

HADCO

by @signify

Urban

Baltimore

VX681 Post top



The Hadco Baltimore LED post top consists of a traditional stately form that has created an industry standard. It offers the style of traditional lanterns with today's cutting edge LEDgine technology. For historic areas and new street-scapes Baltimore is available in sizes that are in proportion to most applications including residential streets, city streets, campuses and parking lots.

Project: _____

Location: _____

Cat.No: _____

Type: _____

Lamps: _____ Qty: _____

Notes: _____

Ordering guide

Example: VX681-48-A-C-2-N-W-A-3-N-N-N-N-SP1-N

Series	LED count	Gen	Finish	Panels	Optics	Photo Control	Color Temp	Voltage	Drive Current	Integral Controls ²	Options			Surge Protect	House Side Shield
											#1 ²	#2 ²	#3 ²		
VX681		G2													
VX681	32 ^{1,3} 32 LEDs 48 ¹ 48 LEDs 64 64 LEDs 80 80 LEDs	G2 Gen 2	A Black B White G Verde H Bronze J Green	C Clear F Frosted V Vertical Ribbed	2 Type 2 3 Type 3 3W Type 3 Wide 4 Type 4 5 Type 5	E 120 VAC button eye H 208/240/277 VAC button eye R 3-Pin Twist Lock Receptacle R7 7-Pin Receptacle in cage N None	N Neutral 4000K W Warm 3000K	A 120-277 B ^{2,3} 347-480	3 350mA 5 530mA 7 ¹ 700mA	Dynadimmer DA 4 Hrs, 25% reduction DB 4 Hrs, 50% reduction DC 4 Hrs, 75% reduction DD 6 Hrs, 25% reduction DE 6 Hrs, 50% reduction DF 6 Hrs, 75% reduction DG 8 Hrs, 25% reduction DH 8 Hrs, 50% reduction DJ 8 Hrs, 75% reduction DL DALI SRD Sensor ready driver (standard configuration) SRD1 Sensor ready driver (alternative configuration) N None	AST Adjustable Start Up Time N None	CLO Constant Light Output N None	OTL Over The Life N None	SP1 10kV/10kA Surge Protector SP2 20kV/20kA Surge Protector	H House Side Shield N None

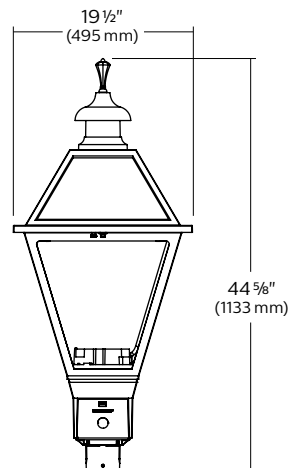
- The 700mA (7) current is only compatible for 32 LEDs (32) and 48 LEDs (48) configurations.
- Configurations with 347-480VAC (B) voltage are not compatible with optional dimming or optional programming.
- Configurations with 32 LEDs (32) at 350mA (3) and 530mA (5) currents are not compatible with 347-480 VAC (B) voltage.



VX681 Baltimore

Post top

Dimensions



VX681

Height: 44 5/8" (113cm)
Width: 19 1/4" (49cm)
Max. EPA: 2.2 sq. ft.
Max. Weight 37.5 lbs.s

