



LumeC RoadFocus LED reduced glare cobra head luminaires provide the benefits of LED technology, including energy savings and lower maintenance costs yet minimizes perceived glare and brightness associated with LED technology without sacrificing performance required for optimum roadway applications. Includes Service Tag, innovative way to provide assistance throughout the life of the product.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lumens: _____ Qty: _____
 Notes: _____

Ordering guide

example: RFS-RG-35W32LED4K-G2-R2/3M-UNV-DMG-HS-PH8-RCD7-GY3

Series	Application	LED module	CCT	Generation	Distribution	Voltage	Options		Finish
							Controls ⁴	Options	
RFS	RG			G2	R2/3M				
RFS RoadFocus small	RG Reduced glare	25W32LED ⁷ 30W32LED 35W32LED 40W32LED 45W32LED 50W32LED 55W32LED 30W64LED 35W64LED 40W64LED 45W64LED 50W64LED 55W64LED 60W64LED 65W64LED 70W64LED ⁷ 75W64LED ⁷ 80W64LED ⁷ 85W64LED ⁷ 90W64LED ⁷ 95W64LED ⁷ 100W64LED ⁷	4K 4000K 3K 3000K 2.7K ¹¹ 2700K	G2 Generation 2	R2/3M Type II-III Medium (ASYM)	UNV 120-277V HVU ⁷ 347-480V	D41 ¹⁴ Zhaga-D4i certified DALI Digitally addressable lighting interface DMG ⁵ 0-10V SRD Sensor ready driver, standard configuration SRD1 Sensor ready driver, alternate configuration	API Factory installed NEMA label, ANSI C136.15-2015 compliant FAWS ⁷ Field adjustable wattage selector FSS ^{2,13} Front Side Shield HS ^{2,13} House Side Shield NRC ⁸ No receptacle NYBC 4-position terminal block OMS ¹⁵ Outdoor Multi Sensor PH8 ^{1,10} Twist-lock photoelectric cell, UNV (120-277VAC) PH8/347 ^{10,12} Twist-lock photoelectric cell (347VAC) PH8/480 ^{10,12} Twist-lock photoelectric cell (480VAC) PHXL ^{1,10} Twist-lock photoelectric cell, extended life, UNV (120-277VAC) PH9 ¹⁰ Shorting cap RCD ^{3,9} Tool less receptacle for twist- lock photocell or shorting cap, 5-pin (optional) RCD7 ^{3,5} Tool less receptacle for twist- lock photocell or shorting cap, 7-pin (standard) SP2 20kV / 10kA Surge protector TLRSR ⁶ SR receptacle BAC ¹⁶ Meets the requirements of the Buy American Act of 1933 (BAA)	BK Black BR Bronze GY3 Gray WH White

¹ Not available with HVU.
² Refer to Accessories section to confirm compatibility of shields with optical distribution.
³ Use of photoelectric cell or shorting cap is required to ensure proper illumination.
⁴ Select one mandatory option.
⁵ Please note this integrated feature come standard with RoadFocus.
⁶ Only available with D41, SRD or SRD1 Driver Options.
⁷ Only available with DMG Driver Options.
⁸ Not available with PH8, PH8/347, PH8/480, PHXL, PH9, DALI, SRD or SRD1 Driver Options.
⁹ Not available with SRD Driver Options.
¹⁰ Either RCD or RCD7 must be selected for this option.
¹¹ Extended lead-time may apply. Consult factory.
¹² Not available with UNV.
¹³ 1 shield provided per LED light engine.
¹⁴ TLRSR must be selected with D41
¹⁵ TLRSR and D41 must be selected with OMS
¹⁶ Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
¹⁷ Consult Signify to confirm whether specific accessories are BAA-compliant.

Accessories¹⁷ (must be ordered as separate line item - quickly and easily installed in the field)

Interact City connector node (Contact the factory for additional support when connected lighting or additional services are desired.)

