LightLab INTERNATIONAL ALLENTOWN LLC

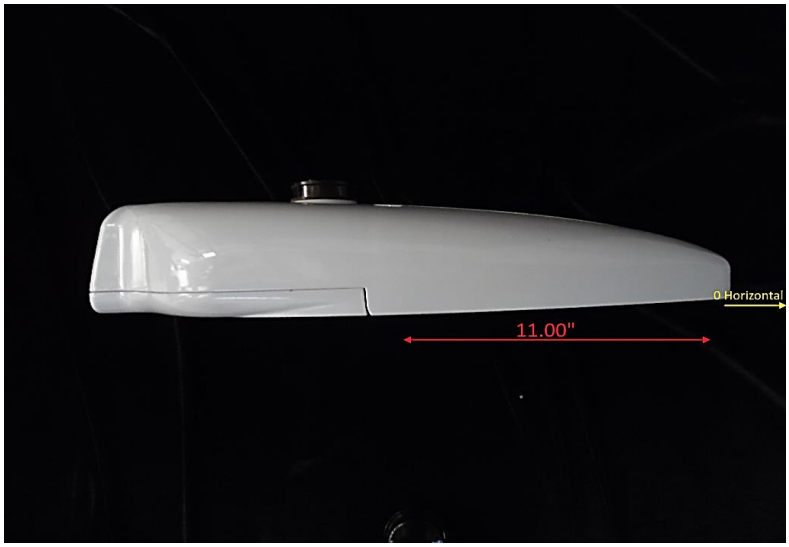
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001821-015A-R01*

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: L6-60M-5-X-2ES-R-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.
60 white LEDs
Osram OT180W/UNV/1800C/2DIM/P6/G2 LED driver set at 1500mA, 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	27703.8	Lumens
Input Current	1.614	A	Total Efficacy	144.0	Lm/W
Input Power	192.4	W			
Frequency	60.00	Hz	Roadway Throw	Medium	
Power Factor	0.994		Roadway Type	Type II	
Current THD	5.7	%	IES BUG Rating	B3 - U0 - G3	

*This test report supersedes test report LLIA001821-015A

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

Test date: 08/13/2022
Report date: 08/16/2022

Signed: Michael L. Grather

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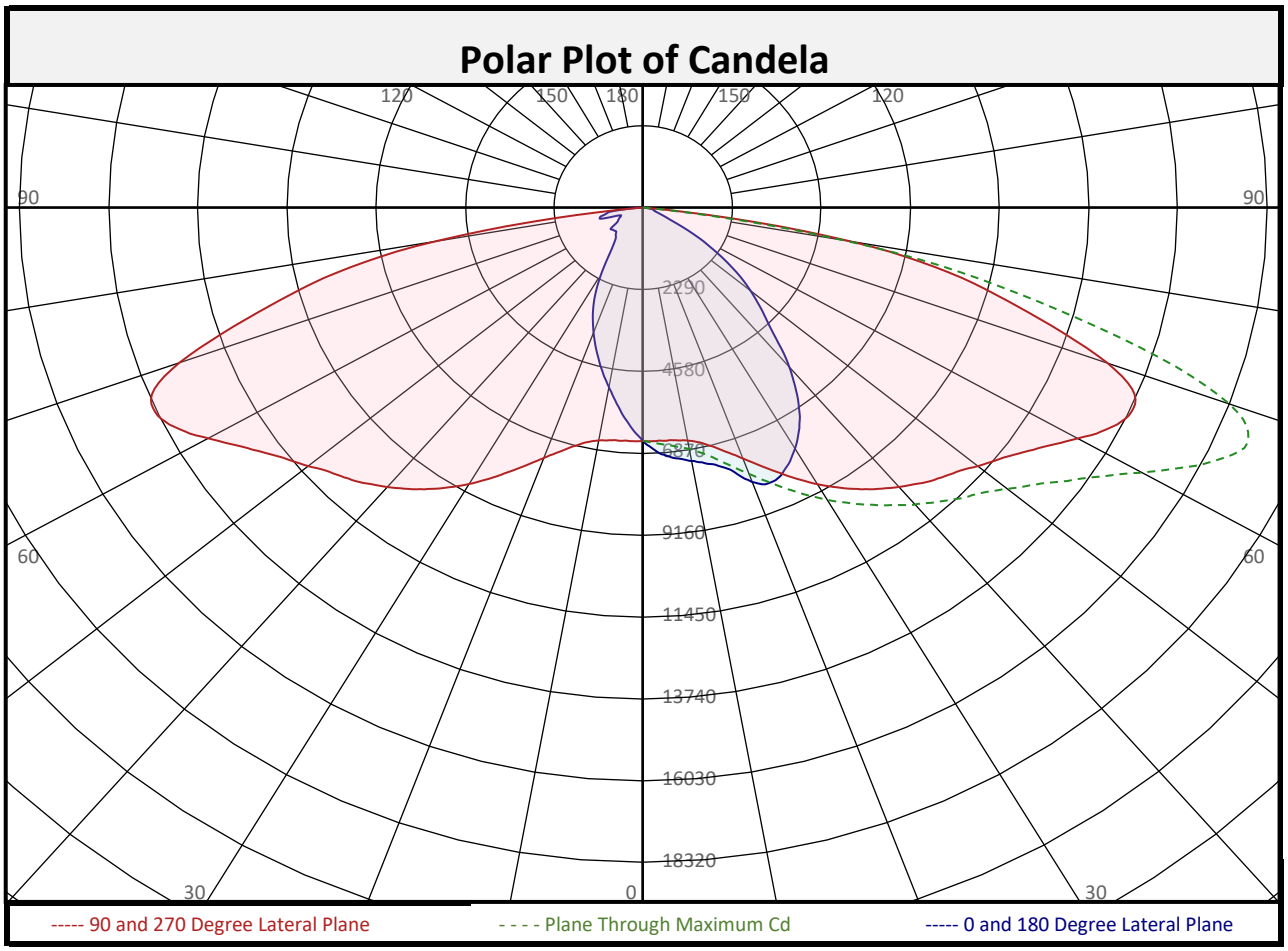

Zonal Flux Summary									
Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	613.5	2.2%	90-100	0.0	0.0%	0-20	2417	8.7%
10-20	1804	6.5%	100-110	0.0	0.0%	0-30	5488	19.8%
20-30	3071	11.1%	110-120	0.0	0.0%	0-40	9622	34.7%
30-40	4135	14.9%	120-130	0.0	0.0%	0-60	19690	71.1%
40-50	4819	17.4%	130-140	0.0	0.0%	0-80	27348	98.7%
50-60	5249	18.9%	140-150	0.0	0.0%	10-90	27090	97.8%
60-70	4927	17.8%	150-160	0.0	0.0%	20-50	12024	43.4%
70-80	2731	9.9%	160-170	0.0	0.0%	40-90	18081	65.3%
80-90	355.9	1.3%	170-180	0.0	0.0%	60-90	8014	28.9%
0-90	27704	100.0%	90-180	0.0	0.0%	0-180	27704	100.0%