LED Wattage and Lumen Values for 3000K fixtures

Ordering Code: (4000K)	Total LEDs	System current (mA)	Average System Watts¹ (W)	Type 2			Type 3			Type 3W			Type 4			Type 5		
				Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating
Clear Panel VX681 3000K																		
32-G2-C-x-W3	32	350	37	3049	82	B1-U2-G1	3069	83	B1-U2-G1	3062	83	B1-U2-G1	3018	82	B1-U2-G1	3013	81	B2-U3-G1
32-G2-C-x-W5	32	530	53	4373	83	B1-U2-G1	4402	83	B1-U3-G1	4392	83	B1-U3-G1	4329	82	B1-U3-G1	4322	82	B3-U3-G1
32-G2-C-x-W7	32	700	71	5516	78	B1-U3-G1	5552	78	B1-U3-G1	5539	78	B1-U3-G2	5460	77	B1-U3-G1	5451	77	B3-U3-G1
48-G2-C-x-W3	48	350	51	4574	90	B1-U2-G1	4604	90	B1-U3-G1	4593	90	B1-U3-G1	4527	89	B1-U3-G1	4520	89	B3-U3-G1
48-G2-C-x-W5	48	530	79	6560	83	B1-U3-G1	6603	84	B1-U3-G1	6588	83	B2-U3-G2	6493	82	B1-U3-G2	6483	82	B3-U3-G1
48-G2-C-x-W7	48	700	106	8274	78	B2-U3-G2	8328	79	B2-U3-G2	8309	78	B2-U3-G2	8189	77	B1-U3-G2	8176	77	B3-U3-G2
64-G2-C-x-W3	64	350	68	5853	86	B1-U3-G1	5900	87	B1-U3-G1	5972	88	B1-U3-G2	5735	84	B1-U3-G2	5978	88	B3-U3-G1
64-G2-C-x-W5	64	530	105	8395	80	B2-U3-G2	8462	81	B2-U3-G2	8566	82	B2-U3-G2	8226	78	B1-U3-G2	8574	82	B3-U3-G2
80-G2-C-x-W3	80	350	85	7316	86	B2-U3-G2	7375	87	B1-U3-G2	7465	88	B2-U3-G2	7168	84	B1-U3-G2	7472	88	B3-U3-G2
80-G2-C-x-W5	80	530	128	10494	82	B2-U3-G2	10578	83	B2-U3-G2	10708	84	B2-U3-G2	10282	80	B2-U3-G2	10718	84	B4-U3-G2
Frosted Panel VX681 3000K																		
32-G2-F-x-W3	32	350	37.0	2848.0	77	B1-U3-G2	2857	77	B1-U3-G2	2857	77	B1-U3-G2	2817	76	B1-U3-G2	2826	76	B1-U3-G2
32-G2-F-x-W5	32	530	53.0	4085.0	77	B1-U3-G2	4098	77	B1-U3-G2	4098	77	B1-U3-G3	4041	76	B1-U3-G3	4054	76	B2-U3-G2
32-G2-F-x-W7	32	700	71.0	5152.0	73	B1-U3-G3	5168	73	B1-U3-G3	5168	73	B1-U3-G3	5096	72	B1-U3-G3	5112	72	B2-U3-G3
48-G2-F-x-W3	48	350	51.0	4272.0	84	B1-U3-G2	4286	84	B1-U3-G3	4286	84	B1-U3-G3	4226	83	B1-U3-G3	4239	83	B2-U3-G2
