

**PHILIPS
LUMEC**

Urban

TownGuide
Classic T



Project: City of Penticton

Location:

Cat.No: See Below in Notes

Type: OB7

Lamps: Qty:

Notes:

PBDP103-50W64LED4K-MP-PC-C-LE2-UNV-DMG-RCD7-PH8-MGY

The Philips Lumec TownGuide family is a functional outdoor LED lighting range for the lower post-top applications. TownGuide is most suitable for parks and recreation, city centers, pedestrian areas and bike paths, campuses, public areas and green projects.

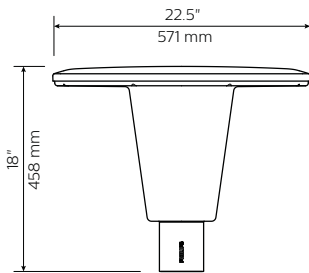
Ordering guide

Example: PBDP103-101W128LED4K-MP-PC-C-LE5-UNV-CDMGM25-RCD-PH8-P120-12-GR

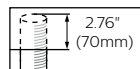
Series	Lamp	Lamp type	Globe material	Globe finish	Optical system	Voltage	Driver options	House Side Shield	Luminaire options	Luminaire accessory	Pole type & height	Finish
PBDP103	50W64LED4K	MP	PC	C	LE2	UNV	DMG	<input type="checkbox"/>	RCD7	PH8	<input type="checkbox"/>	MGY
PBDP103 Classic T	3000K 50W64LED3K 61W64LED3K 75W96LED3K 95W128LED3K 101W128LED3K 4000K 50W64LED4K 61W64LED4K 75W96LED4K 95W128LED4K 101W128LED4K	MP	PC FO	C	LE2 LE3 LE5	UNV	CLO DALI CDMGS25 CDMGS50 CDMGS75 CDMGM25 CDMGM50 CDMGM75 CDMGE25 CDMGE50 CDMGE75 DMG	HS	RCD7 RCD7	PH8 PH9	P120-8 P120-10 P120-12 P120-14 P150-8 P150-10	BKST BRST GR MGY WHST

1. Use of Luminaire accessory **PH8** or **PH9** is required to ensure proper illumination.

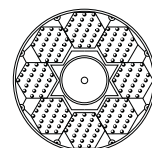
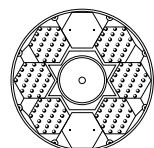
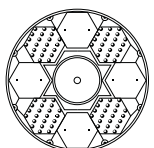
Luminaire



EPA: 1.001sq. ft.
Weight: 15.98 lbs



Arrangement of the LED modules in the luminaire, viewed from the road axis.



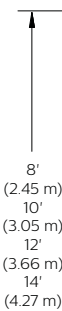
4 modules (64LED)

6 modules (96LED)

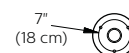
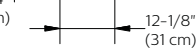
8 modules (128LED)

Poles

P120



P150



PBDP103 TownGuide Classic T

Urban post-top luminaire

Clear Globe

LED = Mid-Power, CRI = 80, CCT = 3000K (+/- 350K), System (LED + driver) rated life = 70,000 hrs

LED Module	Total LEDs	LED Current (mA)	Average System Wattas (W)	LE2			LE3			LE5		
				Delivered Lumens (LM)	Efficacy (LPW)	BUG rating	Delivered Lumens (LM)	Efficacy (LPW)	BUG rating	Delivered Lumens (LM)	Efficacy (LPW)	BUG rating
50W64LED3K-MP-PC-C	64	239	50	4557	91	B1-U2-G1	4635	92	B1-U2-G1	4743	94	B2-U2-G1
61W64LED3K-MP-PC-C	64	284	62	5208	85	B1-U3-G1	5214	85	B1-U2-G1	5375	87	B3-U2-G1
75W96LED3K-MP-PC-C	96	234	75	6787	90	B2-U3-G1	6869	91	B2-U3-G1	7040	93	B3-U3-G1
95W128LED3K-MP-PC-C	128	229	95	8744	92	B2-U3-G2	8754	92	B2-U3-G2	9023	94	B3-U3-G1
101W128LED3K-MP-PC-C	128	243	101	9110	90	B2-U3-G2	9120	90	B2-U3-G2	9401	93	B3-U3-G2

