



Report of Test

LLIA001821-008A

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: L6-16S-5-X-2ES-6-X-XX-3-XX-X-X-X

Pole/arm mounted, gray painted cast aluminum housing and driver compartment cover, one circuit board, one clear plastic lens with optic below each LED, open bottom.

16 white LEDs.

Osram OT100W/UNV/1250C/2DIM/P6 LED driver set at 1200mA, Littlefuse LSP10277SBX3472 suppressor.



Prepared For:

LED Roadway Lighting

84 Chain Lake Drive

Suite 403

Halifax, Nova Scotia B3S 1A2, Canada

Performance Summary

Input Voltage	120.0 Vac	Luminous Flux	8911.5 Lumens
Input Current	0.5594 A	Total Efficacy	134.5 Lm/W
Input Power	66.26 W		
Frequency	60.01 Hz	Roadway Throw	Short
Power Factor	0.987	Roadway Type	Type II
Current THD	3.5 %	IES BUG Rating	B2 - U0 - G2

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

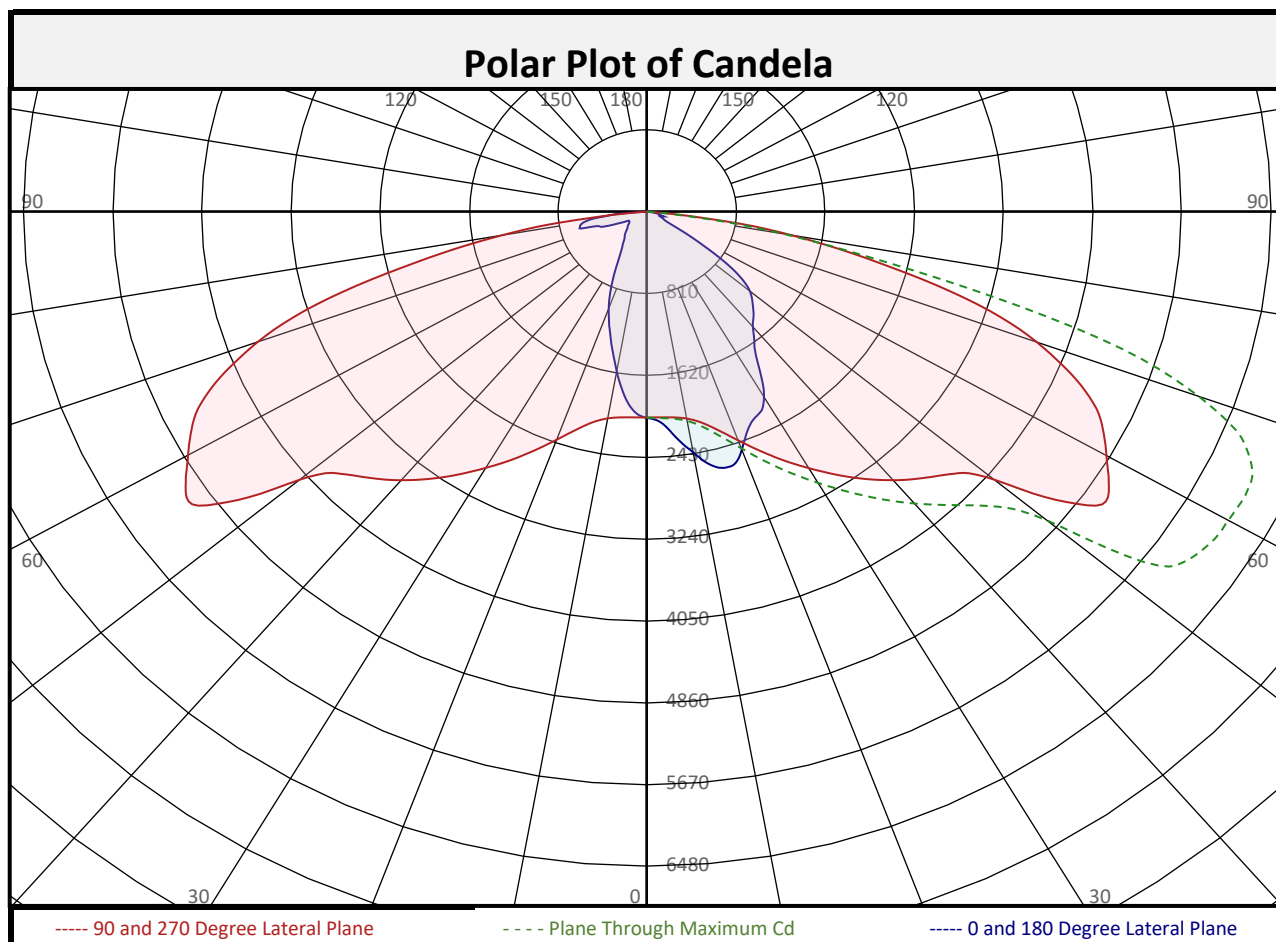
Test date: 07/28/2022

Report date: 07/29/2022

Signed: _____



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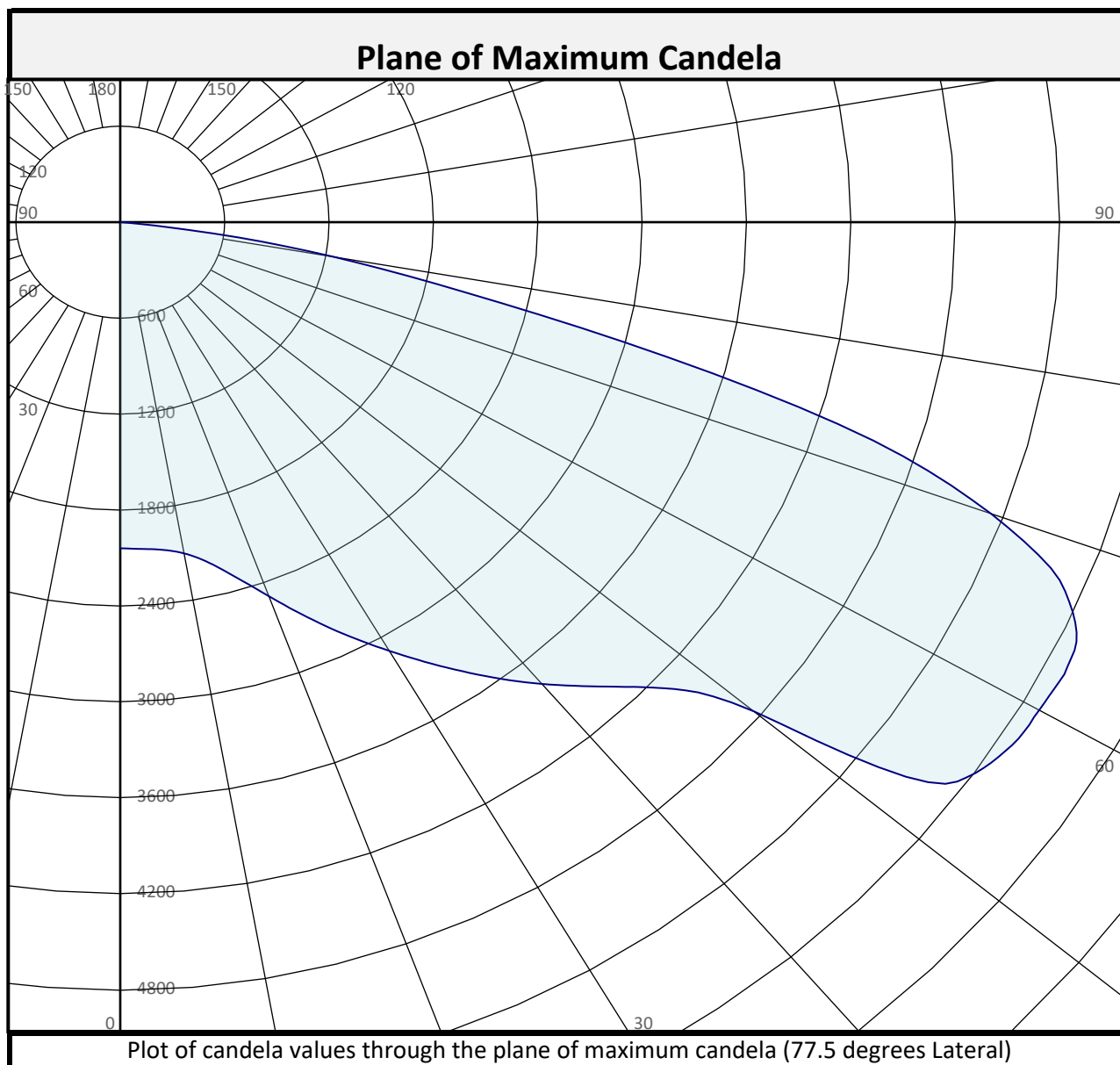


Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	194.6	2.2%		90-100	0.0	0.0%		0-20	779.0	8.7%
10-20	584.3	6.6%		100-110	0.0	0.0%		0-30	1731	19.4%
20-30	952.3	10.7%		110-120	0.0	0.0%		0-40	2997	33.6%
30-40	1265	14.2%		120-130	0.0	0.0%		0-60	6509	73.0%
40-50	1576	17.7%		130-140	0.0	0.0%		0-80	8804	98.8%
50-60	1936	21.7%		140-150	0.0	0.0%		10-90	8717	97.8%
60-70	1516	17.0%		150-160	0.0	0.0%		20-50	3794	42.6%
70-80	779.6	8.7%		160-170	0.0	0.0%		40-90	5915	66.4%
80-90	107.2	1.2%		170-180	0.0	0.0%		60-90	2402	27.0%
0-90	8912	100.0%		90-180	0.0	0.0%		0-180	8912	100.0%



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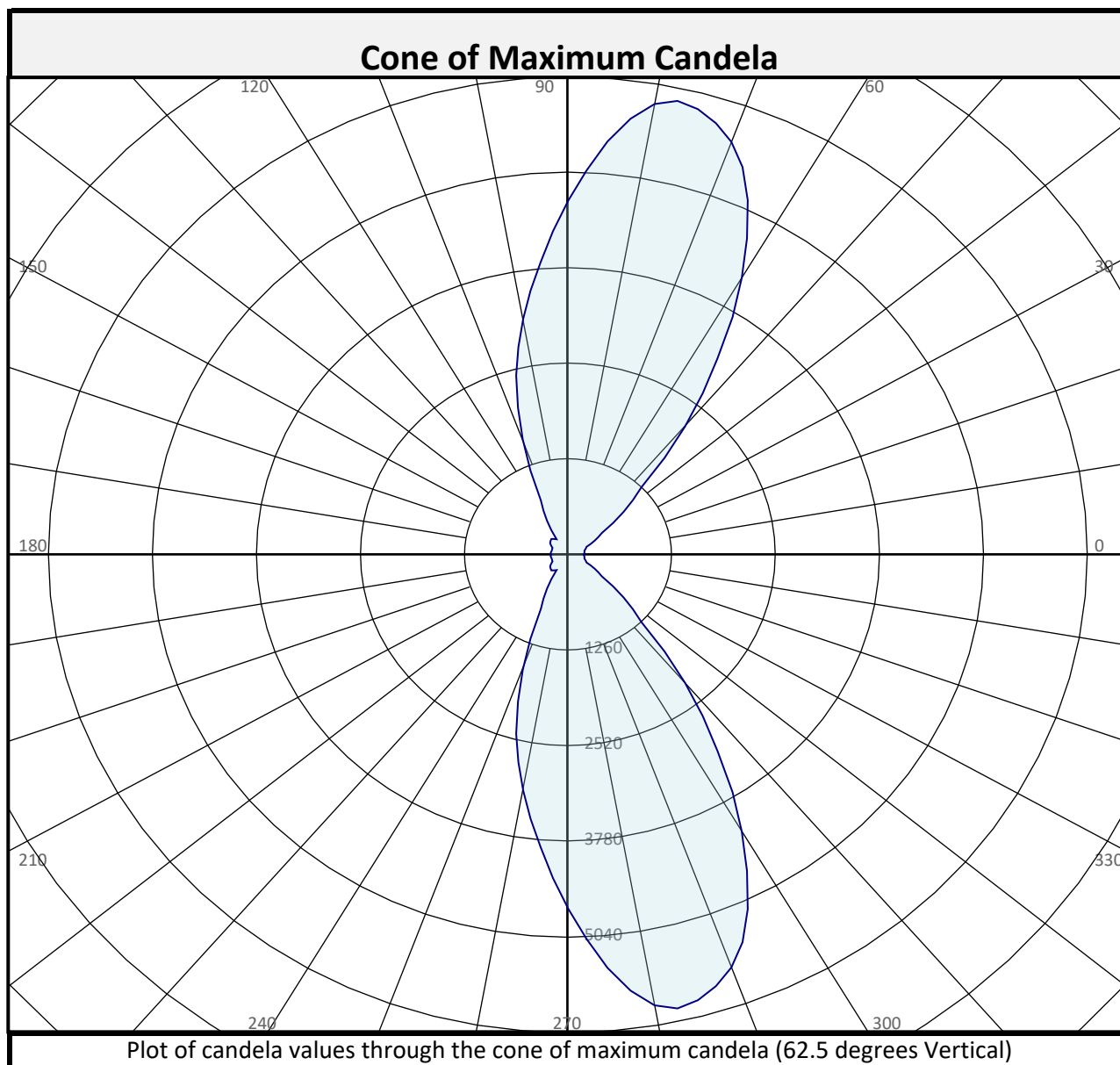


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	6087.6	68.3%	0.0	0.0%	6087.6	68.3%
House Side	2823.9	31.7%	0.0	0.0%	2823.9	31.7%
Total	8911.5	100.0%	0.0	0.0%	8911.5	100.0%



