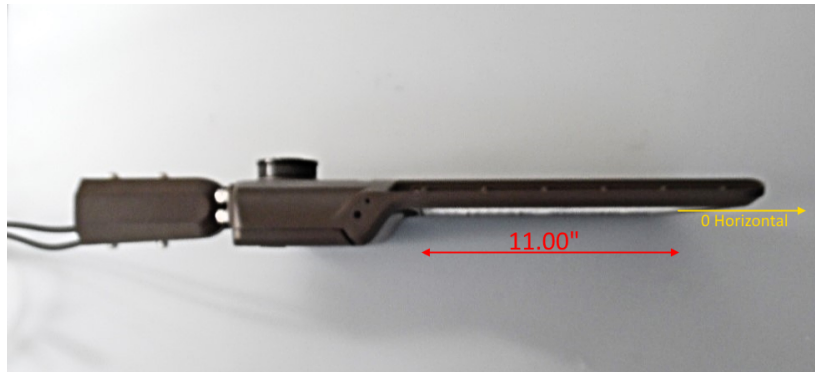


Report of Test

LLIA002251-015

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: ARL-300PCS-T4 - 300W Setting - 4000K Setting
Pole mounted, cast aluminum housing, white LED board with
frosted plastic enclosure with clear optic sections below LEDs.
728 white LEDs, 364 CW LEDs and 364 WW LEDs
One Sosen SS-320NH-E260BH LED driver



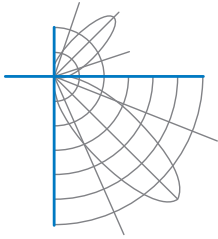
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	44511.3 Lumens
Input Current	2.431 A	Total Efficacy	153.6 Lm/W
Input Power	289.8 W		
Frequency	60.00 Hz	Roadway Throw	Short
Power Factor	0.993	Roadway Type	Type IV
Current THD	9.3 %		

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

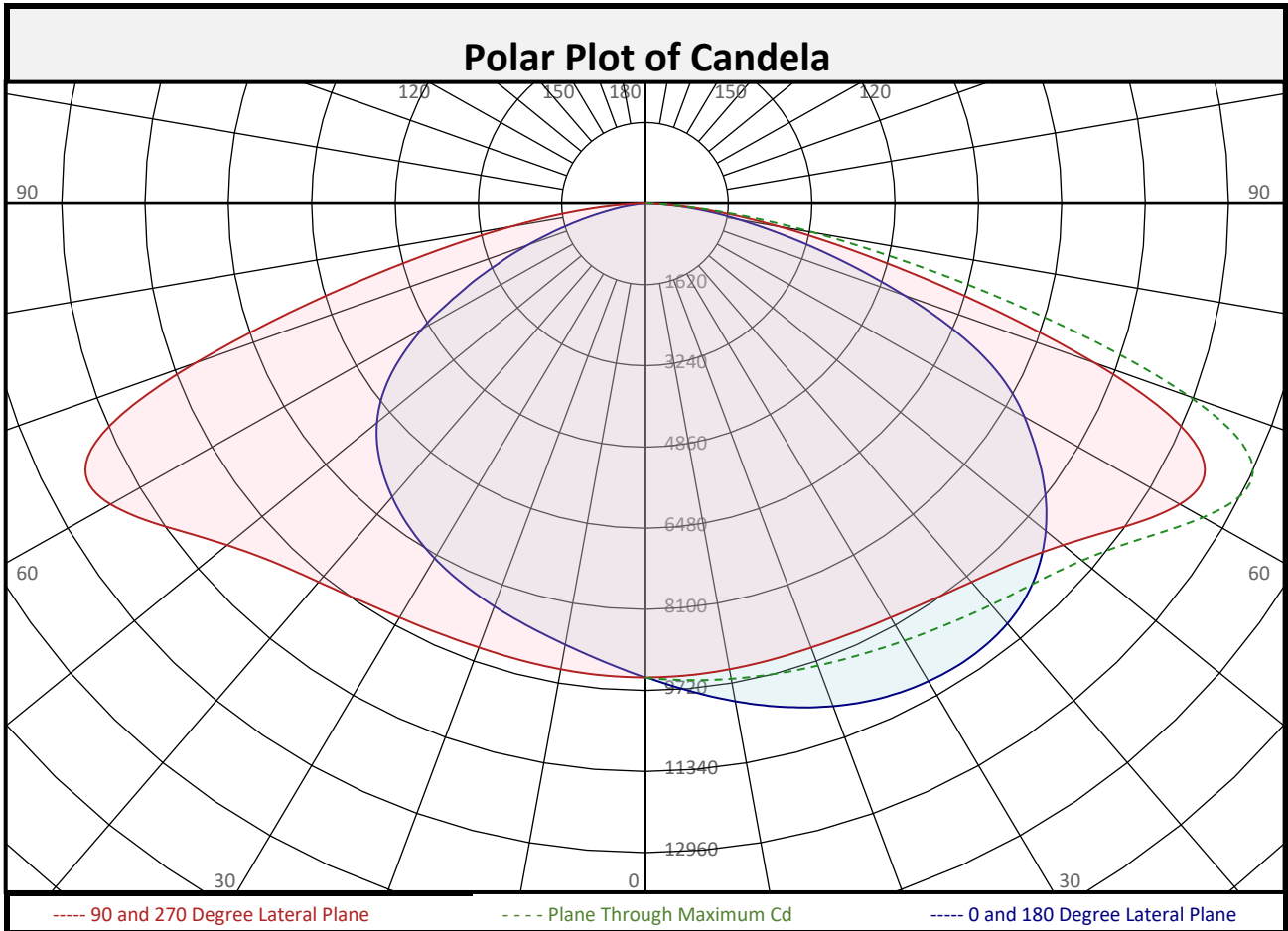
Test date: 11/30/2023
Report date: 12/05/2023

