

ALT1

ARCHITECTURAL AREA/SITE

FEATURES

- Elegant form factor
- High performance optics up to 17,500 delivered lumens
- Diffusion lens for low glare comfort
- NX™ wireless control options



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness
- Separate internal driver compartment rated for IP66 ingress protection
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Gloss Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Gloss Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WH) White, and (CC) Custom Color (Include RAL#)
- Lens is impact resistant 1/8" tempered glass with anti-reflective coating
- Lens has a one-piece extruded vulcanized silicone gasket
- Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Lens frame has a one-piece O-ring extruded vulcanized silicone gasket
- Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws
- Silicone gaskets throughout
- All external fasteners are stainless steel

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories recognized
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

ELECTRICAL (CONTINUED)

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry
- Optional factory programmed dimming profile
- Surge protection: 10,000k in parallel, 20,000k in series
- SF for 120, 277, 347 Line volts
DF for 208, 240, 480 Line volts
- Wiring: No. 18AWM rated 105°C, wet rating.

CERTIFICATIONS AND LISTINGS

- UL 1598 Standard for Luminaires
- IP66 certified
- RoHS compliant

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1,673–18,452
Wattage Range	22–156
Efficacy Range (LPW)	56–137
Reported Life (Hours)	L70/60,000
Weight	21.5 lbs 9.75 kg
EPS Front View / Side View	.37 / .64



RELATED PRODUCTS

[Ouro](#)

[Pavilion](#)

[PGL8](#)

ALT1

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: ALT1-54L-120-3K8-3-UNV-A34-GT-NXSPW30F-CLR

CATALOG #

HOUSING


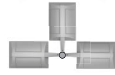






ALT1		LED Engine		CCT/CRI		Distribution		Rotation		Voltage	
ALT1	Architectural Area/Site	28L-20	20W, 3,000 lm	AM	Amber ⁹	FR	Type I/Front Row		Blank for no rotation	UNV	Universal 120–277V
		28L-40	40W, 5,000 lm	3K7	3000K, 70 CRI	2	Type II	L	Optic rotation left ¹	347	347V
		28L-60	60W, 7,500 lm	3K8	3000K, 80 CRI	3	Type III	R	Optic rotation right ¹	480	480V
		28L-85	85W, 10,000 lm	3K9	3000K, 90 CRI	4	Type IV				
		54L-95	95W, 12,500 lm	4K7	4000K, 70 CRI	4W	Type IV Wide				
		54L-120	120W, 15,000 lm	4K8	4000K, 80 CRI	5QM	Type V Square Medium				
		54L-155	155W, 17,500 lm	5K7	5000K, 70 CRI	5QN	Type V Square Narrow				
				5K8	5000K, 80 CRI	5R	Type V Rectangular				
						5W	Type V Wide (Round)				

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
ASQ	Arm Square pole	BL	Black	7PR	7 pin PCR, wireless control enabled	BC	Backlight Control ⁶	SCPREMOTE	Remote control for SCP option. Order at least one per project to program and control the occupancy sensor
A34	Arm mt 3.3–4.2" OD pole	DB	Dark Bronze	7PR-TL	7 pin PCR with twist lock photocontrol	SF	Single Fuse	SW7PR	SiteSync™ on fixture module via 7PR
A46	Arm mt 4.5–6.0" OD pole	GT	Graphite	7PR-SC	7 pin PCR with shorting cap	DF	Double Fuse	SWUSB	SiteSync™ Software on USB
MAF	Horizontal Slipfitter 2.375" OD arm	LG	Light Grey	AD-012	AstroDIM: 50% output at midnight	TB	Terminal Block	SWTAB	SiteSync™ Windows Tablet ⁸
SVSF	Vertical Slipfitter Mount square for 2" pipe tenon, (2.375" OD)	PS	Platinum Silver	AD-022	AstroDIM: 50% output midnight to 4 AM	CLR	Clear Lens	SWBRG	SiteSync™ Wireless Bridge Node
VSF	Vertical Slipfitter Mount for 2" pipe tenon, (2.375" OD)	TT	Titanium	AD-032	AstroDIM: 50% output 10PM	HDL	Diffuse Lens ⁷	SWFC	SiteSync™ Field Commission Service
WB	Wall Bracket for area wall mount	WH	White	AD-042	AstroDIM: 50% output 10PM to 4AM			WIR-RME-L	wISCAPE™ External Fixture Module
		CC	Custom Color ²	NXSP14F	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' ^{3,4}			NXOFM-1R1D-UNV	NX External Contol Node
				NXSP30F	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' ^{3,4}				
				NXSPW14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' ^{3,4}				
				NXSPW30F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' ^{3,4}				
				NXWE	NX Wireless Enabled				
				SCL-8F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights up to 8'				
				SCL-40F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights 9' to 40'				
				SCP-8F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SCP-40F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SWP	Site Sync™ Pre Commission Wireless Module ^{3,4,5}				
				SWPM-40F	Site Sync with Sensor 9' to 40' MH ^{3,4,5}				