LED = Mid-Power, CRI = 80, CCT = 4000K (+/- 350K), System (LED + driver) rated life = 70,000 hrs

50W64LED4K-MP-PC-C	64	239	51	4799	95	B1-U3-G1	4880	97	B1-U3-G1	4994	99	B2-U2-G1
61W64LED4K-MP-PC-C	64	284	62	5485	89	B1-U3-G1	5491	89	B1-U3-G1	5660	92	B3-U2-G1
75W96LED4K-MP-PC-C	96	234	76	7147	95	B2-U3-G2	7233	96	B2-U3-G2	7413	98	B3-U3-G1
95W128LED4K-MP-PC-C	128	229	96	9208	96	B2-U3-G2	9218	96	B2-U3-G2	9502	99	B3-U3-G2
101W128LED4K-MP-PC-C	128	243	102	9593	94	B2-U3-G2	9604	95	B2-U3-G2	9900	98	B3-U3-G2

Frosted Globe

LED = Mid-Power, CRI = 80, CCT = 3000K (+/- 350K), System (LED + driver) rated life = 70,000 hrs

LED Module	Total LEDs	LED Current (mA)	Average System Wattas (W)	LE5		
				Delivered Lumens (LM)	Efficacy (LPW)	BUG rating
50W64LED3K-MP-PC-FO	64	239	50	3063	61	B1-U3-G1
61W64LED3K-MP-PC-FO	64	284	62	3468	56	B1-U3-G1
75W96LED3K-MP-PC-FO	96	234	75	4543	60	B2-U3-G1
95W128LED3K-MP-PC-FO	128	229	95	5768	60	B2-U3-G1
101W128LED3K-MP-PC-FO	128	243	101	6010	59	B2-U3-G1

LED = Mid-Power, CRI = 80, CCT = 4000K (+/- 350K), System (LED + driver) rated life = 70,000 hrs

50W64LED4K-MP-PC-FO	64	239	51	3259	65	B1-U3-G1
61W64LED4K-MP-PC-FO	64	284	62	3690	60	B1-U3-G1
75W96LED4K-MP-PC-FO	96	234	76	4833	64	B2-U3-G1
95W128LED4K-MP-PC-FO	128	229	96	6137	64	B2-U3-G1
101W128LED4K-MP-PC-FO	128	243	102	6394	63	B2-U3-G1

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

Note: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

PBDP103 TownGuide Classic T

Urban post-top luminaire

Specifications

Hood

In a round shape, made of die cast A413 aluminum, mechanically fastened to the globe.

Globe (PC)

One-piece Seamless impact resistant injected-molded clear UV-Stabilized polycarbonate. The globe is mechanically assembled on the hood and fitter. **C:** clear or **FO:** frosted finish.

Fitter

Made of die cast A413 Aluminum alloy. Comes with an easy self adjusting system with two 2 set screws M8 x 20 Allen type for ease of maintenance and installation. Fits on a 3"(76mm) outside diameter by 2.76" (70mm) long tenon.

LED Engine

Light engine composed of 3 main components: LED / Optical System / Driver Electrical components are RoHS compliant. Offered in configurations of 4, 6 or 8 modules. Product does not use any cooling device with moving parts (only passive cooling device). Each module is composed of 16 MP mid power white LEDs. Color temperature of 3000K and 4000K nominal, 80 CRI.

Optical system

LE2 (type II asymmetrical), **LE3** (type III asymmetrical) or **LE5** (type V symmetrical) light distributions. Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.