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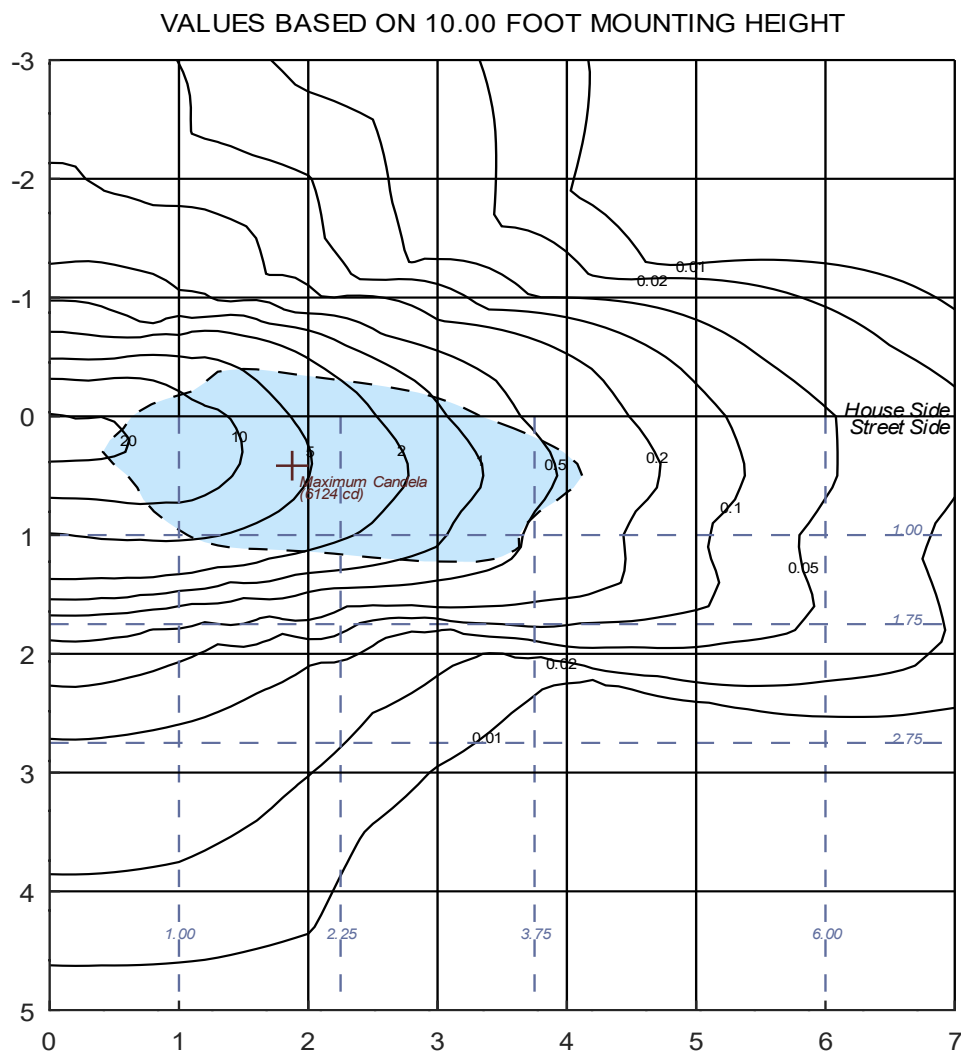


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	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	6087.6	68.3%	0.0	0.0%	6087.6	68.3%
House Side	2823.9	31.7%	0.0	0.0%	2823.9	31.7%
Total	8911.5	100.0%	0.0	0.0%	8911.5	100.0%



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Iso-Illuminance Plot



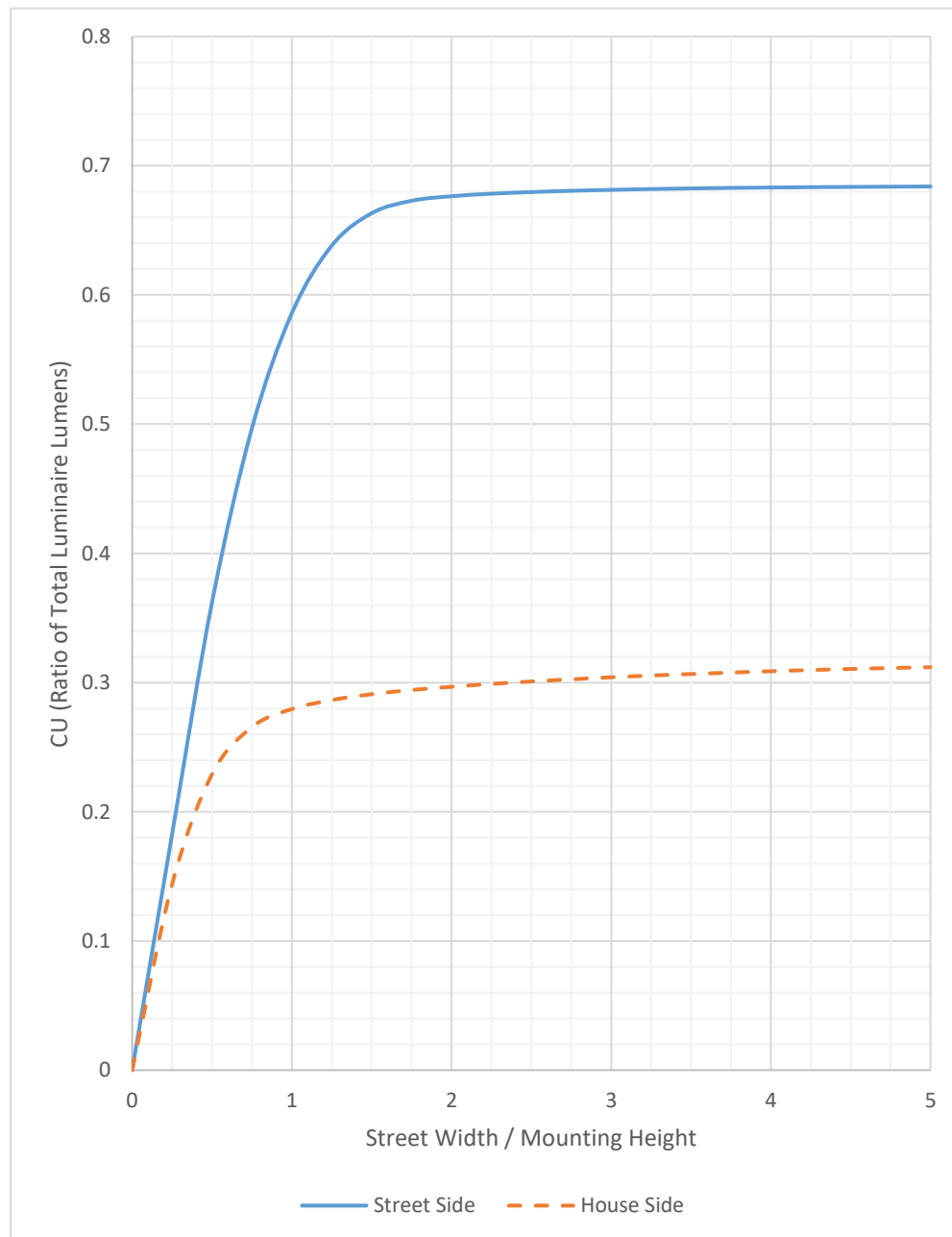
The isofootcandle values shown in the plot above are based on a mounting height of $h = 10.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Coefficients of Utilization Plot

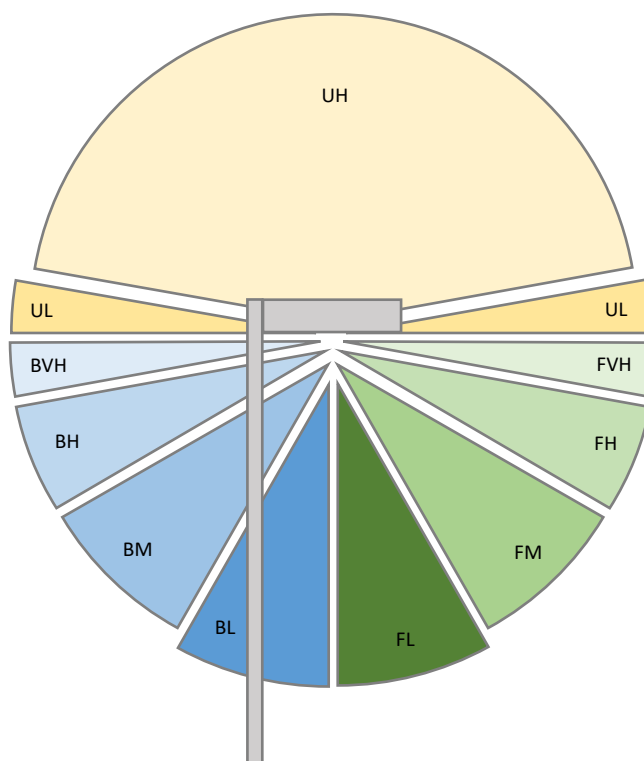




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LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	656.8 Lm
BM - Back Mid (30°-60°)	1402.0 Lm
BH - Back High (60°-80°)	704.6 Lm
BVH - Back Very High (80°-90°)	60.5 Lm

