

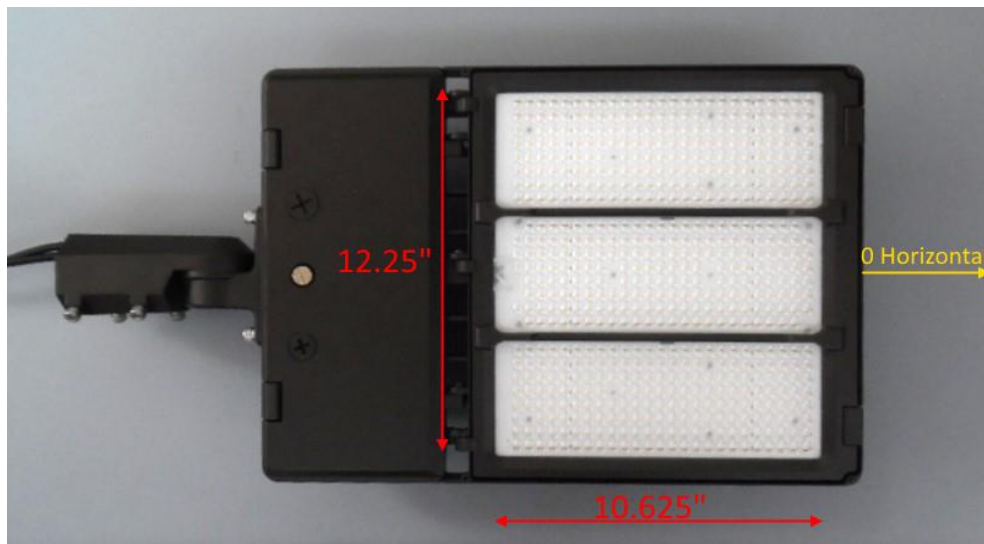


Report of Test

LLIA002251-044

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: ARL-300PCS-SWO - T5 Optics - 250W - 4000K Setting
Pole mounted, cast aluminum housing, white LED board with
frosted plastic enclosure with clear optic sections below each LED.
576 white LEDs, 288 CW LEDs and 288 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	36878.3 Lumens
Input Current	2.030 A	Total Efficacy	152.4 Lm/W
Input Power	242.0 W		
Frequency	60.00 Hz		
Power Factor	0.993	Roadway Type	Area Light
Current THD	9.4 %		

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

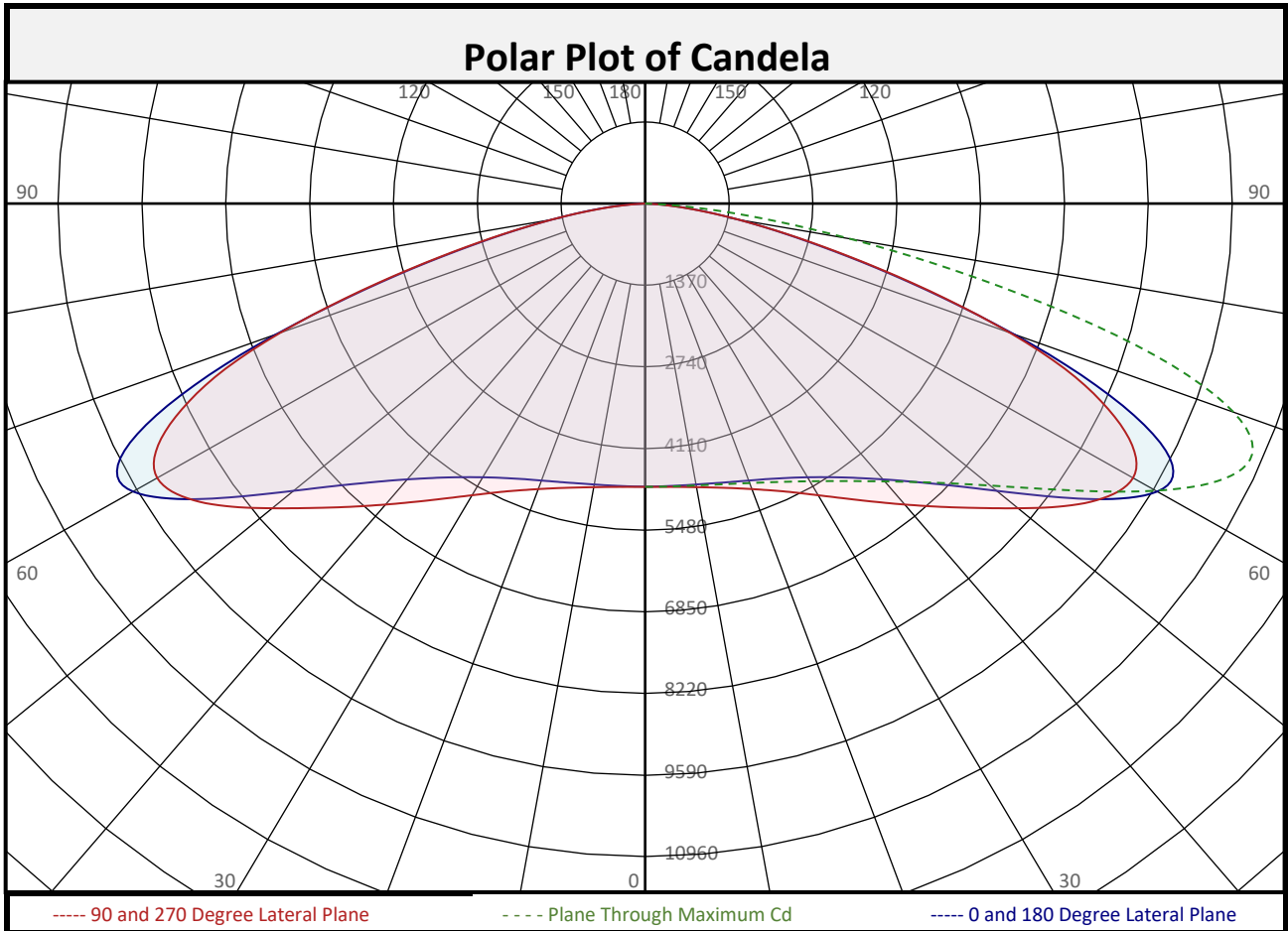
Test date: 10/26/2023
Report date: 10/31/2023

