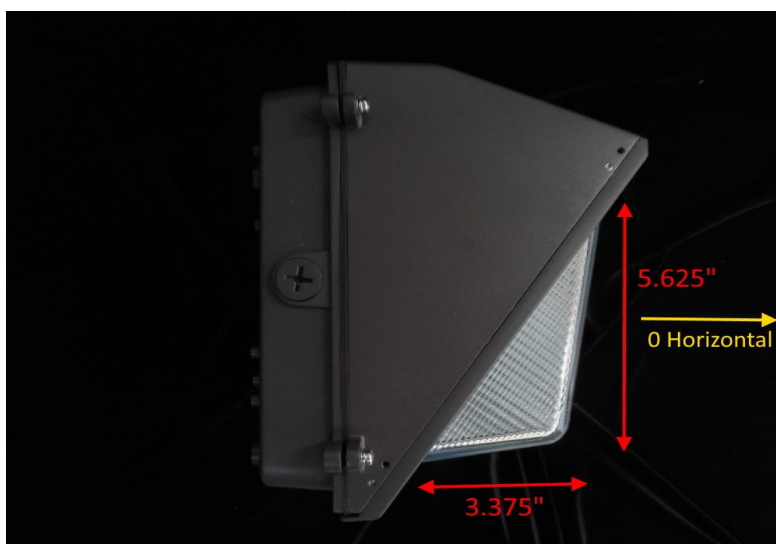


Report of Test

LLIA001528-006

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: WP/120W/PCTS/BZ/PC - 80W and 4000K Setting
Surface mounted wall pack, cast aluminum housing, formed white enamel
metal reflector, clear prismatic glass lens.
792 LEDs, 396 cool white and 396 warm white LEDs
One Fahold FT-150E-054B LED driver



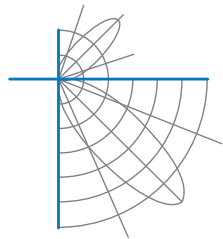
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	11263.4 Lumens
Input Current	0.6473 A	Total Efficacy	145.7 Lm/W
Input Power	77.32 W		
Frequency	60.00 Hz		
Power Factor	0.996	Roadway Type	Area Light
Current THD	5.6 %	IES BUG Rating	B3 - U4 - G4