Shielding accessories

Description	Luminaire Option Code	Accessory Ordering Code
		32 LED version*
Front side shield	FSS	ACC-LG66V32LED-FSS
House side shield	HS	ACC-LG66V32LED-HS

*Refer to Wattage table to confirm light engine configuration. Example, if configuration is 2x32LED, 2 of the desired shields must be ordered per luminaire.



RFS-RG RoadFocus reduced glare

LED Cobra head (small)

Predicted Lumen Depreciation Data

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. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11 Addendum B. Published L70 hours limited to 6 times actual LED test hours.

Ambient Temperature °C	L70 per TM-21	Lumen Maintenance % at 78,000 hrs
25°C	>78,000 hours	>96.6%

LED Wattage values

Ordering Code	Total LEDs	Light Engine Configuration	Average System Watts ¹	Wattage label ²
RFS-RG-25W32LED	32	1x32LED	24	20
RFS-RG-30W32LED	32	1x32LED	27	30
RFS-RG-35W32LED	32	1x32LED	32	30
RFS-RG-40W32LED	32	1x32LED	38	40
RFS-RG-45W32LED	32	1x32LED	43	40
RFS-RG-50W32LED	32	1x32LED	47	50
RFS-RG-55W32LED	32	1x32LED	52	50
RFS-RG-30W64LED	64	2x32LED	29	30
RFS-RG-35W64LED	64	2x32LED	33	30
RFS-RG-40W64LED	64	2x32LED	38	40
RFS-RG-45W64LED	64	2x32LED	43	40
RFS-RG-50W64LED	64	2x32LED	48	50

Ordering Code	Total LEDs	Light Engine Configuration	Average System Watts ¹	Wattage label ²
RFS-RG-55W64LED	64	2x32LED	52	50
RFS-RG-60W64LED	64	2x32LED	57	60
RFS-RG-65W64LED	64	2x32LED	63	60
RFS-RG-70W64LED	64	2x32LED	68	70
RFS-RG-75W64LED	64	2x32LED	72	70
RFS-RG-80W64LED	64	2x32LED	78	80
RFS-RG-85W64LED	64	2x32LED	83	80
RFS-RG-90W64LED	64	2x32LED	87	90
RFS-RG-95W64LED	64	2x32LED	92	90
RFS-RG-100W64LED	64	2x32LED	98	100

1. Typical values, rounded.
2. As per ANSI C136.15-2015. Consult factory for other labeling needs.

4000K LED Lumen values

Ordering Code	Color Temp.	Type R2M/3M		
		Lumen Output	Efficacy (LPW)	BUG Rating
RFS-RG-25W32LED	4000	3824	157	B1-U0-G1
RFS-RG-30W32LED	4000	4215	154	B2-U0-G1
RFS-RG-35W32LED	4000	5076	160	B2-U0-G1
RFS-RG-40W32LED	4000	5898	156	B2-U0-G1
RFS-RG-45W32LED	4000	6721	156	B2-U0-G1
RFS-RG-50W32LED	4000	7544	161	B3-U0-G2
RFS-RG-55W32LED	4000	8367	161	B3-U0-G2
RFS-RG-30W64LED	4000	4802	166	B2-U0-G1
RFS-RG-35W64LED	4000	5591	168	B2-U0-G1
RFS-RG-40W64LED	4000	6411	168	B2-U0-G1
RFS-RG-45W64LED	4000	7168	167	B2-U0-G1
RFS-RG-50W64LED	4000	7938	167	B2-U0-G1
RFS-RG-55W64LED	4000	8678	166	B2-U0-G1
RFS-RG-60W64LED	4000	10161	178	B3-U0-G2
RFS-RG-65W64LED	4000	10837	173	B3-U0-G2
RFS-RG-70W64LED	4000	11538	170	B3-U0-G2
RFS-RG-75W64LED	4000	12191	169	B3-U0-G2
RFS-RG-80W64LED	4000	12868	165	B3-U0-G2
RFS-RG-85W64LED	4000	13527	163	B3-U0-G2
RFS-RG-90W64LED	4000	14147	163	B3-U0-G2
RFS-RG-95W64LED	4000	14758	160	B3-U0-G2
RFS-RG-100W64LED	4000	15385	157	B3-U0-G2