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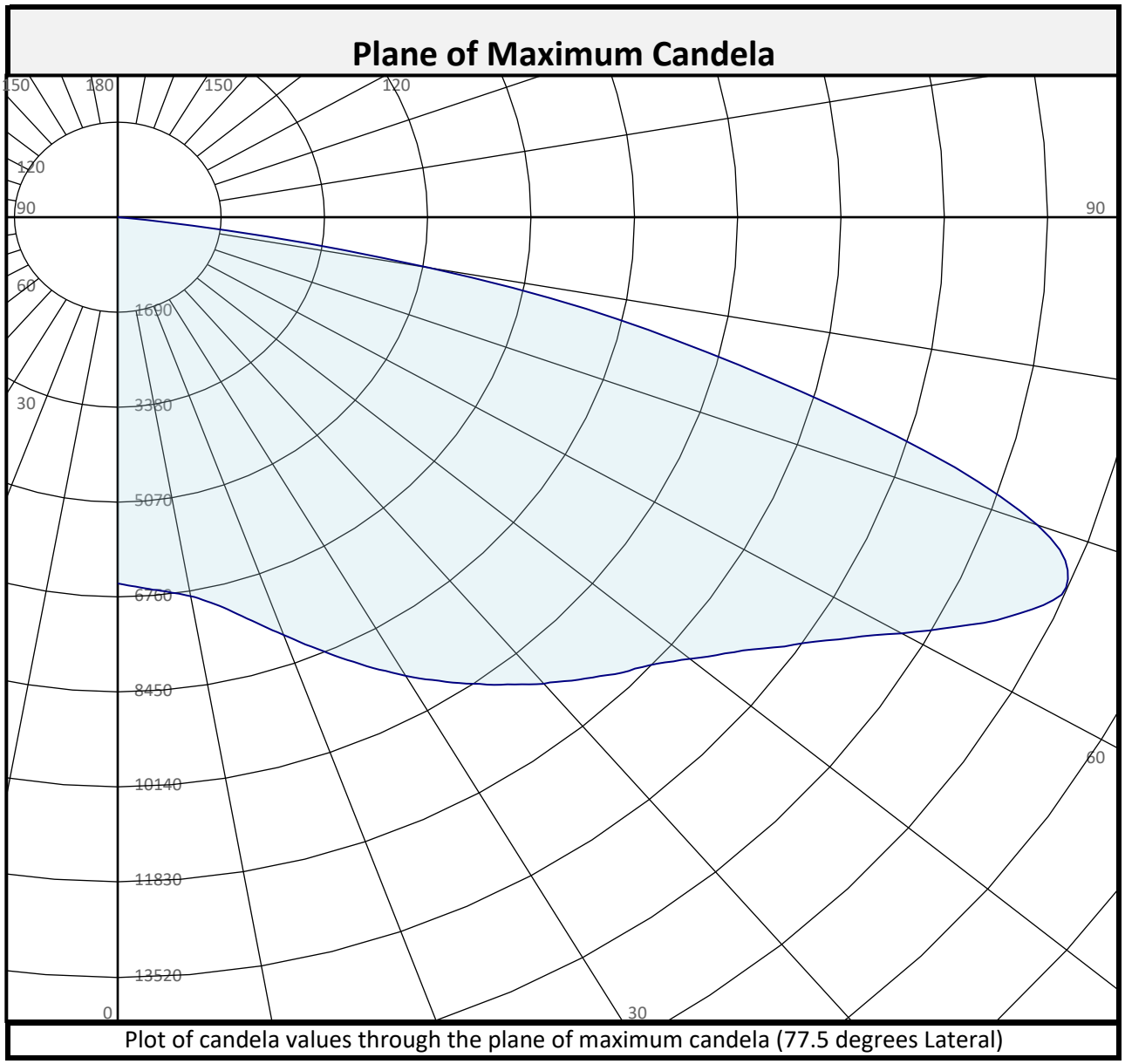

Plot of candela values through the plane of maximum candela (77.5 degrees Lateral)

Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	18503.3	66.8%	0.0	0.0%	18503.3	66.8%
House Side	9200.6	33.2%	0.0	0.0%	9200.6	33.2%
Total	27703.8	100.0%	0.0	0.0%	27703.8	100.0%

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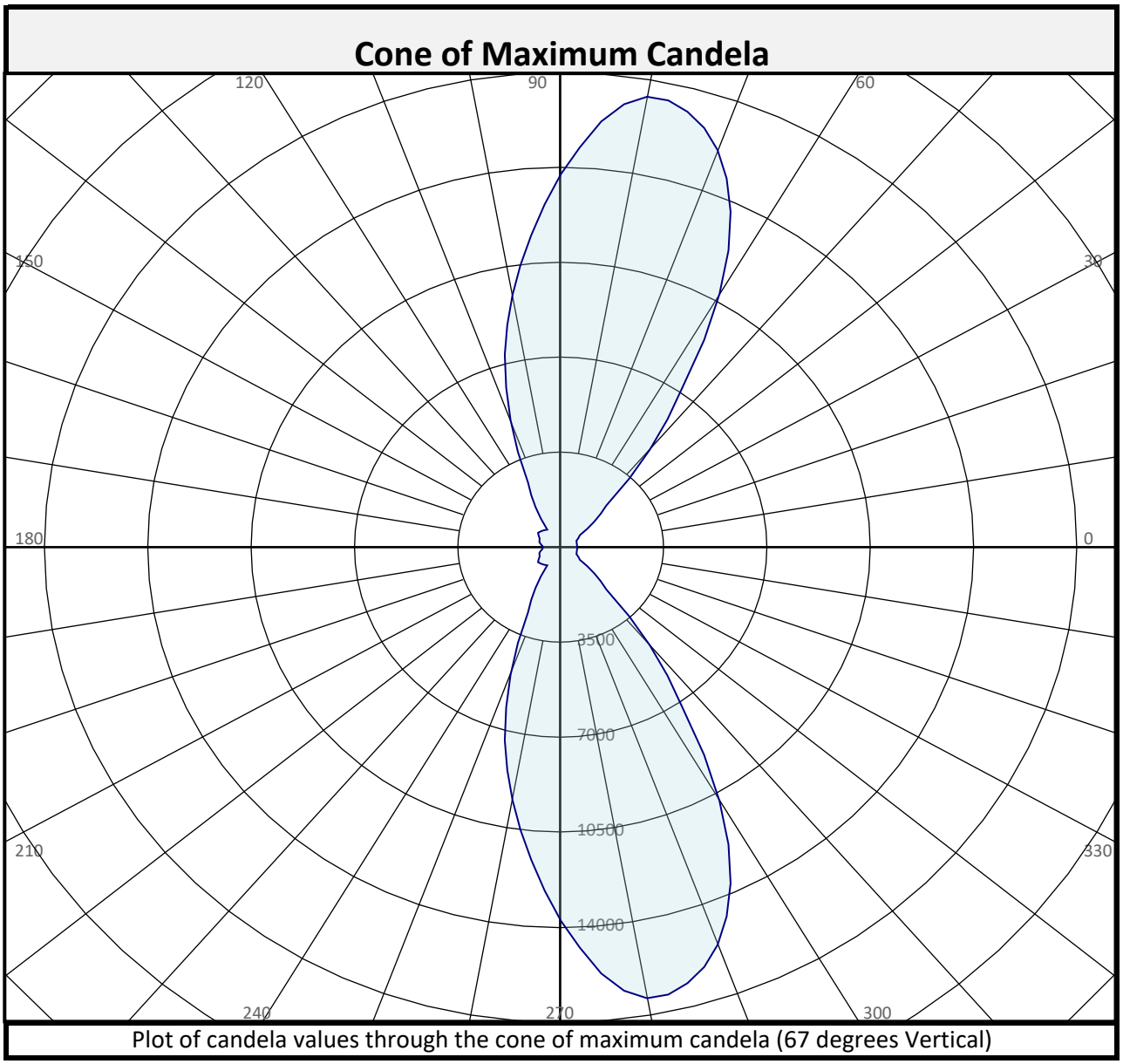