Notes:

- 1 Not available with 5QM and 5W distributions
- 2 Consult factory
- 3 Not available with other sensor or wireless control options
- 4 Not available in 480V
- 5 Specify group and zone at time of order. See www.hubbellighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- 6 Not available with Type 5 distributions, CLR, or HDL option
- 7 Only available in Type 3 or Type 5W
- 8 Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries
- 9 Wildlife friendly

PRODUCT EXCEPTIONS & DETAILS

Configuration				EPA	Configuration				EPA
	1SA	1 Arm Side Mount		0.98		3SY*	3 Arm Side Mount		2.46
	2SB	2 Arm Side Mount		1.48		4SC	4 Arm Side Mount		2.46
	2SL	2 Arm Side Mount		1.96		1W	Single Wall Mount		n/a
	3ST	3 Arm Side Mount		2.20		HSF	Horizontal Slipfitter		n/a

DELIVERED LUMENS

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	20	3,000	No Lens	FR	3110	0	0	0	141	3274	0	0	0	149	3318	1	0	0	148
				FR-BC	2036	0	0	0	93	2143	0	0	0	97	2172	0	0	0	97
				2	2903	1	0	1	132	3056	1	0	1	139	3097	1	0	1	138
				2-BC	1771	0	0	0	80	1864	0	0	0	85	1889	0	0	0	84
				3	2945	1	0	1	131	3100	1	0	1	138	3141	1	0	1	140
				3-BC	1779	0	0	1	81	1873	0	0	1	85	1898	0	0	1	85
				4	2943	0	0	1	134	3098	0	0	1	141	3139	0	0	1	141
				4-BC	2189	0	0	1	100	2304	0	0	1	105	2335	0	0	1	104
				4W	2927	1	0	1	133	3081	1	0	1	140	3122	1	0	1	139
				4W-BC	1673	0	0	1	76	1761	0	0	1	80	1785	0	0	1	80
			5R	3025	2	0	2	137	3184	2	0	2	145	3227	2	0	2	144	
			5QM	3069	2	0	0	139	3230	2	0	0	147	3273	2	0	0	146	
			5QN	3051	2	0	0	139	3211	2	0	0	146	3254	2	0	0	145	
			5W	3024	2	0	1	137	3183	2	0	1	145	3226	2	0	1	144	
			Clear Lens	FR	2909	0	0	0	132	3062	0	0	0	139	3103	0	0	0	141
				2	2715	1	0	1	123	2858	1	0	1	130	2896	1	0	1	132
				3	2754	1	0	1	125	2899	1	0	1	132	2938	1	0	1	134
				4	2752	0	0	1	125	2897	0	0	1	132	2936	0	0	1	133
				4W	2738	1	0	1	124	2882	1	0	1	131	2920	1	0	1	133
				5R	2829	2	0	2	129	2978	2	0	2	135	3018	2	0	2	137
5QM	2870	2		0	0	130	3021	2	0	0	137	3062	2	0	0	139			
5QN	2853	2		0	0	130	3003	2	0	0	137	3044	2	0	0	138			
HDL Lens	5W	2829	2	0	1	129	2977	2	0	1	135	3017	2	0	1	137			
	3	2341	1	0	1	106	2464	1	0	1	112	2497	1	0	1	114			
				5W	2405	1	0	1	109	2531	1	0	1	115	2565	1	0	1	117