3000K LED Lumen values

Ordering Code	Color Temp.	Type R2M/3M		
		Lumen Output	Efficacy (LPW)	BUG Rating
RFS-RG-25W32LED	3000	3642	150	B1-U0-G1
RFS-RG-30W32LED	3000	4014	147	B1-U0-G1
RFS-RG-35W32LED	3000	4834	152	B2-U0-G1
RFS-RG-40W32LED	3000	5617	148	B2-U0-G1
RFS-RG-45W32LED	3000	6401	149	B2-U0-G1
RFS-RG-50W32LED	3000	7185	154	B2-U0-G1
RFS-RG-55W32LED	3000	7969	153	B3-U0-G2
RFS-RG-30W64LED	3000	4573	158	B1-U0-G1
RFS-RG-35W64LED	3000	5325	160	B2-U0-G1
RFS-RG-40W64LED	3000	6106	160	B2-U0-G1
RFS-RG-45W64LED	3000	6827	159	B2-U0-G1
RFS-RG-50W64LED	3000	7560	159	B2-U0-G1
RFS-RG-55W64LED	3000	8265	158	B2-U0-G1
RFS-RG-60W64LED	3000	9677	169	B2-U0-G1
RFS-RG-65W64LED	3000	10321	165	B3-U0-G2
RFS-RG-70W64LED	3000	10989	162	B3-U0-G2
RFS-RG-75W64LED	3000	11610	161	B3-U0-G2
RFS-RG-80W64LED	3000	12255	157	B3-U0-G2
RFS-RG-85W64LED	3000	12883	155	B3-U0-G2
RFS-RG-90W64LED	3000	13473	155	B3-U0-G2
RFS-RG-95W64LED	3000	14055	153	B3-U0-G2
RFS-RG-100W64LED	3000	14652	150	B3-U0-G2

2700K LED Lumen values

Ordering Code	Color Temp.	Type R2M/3M		
		Lumen Output	Efficacy (LPW)	BUG Rating
RFS-RG-25W32LED	2700	3278	135	B1-U0-G1
RFS-RG-30W32LED	2700	3613	132	B1-U0-G1
RFS-RG-35W32LED	2700	4351	137	B1-U0-G1
RFS-RG-40W32LED	2700	5055	133	B2-U0-G1
RFS-RG-45W32LED	2700	5761	134	B2-U0-G1
RFS-RG-50W32LED	2700	6467	138	B2-U0-G1
RFS-RG-55W32LED	2700	7172	138	B2-U0-G1
RFS-RG-30W64LED	2700	4116	142	B1-U0-G1
RFS-RG-35W64LED	2700	4793	144	B2-U0-G1
RFS-RG-40W64LED	2700	5495	144	B2-U0-G1
RFS-RG-45W64LED	2700	6144	143	B2-U0-G1
RFS-RG-50W64LED	2700	6804	143	B2-U0-G1
RFS-RG-55W64LED	2700	7439	142	B2-U0-G1
RFS-RG-60W64LED	2700	8709	152	B2-U0-G1
RFS-RG-65W64LED	2700	9289	148	B2-U0-G1
RFS-RG-70W64LED	2700	9890	145	B3-U0-G2
RFS-RG-75W64LED	2700	10449	145	B3-U0-G2
RFS-RG-80W64LED	2700	11030	141	B3-U0-G2
RFS-RG-85W64LED	2700	11595	140	B3-U0-G2
RFS-RG-90W64LED	2700	12126	139	B3-U0-G2
RFS-RG-95W64LED	2700	12650	138	B3-U0-G2
RFS-RG-100W64LED	2700	13187	135	B3-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 - contact Applications at signify.com/outdoorluminaires. Consult DLC QPL to confirm your specific fixture selection is DLC approved.