Plot of candela values through the cone of maximum candela (67 degrees Vertical)

Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	18503.3	66.8%	0.0	0.0%	18503.3	66.8%
House Side	9200.6	33.2%	0.0	0.0%	9200.6	33.2%
Total	27703.8	100.0%	0.0	0.0%	27703.8	100.0%

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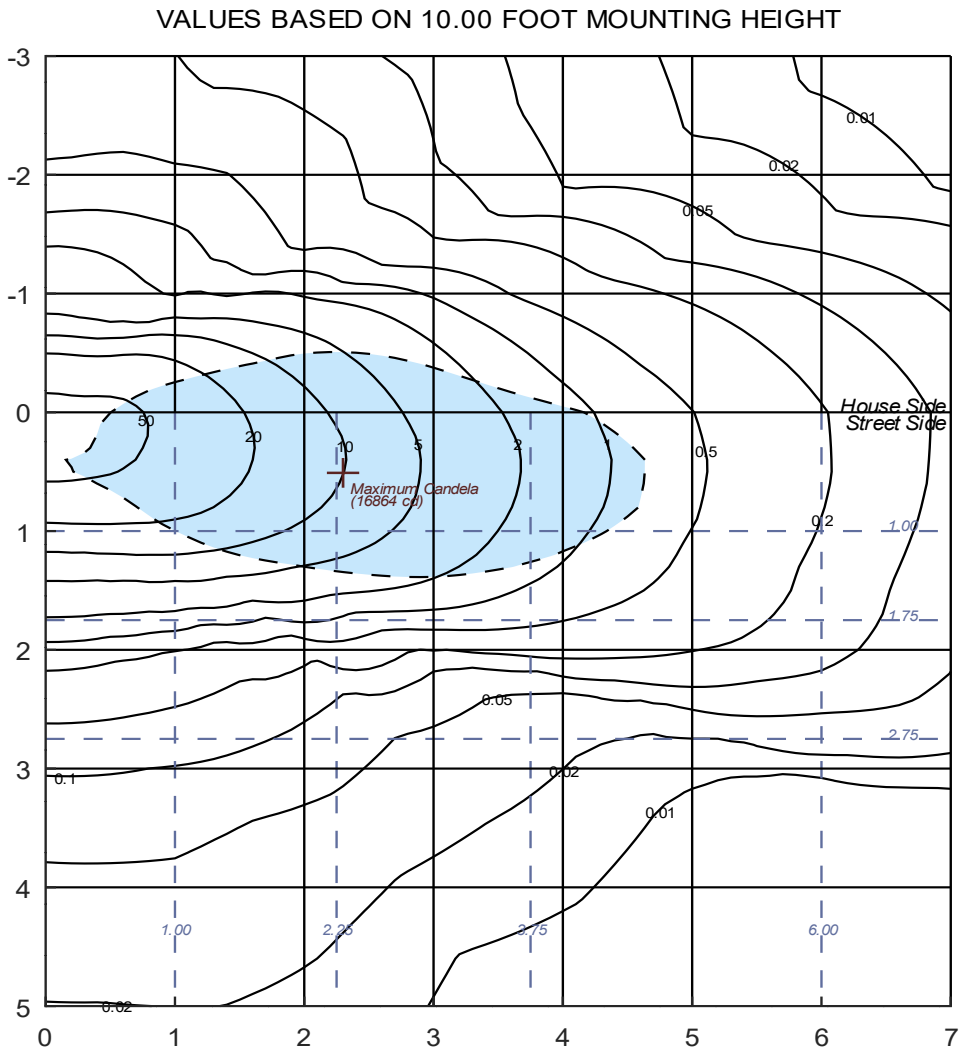
Iso-Illuminance Plot



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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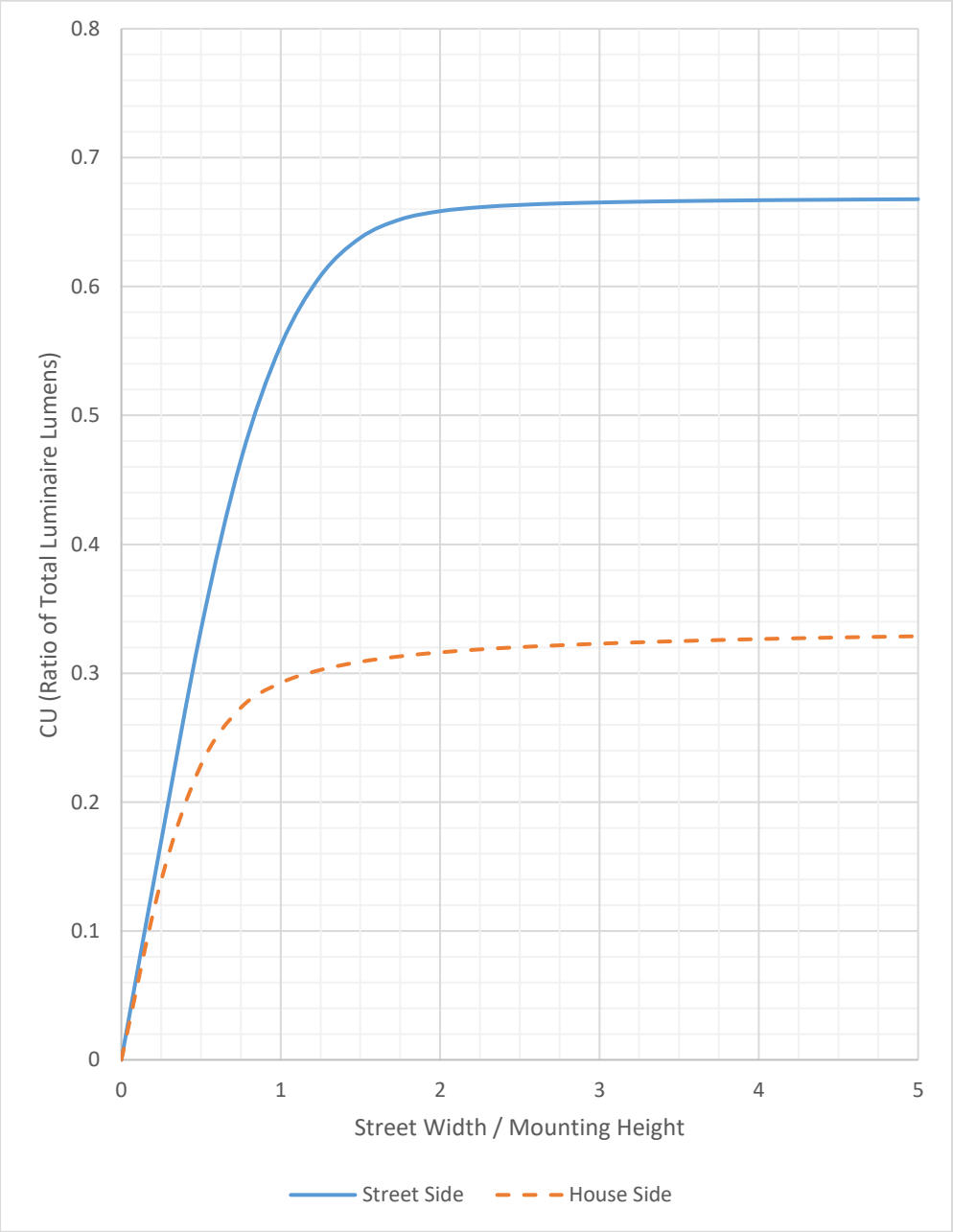
Coefficients of Utilization Plot



