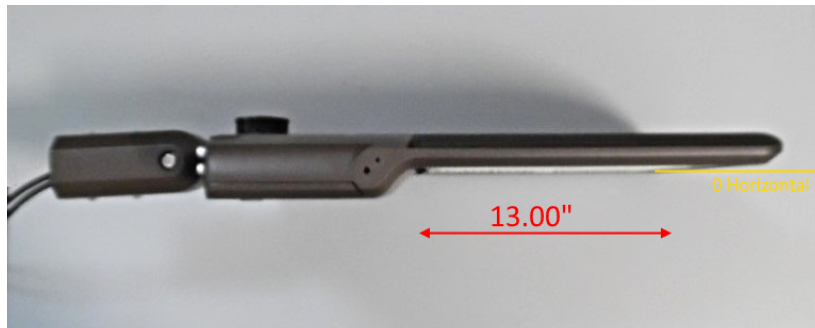


Report of Test

LLIA002251-022

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: ARL-480PCS-T5 -350W Setting - 4000K Setting
Pole mounted, cast aluminum housing, white LED board with
frosted plastic enclosure with clear optic sections below LEDs.
1120 white LEDs, 560 CW LEDs and 560 WW LEDs
Two Sosen SS-240NH-E260BH LED driver



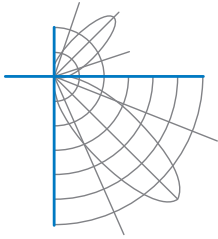
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.1 Vac	Luminous Flux	56837.5 Lumens
Input Current	2.906 A	Total Efficacy	163.1 Lm/W
Input Power	348.4 W		
Frequency	60.00 Hz		
Power Factor	0.998	Roadway Type	Area Light
Current THD	4.0 %		

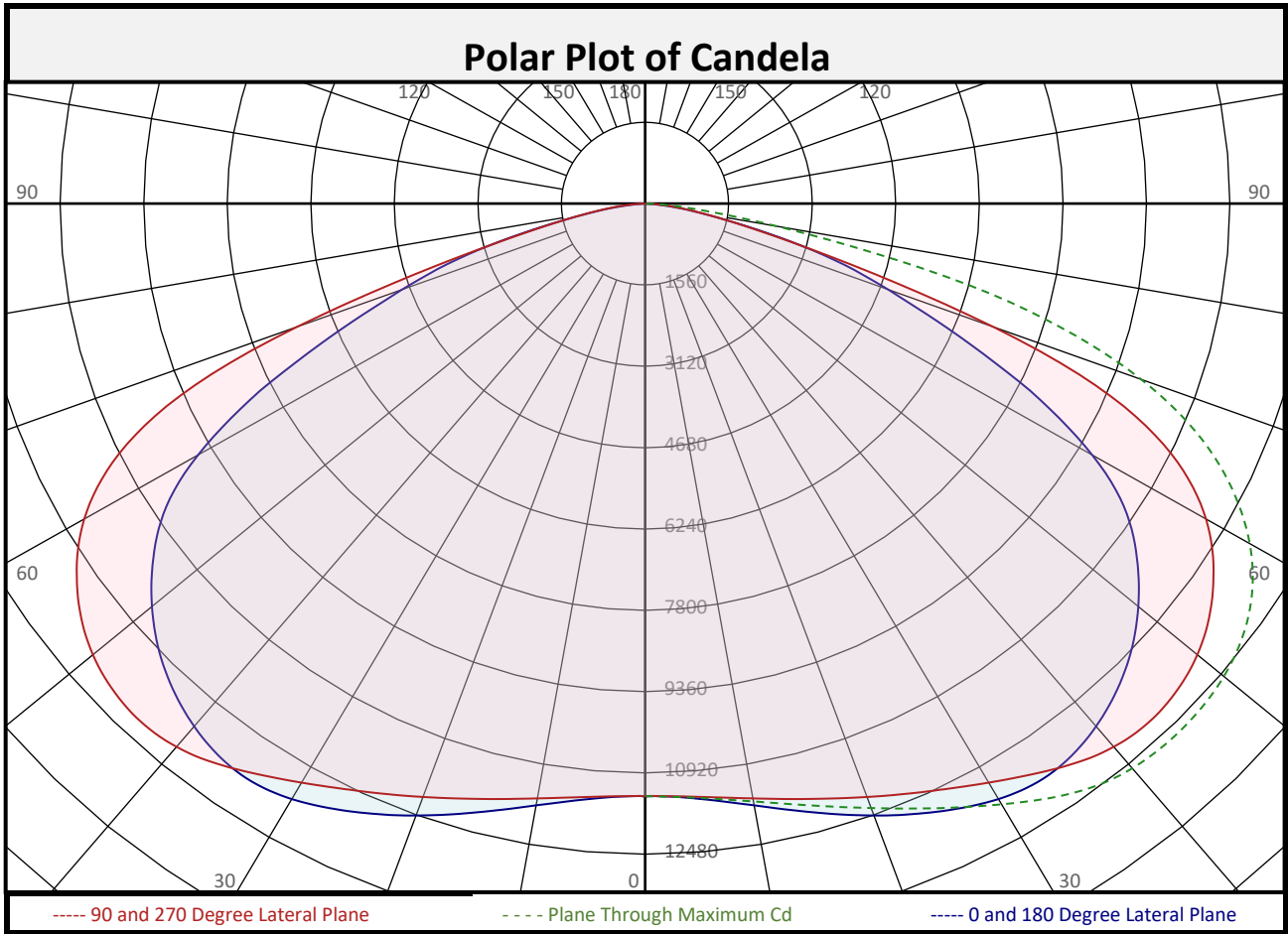
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 11/15/2023
Report date: 11/17/2023