Signed: _____



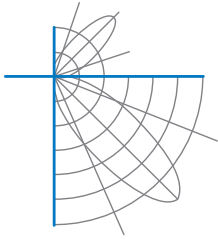
Report of Test

LLIA002251-015

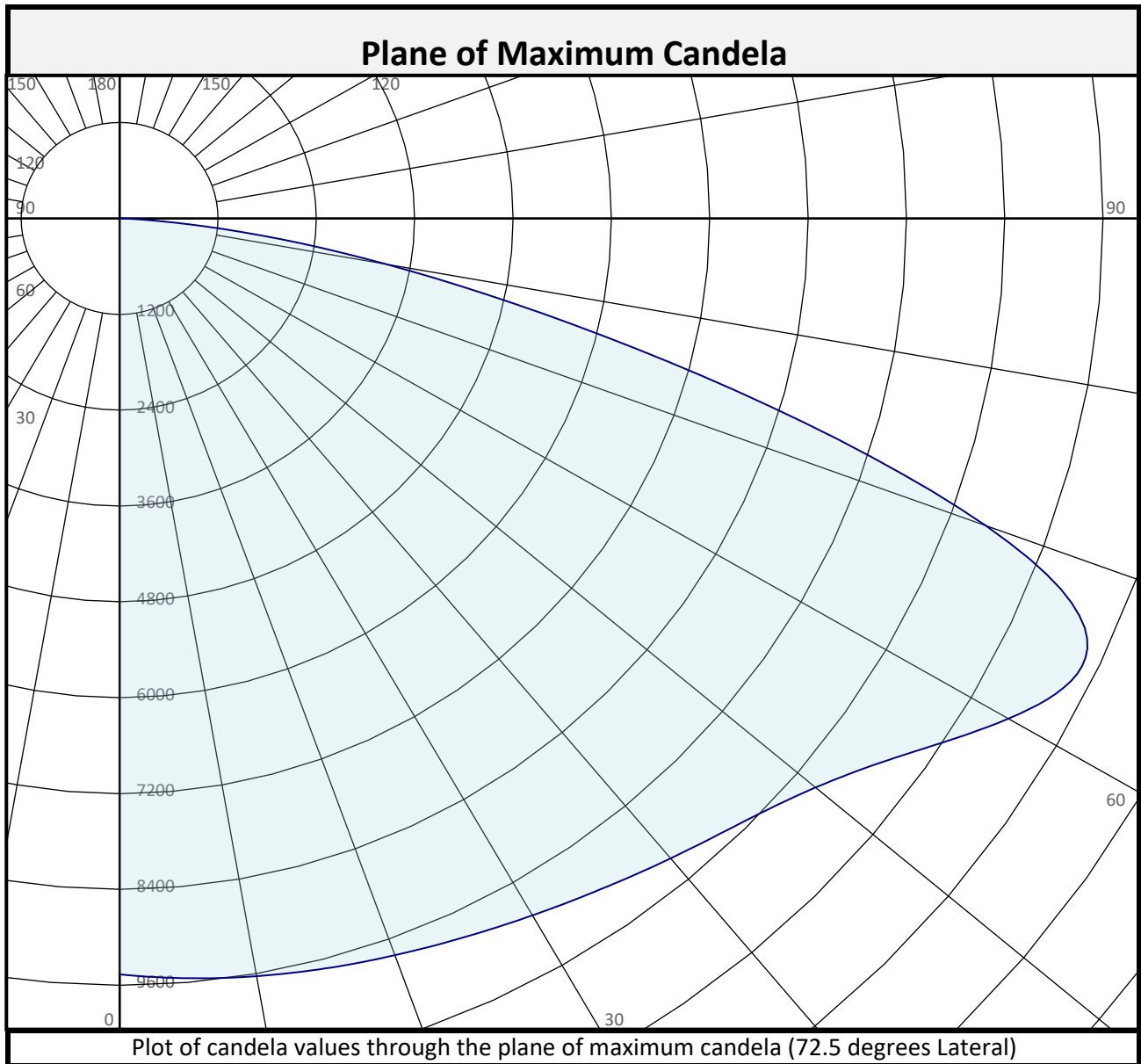


Zonal Flux Summary

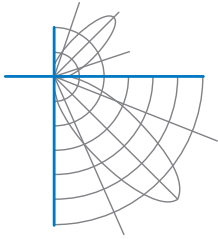
Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	904.6	2.0%	90-100	0.0	0.0%	0-20	3600	8.1%
10-20	2696	6.1%	100-110	0.0	0.0%	0-30	8027	18.0%
20-30	4426	9.9%	110-120	0.0	0.0%	0-40	14051	31.6%
30-40	6024	13.5%	120-130	0.0	0.0%	0-60	29786	66.9%
40-50	7384	16.6%	130-140	0.0	0.0%	0-80	43399	97.5%
50-60	8351	18.8%	140-150	0.0	0.0%	10-90	43607	98.0%
60-70	8370	18.8%	150-160	0.0	0.0%	20-50	17834	40.1%
70-80	5243	11.8%	160-170	0.0	0.0%	40-90	30460	68.4%
80-90	1113	2.5%	170-180	0.0	0.0%	60-90	14726	33.1%
0-90	44511	100.0%	90-180	0.0	0.0%	0-180	44511	100.0%