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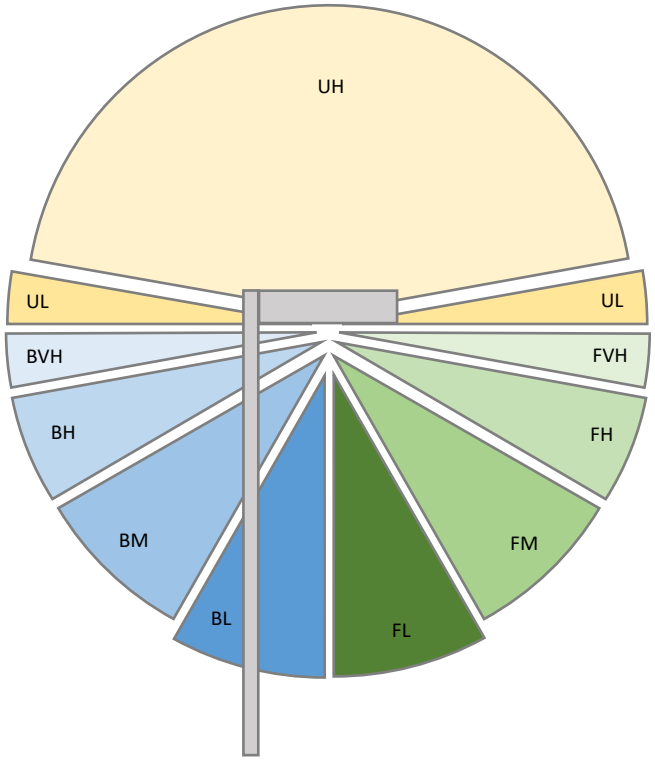
LCS Tables and Bug Classification



Back Light	
BL - Back Low (0°-30°)	2134.0 Lm
BM - Back Mid (30°-60°)	4411.1 Lm
BH - Back High (60°-80°)	2479.7 Lm
BVH - Back Very High (80°-90°)	175.8 Lm

Forward Light	
FL - Forward Low (0°-30°)	3353.9 Lm
FM - Forward Mid (30°-60°)	9790.8 Lm
FH - Forward High (60°-80°)	5178.4 Lm
FVH - Forward Very High (80°-90°)	180.1 Lm

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

BUG Ratings: B3 - U0 - G3

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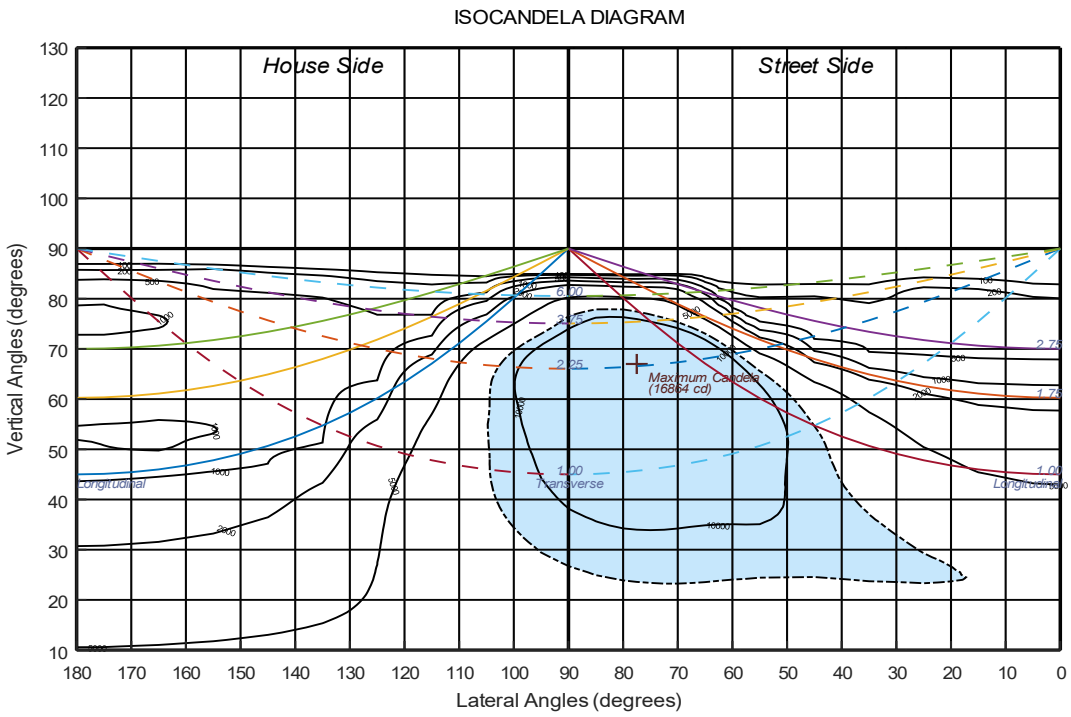
Iso-Candela Plot