Signed: _____



Report of Test

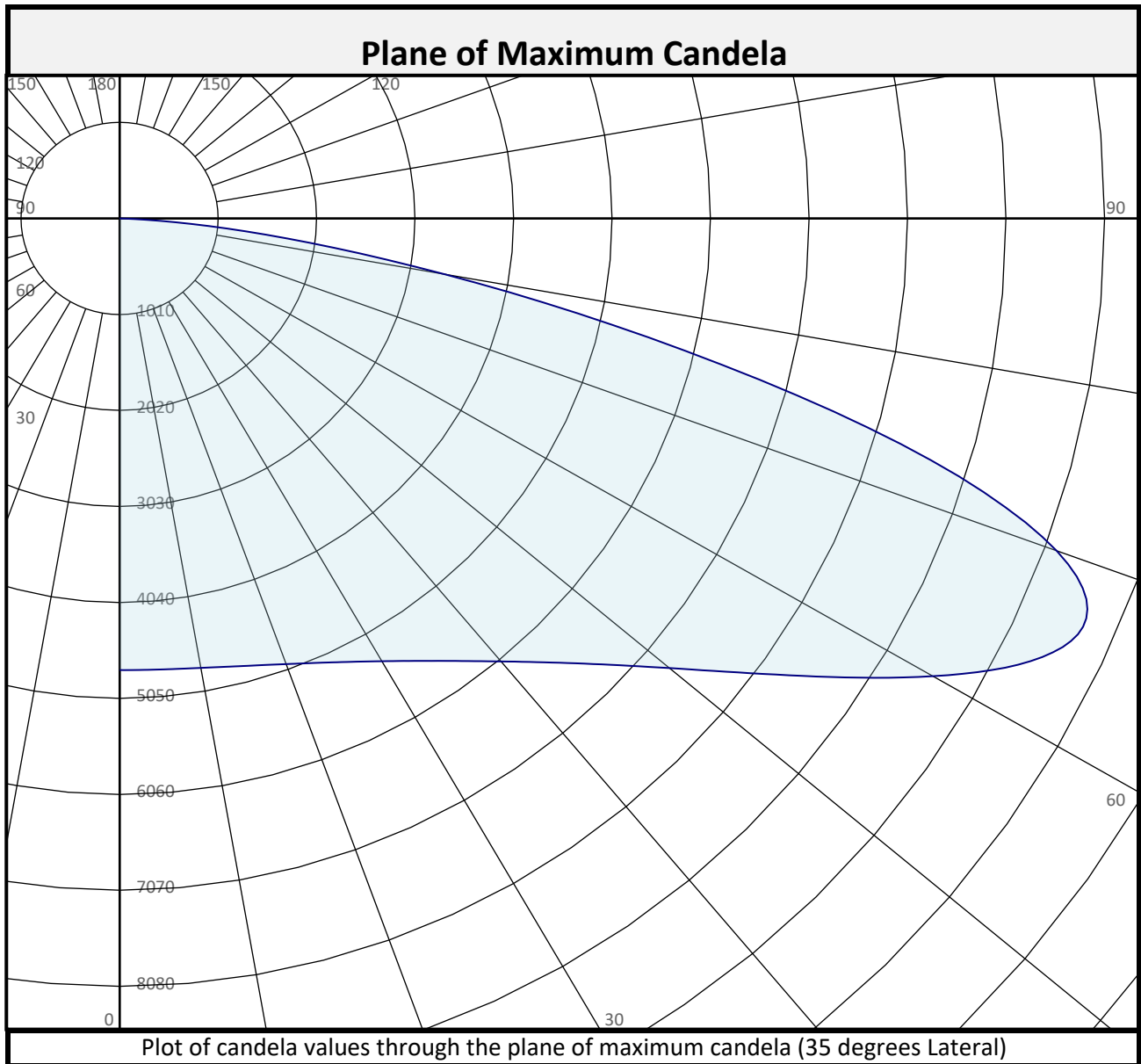
LLIA002251-044



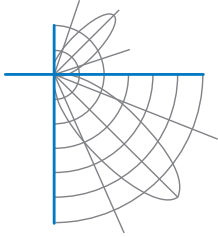
Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	456.5	1.2%		90-100	0.0	0.0%		0-20	1848	5.0%
10-20	1392	3.8%		100-110	0.0	0.0%		0-30	4267	11.6%
20-30	2419	6.6%		110-120	0.0	0.0%		0-40	7929	21.5%
30-40	3663	9.9%		120-130	0.0	0.0%		0-60	20938	56.8%
40-50	5320	14.4%		130-140	0.0	0.0%		0-80	35968	97.5%
50-60	7689	20.8%		140-150	0.0	0.0%		10-90	36422	98.8%
60-70	9386	25.5%		150-160	0.0	0.0%		20-50	11401	30.9%
70-80	5643	15.3%		160-170	0.0	0.0%		40-90	28949	78.5%
80-90	910.7	2.5%		170-180	0.0	0.0%		60-90	15940	43.2%
0-90	36878	100.0%		90-180	0.0	0.0%		0-180	36878	100.0%