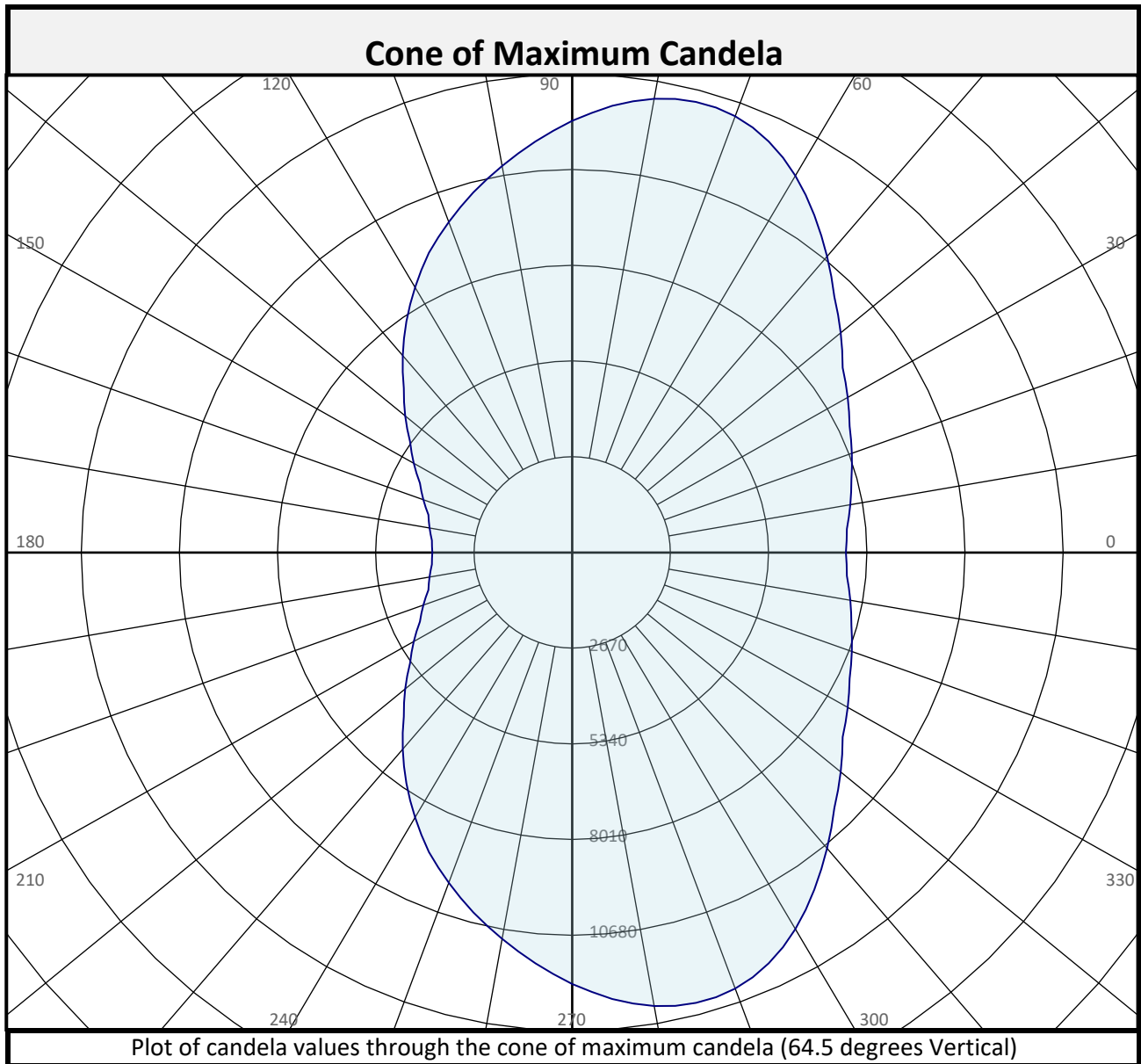
Report of Test
LLIA002251-015



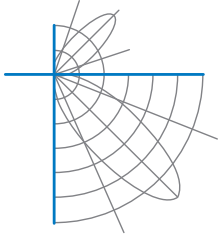
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	25487.6	57.3%	0.0	0.0%	25487.6	57.3%
House Side	19023.8	42.7%	0.0	0.0%	19023.8	42.7%
Total	44511.3	100.0%	0.0	0.0%	44511.3	100.0%



