K-G3-x	96	350	108.8	14520	133	B3-U0-G2	14231	131	B2-U0-G2	13980	128	B2-U0-G2	14202	131	B4-U0-G2
160W96LED4K-G3-x	96	530	162.6	20826	128	B3-U0-G3	20413	126	B3-U0-G3	20052	123	B3-U0-G3	20371	125	B5-U0-G3

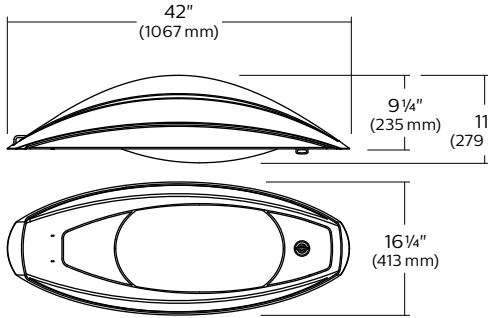
Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout.

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

CPLM Capella LED (medium)

Roadway

Dimensions



CPLM (sag lens)

EPA: 0.83sq. ft.
Weight: 55lbs (25kg)

LED Wattage and Lumen Values: for CPLM with Sag lens

Ordering Code: Flat 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
55W48LED3K-G3-x	48	350	54.4	6990	128	B1-U0-G1	6903	127	B1-U0-G2	6826	125	B1-U0-G2	6841	126	B3-U0-G2
80W48LED3K-G3-x	48	530	81.3	10026	123	B2-U0-G2	9901	122	B2-U0-G2	9791	120	B2-U0-G2	9813	121	B4-U0-G2
108W48LED3K-G3-x	48	700	105.4	12645	120	B3-U0-G2	12488	118	B2-U0-G2	12349	117	B2-U0-G2	12376	117	B4-U0-G2
70W64LED3K-G3-x	64	350	72.5	9320	129	B2-U0-G2	9204	127	B2-U0-G2	9101	126	B2-U0-G2	9121	126	B4-U0-G2
110W64LED3K-G3-x	64	530	108.4	13369	123	B3-U0-G2	13203	122	B2-U0-G2	13055	120	B2-U0-G2	13084	121	B4-U0-G2
145W64LED3K-G3-x	64	700	140.6	16860	120	B3-U0-G2	16650	118	B3-U0-G2	16465	117	B2-U0-G3	16501	117	B4-U0-G2
90W80LED3K-G3-x	80	350	90.7	11173	123	B2-U0-G2	11225	124	B2-U0-G2	11084	122	B2-U0-G2	11229	124	B4-U0-G2
135W80LED3K-G3-x	80	530	135.5	16026	118	B3-U0-G2	16100	119	B3-U0-G2	15899	117	B2-U0-G3	16108	119	B4-U0-G2
180W80LED3K-G3-x	80	700	175.7	20211	115	B3-U0-G3	20306	116	B3-U0-G3	20051	114	B3-U0-G3	20314	116	B5-U0-G3
110W96LED3K-G3-x	96	350	108.8	13408	123	B3-U0-G2	13470	124	B2-U0-G2	13301	122	B2-U0-G2	13475	124	B4-U0-G2
160W96LED3K-G3-x	96	530	162.6	19231	118	B3-U0-G2	19321	119	B3-U0-G3	19079	117	B3-U0-G3	19329	119	B5-U0-G3

Ordering Code: Flat 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
55W48LED4K-G3-x	48	350	54.4	7540	139	B2-U0-G1	7446	137	B1-U0-G2	7363	135	B1-U0-G2	7379	136	B3-U0-G2
80W48LED4K-G3-x	48	530	81.3	10816	133	B2-U0-G2	10680	131	B2-U0-G2	10561	130	B2-U0-G2	10585	130	B4-U0-G2
108W48LED4K-G3-x	48	700	105.4	13640	129	B3-U0-G2	13470	128	B2-U0-G2	13320	126	B2-U0-G2	13349	127	B4-U0-G2
70W64LED4K-G3-x	64	350	72.5	10054	139	B2-U0-G2	9928	137	B2-U0-G2	9817	135	B2-U0-G2	9839	136	B4-U0-G2
110W64LED4K-G3-x	64	530	108.4	14420	133	B3-U0-G2	14240	131	B2-U0-G2	14082	130	B2-U0-G3	14113	130	B4-U0-G2
145W64LED4K-G3-x	64	700	140.6	18186	129	B3-U0-G2	17959	128	B3-U0-G3	17760	126	B3-U0-G3	17800	127	B5-U0-G3
90W80LED4K-G3-x	80	350	90.7	12052	133	B2-U0-G2	12108	133	B2-U0-G2	11956	132	B2-U0-G2	12113	134	B4-U0-G2
135W80LED4K-G3-x	80	530	135.5	17286	128	B3-U0-G2	17366	128	B3-U0-G2	17149	127	B3-U0-G3	17374	128	B4-U0-G2
180W80LED4K-G3-x	80	700	175.7	21802	124	B3-U0-G3	21902	125	B3-U0-G3	21629	123	B3-U0-G4	21912	125	B5-U0-G3
110W96LED4K-G3-x	96	350	108.8	14462	133	B3-U0-G2	14530	134	B2-U0-G2	14347	132	B2-U0-G2	14536	134	B4-U0-G2
160W96LED4K-G3-x	96	530	162.6	20743	128	B3-U0-G3	20840	128	B3-U0-G3	20580	127	B3-U0-G3	20849	128	B5-U0-G3

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.

CPLM Capella LED (medium)

Roadway

Specifications

Housing

The upper and lower part of the housing are made of die cast A360 Aluminum alloy 0.180 (4.6mm) minimum thickness. The mounting means includes two brackets made of stamped galvanized-steel (12ga.). Fits on a 1.9" (49mm) to 2 3/8" (60mm) OD by 10 1/2" (267mm) minimum long tenon, fixed by 3/8-16 UNC steel zinc plated bolts. An integral part of the housing permits an adjustment of +/- 5°. 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 the 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.

DAL: 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:

CDMG25: 4 hours, 25% power dimming

CDMG50: 4 hours 50% power dimming

CDMG75: 4 hours 75% power dimming

Median Mode:

CDMG25: 6 hours 25% power dimming

CDMG50: 6 hours 50% power dimming

CDMG75: 6 hours 75% power dimming

Economy Mode:

CDMG25: 8 hours 25% power dimming

CDMG50: 8 hours 50% power dimming

CDMG75: 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.

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 (75,000 hours for 180W80LED and 60,000 hours for 106W96LED). 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.

CPLM Capella LED (medium)

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 CPLM 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	91%

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.