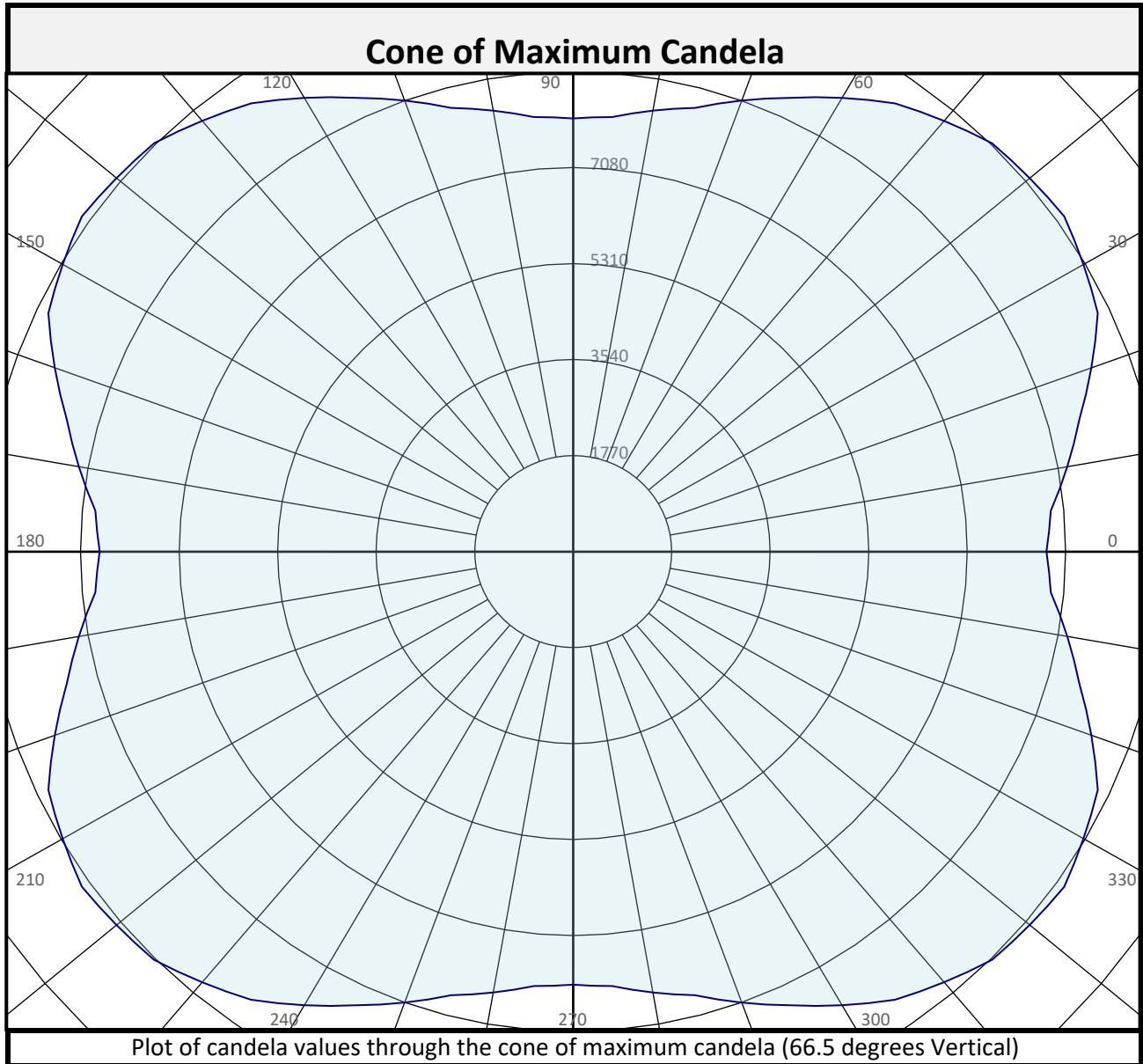
Report of Test
LLIA002251-044



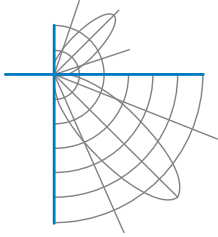
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	18439.1	50.0%	0.0	0.0%	18439.1	50.0%