Report of Test
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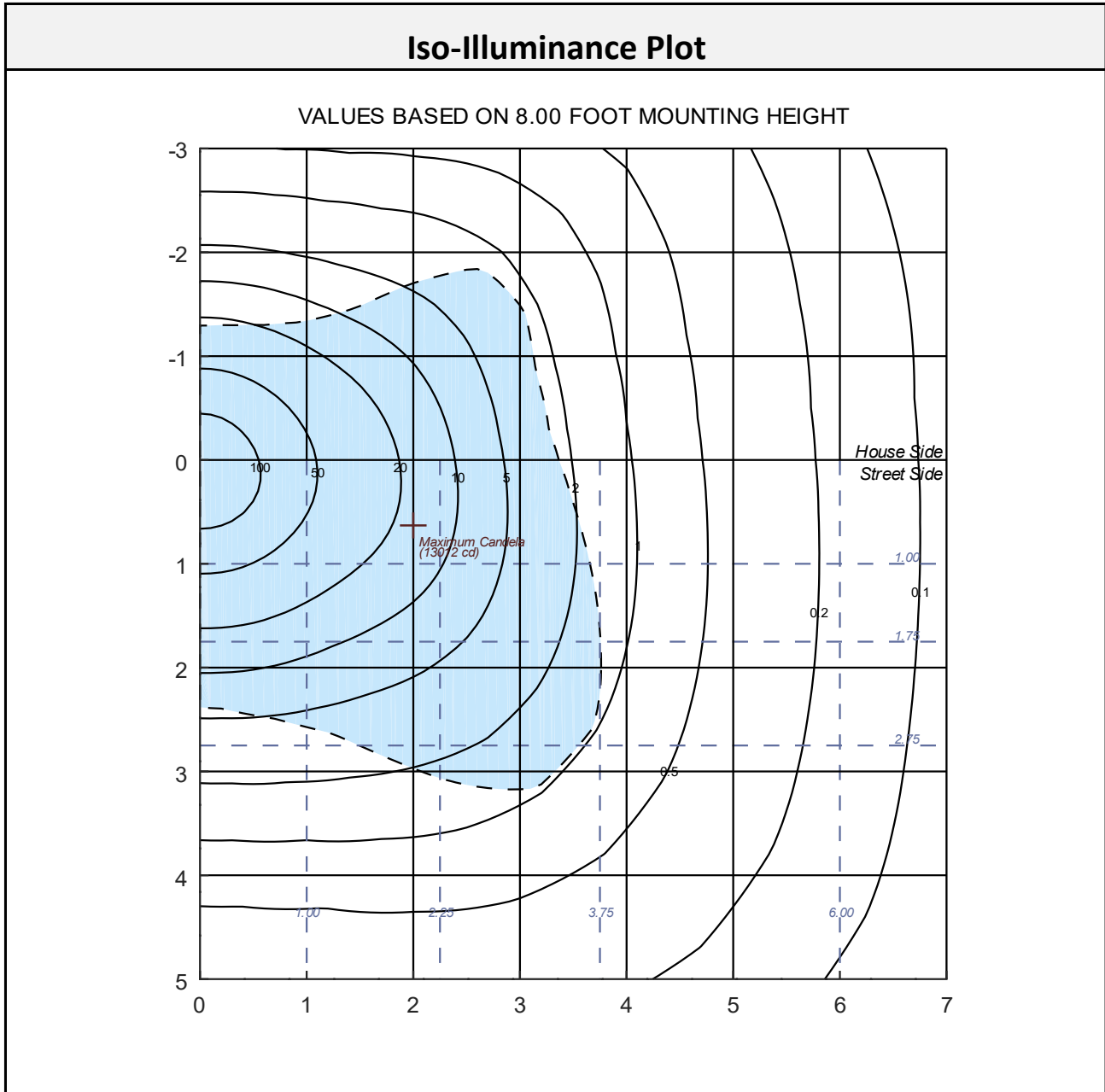


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	25487.6	57.3%	0.0	0.0%	25487.6	57.3%
House Side	19023.8	42.7%	0.0	0.0%	19023.8	42.7%
Total	44511.3	100.0%	0.0	0.0%	44511.3	100.0%