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	40	5,000	No Lens	FR	4870	1	0	0	128	5127	1	0	0	135	5195	1	0	0	137
				FR-BC	3189	0	0	0	84	3356	0	0	0	88	3401	0	0	0	90
				2	4546	1	0	1	120	4785	1	0	1	126	4849	1	0	1	128
				2-BC	2773	0	0	1	73	2919	0	0	1	77	2958	0	0	1	78
				3	4611	1	0	2	121	4854	1	0	2	128	4919	1	0	2	129
				3-BC	2786	0	0	1	73	2933	0	0	1	77	2972	0	0	1	78
				4	4608	1	0	2	121	4851	1	0	2	128	4915	1	0	2	129
				4-BC	3428	0	0	1	90	3608	0	0	1	95	3656	0	0	1	96
				4W	4584	1	0	2	121	4825	1	0	2	127	4889	1	0	2	129
				4W-BC	2621	0	0	1	69	2758	0	0	1	73	2795	0	0	1	74
				5R	4737	2	0	2	125	4986	3	0	1	131	5053	3	0	3	133
				5QM	4806	2	0	1	126	5058	2	0	1	133	5126	2	0	1	135
			5QN	4777	2	0	0	126	5028	2	0	0	132	5096	2	0	0	134	
			5W	4736	3	0	1	125	4985	2	0	2	131	5052	3	0	1	133	
			Clear Lens	FR	4555	1	0	0	120	4795	1	0	0	126	4859	1	0	0	128
				2	4252	1	0	1	112	4476	1	0	1	118	4536	1	0	1	119
				3	4333	1	0	1	114	4561	1	0	1	120	4622	1	0	1	121
				4	4310	0	0	2	113	4537	1	0	2	119	4598	1	0	2	121
				4W	4287	1	0	2	113	4513	1	0	2	119	4573	1	0	2	120
				5R	4431	2	0	2	117	4663	2	0	2	123	4726	2	0	2	124
				5QM	4495	2	0	1	118	4731	2	0	1	125	4794	2	0	1	126
5QN	4468	2		0	0	118	4703	2	0	0	124	4766	2	0	0	125			
5W	4430	3	0	1	117	4663	3	0	1	123	4725	3	0	1	124				
HDL Lens	3	3741	1	0	1	98	3937	1	0	1	104	3990	1	0	1	105			
	5W	3891	2	0	1	102	4095	2	0	1	108	4150	2	0	1	109			

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	60	7,500	No Lens	FR	7347	1	0	1	122	7733	1	0	1	129	7837	1	0	1	131
				FR-BC	4810	0	0	0	80	5063	0	0	0	84	5131	0	0	0	86
				2	6858	1	0	2	114	7218	1	0	2	120	7315	1	0	2	122
				2-BC	4183	0	0	1	70	4403	0	0	1	73	4462	0	0	1	74
				3	6956	1	0	2	116	7322	1	0	2	122	7420	1	0	2	123
				3-BC	4203	0	0	1	70	4424	0	0	1	74	4483	0	0	1	75
				4	6951	1	0	2	116	7317	1	0	2	122	7415	1	0	2	124
				4-BC	5171	0	0	2	86	5443	0	0	2	91	5516	0	0	2	92
				4W	6915	1	0	2	115	7278	1	0	2	121	7376	1	0	2	123
				4W-BC	3953	0	0	2	66	4161	0	0	2	69	4216	0	0	2	70
				5R	7145	3	0	3	119	7521	3	0	3	125	7622	3	0	3	127
				5QM	7249	3	0	1	121	7630	3	0	1	127	7732	3	0	1	129
			5QN	7206	3	0	0	120	7585	3	0	0	126	7687	3	0	0	128	
			5W	7144	3	0	2	119	7520	3	0	2	125	7620	3	0	2	127	
			Clear Lens	FR	6872	1	0	1	115	7233	1	0	1	121	7330	1	0	1	122
				2	6414	1	0	2	107	6751	1	0	2	113	6842	1	0	2	114
				3	6506	1	0	2	108	6848	1	0	2	114	6940	1	0	2	116
				4	6502	1	0	2	108	6844	1	0	2	114	6935	1	0	2	116
				4W	6468	1	0	2	108	6807	1	0	2	113	6899	1	0	2	115
				5R	6683	3	0	3	111	7035	3	0	3	117	7129	3	0	3	119
				5QM	6780	3	0	1	113	7137	3	0	1	119	7232	3	0	1	121
				5QN	6740	2	0	0	112	7094	3	0	0	118	7189	3	0	0	120
			5W	6682	3	0	2	111	7033	3	0	2	117	7128	3	0	2	119	
			HDL Lens	3	5531	2	0	1	92	5821	2	0	1	97	5899	2	0	1	98
5W	5680	2		0	1	95	5979	2	0	1	100	6059	2	0	1	101			