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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles														
	0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75
0	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520
2.5	6781	6793	6790	6770	6738	6707	6681	6673	6660	6647	6645	6627	6617	6605	6589
5	6966	6977	6978	6949	6917	6879	6830	6819	6801	6775	6764	6734	6718	6695	6671
7.5	7082	7082	7081	7066	7042	7008	6968	6947	6928	6902	6877	6852	6828	6790	6765
10	7199	7191	7190	7171	7149	7125	7089	7069	7064	7037	7010	6990	6959	6920	6896
12.5	7322	7319	7312	7292	7273	7261	7249	7229	7228	7210	7191	7169	7143	7110	7074
15	7481	7475	7456	7431	7410	7418	7433	7443	7434	7422	7411	7403	7381	7347	7321
17.5	7746	7745	7680	7633	7588	7613	7678	7686	7687	7691	7700	7689	7678	7657	7625
20	8166	8157	8085	7979	7843	7850	7932	7944	7967	7977	7999	8000	7986	7987	7954
22.5	8355	8364	8353	8343	8243	8142	8206	8229	8249	8277	8302	8326	8328	8327	8305
25	8300	8301	8385	8537	8617	8506	8495	8521	8558	8584	8619	8655	8679	8685	8677
27.5	8081	8094	8252	8532	8835	8919	8823	8848	8883	8925	8958	9001	9035	9054	9058
30	7788	7814	8027	8378	8884	9247	9214	9222	9239	9278	9331	9377	9413	9434	9436
32.5	7426	7460	7717	8138	8806	9447	9630	9609	9601	9626	9683	9736	9766	9795	9804
35	6987	7036	7335	7830	8626	9527	9992	9998	9990	9997	10018	10069	10110	10145	10142
37.5	6437	6501	6876	7467	8392	9513	10281	10328	10363	10367	10396	10421	10452	10483	10482
40	5836	5898	6348	7025	8084	9413	10489	10616	10703	10729	10761	10780	10809	10829	10840
42.5	5127	5209	5760	6586	7746	9281	10639	10847	10999	11061	11106	11144	11164	11183	11172
45	4509	4571	5107	6142	7423	9163	10746	11031	11238	11377	11455	11504	11533	11547	11541
47.5	4035	4091	4542	5650	7089	9062	10916	11246	11498	11686	11787	11869	11879	11882	11857
50	3579	3623	4044	5102	6725	8963	11094	11464	11789	12028	12187	12301	12343	12328	12287
52.5	3104	3143	3516	4504	6291	8751	11301	11748	12117	12412	12625	12766	12822	12823	12774
55	2574	2607	2916	3855	5718	8361	11363	11919	12377	12731	13011	13224	13344	13378	13370
57.5	2042	2061	2293	3088	4968	7782	11187	11902	12495	12965	13351	13667	13860	13961	13990
60	1551	1567	1737	2317	3955	6975	10816	11703	12475	13137	13699	14163	14507	14701	14802
62.5	1048	1060	1143	1546	2704	5618	10128	11239	12263	13152	13923	14578	15092	15451	15659
65	708	702	699	852	1451	3690	8850	10353	11688	12899	13923	14773	15458	15974	16347
67.5	523	525	533	557	686	1890	6703	8621	10458	12105	13484	14642	15546	16193	16596
70	403	406	420	458	482	873	4018	5929	8092	10163	12012	13488	14625	15482	15905
72.5	320	326	336	383	415	456	1838	3199	5128	7225	9168	10862	12148	13114	13706
75	303	309	320	307	348	329	571	1076	2401	4299	6018	7518	8864	9805	10521
77.5	288	292	328	276	255	258	340	413	652	1863	3320	4818	6085	7167	7815
80	202	212	271	252	175	217	213	235	289	508	1503	2528	3784	4568	5032
82.5	113	119	175	187	110	116	111	118	128	166	381	820	1382	1712	1775
85	45	47	54	55	42	41	39	40	41	45	57	76	82	79	67
87.5	7	7	7	7	8	11	16	18	19	20	22	23	25	26	28
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Report of Test

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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles														
	77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
0	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520	6520
2.5	6580	6577	6556	6548	6540	6503	6439	6384	6337	6290	6254	6229	6209	6195	6191
5	6658	6635	6604	6583	6548	6481	6365	6261	6148	6043	5957	5902	5855	5832	5832
7.5	6742	6709	6667	6631	6564	6473	6300	6124	5944	5784	5648	5548	5485	5445	5436
10	6850	6808	6764	6711	6616	6491	6255	5991	5740	5515	5348	5220	5134	5087	5073
12.5	7027	6979	6919	6854	6727	6567	6235	5879	5541	5263	5061	4906	4806	4748	4736
15	7273	7224	7149	7075	6913	6712	6271	5793	5366	5030	4788	4598	4470	4406	4387
17.5	7573	7515	7450	7366	7168	6941	6376	5765	5235	4812	4503	4282	4139	4058	4053
20	7909	7847	7788	7694	7459	7200	6521	5794	5150	4616	4232	3967	3801	3714	3711
22.5	8271	8214	8150	8062	7796	7494	6697	5860	5090	4425	3959	3644	3460	3371	3364
25	8657	8599	8534	8445	8160	7816	6919	5944	5040	4238	3671	3308	3106	3010	3001
27.5	9047	9005	8923	8825	8550	8154	7155	6050	4996	4046	3368	2959	2715	2600	2587
30	9427	9390	9303	9201	8928	8503	7412	6166	4939	3833	3034	2555	2271	2145	2133
32.5	9782	9751	9670	9565	9276	8823	7654	6290	4880	3592	2656	2121	1834	1703	1688
35	10139	10102	10022	9914	9608	9106	7871	6389	4800	3305	2240	1706	1460	1376	1368
37.5	10481	10439	10367	10252	9918	9384	8044	6465	4702	2968	1825	1375	1237	1185	1178
40	10843	10776	10682	10560	10207	9616	8174	6485	4550	2585	1452	1174	1099	1079	1075
42.5	11167	11102	10996	10861	10472	9847	8263	6446	4324	2145	1189	1060	1039	1031	1029
45	11504	11433	11306	11162	10715	10048	8317	6353	4025	1699	1046	1010	990	970	964
47.5	11806	11729	11603	11440	10938	10221	8322	6198	3635	1299	996	964	958	970	967
50	12230	12134	12013	11823	11248	10432	8329	5995	3189	1048	958	943	1006	995	984
52.5	12720	12593	12436	12201	11553	10629	8354	5738	2707	976	936	987	1040	1025	1011
55	13323	13178	12959	12679	11931	10875	8376	5374	2185	931	930	996	1028	1003	981
57.5	13988	13852	13610	13280	12383	11134	8289	4918	1724	898	948	956	908	825	799
60	14817	14681	14396	14011	12910	11442	8247	4462	1366	888	969	902	836	758	733
62.5	15714	15590	15262	14798	13431	11713	8166	3964	1107	890	979	869	811	719	694
65	16515	16447	16075	15470	13771	11769	7868	3297	910	885	969	833	782	669	645
67.5	16835	16841	16470	15744	13673	11444	7178	2463	782	870	939	778	748	621	606
70	16020	15966	15651	14932	12691	10430	6052	1651	695	852	882	689	703	652	641
72.5	13874	13804	13563	13004	11022	8797	4530	1027	623	814	780	638	795	946	945
75	11030	11258	11237	10967	9364	7027	2966	663	558	739	684	731	1045	1156	1148
77.5	8369	8839	8881	8829	7687	5427	1721	454	474	626	667	784	938	1085	1083
80	5163	5534	5686	5766	5355	3767	858	328	380	511	574	615	784	949	941
82.5	1804	1880	2036	2153	2303	1654	295	218	259	365	420	470	632	791	781
85	62	61	63	65	71	78	77	89	114	167	216	291	298	310	302
87.5	29	31	32	33	35	37	39	40	40	39	46	56	71	75	75
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Report of Test

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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles														
	0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75
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

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LLIA001821-015A-R01

Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles														
	77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
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

LLIA001821-015A-R01

Additional Pictures of Test Subject

Report of Test

LLIA001821-015A-R01

Test Distance	9.5 m
Ambient Temperature	24.6 °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.