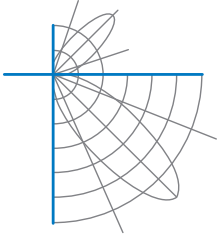


Report of Test

LLIA002251-015

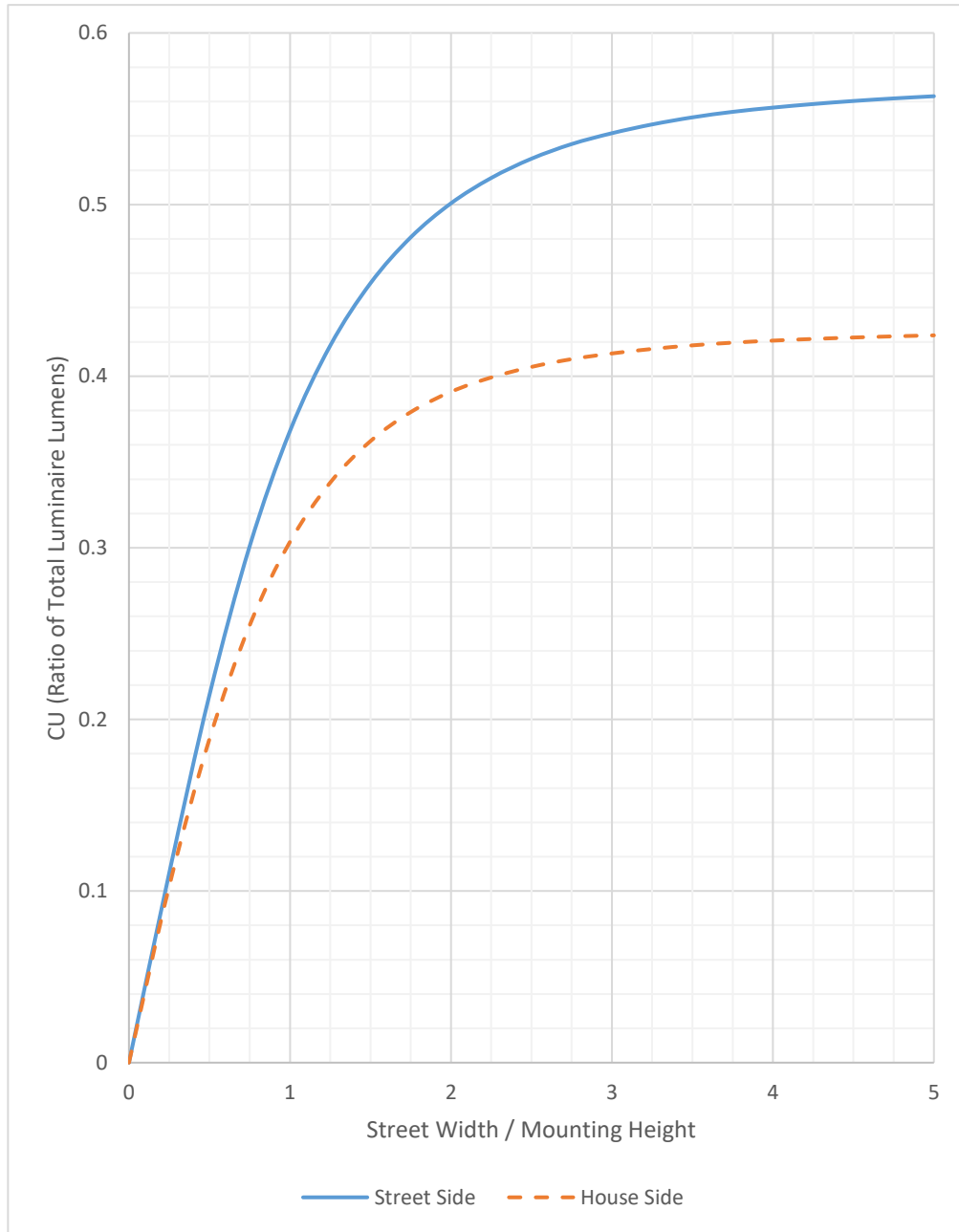


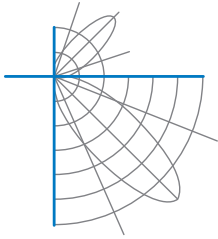
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



Report of Test LLIA002251-015

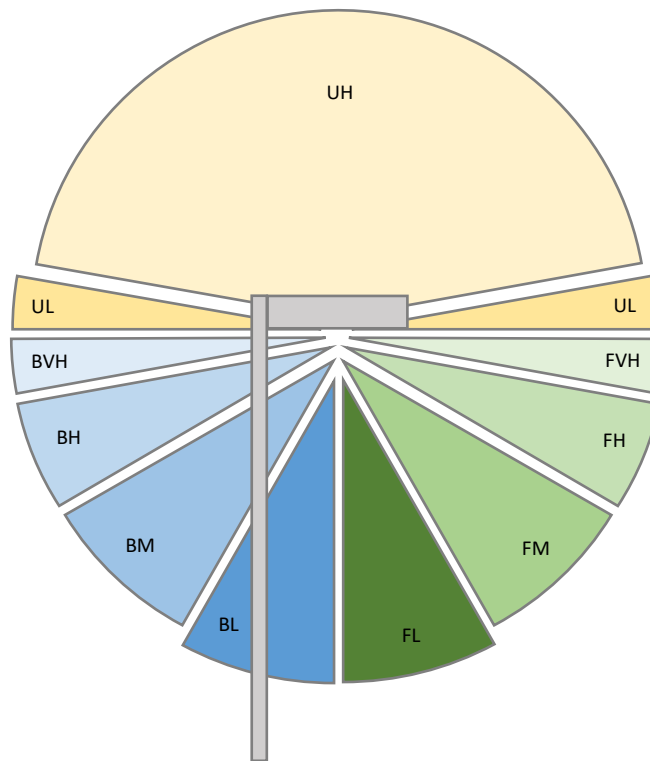
Coefficients of Utilization Plot





Report of Test
LLIA002251-015

LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	3722.7 Lm
BM - Back Mid (30°-60°)	9485.5 Lm
BH - Back High (60°-80°)	5409.4 Lm
BVH - Back Very High (80°-90°)	406.2 Lm

Forward Light

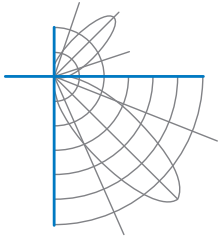
FL - Forward Low (0°-30°)	4303.9 Lm
FM - Forward Mid (30°-60°)	12273.7 Lm
FH - Forward High (60°-80°)	8203.4 Lm
FVH - Forward Very High (80°-90°)	706.6 Lm