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	85	10,000	No Lens	FR	9699	1	0	1	113	10209	1	0	1	119	10346	1	0	1	120
				FR-BC	6350	0	0	1	74	6684	0	0	1	78	6773	0	0	1	79
				2	9054	1	0	2	105	9530	2	0	2	111	9657	2	0	2	112
				2-BC	5523	0	0	1	64	5813	0	0	1	68	5891	0	0	1	68
				3	9183	1	0	2	107	9666	1	0	2	112	9795	1	0	2	114
				3-BC	5549	0	0	2	65	5841	0	0	2	68	5919	0	0	2	69
				4	9177	1	0	2	107	9660	1	0	2	112	9789	1	0	2	114
				4-BC	6827	0	0	2	79	7186	0	0	2	84	7282	0	0	2	85
				4W	9129	1	0	3	106	9609	1	0	3	112	9737	1	0	3	113
				4W-BC	5219	0	0	2	61	5493	0	0	2	64	5567	0	0	2	65
				5R	9433	3	0	3	110	9929	3	0	3	115	10062	3	0	3	117
				5QM	9570	3	0	1	111	10073	3	0	1	117	10208	3	0	1	119
				5QN	9514	3	0	0	111	10014	3	0	0	116	10148	3	0	0	118
			5W	9432	4	0	2	110	9927	4	0	2	115	10060	4	0	2	117	
			Clear Lens	FR	9072	1	0	1	105	9549	1	0	1	111	9677	1	0	1	113
				2	8468	1	0	2	98	8913	1	0	2	104	9033	1	0	2	105
				3	8589	1	0	2	100	9041	1	0	2	105	9162	1	0	2	107
				4	8584	1	0	2	100	9035	1	0	2	105	9156	1	0	2	106
				4W	8538	1	0	2	99	8987	1	0	3	105	9108	1	0	3	106
				5R	8823	3	0	3	103	9287	3	0	3	108	9411	3	0	3	109
				5QM	8951	3	0	1	104	9422	3	0	1	110	9548	3	0	1	111
				5QN	8898	3	0	0	103	9366	3	0	0	109	9491	3	0	0	110
			5W	8822	3	0	2	103	9285	4	0	2	108	9410	4	0	2	109	
HDL Lens	3	7302	2	0	2	85	7685	2	0	2	89	7788	2	0	2	91			
	5W	7499	2	0	1	87	7893	2	0	1	92	7999	2	0	1	93			

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	95	12,500	No Lens	FR	11792	1	0	1	125	12412	1	0	1	132	12578	1	0	1	134
				FR-BC	7848	0	0	1	83	8260	0	0	1	88	8371	0	0	1	90
				2	11210	2	0	2	119	11800	2	0	2	126	11958	2	0	2	126
				2-BC	5993	0	0	1	64	6308	0	0	1	67	6392	0	0	1	69
				3	11225	1	0	2	119	11815	2	0	2	126	11974	2	0	2	127
				3-BC	6273	0	0	2	67	6603	0	0	2	70	6691	0	0	2	72
				4	11311	1	0	2	120	11906	1	0	3	127	12065	1	0	3	128
				4-BC	7291	0	0	2	78	7674	0	0	2	82	7777	0	0	2	84
				4W	11203	2	0	3	119	11792	2	0	3	125	11950	2	0	3	127
				4W-BC	5603	0	0	2	60	5898	0	0	2	63	5977	0	0	2	65
				5R	11623	3	0	3	124	12234	3	0	3	130	12398	3	0	3	131
				5QM	11770	3	0	2	125	12389	3	0	2	132	12555	3	0	2	133
				5QN	11799	3	0	0	126	12420	3	0	0	132	12586	3	0	0	133
			5W	11594	4	0	2	123	12204	4	0	2	130	12367	4	0	2	131	
			Clear Lens	FR	11029	1	0	1	117	11609	1	0	1	124	11765	1	0	1	125
				2	10485	2	0	2	112	11036	2	0	2	117	11184	2	0	2	119
				3	10555	1	0	2	112	11110	1	0	2	118	11259	1	0	2	120
				4	10579	1	0	2	113	11136	1	0	2	118	11285	1	0	2	120
				4W	10479	1	0	3	111	11029	2	0	3	117	11177	2	0	3	119
				5R	10871	3	0	3	116	11443	3	0	3	122	11596	3	0	3	123
				5QM	11009	3	0	2	117	11588	3	0	2	123	11743	3	0	2	125
				5QN	11036	3	0	0	117	11616	3	0	0	124	11772	3	0	0	125
			5W	10845	4	0	2	115	11415	4	0	2	121	11568	4	0	2	123	
HDL Lens	3	8736	2	0	2	93	9195	2	0	2	98	9318	2	0	2	100			
	5W	9152	3	0	1	97	9633	3	0	1	102	9762	3	0	1	104			