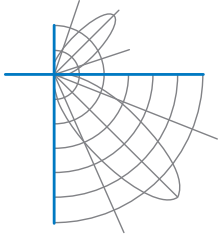
Signed: _____



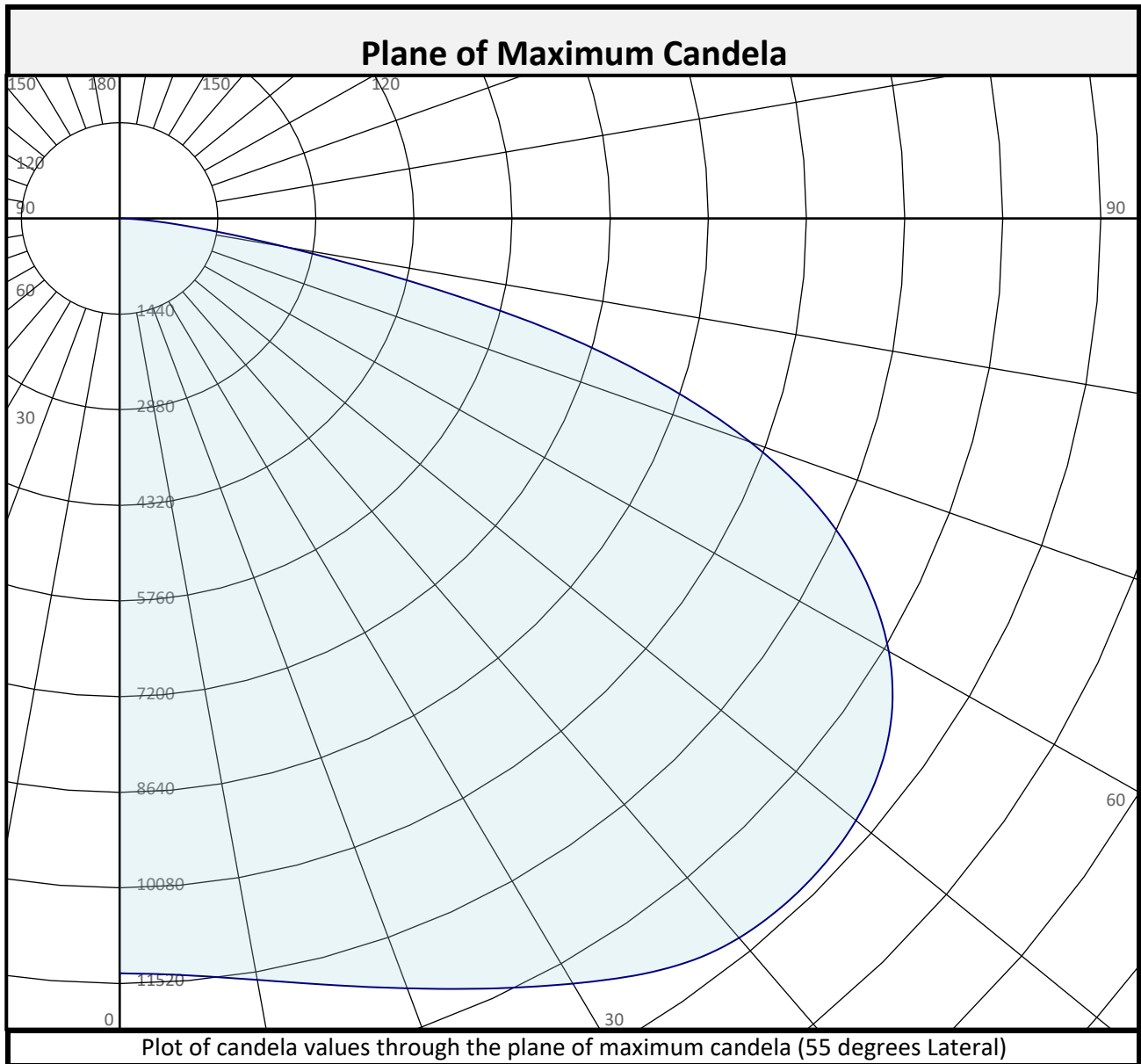
Report of Test
LLIA002251-022



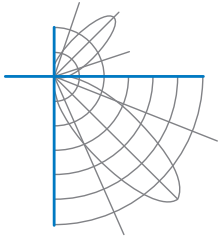
Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	1100	1.9%		90-100	0.0	0.0%		0-20	4509	7.9%
10-20	3409	6.0%		100-110	0.0	0.0%		0-30	10434	18.4%
20-30	5926	10.4%		110-120	0.0	0.0%		0-40	18945	33.3%
30-40	8510	15.0%		120-130	0.0	0.0%		0-60	40853	71.9%
40-50	10522	18.5%		130-140	0.0	0.0%		0-80	56121	98.7%
50-60	11387	20.0%		140-150	0.0	0.0%		10-90	55737	98.1%
60-70	10075	17.7%		150-160	0.0	0.0%		20-50	24958	43.9%
70-80	5193	9.1%		160-170	0.0	0.0%		40-90	37893	66.7%
80-90	716.4	1.3%		170-180	0.0	0.0%		60-90	15984	28.1%
0-90	56837	100.0%		90-180	0.0	0.0%		0-180	56837	100.0%