Uplight

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

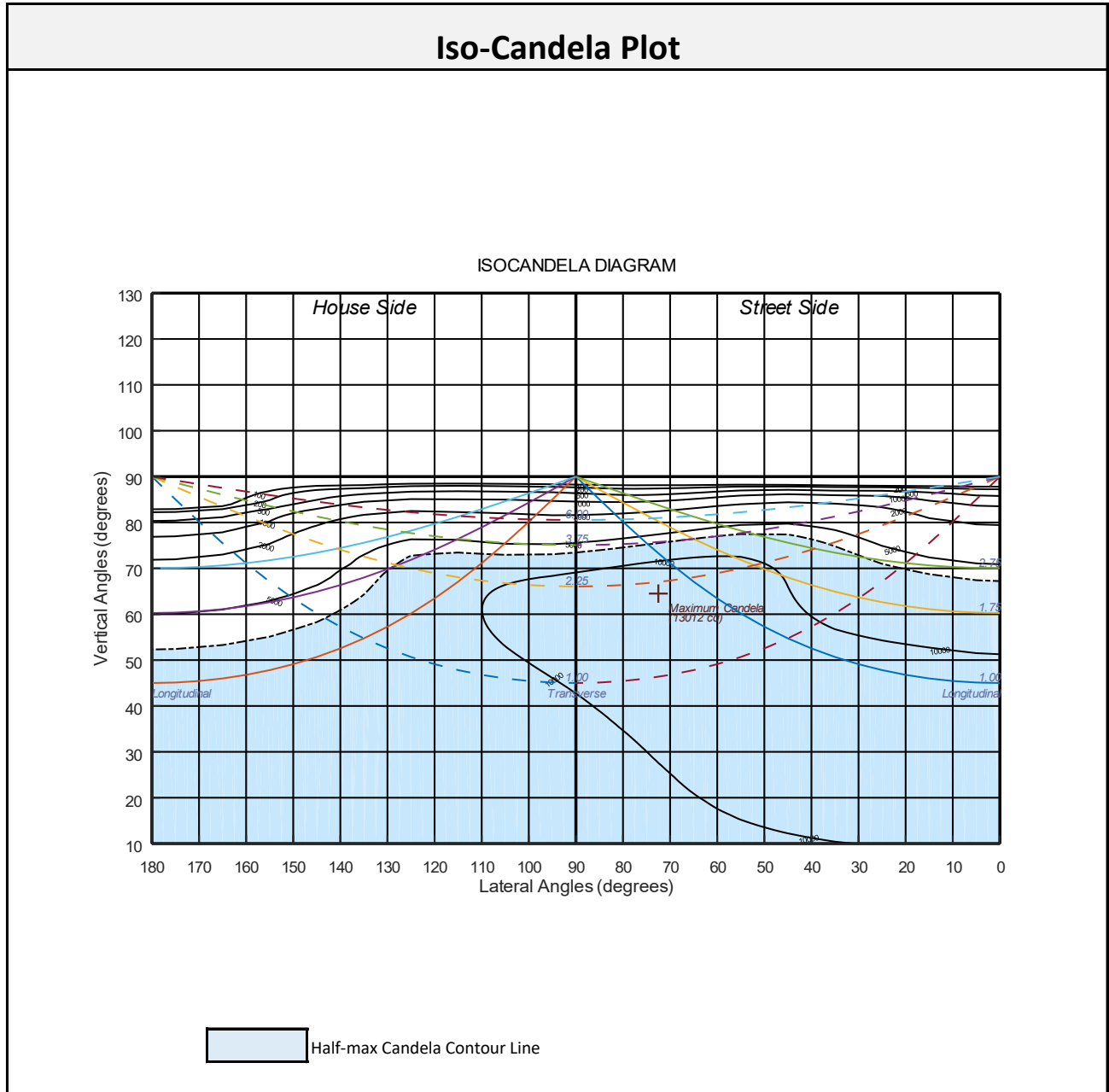
BUG Rating: Asymmetrical Luminaire (Type I, II, III, and IV) B5 - U0 - G5

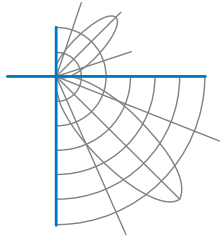
BUG Rating: Quadrilateral Symmetrical Luminaire (Type V, Type VS) B5 - U0 - G4