Revision

R01 - 08/16/2022 - Revised catalog number

LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001821-015B-R01*

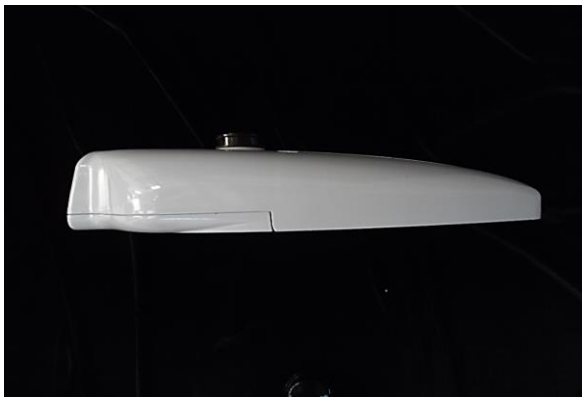
Integrating Sphere Report

Catalog Number: L6-60M-5-X-2ES-R-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.

60 white LEDs

Osram OT180W/UNV/1800C/2DIM/P6/G2 LED driver set at 1500mA, Littlefuse LSP10277SBX3472 suppressor.



Performance Summary

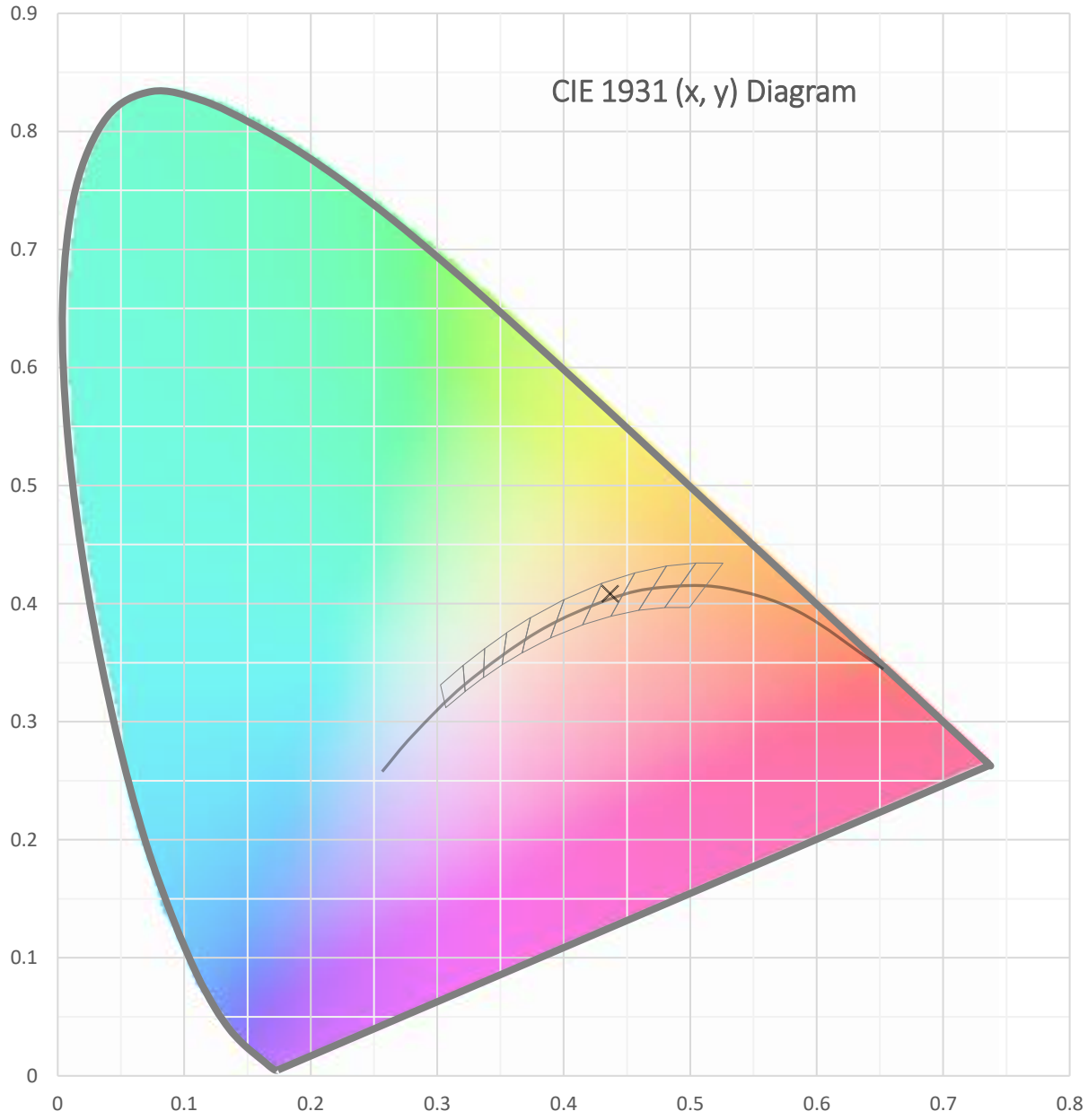
Voltage	120.0	Vac
Current	1.617	A
Power	192.5	W
Frequency	59.99	Hz
Power Factor	0.992	
Current THD	5.3	%
Total Luminous Flux	27620.5	lm
Efficacy	143.5	lm/W
Chromaticity (x,y)	(0.4368, 0.4083)	
(u',v')	(0.2487, 0.5230)	
Duv	0.0017	
CCT	3036	K
CRI (Ra)	71	
R9	-43	
TM-30: Rf	72	
TM-30: Rg	93	
TM-30: Rcs,h1	-18	

Prepared For:
LED Roadway Lighting
84 Chain Lake Drive
Suite 403
Halifax, Nova Scotia B3S 1A2, Canada