House Side	18439.1	50.0%	0.0	0.0%	18439.1	50.0%
Total	36878.3	100.0%	0.0	0.0%	36878.3	100.0%



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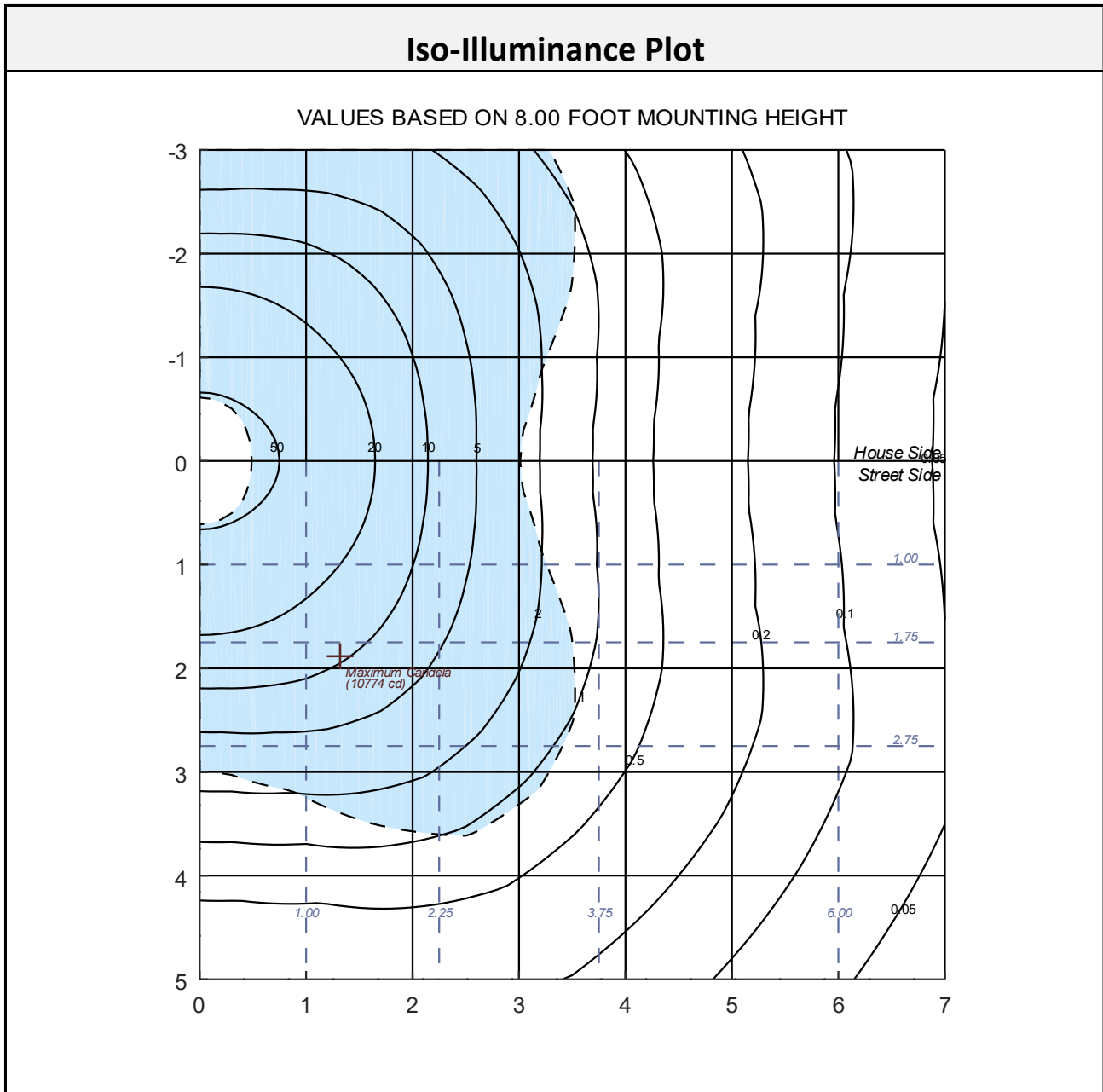