DELIVERED LUMENS (CONTINUED)

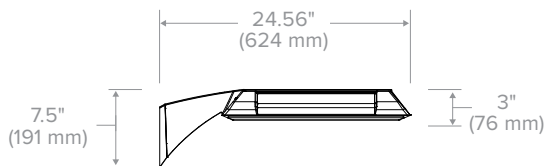
LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	120	15,000	No Lens	FR	14390	1	0	1	118	15146	1	0	1	124	15349	1	0	1	125
				FR-BC	9577	1	0	1	78	10080	1	0	1	83	10215	1	0	1	84
				2	13680	2	0	2	112	14399	2	0	2	118	14592	2	0	2	120
				2-BC	7313	0	0	1	60	7697	0	0	2	63	7800	0	0	2	64
				3	13698	2	0	3	112	14418	2	0	3	118	14611	2	0	3	120
				3-BC	7655	0	0	2	63	8057	0	0	2	66	8165	0	0	2	67
				4	13803	1	0	3	113	14528	1	0	3	119	14723	1	0	3	121
				4-BC	8897	0	0	2	73	9365	0	0	2	77	9490	0	0	2	78
				4W	13671	2	0	3	112	14390	2	0	3	118	14583	2	0	4	120
				4W-BC	6838	1	0	2	56	7197	1	0	2	59	7294	1	0	2	60
				5R	14184	4	0	4	116	14929	4	0	4	122	15129	4	0	4	124
				5QM	14363	3	0	2	118	15118	4	0	2	124	15321	4	0	2	126
			5QN	14399	4	0	4	118	15156	4	0	1	124	15359	4	0	1	126	
			5W	14149	4	0	2	116	14893	4	0	2	122	15092	4	0	2	124	
			Clear Lens	FR	13459	1	0	1	110	14167	1	0	1	116	14356	1	0	2	118
				2	12795	2	0	2	105	13468	2	0	2	110	13648	2	0	2	112
				3	12812	2	0	2	105	13486	2	0	2	111	13666	2	0	2	112
				4	12910	1	0	3	106	13589	1	0	3	111	13771	1	0	3	113
				4W	12787	2	0	3	105	13459	2	0	3	110	13640	2	0	3	112
				5R	13266	4	0	4	109	13964	4	0	4	114	14151	4	0	4	116
				5QM	13434	3	0	2	110	14140	3	0	2	116	14330	3	0	2	117
				5QN	13467	4	0	0	110	14175	4	0	0	116	14365	4	0	0	118
			5W	13234	4	0	2	108	13929	4	0	2	114	14116	4	0	2	116	
			HDL Lens	3	10892	3	0	2	89	11464	3	0	2	94	11618	3	0	2	95
5W	11250	3		0	1	92	11841	3	0	2	97	12000	3	0	2	98			

DELIVERED LUMENS (CONTINUED)