Driver

Driver comes with dimming compatible 0-10 volts. High power factor of 95%. Electronic driver, operating range 50/60 Hz. **UNV:** Auto-adjusting universal voltage input from **120 to 277 VAC** rated for both application line to line or line to neutral, Class I, THD of 20% max. Maximum ambient operating temperature from -40° F (-40° C) to 130° F (55° C) degrees. Certified in compliance to UL1310 cULus requirement. Dry and damp location. Mechanically fastened on the hood.

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.

Wiring

Gauge (#18) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

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 Urban luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Hardware

All exposed screws shall be stainless steel. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Driver options

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.

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

DMG: Dimmable driver 0-10Vt.

Ordering Code	Scenario	Dimming Time	Dimming Level
CDMGS25	Safety	4 hours	25% power
CDMGS50	Safety	4 hours	50% power
CDMGS75	Safety	4 hours	75% power
CDMGM25	Median	6 hours	25% power
CDMGM50	Median	6 hours	50% power
CDMGM75	Median	6 hours	75% power
CDMGE25	Economy	8 hours	25% power
CDMGE50	Economy	8 hours	50% power
CDMGE75	Economy	8 hours	75% power

Luminaire option

RCD: Receptacle with 5 pins allowing dimming, can be used with a twist-lock, photoelectric cell or a shorting cap.

RCD7: Receptacle with 7 pins allowing dimming, can be used with a twist-lock, photoelectric cell or a shorting cap.

Options

HS: House side shield optional

Luminaire accessories

PH8: Photoelectric Cell, Twist-lock Type complete with receptacle. Allows a 90° rotation.

PH9: Shorting cap, Twist-lock Type complete with receptacle.

Finish

The Thermosetting powder coating provided meets the color requirements of the AAMA 2604 specification as measured per ASTM D2244. The Thermosetting product is applied at a dry film of 2.5 to 4.0 mils (64-102 microns) on textured finishes, resulting in a durable long lasting finish.

Finish Options Include:

BKST: Black Sand Textured

BRST: Bronze Sand Textured

GR: Dark Gray Sand Textured

MGY: Medium Gray Sand Textured

WHST: White Sand Textured.

Consult factory for custom finish options.

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.

Quality control

Manufactured to ISO 9001 2008 standards and ISO 14001 2004 International Quality Standards Certification.

Vibration resistance

Meets the ANSI C136.31, American National Standard for Roadway Luminaire Vibration specifications for normal applications (Tested for 1.5G over 100 000 cycles).

Certifications and Compliance

cETL listed to Canadian safety standards for wet locations. UL8750 and UL1598 compliant. ETL listed to U.S. safety standards for wet locations. cETL listed to Canadian safety standards for wet locations. LM80 & LM79 tested. Listed on the DesignLights™ Consortium (DLC) Qualified Products.

PBDP103 TownGuide Classic T

Urban post-top luminaire

Pole options

P120: 413F, low-copper cast aluminum. 6063-T6 extruded aluminum. Anchor rods are hot dipped galvanized steel. Tenon/Top: 3" OD., Bolt Circle: 7 1/2" - 9 1/2", Anchor Rods: (4) 3/4" dia. x 19", Base Dimensions: 11 1/2" dia. x 2 3/8", Base Cover: (Included) 12 1/8" dia. x 3 1/4", Hand Hole: 2" x 4" Oval, Shaft: 4" - 3" Tapered, Wall Thickness: 0.125 Aluminum, Height: 8', 10', 12', 14'

P150: 356 HM high-strength, low-copper, proprietary cast aluminum alloy. 319 permanent mold aluminum. 6005-T5 extruded aluminum. Anchor rods are hot dipped galvanized steel. Tenon/Top is 3" OD., Bolt Circle is 7", Anchor Rods: (3) 1/2" dia. x 15 1/2", Base Dimensions: 9 5/8" dia. x 1 3/8", Base Cover: (included) 10 1/4" dia. x 2 3/4", Hand Hole: 2" x 4" Oval, Shaft: 3" Straight, Wall Thickness: 0.125 Aluminum, Height: 8' or 10'

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	245 mA	>100,000	>60,000	89.8%

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.