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	18439.1	50.0%	0.0	0.0%	18439.1	50.0%
House Side	18439.1	50.0%	0.0	0.0%	18439.1	50.0%
Total	36878.3	100.0%	0.0	0.0%	36878.3	100.0%



Report of Test

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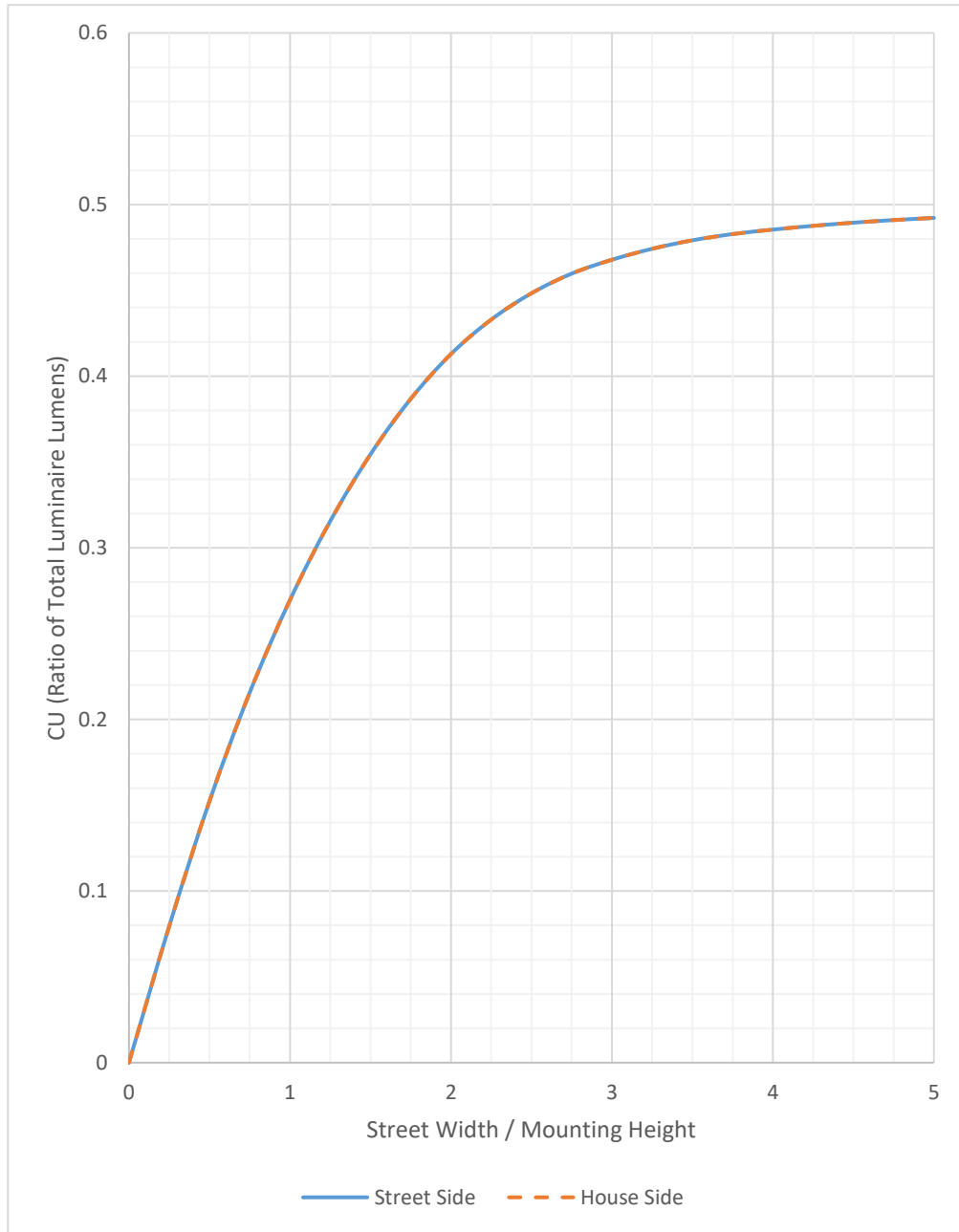