48-G2-F-x-W5	48	530	79.0	6128.0	78	B2-U3-G3	6147	78	B2-U3-G3	6147	78	B2-U3-G3	6061	77	B1-U3-G3	6080	77	B3-U3-G3
48-G2-F-x-W7	48	700	106.0	7728.0	73	B2-U3-G3	7753	73	B2-U3-G3	7753	73	B2-U3-G3	7644	72	B2-U3-G3	7668	72	B3-U3-G3
64-G2-F-x-W3	64	350	68.0	5432.0	80	B1-U3-G3	5494	81	B1-U3-G3	5602	82	B1-U3-G3	5356	79	B1-U3-G3	5539	81	B2-U3-G3
64-G2-F-x-W5	64	530	105.0	7791.0	74	B2-U3-G3	7880	75	B2-U3-G3	8035	77	B2-U3-G4	7682	73	B2-U3-G4	7946	76	B3-U3-G3
80-G2-F-x-W3	80	350	85.0	6790.0	80	B2-U3-G3	6867	81	B2-U3-G3	7002	82	B2-U3-G3	6695	79	B2-U3-G3	6924	81	B3-U3-G3
80-G2-F-x-W5	80	530	128.0	9739.0	76	B2-U4-G3	9850	77	B2-U4-G4	10044	78	B2-U4-G4	9603	75	B2-U4-G4	9932	78	B3-U4-G4
Vetrical Ribbed Panel VX681 3000K																		
32-G2-V-x-W3	32	350	37.0	2983	81	B1-U2-G1	3000	81	B1-U2-G1	2986	81	B1-U2-G1	2952	80	B1-U2-G1	2952	80	B2-U3-G1
32-G2-V-x-W5	32	530	53.0	4279	81	B1-U2-G1	4303	81	B1-U3-G1	4283	81	B1-U3-G1	4234	80	B1-U3-G1	4234	80	B3-U3-G1
32-G2-V-x-W7	32	700	71.0	5396	76	B1-U3-G1	5427	76	B1-U3-G1	5402	76	B1-U3-G2	5340	75	B1-U3-G1	5340	75	B3-U3-G1
48-G2-V-x-W3	48	350	51.0	4475	88	B1-U2-G1	4500	88	B1-U3-G1	4479	88	B1-U3-G1	4428	87	B1-U3-G1	4428	87	B3-U3-G1
48-G2-V-x-W5	48	530	79.0	6418	81	B1-U3-G1	6455	82	B1-U3-G1	6425	81	B1-U3-G2	6351	80	B1-U3-G2	6351	80	B3-U3-G1
48-G2-V-x-W7	48	700	106.0	8094	76	B2-U3-G2	8141	77	B2-U3-G2	8103	76	B2-U3-G2	8010	76	B1-U3-G2	8010	76	B3-U3-G2
64-G2-V-x-W3	64	350	68.0	5734	84	B1-U3-G1	5750	85	B1-U3-G1	5868	86	B1-U3-G2	5627	83	B1-U3-G2	5795	85	B3-U3-G1
64-G2-V-x-W5	64	530	105.0	8225	78	B2-U3-G2	8248	79	B2-U3-G2	8418	80	B2-U3-G2	8071	77	B1-U3-G2	8312	79	B3-U3-G2
80-G2-V-x-W3	80	350	85.0	7168	84	B2-U3-G2	7188	85	B1-U3-G2	7336	86	B2-U3-G2	7034	83	B1-U3-G2	7244	85	B3-U3-G2
80-G2-V-x-W5	80	530	128.0	10281	80	B2-U3-G2	10310	81	B2-U3-G2	10522	82	B2-U3-G2	10089	79	B2-U3-G2	10390	81	B4-U3-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 outdoorlighting.applications@philips.com.