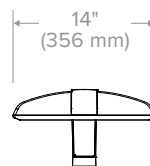
LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI						
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	155	17,500	No Lens	FR	17299	2	0	2	111	18208	2	0	2	117	18452	2	0	2	119
				FR-BC	11513	1	0	1	74	12118	1	0	1	78	12280	1	0	1	79
				2	16445	2	0	2	105	17310	2	0	3	111	17542	2	0	3	112
				2-BC	8791	0	0	2	56	9253	0	0	2	59	9377	0	0	2	60
				3	16467	2	0	3	106	17333	2	0	3	111	17565	2	0	3	113
				3-BC	9202	1	0	2	59	9686	1	0	2	62	9816	1	0	2	63
				4	16593	1	0	3	106	17465	1	0	3	112	17699	1	0	4	113
				4-BC	10696	0	0	2	69	11258	1	0	2	72	11409	1	0	2	73
				4W	16435	2	0	4	105	17299	2	0	4	111	17531	2	0	4	112
				4W-BC	8220	1	0	2	53	8652	1	0	2	55	8768	1	0	2	56
				5R	17051	4	0	4	109	17947	4	0	4	115	18188	4	0	4	117
				5QM	17267	4	0	2	111	18174	4	0	2	117	18418	4	0	2	118
			5QN	17309	4	0	1	111	18219	4	0	1	117	18463	4	0	1	118	
			5W	17009	4	0	2	109	17903	4	0	2	115	18143	4	0	2	116	
			Clear Lens	FR	16180	1	0	2	104	17030	1	0	2	109	17258	1	0	2	111
				2	15382	2	0	2	99	16190	2	0	2	104	16407	2	0	2	105
				3	15402	2	0	3	99	16212	2	0	3	104	16429	2	0	3	105
				4	15520	1	0	3	99	16336	1	0	3	105	16555	1	0	3	106
				4W	15372	2	0	4	99	16180	2	0	4	104	16397	2	0	4	105
				5R	15948	4	0	4	102	16787	4	0	4	108	17011	4	0	4	109
				5QM	16150	4	0	2	104	16999	4	0	2	109	17227	4	0	2	110
				5QN	16190	4	0	1	104	17041	4	0	1	109	17269	4	0	1	111
			5W	15909	4	0	2	102	16745	4	0	2	107	16969	4	0	2	109	
			HDL Lens	3	13093	3	0	2	84	13782	3	0	2	88	13966	3	0	2	90
5W	13524	3		0	2	87	14235	3	0	2	91	14426	3	0	2	92			

CRI Lumen Multiplier			Amber Multiplier	
CCT	80 CRI	90 CRI	CCT	Multiplier
3000K	0.9119	0.7033	5000K	1
4000K	0.8941	N/A	AM	0.1727

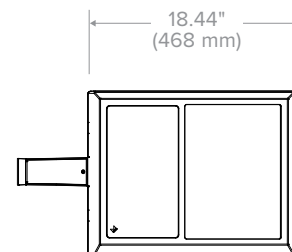
DIMENSIONS



Side View



Front View



Top View

ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-FR

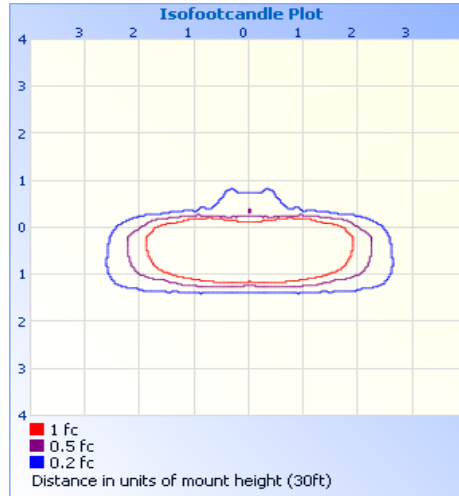
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	18208
Watts	156
Efficacy	116.7
IES Type	I
BUG Rating	B2-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16101	88.4%
Downward House Side	2107	11.6%
Downward Total	18208	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18208	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-2

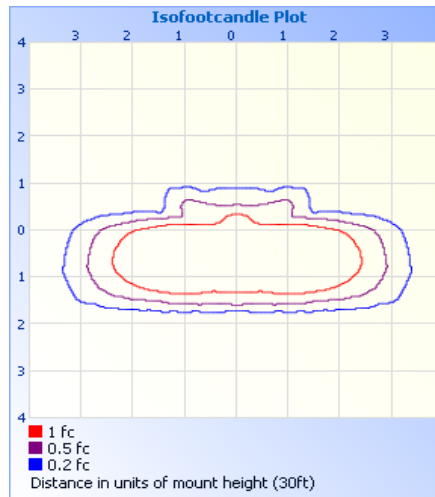
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17309
Watts	156
Efficacy	111.0
IES Type	II
BUG Rating	B2-U0-G3
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14323	82.7%
Downward House Side	2986	17.3%
Downward Total	17309	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17309	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-3