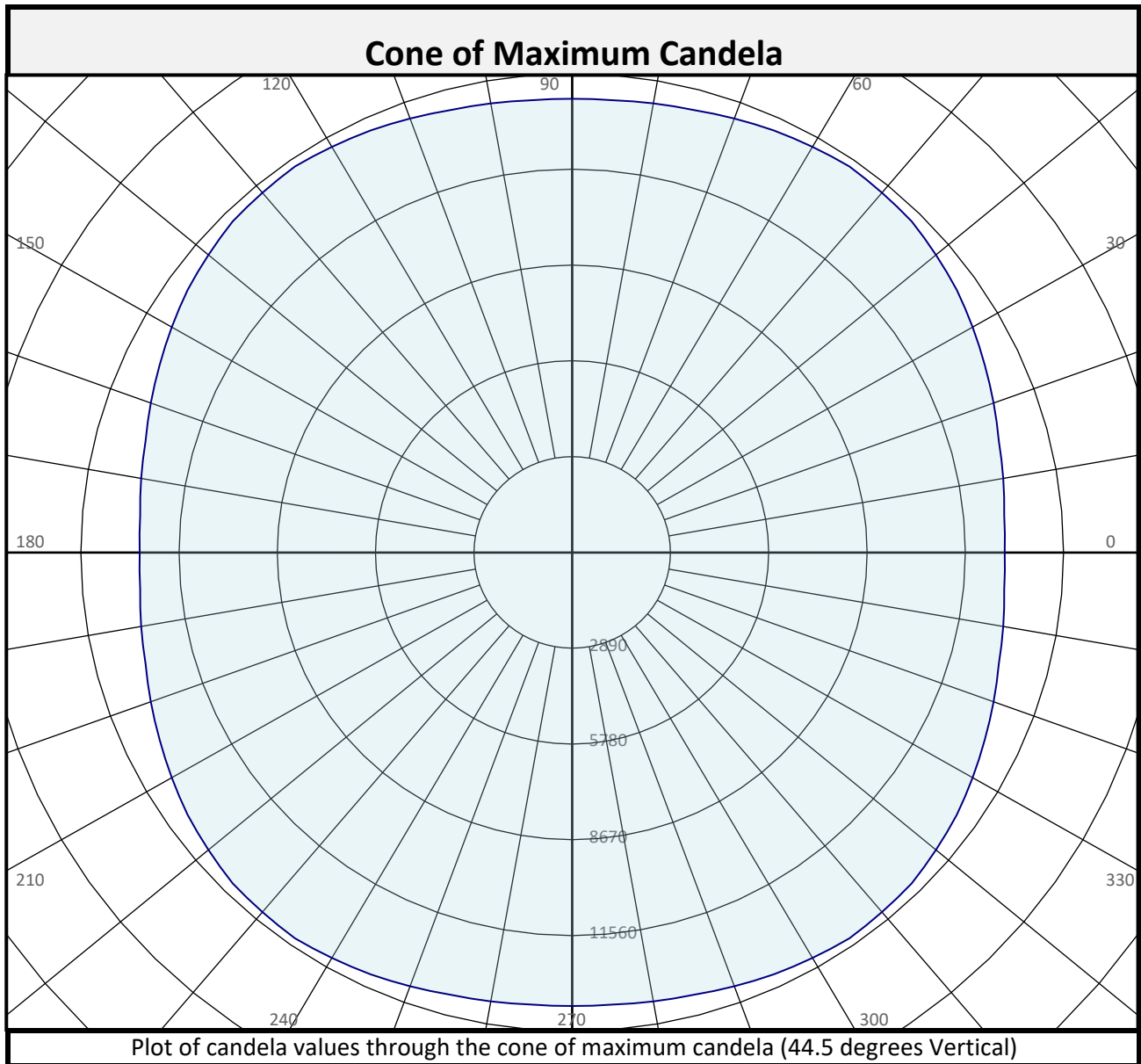
Report of Test
LLIA002251-022



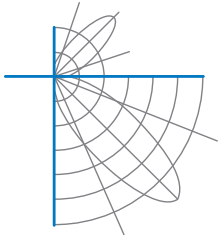
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	28418.7	50.0%	0.0	0.0%	28418.7	50.0%
House Side	28418.7	50.0%	0.0	0.0%	28418.7	50.0%
Total	56837.5	100.0%	0.0	0.0%	56837.5	100.0%