Report of Test
LLIA002251-015

Iso-Candela Plot





Report of Test

LLIA002251-015

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	
0	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	
2.5	9601	9612	9606	9598	9586	9567	9548	9542	9536	9529	9523	9517	9512	9503	9501	
5	9761	9769	9759	9740	9713	9675	9634	9622	9610	9595	9586	9573	9560	9546	9537	
7.5	9926	9932	9916	9889	9846	9786	9722	9704	9686	9667	9649	9629	9609	9588	9573	
10	10089	10094	10075	10035	9977	9899	9811	9786	9763	9736	9711	9684	9658	9631	9606	
12.5	10249	10256	10232	10181	10111	10013	9902	9871	9840	9806	9775	9741	9707	9672	9640	
15	10402	10410	10383	10327	10241	10126	9993	9955	9916	9878	9838	9799	9758	9717	9679	
17.5	10547	10556	10526	10464	10370	10237	10085	10040	9997	9951	9906	9861	9811	9765	9718	
20	10677	10685	10656	10592	10490	10348	10175	10126	10078	10025	9975	9924	9866	9814	9761	
22.5	10794	10800	10772	10709	10604	10450	10262	10212	10157	10102	10046	9988	9926	9869	9811	
25	10889	10893	10870	10814	10707	10550	10352	10298	10239	10183	10121	10058	9992	9929	9866	
27.5	10960	10968	10951	10900	10799	10642	10439	10383	10324	10262	10198	10133	10062	9998	9928	
30	11010	11020	11008	10968	10875	10722	10523	10467	10405	10343	10279	10212	10140	10073	9999	
32.5	11041	11051	11044	11017	10936	10794	10604	10548	10490	10429	10365	10296	10224	10156	10078	
35	11043	11054	11057	11045	10975	10850	10679	10627	10574	10512	10454	10387	10316	10245	10170	
37.5	11015	11030	11042	11046	10995	10892	10747	10702	10656	10601	10547	10484	10414	10347	10272	
40	10951	10965	10996	11016	10988	10921	10809	10776	10734	10689	10642	10586	10521	10457	10384	
42.5	10841	10855	10907	10944	10947	10922	10861	10838	10809	10776	10735	10689	10635	10576	10509	
45	10675	10694	10765	10834	10870	10899	10897	10891	10880	10859	10833	10801	10758	10708	10654	
47.5	10449	10476	10573	10673	10757	10846	10926	10940	10947	10950	10944	10929	10905	10871	10829	
50	10167	10200	10331	10466	10603	10769	10949	10993	11029	11058	11081	11093	11092	11081	11056	
52.5	9826	9862	10031	10210	10410	10669	10982	11062	11138	11207	11264	11309	11338	11354	11352	
55	9429	9470	9679	9908	10179	10553	11037	11166	11290	11403	11508	11592	11655	11699	11715	
57.5	8982	9031	9273	9557	9913	10427	11129	11316	11496	11666	11814	11941	12036	12104	12137	
60	8516	8561	8825	9154	9607	10304	11254	11508	11745	11964	12159	12318	12441	12522	12563	
62.5	7978	8022	8322	8714	9267	10187	11400	11706	11996	12257	12484	12665	12797	12881	12911	
65	7289	7349	7734	8222	8906	10058	11494	11839	12156	12435	12666	12841	12957	13004	12993	
67.5	6399	6472	6963	7639	8514	9888	11433	11773	12068	12307	12480	12585	12613	12572	12471	
70	5378	5455	6002	6864	8037	9556	11020	11276	11456	11561	11586	11542	11430	11252	11027	
72.5	4343	4416	4951	5931	7343	8958	10002	10090	10098	10022	9883	9686	9458	9184	8891	
75	3393	3452	3930	4962	6425	7887	8381	8295	8154	7962	7735	7478	7216	6934	6655	
77.5	2558	2606	3023	4026	5386	6437	6479	6318	6119	5880	5641	5399	5164	4936	4720	
80	1855	1894	2258	3159	4208	4830	4617	4441	4251	4045	3845	3651	3476	3311	3166	
82.5	1237	1272	1591	2306	2897	3167	2937	2796	2642	2487	2337	2197	2076	1973	1889	
85	666	692	933	1325	1508	1639	1441	1338	1233	1133	1052	973	909	860	828	
87.5	147	153	202	255	266	321	299	275	252	229	213	201	193	185	179	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

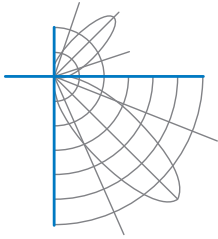
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.

North America (issuing laboratory)