Uplight

UL - Upward Low (90°-100°)	0.0 Lm
UH - Upward High (100°-180°)	0.0 Lm

Forward Light

FL - Forward Low (0°-30°)	1074.4 Lm
FM - Forward Mid (30°-60°)	3375.8 Lm
FH - Forward High (60°-80°)	1590.7 Lm
FVH - Forward Very High (80°-90°)	46.7 Lm

BUG Ratings: B2 - U0 - G2



The diagram is a plot of Vertical Angle (degrees) on the y-axis (10 to 130) versus Lateral Angle (degrees) on the x-axis (180 to 0). It is divided into two regions: 'House Side' (left) and 'Street Side' (right). The plot shows several sets of contour lines representing different luminance levels. A central region is shaded light blue and labeled 'Maximum Candela (6124 cd)'. Within this region, a red cross marks the peak. Contour lines are labeled with values such as 1.00, 2.25, 3.75, 6.25, 10.00, 15.00, 20.00, 30.00, 40.00, 50.00, 60.00, 70.00, 80.00, 90.00, 100.00, 120.00, 140.00, 160.00, 180.00, 200.00, 220.00, 240.00, 260.00, 280.00, 300.00, 320.00, 340.00, 360.00, 380.00, 400.00, 420.00, 440.00, 460.00, 480.00, 500.00, 520.00, 540.00, 560.00, 580.00, 600.00, 620.00, 640.00, 660.00, 680.00, 700.00, 720.00, 740.00, 760.00, 780.00, 800.00, 820.00, 840.00, 860.00, 880.00, 900.00, 920.00, 940.00, 960.00, 980.00, 1000.00, 1020.00, 1040.00, 1060.00, 1080.00, 1100.00, 1120.00, 1140.00, 1160.00, 1180.00, 1200.00, 1220.00, 1240.00, 1260.00, 1280.00, 1300.00, 1320.00, 1340.00, 1360.00, 1380.00, 1400.00, 1420.00, 1440.00, 1460.00, 1480.00, 1500.00, 1520.00, 1540.00, 1560.00, 1580.00, 1600.00, 1620.00, 1640.00, 1660.00, 1680.00, 1700.00, 1720.00, 1740.00, 1760.00, 1780.00, 1800.00, 1820.00, 1840.00, 1860.00, 1880.00, 1900.00, 1920.00, 1940.00, 1960.00, 1980.00, 2000.00, 2020.00, 2040.00, 2060.00, 2080.00, 2100.00, 2120.00, 2140.00, 2160.00, 2180.00, 2200.00, 2220.00, 2240.00, 2260.00, 2280.00, 2300.00, 2320.00, 2340.00, 2360.00, 2380.00, 2400.00, 2420.00, 2440.00, 2460.00, 2480.00, 2500.00, 2520.00, 2540.00, 2560.00, 2580.00, 2600.00, 2620.00, 2640.00, 2660.00, 2680.00, 2700.00, 2720.00, 2740.00, 2760.00, 2780.00, 2800.00, 2820.00, 2840.00, 2860.00, 2880.00, 2900.00, 2920.00, 2940.00, 2960.00, 2980.00, 3000.00, 3020.00, 3040.00, 3060.00, 3080.00, 3100.00, 3120.00, 3140.00, 3160.00, 3180.00, 3200.00, 3220.00, 3240.00, 3260.00, 3280.00, 3300.00, 3320.00, 3340.00, 3360.00, 3380.00, 3400.00, 3420.00, 3440.00, 3460.00, 3480.00, 3500.00, 3520.00, 3540.00, 3560.00, 3580.00, 3600.00, 3620.00, 3640.00, 3660.00, 3680.00, 3700.00, 3720.00, 3740.00, 3760.00, 3780.00, 3800.00, 3820.00, 3840.00, 3860.00, 3880.00, 3900.00, 3920.00, 3940.00, 3960.00, 3980.00, 4000.00, 4020.00, 4040.00, 4060.00, 4080.00, 4100.00, 4120.00, 4140.00, 4160.00, 4180.00, 4200.00, 4220.00, 4240.00, 4260.00, 4280.00, 4300.00, 4320.00, 4340.00, 4360.00, 4380.00, 4400.00, 4420.00, 4440.00, 4460.00, 4480.00, 4500.00, 4520.00, 4540.00, 4560.00, 4580.00, 4600.00, 4620.00, 4640.00, 4660.00, 4680.00, 4700.00, 4720.00, 4740.00, 4760.00, 4780.00, 4800.00, 4820.00, 4840.00, 4860.00, 4880.00, 4900.00, 4920.00, 4940.00, 4960.00, 4980.00, 5000.00, 5020.00, 5040.00, 5060.00, 5080.00, 5100.00, 5120.00, 5140.00, 5160.00, 5180.00, 5200.00, 5220.00, 5240.00, 5260.00, 5280.00, 5300.00, 5320.00, 5340.00, 5360.00, 5380.00, 5400.00, 5420.00, 5440.00, 5460.00, 5480.00, 5500.00, 5520.00, 5540.00, 5560.00, 5580.00, 5600.00, 5620.00, 5640.00, 5660.00, 5680.00, 5700.00, 5720.00, 5740.00, 5760.00, 5780.00, 5800.00, 5820.00, 5840.00, 5860.00, 5880.00, 5900.00, 5920.00, 5940.00, 5960.00, 5980.00, 6000.00, 6020.00, 6040.00, 6060.00, 6080.00, 6100.00, 6120.00, 6140.00, 6160.00, 6180.00, 6200.00, 6220.00, 6240.00, 6260.00, 6280.00, 6300.00, 6320.00, 6340.00, 6360.00, 6380.00, 6400.00, 6420.00, 6440.00, 6460.00, 6480.00, 6500.00, 6520.00, 6540.00, 6560.00, 6580.00, 6600.00, 6620.00, 6640.00, 6660.00, 6680.00, 6700.00, 6720.00, 6740.00, 6760.00, 6780.00, 6800.00, 6820.00, 6840.00, 6860.00, 6880.00, 6900.00, 6920.00, 6940.00, 6960.00, 6980.00, 7000.00, 7020.00, 7040.00, 7060.00, 7080.00, 7100.00, 7120.00, 7140.00, 7160.00, 7180.00, 7200.00, 7220.00, 7240.00, 7260.00, 7280.00, 7300.00, 7320.00, 7340.00, 7360.00, 7380.00, 7400.00, 7420.00, 7440.00, 7460.00, 7480.00, 7500.00, 7520.00, 7540.00, 7560.00, 7580.00, 7600.00, 7620.00, 7640.00, 7660.00, 7680.00, 7700.00, 7720.00, 7740.00, 7760.00, 7780.00, 7800.00, 7820.00, 7840.00, 7860.00, 7880.00, 7900.00, 7920.00, 7940.00, 7960.00, 7980.00, 8000.00, 8020.00, 8040.00, 8060.00, 8080.00, 8100.00, 8120.00, 8140.00, 8160.00, 8180.00, 8200.00, 8220.00, 8240.00, 8260.00, 8280.00, 8300.00, 8320.00, 8340.00, 8360.00, 8380.00, 8400.00, 8420.00, 8440.00, 8460.00, 8480.00, 8500.00, 8520.00, 8540.00, 8560.00, 8580.00, 8600.00, 8620.00, 8640.00, 8660.00, 8680.00, 8700.00, 8720.00, 8740.00, 8760