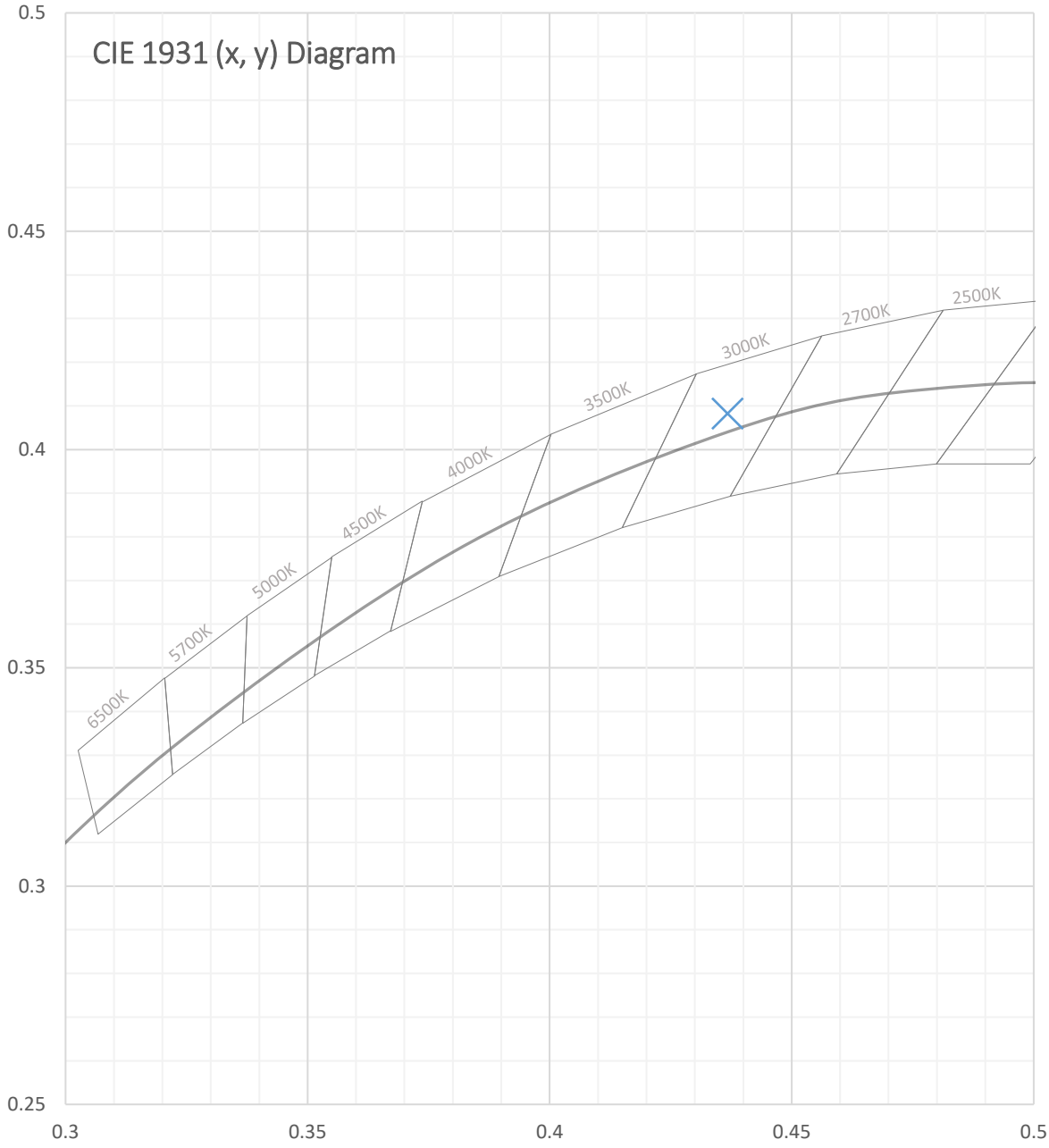
*This test report supersedes test report LLIA001821-015B

Test date: 08/13/2022
Report date: 08/16/2022

Test Report Number: LLIA001821-015B-R01



Test Report Number: LLIA001821-015B-R01



Test Report Number: LLIA001821-015B-R01

Total Radiant Flux	77.80	W
Total Luminous Flux	27620.5	Lm
Chromaticity CIE 1931 (x, y)	(0.4368, 0.4083)	
Chromaticity CIE 1976 (u', v')	(0.2487, 0.5230)	
Correlated Color Temperature (CCT)	3036	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	59	
R11	62	
R12	52	
R13	69	
R14	97	
TM-30: Rf	72	
TM-30: Rg	93	
TM-30: Rcs,h1	-18	
Distance from Planckian Locus (Duv)	0.0017	
Scotopic/Photopic Ratio ǂ	1.218	

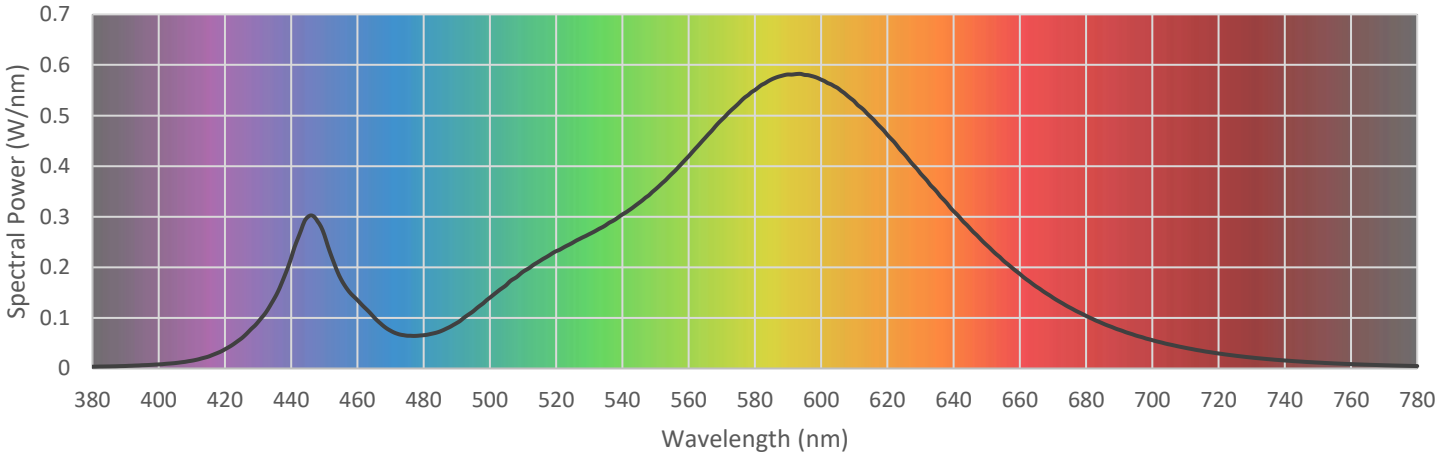
Electrical Data

Voltage	120.0	Vac
Current	1.617	A
Power	192.5	W
Frequency	59.99	Hz
Power Factor	0.992	
Current THD	5.3	%