The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



Report of Test LLIA002251-044

Coefficients of Utilization Plot

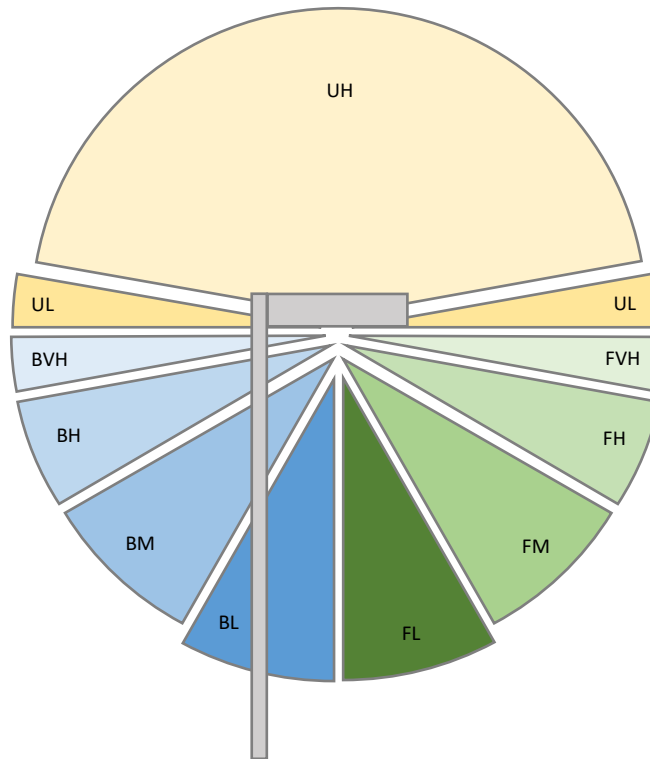




Report of Test

LLIA002251-044

LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	2133.4 Lm
BM - Back Mid (30°-60°)	8335.6 Lm
BH - Back High (60°-80°)	7514.8 Lm
BVH - Back Very High (80°-90°)	455.4 Lm

Forward Light

FL - Forward Low (0°-30°)	2133.4 Lm
FM - Forward Mid (30°-60°)	8335.6 Lm
FH - Forward High (60°-80°)	7514.8 Lm
FVH - Forward Very High (80°-90°)	455.4 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