Report of Test
LLIA002251-022

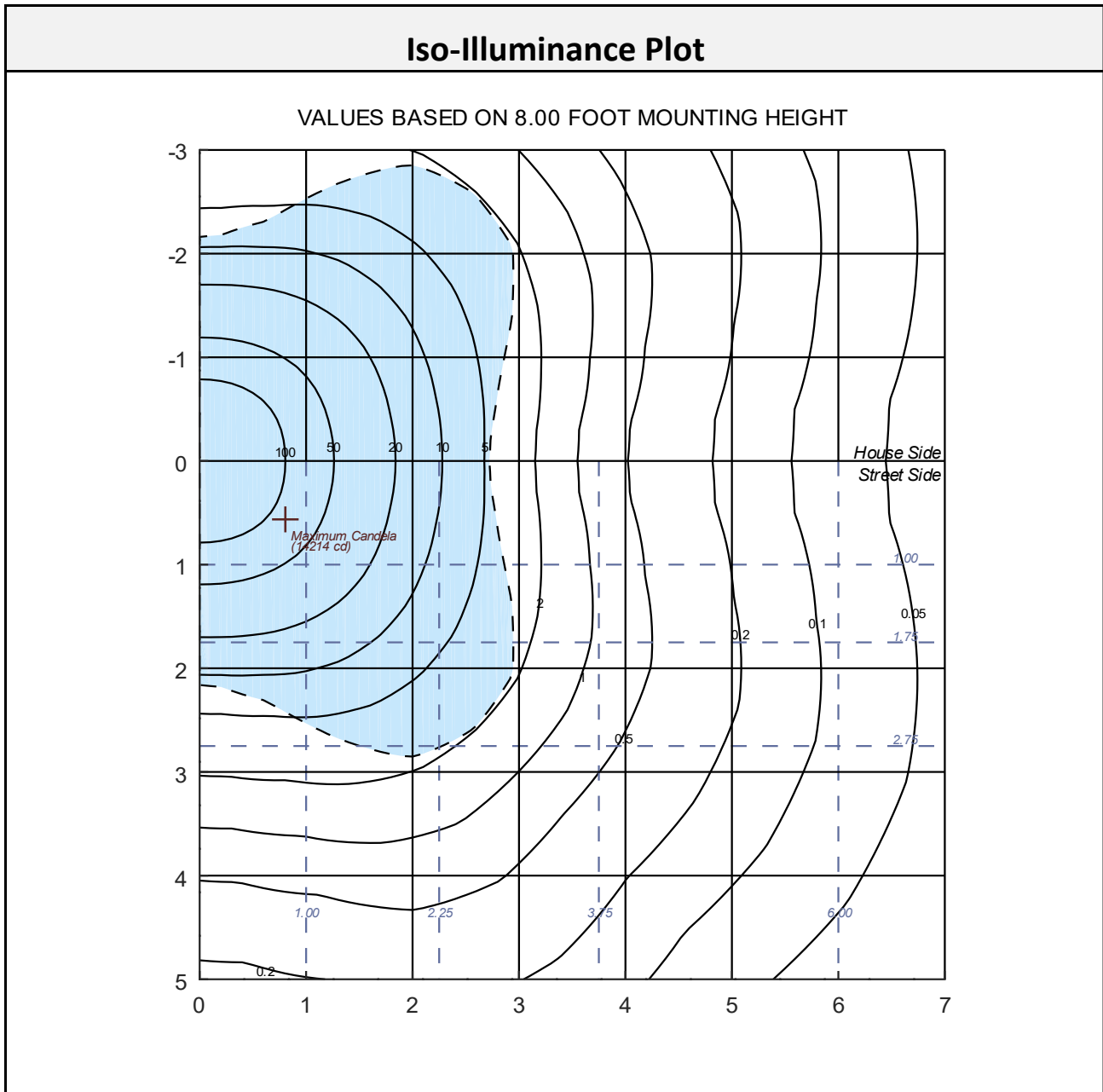


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	28418.7	50.0%	0.0	0.0%	28418.7	50.0%
House Side	28418.7	50.0%	0.0	0.0%	28418.7	50.0%
Total	56837.5	100.0%	0.0	0.0%	56837.5	100.0%