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Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

**PHILIPS
LUMEC**

Roadway

RoadFocus

RFM: 72, 108 and 160W



Project: CITY OF PENTICTON
 Location:
 Cat.No:
 Type: **1**
 Lamps: Qty:
 Notes:

The Philips Lumece RoadFocus LED Cobra Head luminaires feature a sleek design that provides seamless replacement of existing HID luminaires. RoadFocus is available in three sizes, offers multiple lumen packages, and a complete array of optical distributions, making it an outstanding solution for all types of roadway applications.

Ordering guide

example: RFM-72W32LED4K-T-R2S-UNIV-DMG-AST-FAWS-RCD-SP2-PH8XL-GY3

Luminaire	LED Module	Optical System	Voltage	Driver and Dimming	Wattage Switch	Twist-Lock Receptacle	Surge Protection	Luminaire Options	Finish
RFM	108W32LED4K-T	R2M	UNIV	DMG		RCD7		PH8	GY3
RFM RoadFocus Medium	72W32LED4K-T or 108W32LED4K-T ^{2,4} or 108W48LED4K-T or 160W48LED4K-T ^{2,4}	R2S Type II Short R2M Type II Medium R3S Type III Short R3M Type III Medium 5 Type V	UNIV 120-277VAC HVU 347-480VAC	<i>Standard:</i> DMG^{1,6} Dimmable driver 0-10V <i>Optional:</i> AMPD^{2,4,5,6} Amplight Dimming Dynadimmer Economy Profile CDMG25^{2,4,5,6} CDMG50^{2,4,5,6} CDMG75^{2,4,5,6} Median Profile CDMGM25^{2,4,5,6} CDMGM50^{2,4,5,6} CDMGM75^{2,4,5,6} Safety Profile CDMGS25^{2,4,5,6} CDMGS50^{2,4,5,6} CDMGS75^{2,4,5,6} DALI^{2,4,5,6} Digitally Addressable Lighting Interface DMG-AST^{*2,4} Adjustable Startup Time DMG-CLO^{*2,4,5} Constant Light Output DMG-OTL^{*2,4} Over The Life <i>*Includes 0-10v dimming</i>	None (leave blank) FAWS⁵ Field Adjustable Wattage Selector (optional)	<i>Standard:</i> RCD^{1,3,7} Receptacle for twist-lock photocell or shorting cap, 5-pin (standard) <i>Optional:</i> RCD7^{3,7} Receptacle for twist-lock photocell or shorting cap, 7-pin (optional)	SP2⁸ 20kV / 20kA Surge Protector (optional)	HS House side shield, 1 per 16 LED light engine PH8³ Twist-lock Photoelectric Cell, UNIV (120-277VAC) PH8/347³ Twist-lock Photoelectric Cell, HVU (347VAC) PH8/480³ Twist-lock Photoelectric Cell, HVU (480VAC) PH8XL³ Twist-lock Photoelectric Cell, extended life, UNIV (120-277VAC) PH9³ Shorting cap	BK Black finish BR Bronze finish GY3 Gray finish WH White finish

- Please note these integrated features come standard with RoadFocus luminaires.
- Denotes programmable driver option. Not available with HVU (347-480volt).
Not available with 1050 mA versions (108W32LED, 160W48LED).
- Use of photoelectric cell or shorting cap is required to ensure proper illumination.
- Not available with HVU (347-480volt).
- FAWS not available with AMPD, CDMG options, DALI or CLO.
- Dimming choices: Select either DMG or AMPD or one of the CDMG options or DALI.
- When RCD7 option is selected you will get 7-pin instead of standard RCD 5-pin.
- When SP2 option is selected you will get SP2 instead of standard SP1.