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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
		0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040
	2.5	2065	2064	2064	2061	2058	2057	2053	2050	2049	2050	2049	2047	2047	2048	2047
	5	2148	2146	2141	2126	2110	2096	2078	2073	2068	2066	2063	2060	2059	2058	2056
	7.5	2287	2286	2275	2251	2217	2174	2129	2118	2108	2100	2093	2087	2082	2078	2075
	10	2416	2414	2399	2371	2334	2283	2215	2194	2178	2162	2147	2135	2125	2118	2110
	12.5	2549	2546	2531	2496	2448	2395	2324	2301	2279	2256	2232	2213	2195	2183	2171
	15	2623	2620	2616	2602	2575	2516	2443	2421	2399	2375	2349	2324	2297	2278	2263
	17.5	2626	2626	2640	2656	2667	2651	2578	2557	2539	2514	2489	2461	2431	2403	2379
	20	2517	2523	2571	2645	2722	2763	2731	2711	2690	2665	2641	2614	2580	2547	2514
	22.5	2372	2379	2430	2546	2720	2849	2878	2869	2851	2826	2801	2774	2739	2704	2667
	25	2279	2282	2321	2437	2651	2893	3004	3008	3003	2987	2962	2934	2900	2864	2826
	27.5	2236	2238	2270	2364	2572	2886	3104	3126	3134	3134	3120	3093	3057	3022	2983
	30	2130	2140	2213	2333	2519	2851	3177	3224	3252	3267	3268	3251	3219	3181	3139
	32.5	1938	1955	2069	2264	2494	2821	3226	3303	3356	3391	3406	3403	3381	3347	3306
	35	1728	1750	1884	2135	2460	2800	3260	3364	3450	3510	3540	3550	3539	3515	3476
	37.5	1605	1621	1743	1994	2396	2795	3286	3415	3526	3616	3668	3695	3697	3681	3648
	40	1502	1519	1658	1909	2337	2810	3322	3462	3595	3706	3786	3831	3844	3839	3815
	42.5	1435	1453	1600	1899	2350	2898	3408	3540	3675	3799	3897	3964	3990	3996	3977
	45	1370	1392	1552	1862	2330	2996	3604	3731	3854	3966	4058	4123	4153	4161	4149
	47.5	1301	1321	1474	1799	2284	3034	3769	3917	4056	4189	4297	4371	4399	4399	4374
	50	1224	1239	1358	1667	2185	3044	4028	4221	4397	4558	4704	4802	4840	4847	4824
	52.5	1085	1101	1195	1493	2044	2964	4191	4492	4781	5058	5323	5536	5680	5772	5787
	55	855	875	987	1296	1881	2865	4129	4450	4771	5072	5350	5601	5793	5931	6006
	57.5	549	565	673	979	1557	2619	4099	4441	4776	5093	5387	5639	5836	5981	6076
	60	283	295	364	545	1004	2018	3830	4249	4647	5027	5367	5631	5827	5973	6076
	62.5	184	195	203	244	496	1253	3157	3711	4211	4697	5154	5527	5787	5960	6077
	65	164	172	166	167	214	674	2201	2891	3491	4063	4634	5139	5536	5821	5997
	67.5	139	143	145	149	152	299	1265	1927	2643	3311	3970	4534	4980	5349	5657
	70	120	122	125	133	139	167	577	987	1713	2481	3253	3923	4347	4621	4967
	72.5	161	157	130	120	121	122	195	329	724	1486	2256	3140	3793	3983	4110
	75	131	132	131	119	102	91	115	125	181	610	1253	1952	2799	3169	3095
	77.5	109	110	117	118	75	77	84	89	95	144	588	994	1737	2268	2175
	80	66	67	81	97	51	63	53	56	59	73	200	500	854	1371	1454
	82.5	32	33	35	45	31	32	29	30	30	34	75	177	327	525	615
	85	17	17	17	16	15	14	12	12	11	12	16	25	36	47	50
	87.5	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
		77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040
	2.5	2045	2044	2042	2043	2037	2037	2035	2032	2027	2022	2018	2013	2007	2003	2002
	5	2053	2052	2050	2049	2042	2039	2030	2017	1997	1977	1955	1936	1920	1911	1909
	7.5	2070	2068	2065	2061	2054	2047	2026	1994	1948	1902	1854	1811	1781	1765	1762
	10	2103	2098	2094	2088	2077	2065	2027	1963	1883	1801	1726	1665	1625	1600	1596
	12.5	2160	2150	2145	2138	2122	2101	2038	1932	1805	1692	1588	1510	1463	1438	1432
	15	2246	2232	2224	2216	2194	2165	2063	1904	1730	1576	1458	1374	1317	1289	1285
	17.5	2356	2339	2328	2317	2289	2251	2105	1889	1655	1473	1338	1243	1187	1156	1151
	20	2486	2464	2448	2434	2402	2352	2157	1886	1597	1379	1230	1125	1060	1026	1020
	22.5	2632	2604	2584	2568	2528	2462	2221	1889	1556	1298	1126	1008	929	887	881
	25	2784	2750	2726	2706	2658	2578	2290	1898	1523	1222	1021	873	783	738	732
	27.5	2938	2900	2873	2848	2793	2697	2361	1917	1499	1151	898	733	644	596	591
	30	3096	3055	3022	2994	2926	2811	2428	1932	1474	1068	766	600	526	491	487
	32.5	3261	3214	3178	3144	3064	2929	2493	1945	1450	970	635	500	446	421	418
	35	3427	3379	3336	3296	3203	3044	2557	1961	1413	859	530	429	397	376	374
	37.5	3600	3548	3496	3450	3338	3155	2608	1978	1358	736	446	376	348	337	335
	40	3770	3718	3660	3602	3467	3257	2648	1990	1282	614	379	333	321	315	314
	42.5	3936	3882	3822	3753	3588	3345	2675	1985	1184	487	325	307	301	292	290
	45	4111	4051	3982	3898	3702	3426	2694	1960	1051	381	298	288	278	265	262
	47.5	4321	4251	4165	4063	3829	3506	2708	1900	892	307	281	275	264	245	240
	50	4760	4671	4561	4426	4129	3725	2780	1824	731	278	273	267	255	234	228
	52.5	5698	5530	5335	5112	4684	4179	3132	1904	622	276	276	257	244	220	212
	55	6007	5917	5752	5531	5047	4435	3195	1680	493	277	274	244	221	203	196
	57.5	6085	5996	5819	5575	4971	4278	3028	1446	388	281	275	228	207	197	188
	60	6105	6015	5802	5515	4817	4077	2788	1152	298	287	277	221	216	208	187
	62.5	6124	6029	5794	5466	4667	3865	2444	786	248	292	269	211	207	215	207
	65	6071	5976	5710	5347	4467	3653	2027	481	232	291	256	205	228	263	264
	67.5	5850	5795	5513	5107	4154	3383	1542	290	222	289	246	204	297	343	348
	70	5332	5452	5221	4781	3762	3028	1040	197	209	281	235	226	374	433	443
	72.5	4544	4852	4735	4268	3262	2625	653	156	193	262	222	249	417	467	478
	75	3258	3637	3816	3522	2589	2090	364	123	173	240	207	254	488	630	639
	77.5	2043	2198	2548	2543	1913	1467	153	91	154	208	195	315	518	624	626
	80	1243	1169	1346	1470	1317	840	71	67	129	163	176	310	470	578	577
	82.5	537	437	443	537	670	333	36	48	81	117	150	225	365	449	442
	85	44	37	39	50	69	39	13	20	30	38	49	83	176	265	253
	87.5	3	3	3	4	4	4	5	5	6	7	6	6	7	8	8
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
		0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	152.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	157.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	162.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Report of Test