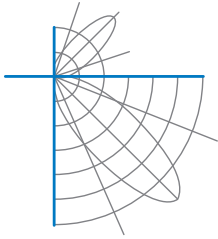


Report of Test

LLIA002251-022

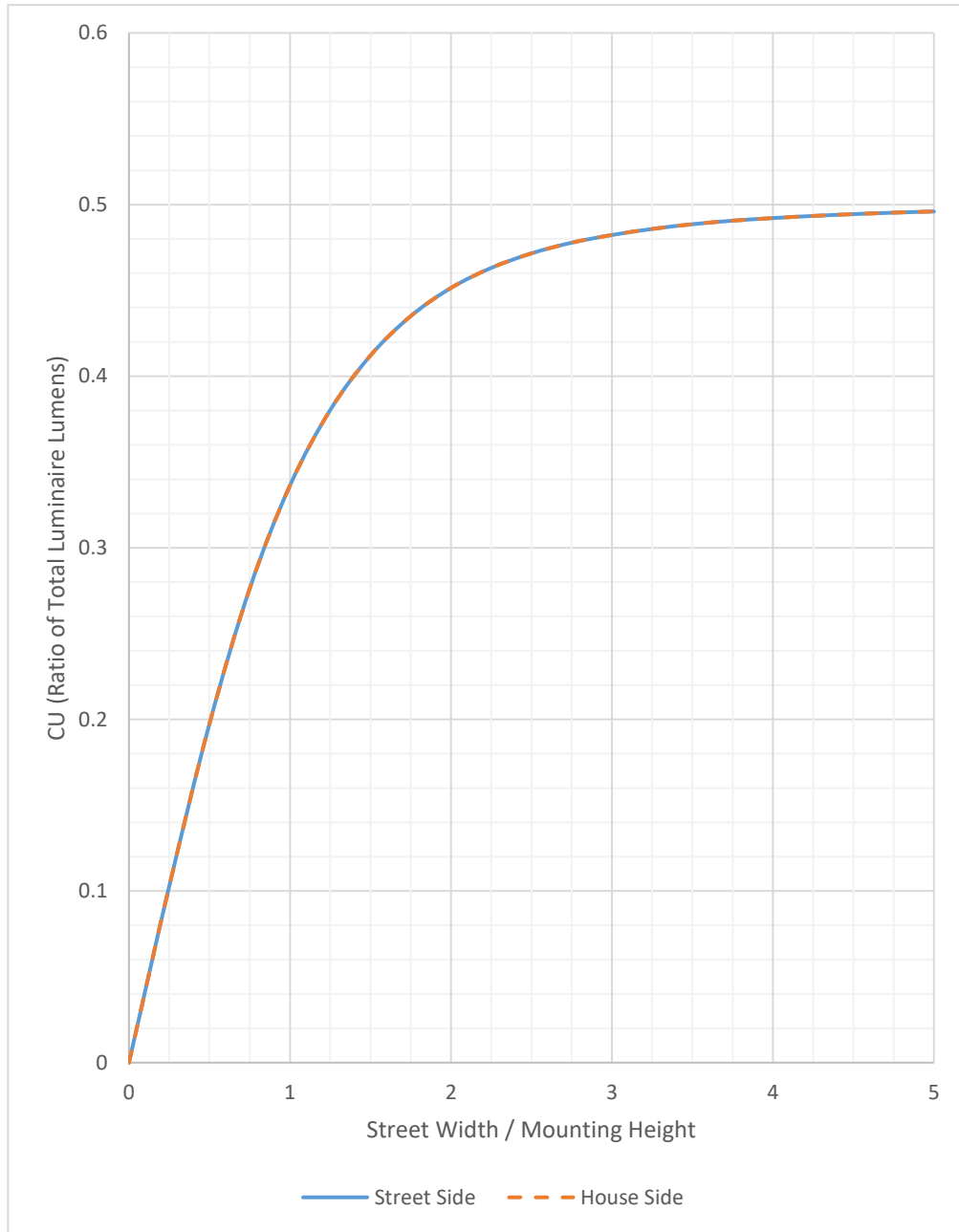


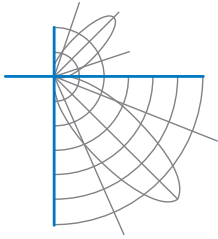
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