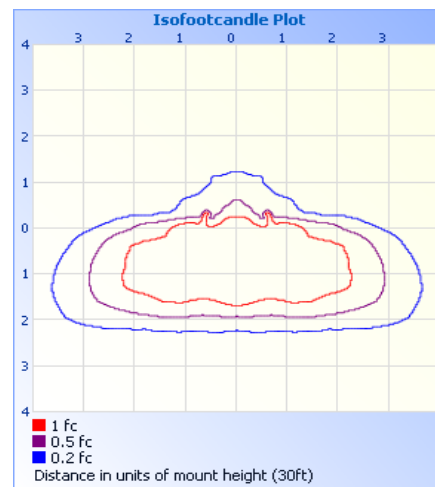
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17332
Watts	156
Efficacy	111.1
IES Type	III
BUG Rating	B2-U0-G3
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14911	86.0%
Downward House Side	2421	14.0%
Downward Total	17332	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17332	100%

ISOFOOT CANDLE PLOT



ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-4

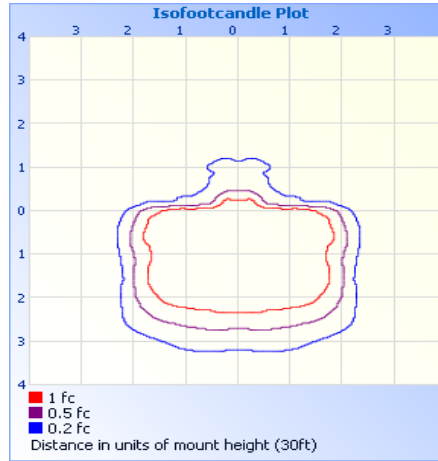
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17465
Watts	156
Efficacy	112.0
IES Type	IV
BUG Rating	B1-U0-G3
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15757	90.2%
Downward House Side	1708	9.8%
Downward Total	17465	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17465	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-4W

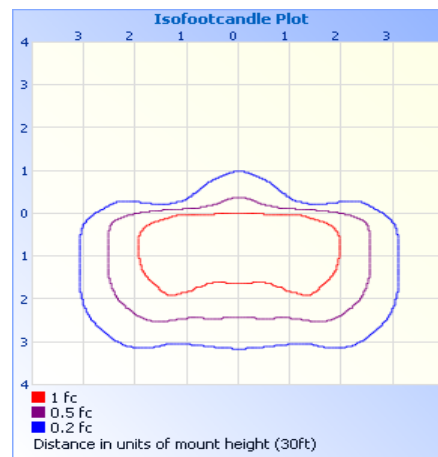
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17299
Watts	156
Efficacy	110.9
IES Type	IV
BUG Rating	B2-U0-G4
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15320	88.6%
Downward House Side	1979	11.4%
Downward Total	17299	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17299	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5R

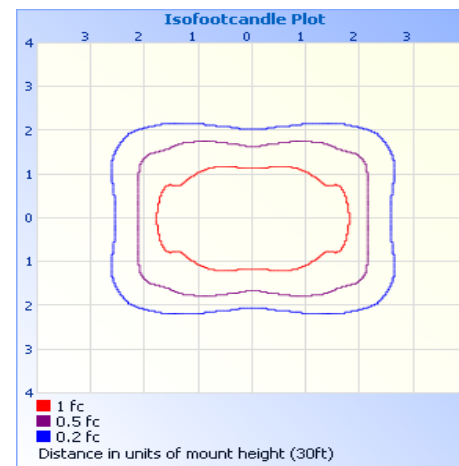
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17947
Watts	156
Efficacy	115.0
IES Type	III
BUG Rating	B4-U0-G4
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8974	50.0%
Downward House Side	8974	50.0%
Downward Total	17947	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17947	100%

ISOFOOT CANDLE PLOT



ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-5QM

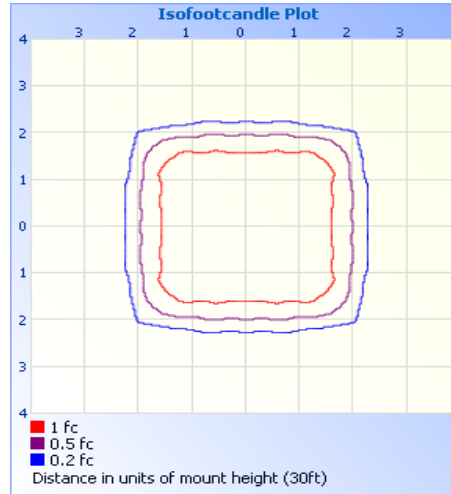
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	18173
Watts	156
Efficacy	116.5
IES Type	V
BUG Rating	B4-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9087	50.0%
Downward House Side	9087	50.0%
Downward Total	18173	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18173	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5QN