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Report of Test

LLIA002251-015

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	
0	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	9461	
2.5	9496	9487	9484	9476	9453	9449	9422	9395	9375	9358	9342	9327	9320	9316	9312	
5	9525	9508	9499	9484	9449	9432	9380	9330	9291	9259	9228	9203	9188	9181	9178	
7.5	9554	9529	9512	9492	9444	9412	9335	9266	9207	9161	9118	9085	9067	9056	9051	
10	9582	9550	9525	9499	9437	9392	9292	9202	9127	9066	9015	8977	8954	8942	8937	
12.5	9608	9570	9539	9505	9431	9372	9248	9139	9049	8977	8918	8876	8851	8840	8833	
15	9637	9592	9553	9514	9428	9353	9207	9080	8975	8892	8828	8784	8756	8743	8737	
17.5	9669	9618	9570	9525	9426	9338	9170	9022	8904	8812	8742	8693	8663	8650	8646	
20	9708	9650	9594	9542	9428	9331	9138	8970	8838	8735	8660	8607	8575	8560	8557	
22.5	9750	9689	9627	9564	9443	9329	9110	8925	8777	8662	8582	8523	8488	8470	8466	
25	9801	9732	9668	9600	9465	9338	9093	8886	8720	8594	8502	8439	8399	8380	8374	
27.5	9858	9787	9717	9645	9499	9355	9085	8854	8669	8528	8425	8353	8308	8286	8281	
30	9924	9849	9775	9699	9540	9386	9085	8830	8623	8466	8348	8265	8209	8184	8176	
32.5	10002	9923	9847	9768	9597	9432	9102	8817	8586	8405	8271	8173	8105	8072	8064	
35	10092	10013	9931	9848	9667	9491	9131	8818	8554	8346	8188	8071	7989	7948	7938	
37.5	10192	10113	10028	9939	9758	9562	9179	8833	8532	8291	8104	7963	7860	7808	7802	
40	10310	10226	10142	10055	9863	9659	9244	8859	8518	8234	8010	7841	7718	7656	7648	
42.5	10437	10362	10275	10188	9989	9776	9330	8901	8512	8176	7907	7704	7561	7490	7477	
45	10588	10520	10436	10346	10146	9925	9440	8960	8506	8109	7789	7547	7383	7301	7287	
47.5	10776	10710	10636	10552	10350	10115	9576	9031	8497	8025	7648	7363	7175	7080	7069	
50	11013	10964	10899	10812	10604	10351	9753	9115	8482	7917	7472	7140	6925	6819	6805	
52.5	11324	11281	11217	11135	10915	10637	9957	9209	8450	7775	7248	6861	6615	6494	6480	
55	11703	11671	11611	11524	11281	10969	10180	9300	8394	7589	6969	6522	6239	6093	6072	
57.5	12134	12103	12037	11937	11667	11301	10400	9379	8306	7352	6626	6110	5776	5599	5577	
60	12565	12523	12441	12328	12000	11573	10548	9412	8183	7067	6220	5626	5234	5032	5006	
62.5	12890	12827	12713	12562	12172	11677	10562	9361	8025	6745	5764	5088	4606	4350	4321	
65	12924	12799	12634	12437	11951	11409	10321	9172	7818	6410	5289	4442	3929	3715	3687	
67.5	12305	12086	11844	11580	11024	10490	9637	8774	7547	6071	4718	3823	3295	3056	3031	
70	10760	10459	10156	9862	9302	8860	8409	8064	7163	5652	4180	3223	2701	2465	2442	
72.5	8590	8276	7984	7721	7254	6928	6805	6986	6587	5133	3639	2648	2100	1898	1876	
75	6389	6136	5907	5705	5369	5158	5203	5668	5604	4470	3063	2065	1565	1365	1346	
77.5	4523	4342	4186	4054	3848	3727	3839	4324	4456	3674	2467	1543	1060	905	890	
80	3036	2924	2832	2756	2645	2598	2740	3012	3175	2723	1811	1032	662	550	540	
82.5	1820	1769	1729	1700	1671	1679	1821	1903	2000	1686	1157	605	269	168	162	
85	810	810	818	830	866	914	995	1013	1030	833	486	191	34	1	1	
87.5	174	175	182	196	231	264	294	322	292	196	151	67	11	1	1	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

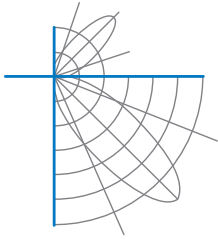
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.

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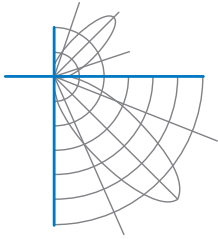


Report of Test

LLIA002251-015

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	

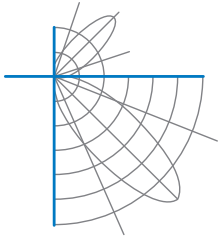


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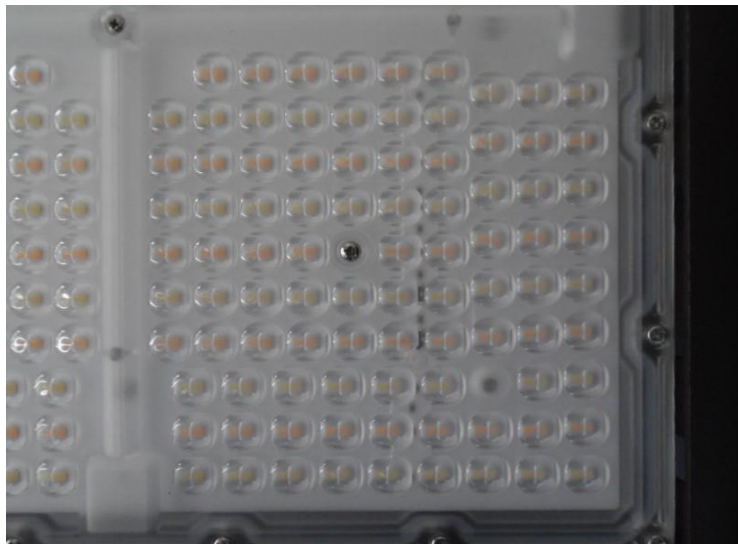
Luminous Intensity (Candela) Table

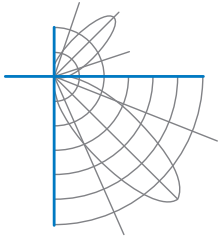
	Lateral (C-Plane) Angles															
	77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	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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Additional Pictures of Test Subject





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Test Distance 9.5 m
Ambient Temperature 25.4 °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.