Report of Test LLIA002251-022

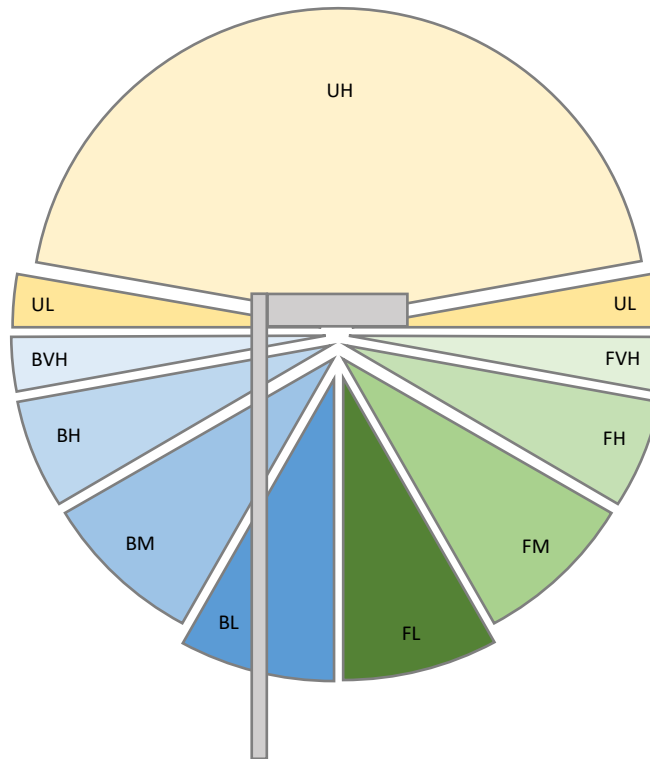
Coefficients of Utilization Plot





Report of Test
LLIA002251-022

LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	5217.1 Lm
BM - Back Mid (30°-60°)	15209.6 Lm
BH - Back High (60°-80°)	7633.8 Lm
BVH - Back Very High (80°-90°)	358.2 Lm

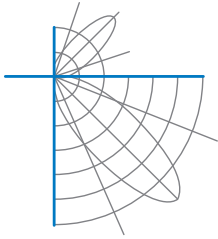
Forward Light

FL - Forward Low (0°-30°)	5217.1 Lm
FM - Forward Mid (30°-60°)	15209.6 Lm
FH - Forward High (60°-80°)	7633.8 Lm
FVH - Forward Very High (80°-90°)	358.2 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