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

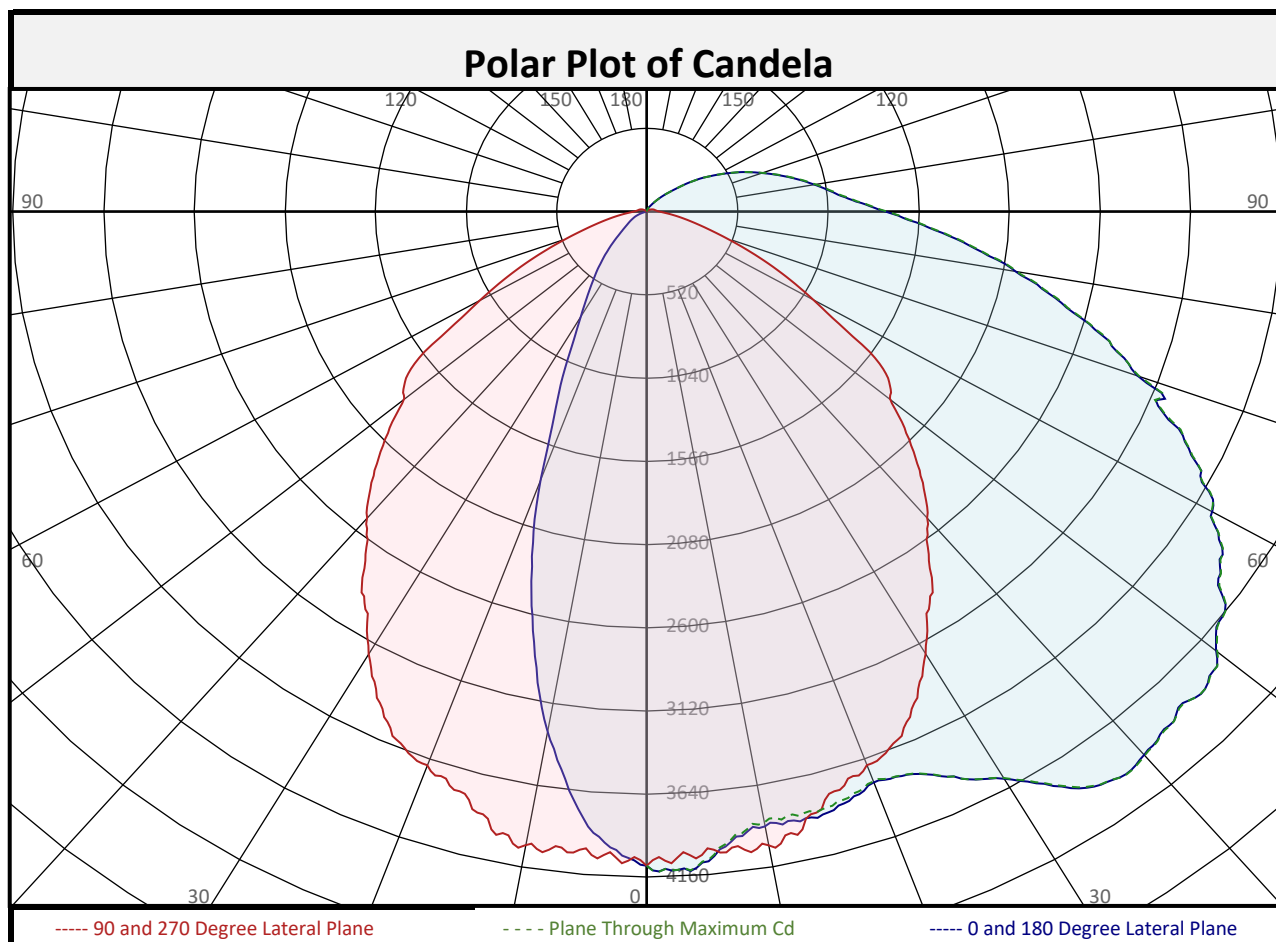
Test date: 09/01/2021
Report date: 09/02/2021