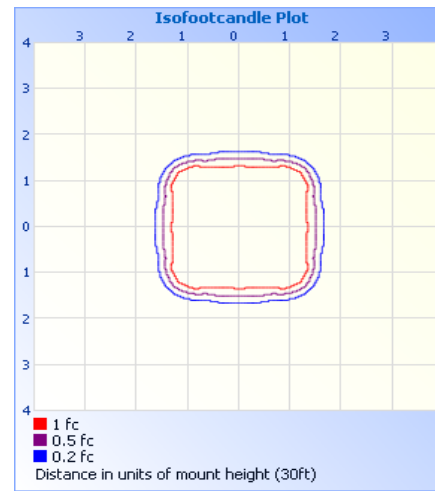
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	18219
Watts	156
Efficacy	116.8
IES Type	V
BUG Rating	B4-U0-G1
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9110	50.0%
Downward House Side	9110	50.0%
Downward Total	18219	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18219	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5W

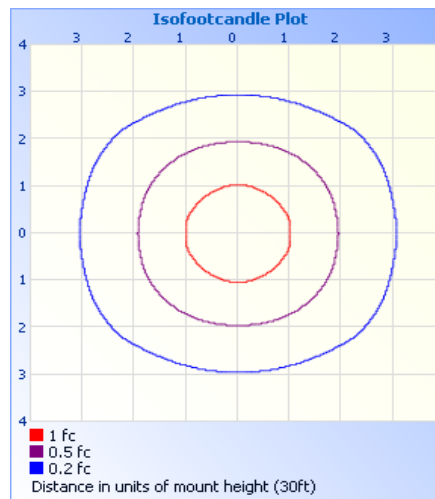
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	17904
Watts	156
Efficacy	114.8
IES Type	V
BUG Rating	B4-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8952	50.0%
Downward House Side	8952	50.0%
Downward Total	17904	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17904	100%

ISOFOOT CANDLE PLOT

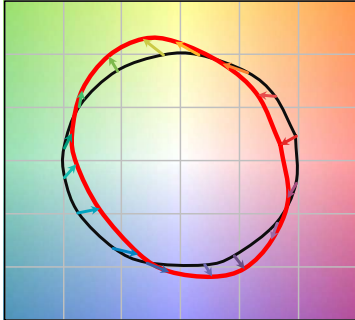


ALT1

ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

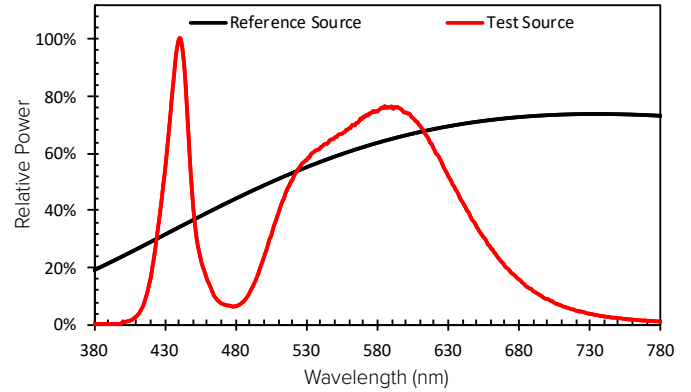


— Reference Illuminant — Test Source

TEST SOURCE

R _f	68
R _g	99
CCT(K)	3947
D _{uv}	0.0004
x	0.3831
y	0.3793
CIE R _a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

# LED	System Watts	Drive Current	Electrical								Min. Power Factor	Max THD (%)	Dimming Range	Dimming			
			Line Voltage		Amps AC									Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
28	22	250 mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	38	400 mA			0.32	0.18	0.16	0.14	0.11	0.08							
	60	650 mA			0.50	0.29	0.25	0.22	0.17	0.13							
	86	950 mA			0.72	0.41	0.36	0.31	0.25	0.18							
54	94	550 mA	120-480	50/60	0.78	0.45	0.39	0.34	0.27	0.20	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	122	700 mA			1	0.59	0.51	0.44	0.35	0.25							
	156	900 mA			1.30	0.75	0.65	0.56	0.45	0.33							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	96.9%	95.3%	93.3%	86.6%	> 60,000