RFM RoadFocus

Medium, LED Cobrahead: 72, 108, and 160W

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

ACC-RFS-RFM-RFL-UNIV-SPC^{1,2} Starsense twist-lock photoelectric cell and antenna node, UNIV (120-277VAC).	ACC-RFM-RFL-HVU-SPC^{1,2} Starsense twist-lock photoelectric cell and antenna node, HVU (347-480VAC).	ACC-RFS-RFM-RFL-UNIV-SPCD^{1,2} Starsense dimmable twist-lock photoelectric cell and antenna node, UNIV (120-277VAC).
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1. Use of photoelectric cell or shorting cap is required to ensure proper illumination.
2. Please note that more hardware as well as software are required.
Please contact the quotations department for help with putting together the entire control system.

LED Wattage and Lumen Values

LED = Philips Lumileds LUXEON T, CRI = 70, CCT = 4000K (+/- 350K)
System (LED + driver) rated life = 100,000 hrs¹

LED Module	Typical Delivered Lumens	Typical System Wattage (W) ²	LED Current (mA)	Typical System Current (A) @						Efficacy (Lm/W)	BUG Rating
				120V	208V	240V	277V	347V	480V		
72W32LED4K-T-R2S	8,330	73	700	0.62	0.36	0.31	0.28	0.21	0.15	114	B2-U0-G1
72W32LED4K-T-R2M	8,140	73	700	0.62	0.36	0.31	0.28	0.21	0.15	112	B2-U0-G2
72W32LED4K-T-R3S	8,085	73	700	0.62	0.36	0.31	0.28	0.21	0.15	111	B1-U0-G2
72W32LED4K-T-R3M	8,178	73	700	0.62	0.36	0.31	0.28	0.21	0.15	112	B2-U0-G2
72W32LED4K-T-5	7,496	73	700	0.62	0.36	0.31	0.28	0.21	0.15	103	B3-U0-G2
108W32LED4K-T-R2S	11,169	108	1050	0.91	0.53	0.47	0.41	N/A		103	B2-U0-G2
108W32LED4K-T-R2M	10,914	108	1050	0.91	0.53	0.47	0.41			101	B2-U0-G2
108W32LED4K-T-R3S	10,841	108	1050	0.91	0.53	0.47	0.41			100	B1-U0-G2
108W32LED4K-T-R3M	10,965	108	1050	0.91	0.53	0.47	0.41			102	B2-U0-G2
108W32LED4K-T-5	10,050	108	1050	0.91	0.53	0.47	0.41			93	B3-U0-G2
108W48LED4K-T-R2S	12,507	106	700	0.93	0.53	0.46	0.40	0.32	0.23	118	B3-U0-G2
108W48LED4K-T-R2M	12,222	106	700	0.93	0.53	0.46	0.40	0.32	0.23	115	B2-U0-G2
108W48LED4K-T-R3S	12,140	106	700	0.93	0.53	0.46	0.40	0.32	0.23	115	B2-U0-G2
108W48LED4K-T-R3M	12,279	106	700	0.93	0.53	0.46	0.40	0.32	0.23	116	B2-U0-G2
108W48LED4K-T-5	11,255	106	700	0.93	0.53	0.46	0.40	0.32	0.23	107	B4-U0-G2
160W48LED4K-T-R2S	16,778	161	1050	1.34	0.76	0.66	0.58	N/A		104	B3-U0-G2
160W48LED4K-T-R2M	16,396	161	1050	1.34	0.76	0.66	0.58			102	B3-U0-G3
160W48LED4K-T-R3S	16,285	161	1050	1.34	0.76	0.66	0.58			101	B2-U0-G3
160W48LED4K-T-R3M	16,472	161	1050	1.34	0.76	0.66	0.58			102	B3-U0-G3
160W48LED4K-T-5	15,098	161	1050	1.34	0.76	0.66	0.58			94	B4-U0-G2

1. L₇₀ >100,000 hrs (at ambient temperature = 25°C).
2. System wattage or total luminaire wattage includes the LED module and the LED driver.
Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