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

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LED Wattage and Lumen Values for 4000K fixtures

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				Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating	Lumen Output²	Efficacy (LPW)	BUG Rating
Clear Panel VX681 4000K																		
32-G2-C-x-N3	32	350	37	3415	92	B1-U2-G1	3437	93	B1-U2-G1	3429	93	B1-U3-G1	3380	91	B1-U3-G1	3375	91	B2-U3-G1
32-G2-C-x-N5	32	530	53	4898	92	B1-U3-G1	4930	93	B1-U3-G1	4919	93	B1-U3-G1	4848	91	B1-U3-G1	4840	91	B3-U3-G1
32-G2-C-x-N7	32	700	71	6178	87	B1-U3-G1	6218	88	B1-U3-G1	6204	87	B1-U3-G2	6115	86	B1-U3-G2	6105	86	B3-U3-G1
48-G2-C-x-N3	48	350	51	5122	100	B1-U3-G1	5156	101	B1-U3-G1	5144	101	B1-U3-G1	5070	99	B1-U3-G1	5062	99	B3-U3-G1
48-G2-C-x-N5	48	530	79	7347	93	B2-U3-G2	7396	94	B2-U3-G2	7379	93	B2-U3-G2	7273	92	B1-U3-G2	7261	92	B3-U3-G2
48-G2-C-x-N7	48	700	106	9266	87	B2-U3-G2	9327	88	B2-U3-G2	9306	88	B2-U3-G2	9172	87	B2-U3-G2	9157	86	B3-U3-G2
64-G2-C-x-N3	64	350	68	6555	96	B1-U3-G1	6608	97	B1-U3-G1	6689	98	B1-U3-G2	6423	94	B1-U3-G2	6695	98	B3-U3-G1
64-G2-C-x-N5	64	530	105	9403	90	B2-U3-G2	9478	90	B2-U3-G2	9594	91	B2-U3-G2	9213	88	B2-U3-G2	9603	91	B3-U3-G2
80-G2-C-x-N3	80	350	85	8194	96	B2-U3-G2	8260	97	B2-U3-G2	8361	98	B2-U3-G2	8028	94	B1-U3-G2	8369	98	B3-U3-G2
80-G2-C-x-N5	80	530	128	11753	92	B2-U3-G2	11847	93	B2-U3-G2	11993	94	B2-U3-G2	11516	90	B2-U3-G2	12004	94	B4-U3-G2
Frosted Panel VX681 4000K																		
32-G2-F-x-N3	32	350	37.0	3190	86	B1-U3-G2	3200	86	B1-U3-G2	3200	86	B1-U3-G2	3155	85	B1-U3-G2	3165	86	B2-U3-G2
32-G2-F-x-N5	32	530	53.0	4575	86	B1-U3-G2	4590	87	B1-U3-G3	4590	87	B1-U3-G3	4526	85	B1-U3-G3	4540	86	B2-U3-G3
32-G2-F-x-N7	32	700	71.0	5770	81	B2-U3-G3	5789	82	B2-U3-G3	5789	82	B2-U3-G3	5708	80	B1-U3-G3	5726	81	B2-U3-G3
48-G2-F-x-N3	48	350	51.0	4785	94	B1-U3-G3	4800	94	B1-U3-G3	4800	94	B1-U3-G3	4733	93	B1-U3-G3	4748	93	B2-U3-G3
48-G2-F-x-N5	48	530	79.0	6863	87	B2-U3-G3	6885	87	B2-U3-G3	6885	87	B2-U3-G3	6788	86	B2-U3-G3	6810	86	B3-U3-G3
48-G2-F-x-N7	48	700	106.0	8656	82	B2-U4-G3	8683	82	B2-U4-G3	8683	82	B2-U4-G4	8561	81	B2-U4-G4	8589	81	B3-U4-G3
64-G2-F-x-N3	64	350	68.0	6084	89	B1-U3-G3	6153	90	B2-U3-G3	6274	92	B2-U3-G3	5999	88	B1-U3-G3	6204	91	B3-U3-G3
64-G2-F-x-N5	64	530	105.0	8726	83	B2-U3-G3	8826	84	B2-U4-G3	8999	86	B2-U4-G4	8604	82	B2-U4-G4	8899	85	B3-U4-G3
80-G2-F-x-N3	80	350	85.0	7604	89	B2-U3-G3	7691	90	B2-U3-G3	7843	92	B2-U3-G4	7498	88	B2-U3-G3	7755	91	B3-U3-G3
80-G2-F-x-N5	80	530	128.0	10908	85	B2-U4-G4	11032	86	B2-U4-G4	11249	88	B2-U4-G4	10755	84	B2-U4-G4	11124	87	B3-U4-G4
Vetrical Ribbed Panel VX681 4000K																		
32-G2-V-x-N3	32	350	37	3341	90	B1-U2-G1	3360	91	B1-U2-G1	3344	90	B1-U2-G1	3306	89	B1-U2-G1	3306	89	B2-U3-G1
32-G2-V-x-N5	32	530	53	4792	90	B1-U3-G1	4820	91	B1-U3-G1	4797	91	B1-U3-G1	4742	89	B1-U3-G1	4742	89	B3-U3-G1
32-G2-V-x-N7	32	700	71	6044	85	B1-U3-G1	6078	86	B1-U3-G1	6050	85	B1-U3-G2	5981	84	B1-U3-G2	5981	84	B3-U3-G1
48-G2-V-x-N3	48	350	51	5011	98	B1-U3-G1	5040	99	B1-U3-G1	5016	98	B1-U3-G1	4959	97	B1-U3-G1	4959	97	B3-U3-G1
48-G2-V-x-N5	48	530	79	7188	91	B2-U3-G2	7229	92	B2-U3-G2	7196	91	B2-U3-G2	7114	90	B1-U3-G2	7114	90	B3-U3-G2
48-G2-V-x-N7	48	700	106	9066	86	B2-U3-G2	9117	86	B2-U3-G2	9075	86	B2-U3-G2	8972	85	B2-U3-G2	8972	85	B3-U3-G2
64-G2-V-x-N3	64	350	68	6422	94	B1-U3-G1	6440	95	B1-U3-G1	6573	97	B1-U3-G2	6302	93	B1-U3-G2	6490	95	B3-U3-G1
64-G2-V-x-N5	64	530	105	9212	88	B2-U3-G2	9238	88	B2-U3-G2	9428	90	B2-U3-G2	9040	86	B2-U3-G2	9309	89	B3-U3-G2
80-G2-V-x-N3	80	350	85	8028	94	B2-U3-G2	8050	95	B2-U3-G2	8216	97	B2-U3-G2	7878	93	B1-U3-G2	8113	95	B3-U3-G2
80-G2-V-x-N5	80	530	128	11515	90	B2-U3-G2	11547	90	B2-U3-G2	11785	92	B2-U3-G2	11300	88	B2-U3-G2	11637	91	B4-U3-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 outdoorlighting.applications@philips.com.