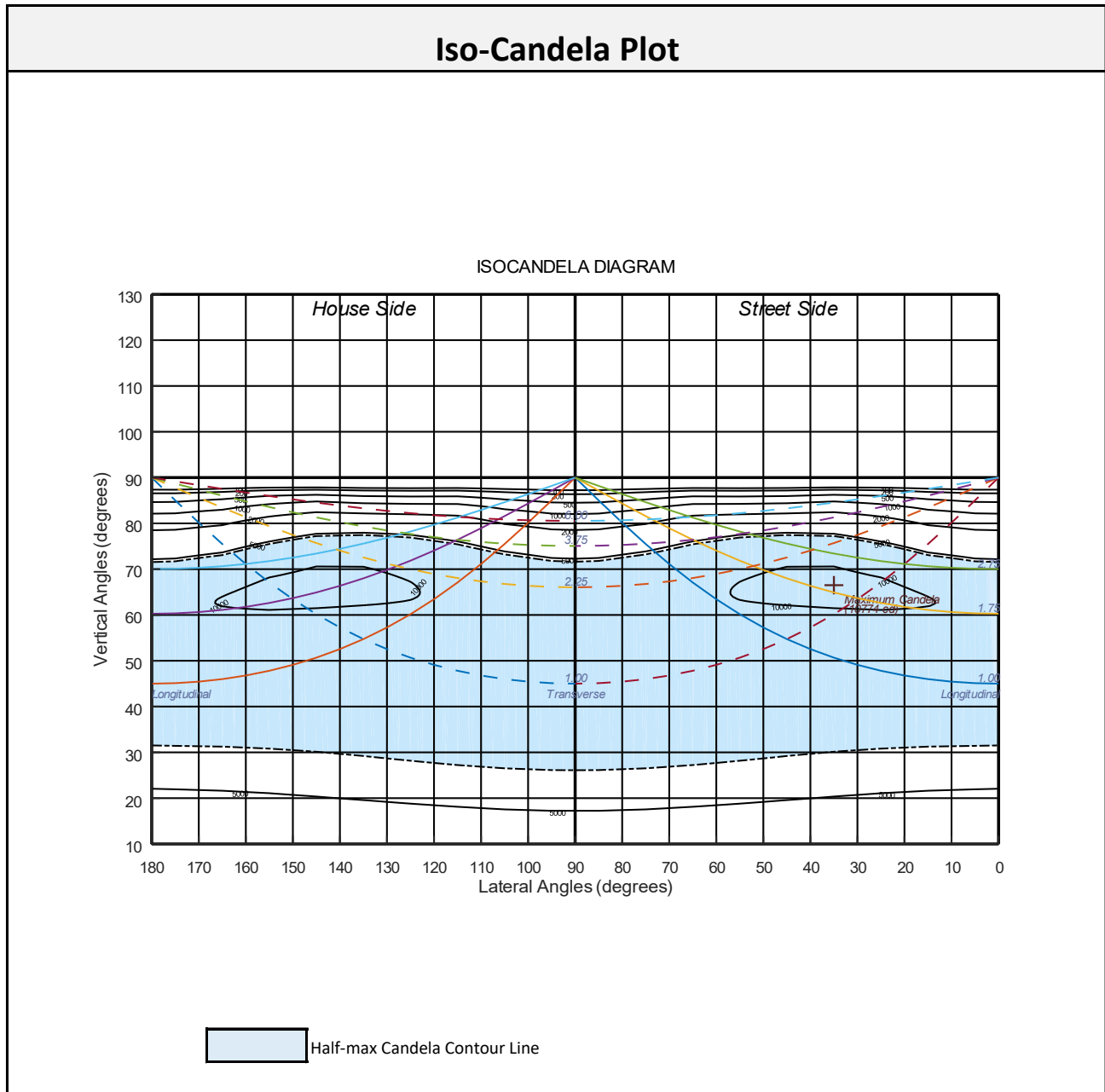
BUG Rating: Quadrilateral Symmetrical Luminaire (Type V, Type VS)

B5 - U0 - G4



Report of Test
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Iso-Candela Plot





Report of Test

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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	4752	4752	4752	4752	4752	4752	4752	4752	4752	4752	4752
	2.5	4752	4754	4754	4755	4756	4754	4755	4755	4754	4756	4757
	5	4758	4760	4761	4762	4764	4764	4765	4769	4769	4771	4770
	7.5	4770	4772	4773	4776	4779	4782	4786	4791	4793	4795	4795
	10	4788	4789	4792	4796	4802	4808	4815	4821	4828	4830	4831
	12.5	4814	4815	4819	4826	4834	4843	4853	4863	4873	4877	4877
	15	4850	4852	4856	4864	4876	4888	4902	4917	4929	4936	4935
	17.5	4894	4896	4902	4913	4927	4945	4963	4982	4999	5008	5008
	20	4948	4950	4958	4971	4990	5013	5037	5061	5083	5095	5096
	22.5	5012	5015	5025	5041	5065	5093	5125	5156	5183	5198	5201
	25	5092	5095	5106	5125	5154	5189	5230	5270	5304	5323	5325
	27.5	5188	5193	5203	5225	5258	5301	5351	5402	5445	5471	5474
	30	5305	5311	5320	5344	5380	5431	5494	5556	5611	5645	5649
	32.5	5446	5450	5459	5483	5521	5579	5655	5733	5800	5841	5848
	35	5611	5616	5624	5644	5683	5748	5839	5934	6015	6063	6069
	37.5	5810	5813	5816	5832	5870	5943	6048	6160	6255	6310	6316
	40	6044	6047	6044	6051	6085	6165	6285	6412	6521	6582	6590
	42.5	6321	6323	6312	6305	6333	6415	6546	6690	6810	6878	6886
	45	6649	6649	6628	6606	6620	6702	6845	6998	7125	7197	7208
	47.5	7037	7036	7005	6962	6959	7035	7182	7340	7472	7550	7560
50	7502	7499	7451	7387	7360	7421	7560	7718	7859	7940	7950	
52.5	8039	8035	7976	7888	7834	7867	7985	8140	8281	8355	8367	
55	8633	8628	8566	8465	8381	8365	8454	8593	8702	8754	8762	
57.5	9213	9214	9181	9104	8992	8918	8965	9038	9069	9073	9068	
60	9664	9675	9731	9745	9632	9508	9474	9412	9302	9215	9202	
62.5	9726	9771	10040	10278	10238	10087	9901	9618	9273	9043	9009	
65	9150	9243	9848	10509	10672	10524	10129	9495	8873	8507	8460	
67.5	7967	8089	8995	10204	10743	10642	9962	8971	8143	7669	7605	
70	6406	6526	7545	9225	10227	10194	9269	8112	7144	6452	6349	
72.5	4801	4893	5785	7617	9025	8997	8108	6997	5816	4969	4869	
75	3415	3483	4148	5743	7188	7253	6610	5628	4331	3572	3491	
77.5	2343	2385	2834	4025	5176	5350	4999	4150	2991	2447	2390	
80	1533	1557	1863	2656	3389	3366	3210	2774	1946	1586	1546	
82.5	919	932	1123	1589	1970	1834	1739	1653	1154	914	888	
85	439	445	555	760	920	782	745	748	548	420	409	
87.5	85	82	107	142	162	133	124	131	100	75	75	
90	0	0	0	0	0	0	0	0	0	0	0	