LLIA001821-008A

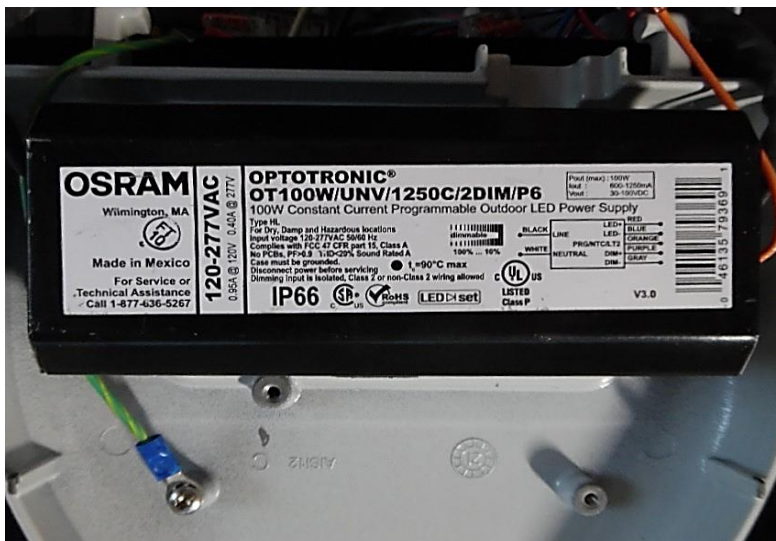
Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
		77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	152.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	157.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	162.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Report of Test LLIA001821-008A

Additional Pictures of Test Subject



Report of Test

LLIA001821-008A

Test Distance 9.5 m
Ambient Temperature 24.9 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-19. Format of reports and angular increments based on IES LM-31-20 and LM-10-20.

The luminous intensity values, and other derived quantities, contained in this report are based on absolute data.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the IES C-Type spherical coordinate system as defined in IES LM-75-19.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

The device under test emits no detectable uplight, as defined by ANSI/IES LM-31-20. For the purpose of this report, certain non-zero uplight readings, attributable to instrument artifacts, have been assigned a zero value.



Report of Test

LLIA001821-008B

Integrating Sphere Report

Catalog Number: L6-16S-5-X-2ES-6-X-XX-3-XX-X-X-X

Pole/arm mounted, gray painted cast aluminum housing and driver compartment cover, one circuit board, one clear plastic lens with optic below each LED, open bottom.

16 white LEDs.

Osram OT100W/UNV/1250C/2DIM/P6 LED driver set at 1200mA, Littlefuse LSP10277SBX3472 suppressor.



Performance Summary

Voltage	120.0 Vac
Current	0.5564 A
Power	66.20 W
Frequency	59.99 Hz
Power Factor	0.992
Current THD	3.4 %
Total Luminous Flux	8888.9 lm
Efficacy	134.3 lm/W
Chromaticity (x,y)	(0.4371, 0.4092)
(u',v')	(0.2485, 0.5234)
Duv	0.0020
CCT	3039 K
CRI (Ra)	71
R9	-43
TM-30: Rf	72
TM-30: Rg	93
TM-30: Rcs,h1	-18

Prepared For:

LED Roadway Lighting

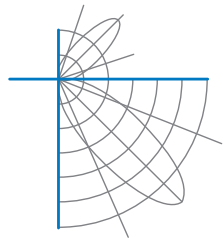
84 Chain Lake Drive

Suite 403

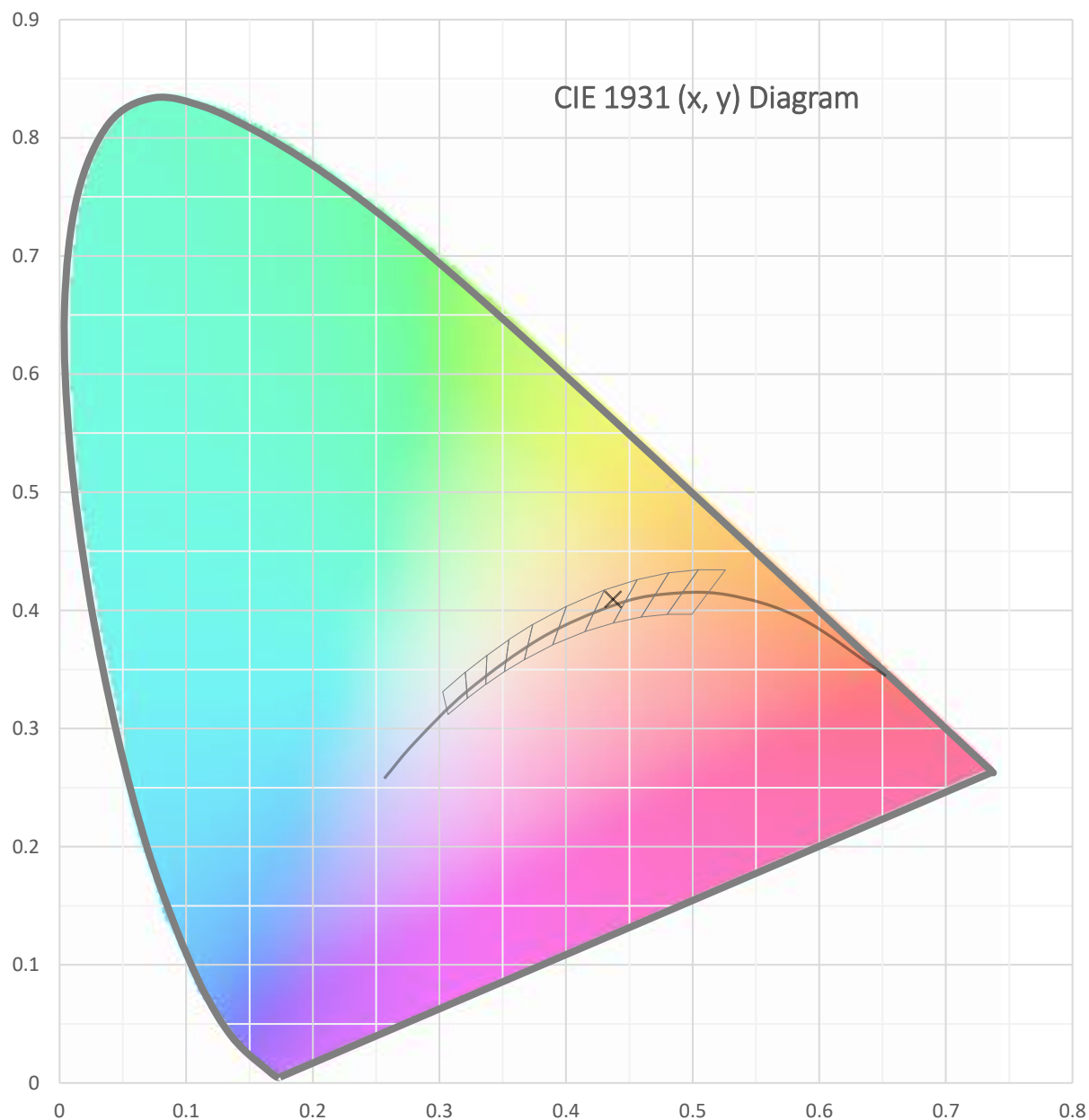
Halifax, Nova Scotia B3S 1A2, Canada

Test date: 07/28/2022

Report date: 07/29/2022

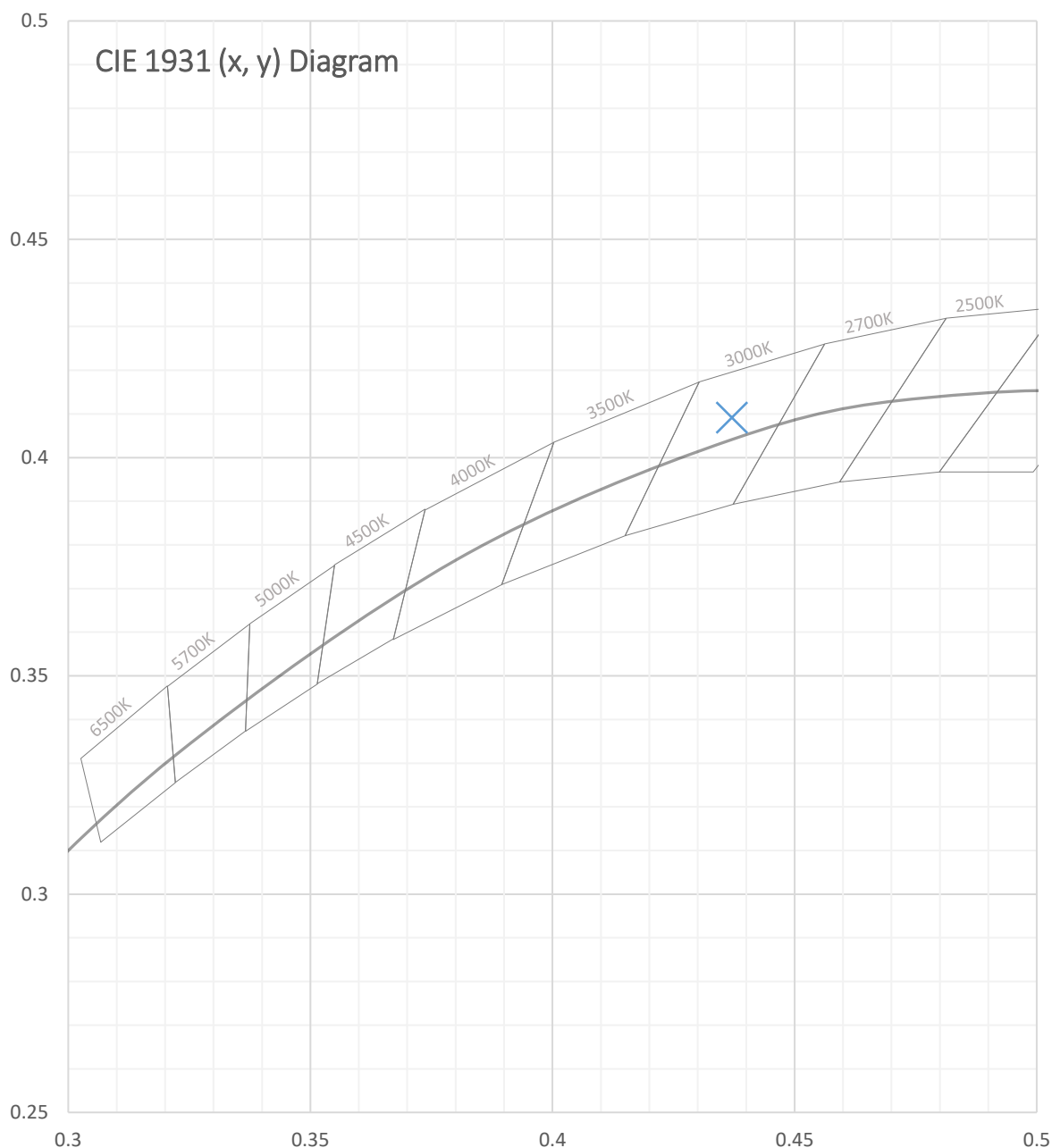


Test Report Number: LLIA001821-008B





Test Report Number: LLIA001821-008B





Test Report Number: LLIA001821-008B

Total Radiant Flux	24.96 W
Total Luminous Flux	8888.9 Lm
Chromaticity CIE 1931 (x, y)	(0.4371, 0.4092)
Chromaticity CIE 1976 (u', v')	(0.2485, 0.5234)
Correlated Color Temperature (CCT)	3039 K
Color Rendering Index (Ra)	71
R1	66
R2	81
R3	95
R4	67
R5	66
R6	75
R7	76
R8	40
R9	-43
R10	58
R11	62
R12	52
R13	68
R14	97
TM-30: Rf	72
TM-30: Rg	93
TM-30: Rcs,h1	-18
Distance from Planckian Locus (Duv)	0.0020
Scotopic/Photopic Ratio $\frac{V_{sc}}{V_{ph}}$	1.215

Electrical Data

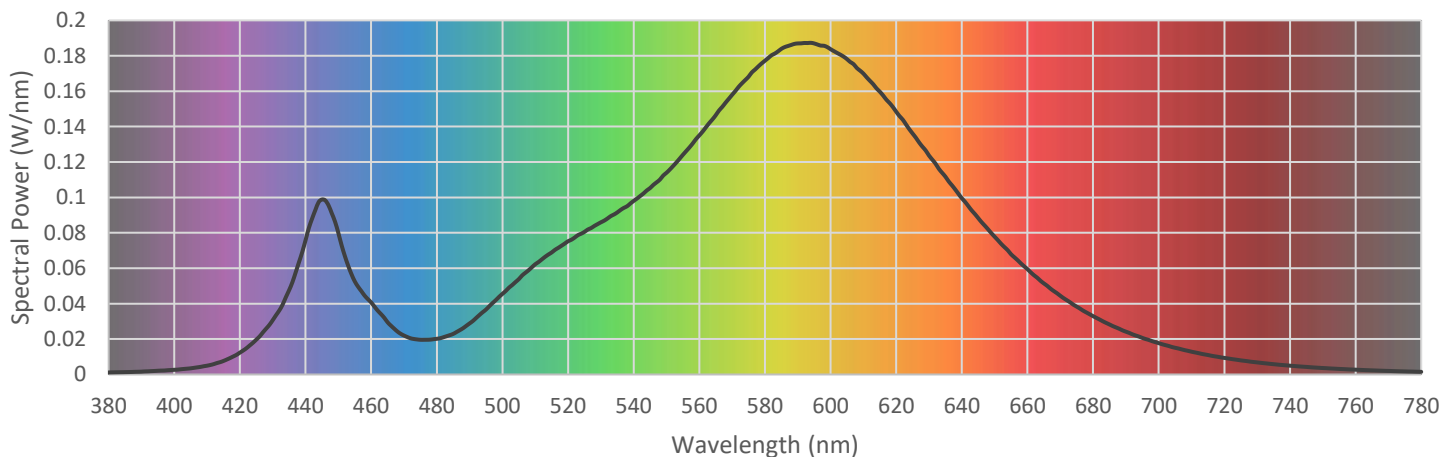
Voltage	120.0 Vac
Current	0.5564 A
Power	66.20 W
Frequency	59.99 Hz
Power Factor	0.992
Current THD	3.4 %