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

Specifications

Housing

Roof: Hinged roof with stainless steel thumb screw. 360 low-copper die-cast aluminum alloy.

Panels: Three panel options. Clear panels are made of an U.V Stabilized sheet material and include a frosted decorative glass chimney. Vertical Rib panels are U.V. stabilized, injection molded with internal vertical ribs. Frosted Panels are U.V. Stabilized sheet material. All panels have tool-less removal for ease of cleaning.

Fitter: Slip Fitter Dimensions: 3" I.D. x 3" deep. Tool-less hinge door to access photocontrol components.

Light Engine

LEDgine is composed of five main components: Heat Sink, Lens, LED lamp, Optical System, and Driver. Electrical components are RoHS compliant.

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) or Warm White, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

Heat Sink

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

Optical System

Type 2, 3, 3W, 4 and Type 5 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 standard with 0-10V dimming capability. High power factor of 95%. 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, THD of 20% max. Maximum ambient operating temperature from 40°F (4°C) to 130°F (55°C). **Certified in compliance to UL1310 cULus requirement (dry and damp location).** Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221°F (105°C). **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.**

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Specifications (continued)

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).

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.

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

DALI: Pre-set driver compatible with 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. **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.

Dimming Options

DA: 4 Hrs 25% reduction

DB: 4 Hrs 50% reduction

DC: 4 Hrs 75% reduction

DD: 6 Hrs 25% reduction

DE: 6 Hrs 50% reduction

DF: 6 Hrs 75% reduction

DG: 8 Hrs 25% reduction

DH: 8 Hrs 50% reduction

DJ: 8 Hrs 75% reduction

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	up to 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.

Surge Protection

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. Option for SP2 20kV/20kA.

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, using LM-80 data from LED manufacturers and engineering prediction methods, the luminaire useful life is expected to reach 100,000+ hours with >L70 lumen maintenance @ 25°C (48, 64 and 80 LEDs at 530mA is 77,000). Luminaire useful life accounts for LED lumen maintenance and additional factors, including LED life, driver life, PCB substrate, solder joints on/off cycles and burning hours for nominal applications.

Hardware

All non-ferrous fasteners prevent corrosion and ensure longer life.

Wiring

18 AWG wire, 6" (152mm) minimum exceeding from luminaire.

Options



HS
House
side shield

SP2
20kV/20kA
integral surge
protector
(optional)

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 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

LED products manufacturing standard

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

The manufacturer must provide a written confirmation of its ISO 9001 2008 and ISO 14001 2004 International Quality Standards Certification.

Meets the ANSI C136.31 2010, American national Standard for Roadway Luminaire Vibration specifications for Normal Applications.

Certifications and Compliance

cETL listed to Canadian safety standards for wet locations. Manufactured to ISO 9001:2008 Standards. 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 List (QPL).

IP Rating

The LED optics chamber is IP66 rated.

Warranty

5 year extended warranty.