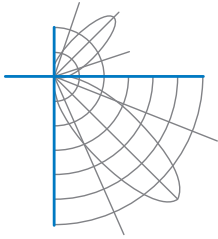


Report of Test

LLIA002251-022

Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles											
	0	5	15	25	35	45	55	65	75	85	90	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	11366	11366	11366	11366	11366	11366	11366	11366	11366	11366	11366
	2.5	11380	11390	11391	11389	11391	11389	11388	11385	11382	11381	11374
	5	11454	11461	11461	11457	11453	11446	11441	11432	11428	11425	11418
	7.5	11568	11575	11571	11563	11555	11540	11528	11513	11501	11496	11488
	10	11713	11721	11715	11705	11690	11666	11643	11618	11598	11589	11580
	12.5	11890	11895	11888	11874	11852	11821	11785	11748	11716	11698	11692
	15	12080	12085	12079	12065	12039	11999	11949	11894	11850	11823	11818
	17.5	12282	12286	12283	12271	12244	12198	12135	12063	12003	11964	11956
	20	12483	12485	12490	12487	12465	12414	12337	12245	12166	12116	12108
	22.5	12680	12681	12697	12707	12696	12645	12558	12446	12341	12277	12268
	25	12866	12870	12898	12929	12935	12891	12796	12661	12530	12449	12438
	27.5	13038	13047	13089	13146	13176	13143	13044	12889	12732	12637	12621
	30	13184	13197	13258	13350	13414	13403	13305	13132	12952	12839	12821
	32.5	13275	13294	13384	13517	13630	13657	13570	13381	13180	13051	13031
	35	13291	13313	13435	13620	13796	13877	13818	13629	13414	13273	13249
	37.5	13224	13247	13403	13645	13883	14032	14018	13840	13620	13473	13453
	40	13091	13115	13300	13597	13899	14109	14142	13979	13761	13622	13601
	42.5	12906	12935	13146	13497	13864	14134	14199	14040	13820	13693	13679
	45	12667	12704	12946	13355	13789	14115	14212	14038	13809	13689	13677
	47.5	12376	12416	12693	13163	13670	14063	14182	13984	13731	13617	13602
	50	12020	12067	12386	12923	13505	13966	14104	13873	13590	13471	13460
	52.5	11605	11655	12021	12628	13288	13817	13967	13694	13373	13248	13241
	55	11129	11188	11598	12280	13018	13604	13754	13431	13075	12954	12943
	57.5	10517	10590	11093	11882	12689	13309	13449	13080	12698	12582	12573
	60	9637	9732	10412	11391	12286	12926	13032	12620	12215	12099	12094
	62.5	8509	8622	9472	10761	11775	12425	12489	12032	11586	11444	11435
	65	7186	7314	8312	9947	11149	11795	11816	11276	10740	10528	10504
	67.5	5920	6040	7029	8844	10375	10997	10959	10278	9574	9159	9099
	70	4842	4947	5822	7657	9263	10003	9851	8992	7940	7085	6934
	72.5	3897	3997	4802	6443	7966	8593	8431	7340	5928	4700	4509
75	2811	2908	3743	5258	6510	6846	6664	5508	4009	2899	2770	
77.5	1779	1852	2575	4063	4869	4544	4365	3781	2563	1822	1747	
80	1061	1104	1559	2786	2946	2471	2484	2260	1597	1156	1111	
82.5	596	625	907	1628	1399	1196	1281	1198	970	705	676	
85	218	233	375	605	569	522	599	547	489	377	357	
87.5	67	76	122	146	140	129	169	164	160	133	125	
90	0	0	0	0	0	0	0	0	0	0	0	

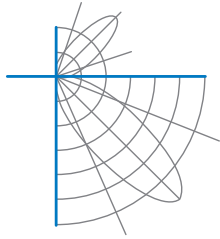


Report of Test

LLIA002251-022

Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles											
	0	5	15	25	35	45	55	65	75	85	90	
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
	92.5	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0
	152.5	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0
	157.5	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0
	162.5	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	
167.5	0	0	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	0	0	
172.5	0	0	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	0	0	
177.5	0	0	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	0	0	

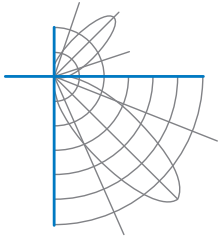


Report of Test

LLIA002251-022

Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles											
	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	11366	11366	11366	11366	11366	11366	11366	11366	11366	11366	11366
	2.5	11374	11381	11382	11385	11388	11389	11391	11389	11391	11390	11380
	5	11418	11425	11428	11432	11441	11446	11453	11457	11461	11461	11454
	7.5	11488	11496	11501	11513	11528	11540	11555	11563	11571	11575	11568
	10	11580	11589	11598	11618	11643	11666	11690	11705	11715	11721	11713
	12.5	11692	11698	11716	11748	11785	11821	11852	11874	11888	11895	11890
	15	11818	11823	11850	11894	11949	11999	12039	12065	12079	12085	12080
	17.5	11956	11964	12003	12063	12135	12198	12244	12271	12283	12286	12282
	20	12108	12116	12166	12245	12337	12414	12465	12487	12490	12485	12483
	22.5	12268	12277	12341	12446	12558	12645	12696	12707	12697	12681	12680
	25	12438	12449	12530	12661	12796	12891	12935	12929	12898	12870	12866
	27.5	12621	12637	12732	12889	13044	13143	13176	13146	13089	13047	13038
	30	12821	12839	12952	13132	13305	13403	13414	13350	13258	13197	13184
	32.5	13031	13051	13180	13381	13570	13657	13630	13517	13384	13294	13275
	35	13249	13273	13414	13629	13818	13877	13796	13620	13435	13313	13291
	37.5	13453	13473	13620	13840	14018	14032	13883	13645	13403	13247	13224
	40	13601	13622	13761	13979	14142	14109	13899	13597	13300	13115	13091
	42.5	13679	13693	13820	14040	14199	14134	13864	13497	13146	12935	12906
	45	13677	13689	13809	14038	14212	14115	13789	13355	12946	12704	12667
	47.5	13602	13617	13731	13984	14182	14063	13670	13163	12693	12416	12376
50	13460	13471	13590	13873	14104	13966	13505	12923	12386	12067	12020	
52.5	13241	13248	13373	13694	13967	13817	13288	12628	12021	11655	11605	
55	12943	12954	13075	13431	13754	13604	13018	12280	11598	11188	11129	
57.5	12573	12582	12698	13080	13449	13309	12689	11882	11093	10590	10517	
60	12094	12099	12215	12620	13032	12926	12286	11391	10412	9732	9637	
62.5	11435	11444	11586	12032	12489	12425	11775	10761	9472	8622	8509	
65	10504	10528	10740	11276	11816	11795	11149	9947	8312	7314	7186	
67.5	9099	9159	9574	10278	10959	10997	10375	8844	7029	6040	5920	
70	6934	7085	7940	8992	9851	10003	9263	7657	5822	4947	4842	
72.5	4509	4700	5928	7340	8431	8593	7966	6443	4802	3997	3897	
75	2770	2899	4009	5508	6664	6846	6510	5258	3743	2908	2811	
77.5	1747	1822	2563	3781	4365	4544	4869	4063	2575	1852	1779	
80	1111	1156	1597	2260	2484	2471	2946	2786	1559	1104	1061	
82.5	676	705	970	1198	1281	1196	1399	1628	907	625	596	
85	357	377	489	547	599	522	569	605	375	233	218	
87.5	125	133	160	164	169	129	140	146	122	76	67	
90	0	0	0	0	0	0	0	0	0	0	0	