Test Report Number: LLIA001821-008B

Summary Spectral Power Distribution (wavelength - nm, spectral power - W/nm)

380	0.001153	480	0.020149	580	0.177208	680	0.032939
385	0.001330	485	0.022923	585	0.183909	685	0.028240
390	0.001598	490	0.028856	590	0.186979	690	0.024169
395	0.002097	495	0.036667	595	0.186965	695	0.020641
400	0.002632	500	0.045535	600	0.183717	700	0.017699
405	0.003476	505	0.053852	605	0.178110	705	0.015079
410	0.004962	510	0.062262	610	0.169955	710	0.012858
415	0.007642	515	0.068898	615	0.159723	715	0.010994
420	0.012354	520	0.075255	620	0.148399	720	0.009350
425	0.019712	525	0.080536	625	0.136083	725	0.007965
430	0.030672	530	0.085943	630	0.123643	730	0.006825
435	0.047642	535	0.091520	635	0.111705	735	0.005803
440	0.075854	540	0.098039	640	0.099517	740	0.004956
445	0.098796	545	0.105298	645	0.088310	745	0.004266
450	0.079883	550	0.113919	650	0.077805	750	0.003642
455	0.052581	555	0.124074	655	0.067883	755	0.003123
460	0.040676	560	0.135041	660	0.059467	760	0.002703
465	0.029465	565	0.146420	665	0.051435	765	0.002315
470	0.021989	570	0.157965	670	0.044465	770	0.001997
475	0.019584	575	0.168151	675	0.038316	775	0.001726
						780	0.001490





Test Report Number: LLIA001821-008B

IES TM-30 Details

Source: LLIA001821-008B

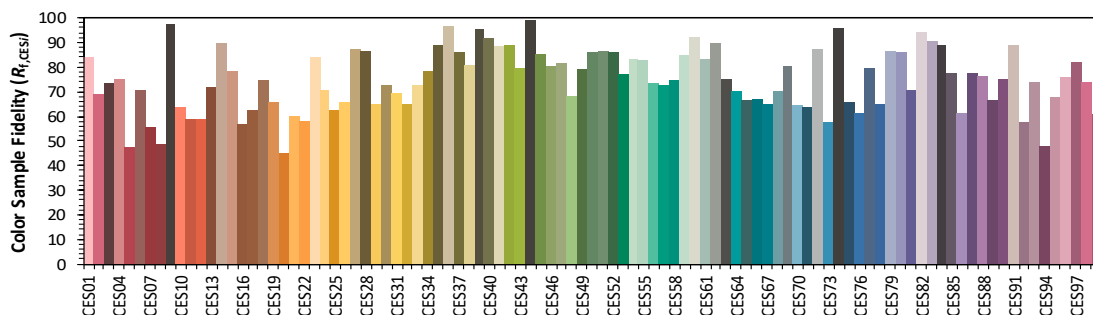
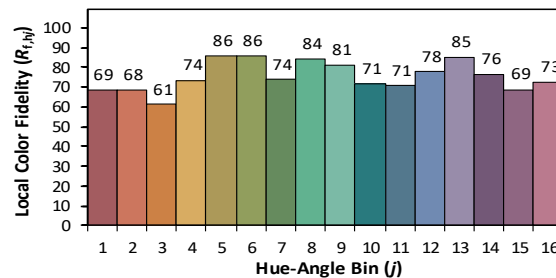
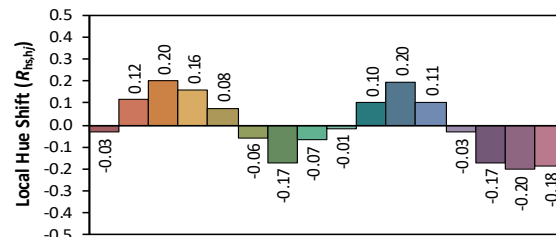
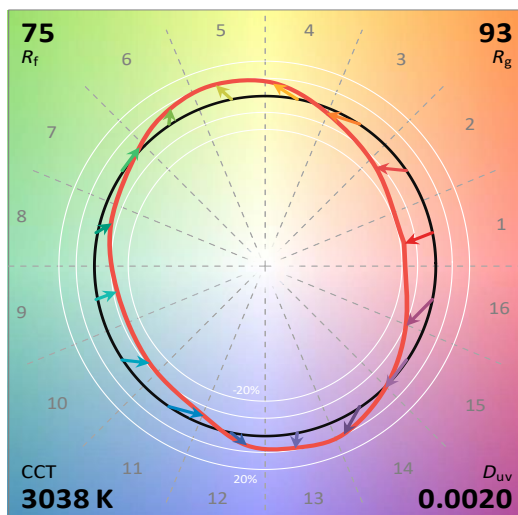
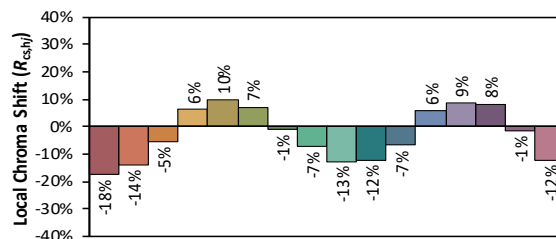
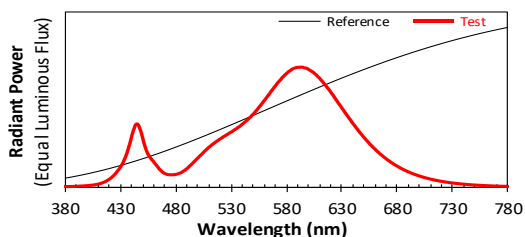
Manufacturer:

LED Roadway Lighting

Date: 7/29/2022

Model:

L6-16S-5-X-2ES-6-X-XX-3-XX-X-X-X



Notes:

x 0.4371
y 0.4091
u' 0.2485
v' 0.5234

CIE 13.3-1995
(CRI)

R_a 71
R_g -43

Test Report Number: LLIA001821-008B

Test Equipment Configuration: LightLab International Allentown 2m Integrating Sphere
Measurements acquired using a Labsphere CDS 2600 spectroradiometer
Testing was performed using 4π geometry

Test Temperature: 25.6 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-19, LM-78-20, LM-58-20, ANSI_ANSI C78.377-2017, TM-30-20

Significance: The laboratory has not participated in the selection of samples to be tested.
All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Notes: The measurements and other derived quantities contained in this report are based on the absolute data as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Sphere Report Template V2-18



Report of Test

LLIA001821-008C

Electrical Test Report

Catalog Number: L6-16S-5-X-2ES-6-X-XX-3-XX-X-X-X

Pole/arm mounted, gray painted cast aluminum housing and driver compartment cover, one circuit board, one clear plastic lens with optic below each LED, open bottom.

16 white LEDs.

Osram OT100W/UNV/1250C/2DIM/P6 LED driver set at 1200mA, Littlefuse LSP10277SBX3472 suppressor.



Performance Summary

Voltage	277.0 Vac
Current	0.2523 A
Power	65.60 W
Frequency	60.00 Hz
Power Factor	0.939
Current THD	6.6 %

Ambient Temperature: 24.9 °C

Prepared For:

LED Roadway Lighting

84 Chain Lake Drive

Suite 403

Halifax, Nova Scotia B3S 1A2, Canada

Tested in accordance with the applicable sections of IES LM-79-19. The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Test date: 07/27/2022

Report date: 07/29/2022

Electrical Report Template V1-4