RFM RoadFocus

Medium, LED Cobrahead: 72, 108, and 160W

Field Adjustable Wattage (FAWS) Multiplier Chart

72W32LED4K-T or 108W48LED4K-T (700 mA)

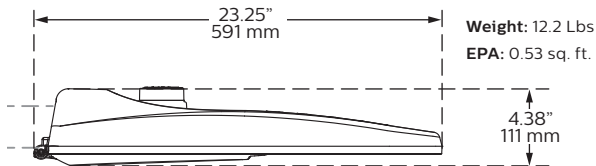
FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage and typical current
1	0.37	0.29
2	0.55	0.50
3	0.62	0.58
4	0.71	0.69
5	0.77	0.75
6	0.81	0.81
7	0.84	0.87
8	0.94	0.91
9	0.98	0.96
10	1.00	1.00

108W32LED4K-T OR 160W48LED4K-T (1050mA)

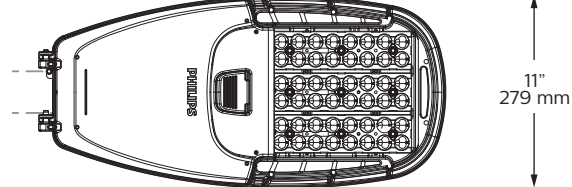
FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage and typical current
1	0.33	0.27
2	0.56	0.48
3	0.64	0.57
4	0.71	0.65
5	0.79	0.74
6	0.84	0.79
7	0.89	0.85
8	0.92	0.90
9	0.96	0.95
10	1.00	1.00

Dimensions

Side View



Bottom View



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. Published L70 hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1050 mA	>100,000 hours	>60,000 hours	>96%

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 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 with Philips Lumileds LUXEON T LEDs. 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: (Included), LED type Philips Lumileds LUXEON T. Composed of high performance white LEDs. Color temperature as per ANSI bin 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical.

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. Dark Sky compliant with 0% uplight and U0 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 +40°C / +104°F.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max.

RFM RoadFocus

Medium, LED Cobrahead: 72, 108, and 160W

Specifications (continued)

Light Engine (continued)

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.

RCD*: Receptacle with 5 pins enabling dimming, can be used with a twist lock Starsense or photoelectric cell or a shorting cap.

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.*

Driver and Luminaire Options

AMPD*: Driver pre-programmed for compatibility with Amflight control system.

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.

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:

CDMG525: 4 hours, 25% power dimming
CDMG550: 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

** Not available with HVU (347-480V)*

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.

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

RCD7*: 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.

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

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

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

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

PH8XL*: Twist-lock Photoelectric Cell, extended life, UNIV (120-277VAC).

PH9*: Shorting cap.

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

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, Philips System Reliability Tool, Philips Advance data and Philips Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours (72W32LED and 108W48LED at 700mA) or 94,500 hours (108W32LED and 160W48LED at 1050mA) 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 3000 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 RFM meets the ANSI C136.31, 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. RoadFocus LED Cobrahead 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 philips.com/warranties for details and restrictions.

Brackets/Arms

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





ORA-LED

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INTRODUCING THE SLEEK,
MODERN ORA FIXTURE

- Elegant, sleek design with a modern look.
- DLC approved wall / flood light option with a competitive efficacy
- Versatile fixture available in three mounting options - wall, knuckle and yoke mount



IDEAL FOR



Town Houses



Condos



Perimeter Lighting



Shopping Malls

TECHNICAL SPECIFICATIONS

	ORA1-LED15	ORA2-LED30	ORA3-LED50	ORA4-LED80
Watts	16	30	50	78
Lumens	1510	3359	5470	88271
Efficacy	97	112	111	113
Replaces Up To	50W MH	50W MH	100W MH	150W MH
Voltage			120-277V	
Colour Temp.			4000K*	
Finish			Bronze	

* Standard configuration