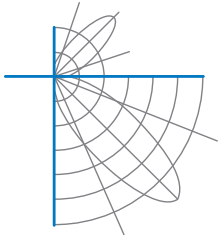


Report of Test

LLIA002251-022

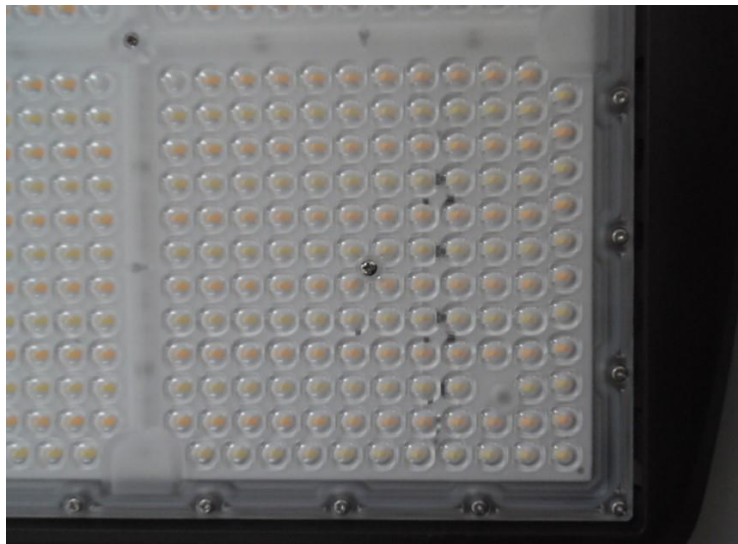
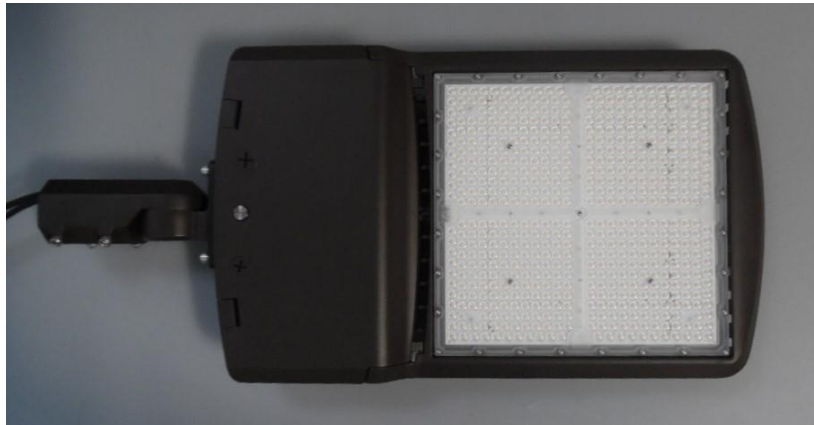
Luminous Intensity (Candela) Table

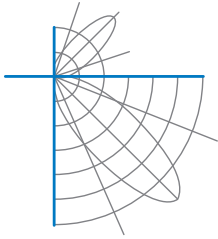
	Lateral (C-Plane) Angles											
	90	95	105	115	125	135	145	155	165	175	180	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0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



Report of Test
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Additional Pictures of Test Subject





Report of Test

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Test Distance 9.5 m
Ambient Temperature 25.6 °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.