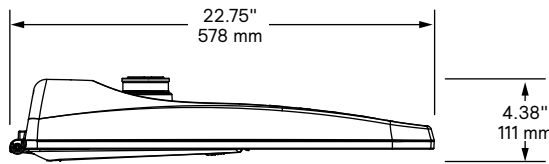
Note: Some data may be scaled based on tests of similar but not identical luminaires.

RFS-RG RoadFocus reduced glare

LED Cobra head (small)

Dimensions

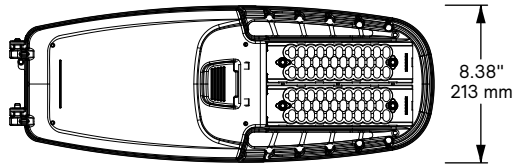
Side View



Weight: 9.4 lbs

EPA: 0.52 sq. feet

Bottom View



Field Adjustable Wattage (FAWS) Multiplier Chart

FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

Note: Typical value accuracy +/- 5%

Specifications

Housing

Made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 5 1/2" (140mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. A clearance of 13" (330mm) at the rear is required in order to remove the door. Complete with a bird guard protecting against birds and similar intruders and an ANSI label as per C136.15-2015 to identify wattage and source (both included in box). Housing (including electrical compartment) rated IP54 per ANSI C136.37.

Light Engine

Composed of 4 main components: LED Module / Optical System / Heat Sink / Driver.

Electrical components are RoHS compliant, IP66 sealed light engine equipped 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.

LED Module: Composed of high-performance white LEDs. Color temperature as per ANSI/ NEMA bin 2700 Kelvin nominal (2725 ±145K), 3000 Kelvin nominal (3045K +/- 175K) or 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. Other CCT/CRI also available, consult factory.

Optical System: Composed of high performance UV stabilized optical grade 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% upright and UO per IESNA TM-15.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural vertical convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide openings enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +50°C / +122°F.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I or 2, THD of 20% max.

DMG: 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).

Integrated Features

DMG: Dimmable driver 0-10V.

RCD7*: Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap.

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

SP1: Surge protection device 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 DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA.

Please note that these integrated features always come with RoadFocus luminaire.

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

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LED Cobra head (small)

Specifications (continued)

Driver and Luminaire Options

D4I: Zhaga-D4i certified fixture

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

SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle and bottom TLRSR receptacle, if this option included/ chosen. This configuration is compatible with Interact City controllers.

SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock. If TLRSR receptacle option included, standard SR communication, 24V auxiliary supply and LSI are connected to the TLRSR receptacle.

OMS: Outdoor Multi Sensor

FAWS: Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level – see the FAWS multiplier chart for more details.

Note: It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.

NRC: No Receptacle. Fixture is shipped with a cap instead of a receptacle.

NYBC: 4-position terminal block

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

RCD*: Tool Less orientable receptacle with 5 pins enabling dimming, can be used with a twist lock Interact City or photoelectric cell or a shorting cap.

TLRSR: SR Sensor connector, installed in fixture door. Shipped with protective cover.

PH8: Twist-lock photoelectric cell, UNV (120-277VAC).

PH8/347: Twist-lock photoelectric cell, UNV (120-277VAC).

PH8/480: Twist-lock photoelectric cell, UNV (120-277VAC).

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

PH9*: Shorting cap.

API: Factory Installed NEMA label, ANSI C136.15-2015 compliant. Consult factory for other labeling needs.

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

Factory Installed Shield Options

(One per Light Engine)

FSS: Front Side Shield. Shields light output on the front side of fixture.

HS: House Side Shield. Shields light output to the back side of fixture.

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 to reduce seizing of the parts, also 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

Color 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 5000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

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 RFS meets the ANSI C136.31-2018, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100,000 cycles by independent lab)

Certifications and Compliance

cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires. Most versions of RoadFocus LED Cobrahead luminaires are DesignLights Consortium qualified, consult DLC QPL to confirm your specific fixture selection is approved. CCTs 3000K and warmer are Dark Sky Approved. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the APP and register your product right away.

For more details visit: signify.com/servicetag

Limited Warranty

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

Brackets/Arms

For brackets / arms available with this luminaire, see Lumec 3D for details.