Test Report Number: LLIA001821-015B-R01

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

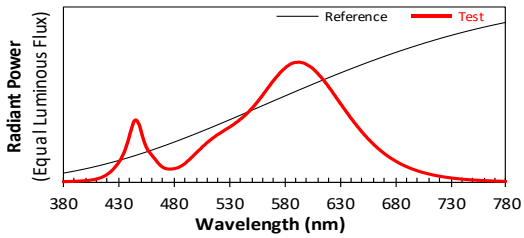
380	0.003494	480	0.065761	580	0.550251	680	0.103969
385	0.004062	485	0.073334	585	0.571296	685	0.089148
390	0.004859	490	0.089911	590	0.581193	690	0.076437
395	0.006405	495	0.113275	595	0.580276	695	0.065232
400	0.008069	500	0.139998	600	0.570959	700	0.056005
405	0.010687	505	0.165174	605	0.554462	705	0.047739
410	0.015351	510	0.191308	610	0.528442	710	0.040782
415	0.023514	515	0.212199	615	0.497154	715	0.034819
420	0.037933	520	0.231904	620	0.461809	720	0.029632
425	0.059570	525	0.248593	625	0.424771	725	0.025273
430	0.091851	530	0.265580	630	0.385593	730	0.021624
435	0.139499	535	0.283327	635	0.348951	735	0.018442
440	0.218819	540	0.304590	640	0.310861	740	0.015765
445	0.299441	545	0.327246	645	0.276563	745	0.013560
450	0.264094	550	0.354195	650	0.243838	750	0.011632
455	0.176784	555	0.385293	655	0.213317	755	0.009971
460	0.135165	560	0.419376	660	0.186924	760	0.008603
465	0.101153	565	0.455938	665	0.161733	765	0.007396
470	0.074620	570	0.491690	670	0.140017	770	0.006368
475	0.064724	575	0.523314	675	0.120750	775	0.005511
						780	0.004770

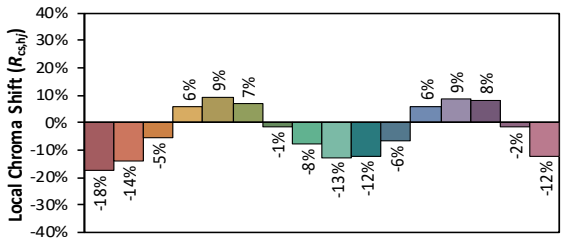


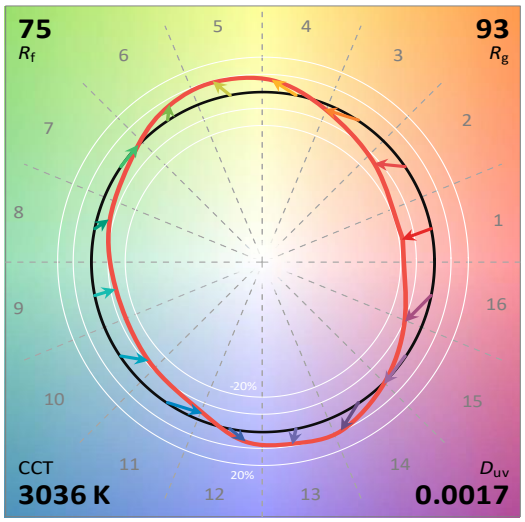
Test Report Number: LLIA001821-015B-R01

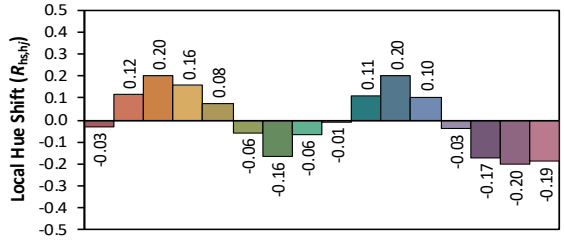
IES TM-30 Details

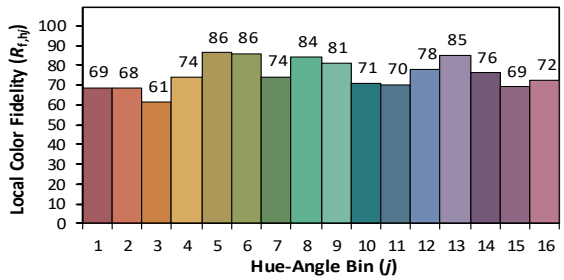
Source:	LLIA001821-015B	**Manufacturer:**	LED Roadway Lighting
Date:	8/15/2022	**Model:**	L6-60M-5-X-2ES-J-X-XX-3-XX-X-X-X

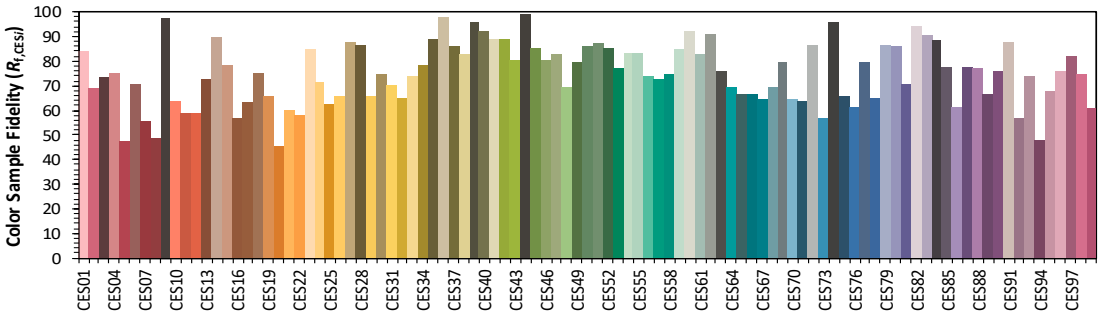












Notes:

x	0.4368
y	0.4082
u'	0.2487
v'	0.5230

CIE 13.3-1995 (CRI)

R_a	71
R_9	-43

Test Report Number: LLIA001821-015B-R01

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:	25.4 °C
Test Procedure:	Tested in accordance with the applicable sections of: LM-79-19, LM-78-20, LM-58-20, ANSI_ANSLG 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.
Revision:	R01 - 08/16/2022 - Revised catalog number

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Australasia & S.E. Asia LightLab International, 50 Redcliffe Gardens Drive, Clontarf, Queensland, 4019, Australia, Ph : +61 7 3283 7862, Fx : +61 7 3283 8751, www.lightlabint.com

LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001821-015C-R01*

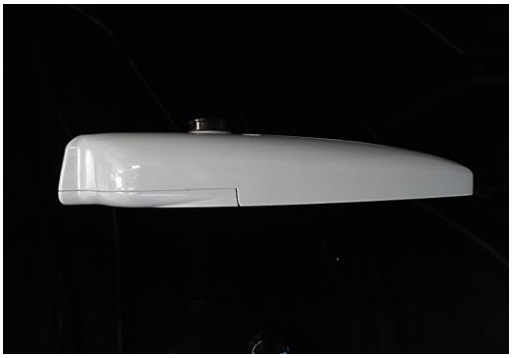
Electrical Test Report

Catalog Number: L6-60M-5-X-2ES-R-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.

60 white LEDs

Osram OT180W/UNV/1800C/2DIM/P6/G2 LED driver set at 1500mA, Littlefuse LSP10277SBX3472 suppressor.



Performance Summary

Voltage	277.0	Vac
Current	0.6973	A
Power	187.7	W
Frequency	60.00	Hz
Power Factor	0.972	
Current THD	10.0	%
Ambient Temperature:	24.7	°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.

*This test report supersedes test report LLIA001821-015C

Test date: 08/13/2022
Report date: 08/16/2022

Electrical Report Template V1-4

Revision: R01 - 08/16/2022 - Revised catalog number