Report of Test

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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

LLIA002251-044

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	4752	4752	4752	4752	4752	4752	4752	4752	4752	4752	4752
	2.5	4757	4756	4754	4755	4755	4754	4756	4755	4754	4754	4752
	5	4770	4771	4769	4769	4765	4764	4764	4762	4761	4760	4758
	7.5	4795	4795	4793	4791	4786	4782	4779	4776	4773	4772	4770
	10	4831	4830	4828	4821	4815	4808	4802	4796	4792	4789	4788
	12.5	4877	4877	4873	4863	4853	4843	4834	4826	4819	4815	4814
	15	4935	4936	4929	4917	4902	4888	4876	4864	4856	4852	4850
	17.5	5008	5008	4999	4982	4963	4945	4927	4913	4902	4896	4894
	20	5096	5095	5083	5061	5037	5013	4990	4971	4958	4950	4948
	22.5	5201	5198	5183	5156	5125	5093	5065	5041	5025	5015	5012
	25	5325	5323	5304	5270	5230	5189	5154	5125	5106	5095	5092
	27.5	5474	5471	5445	5402	5351	5301	5258	5225	5203	5193	5188
	30	5649	5645	5611	5556	5494	5431	5380	5344	5320	5311	5305
	32.5	5848	5841	5800	5733	5655	5579	5521	5483	5459	5450	5446
	35	6069	6063	6015	5934	5839	5748	5683	5644	5624	5616	5611
	37.5	6316	6310	6255	6160	6048	5943	5870	5832	5816	5813	5810
	40	6590	6582	6521	6412	6285	6165	6085	6051	6044	6047	6044
	42.5	6886	6878	6810	6690	6546	6415	6333	6305	6312	6323	6321
	45	7208	7197	7125	6998	6845	6702	6620	6606	6628	6649	6649
	47.5	7560	7550	7472	7340	7182	7035	6959	6962	7005	7036	7037
	50	7950	7940	7859	7718	7560	7421	7360	7387	7451	7499	7502
	52.5	8367	8355	8281	8140	7985	7867	7834	7888	7976	8035	8039
	55	8762	8754	8702	8593	8454	8365	8381	8465	8566	8628	8633
	57.5	9068	9073	9069	9038	8965	8918	8992	9104	9181	9214	9213
	60	9202	9215	9302	9412	9474	9508	9632	9745	9731	9675	9664
	62.5	9009	9043	9273	9618	9901	10087	10238	10278	10040	9771	9726
	65	8460	8507	8873	9495	10129	10524	10672	10509	9848	9243	9150
	67.5	7605	7669	8143	8971	9962	10642	10743	10204	8995	8089	7967
70	6349	6452	7144	8112	9269	10194	10227	9225	7545	6526	6406	
72.5	4869	4969	5816	6997	8108	8997	9025	7617	5785	4893	4801	
75	3491	3572	4331	5628	6610	7253	7188	5743	4148	3483	3415	
77.5	2390	2447	2991	4150	4999	5350	5176	4025	2834	2385	2343	
80	1546	1586	1946	2774	3210	3366	3389	2656	1863	1557	1533	
82.5	888	914	1154	1653	1739	1834	1970	1589	1123	932	919	
85	409	420	548	748	745	782	920	760	555	445	439	
87.5	75	75	100	131	124	133	162	142	107	82	85	
90	0	0	0	0	0	0	0	0	0	0	0	



Report of Test

LLIA002251-044

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
LLIA002251-044

Additional Pictures of Test Subject





Report of Test

LLIA002251-044

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.