Signed: _____

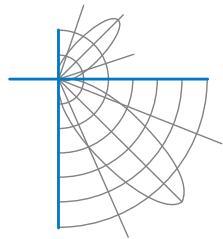


Report of Test

LLIA001528-006

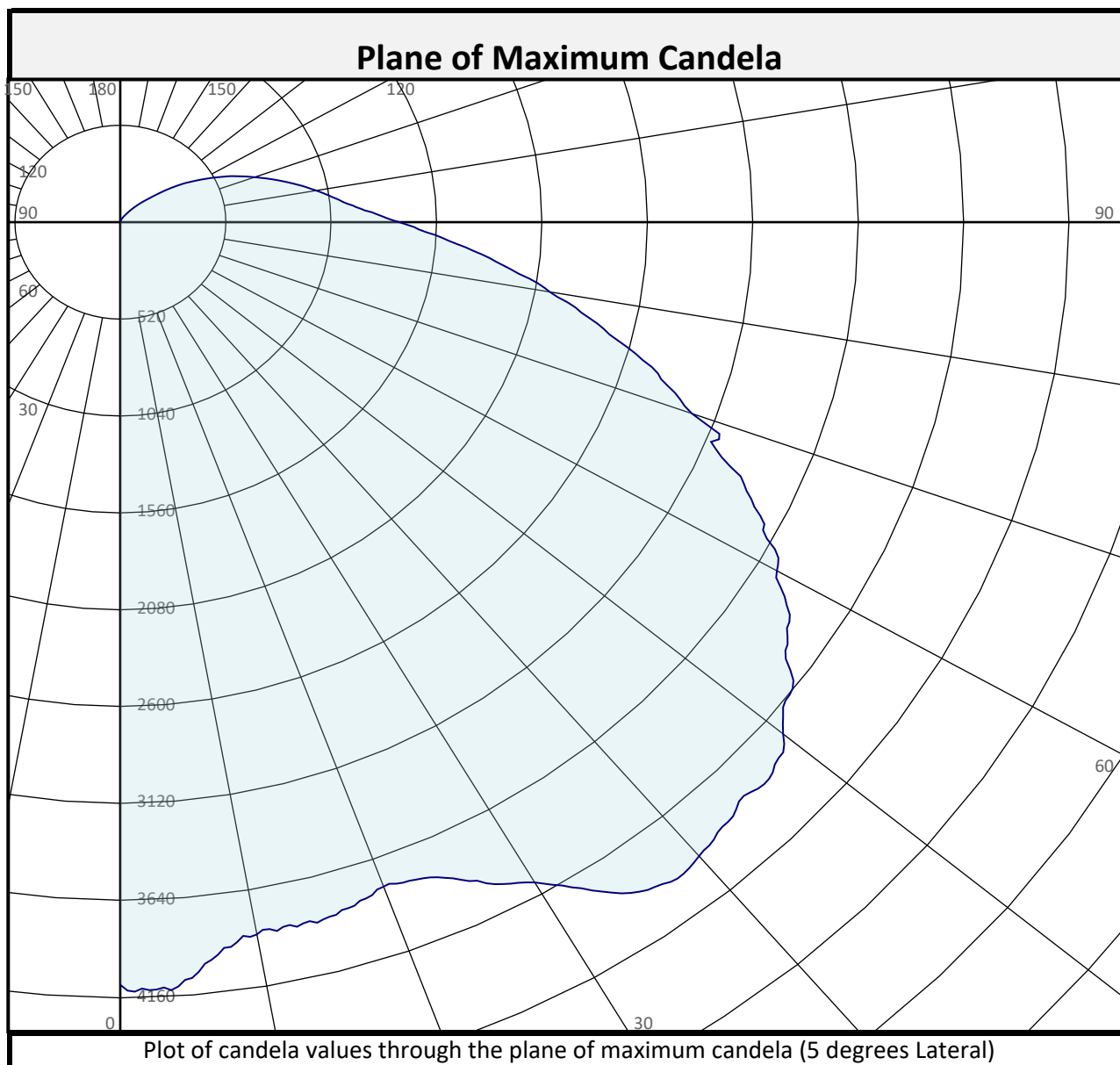


Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	373.0	3.3%		90-100	387.7	3.4%		0-20	1354	12.0%
10-20	980.6	8.7%		100-110	256.2	2.3%		0-30	2687	23.9%
20-30	1334	11.8%		110-120	155.5	1.4%		0-40	4225	37.5%
30-40	1538	13.7%		120-130	79.0	0.7%		0-60	7408	65.8%
40-50	1623	14.4%		130-140	32.1	0.3%		0-80	9713	86.2%
50-60	1560	13.9%		140-150	11.0	0.1%		10-90	9966	88.5%
60-70	1328	11.8%		150-160	3.0	0.0%		20-50	4494	39.9%
70-80	977.6	8.7%		160-170	0.3	0.0%		40-90	6114	54.3%
80-90	625.8	5.6%		170-180	0.0	0.0%		60-90	2931	26.0%
0-90	10339	91.8%		90-180	924.7	8.2%		0-180	11263	100.0%

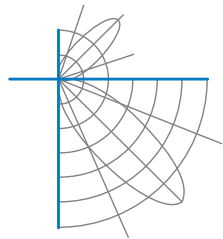


Report of Test

LLIA001528-006

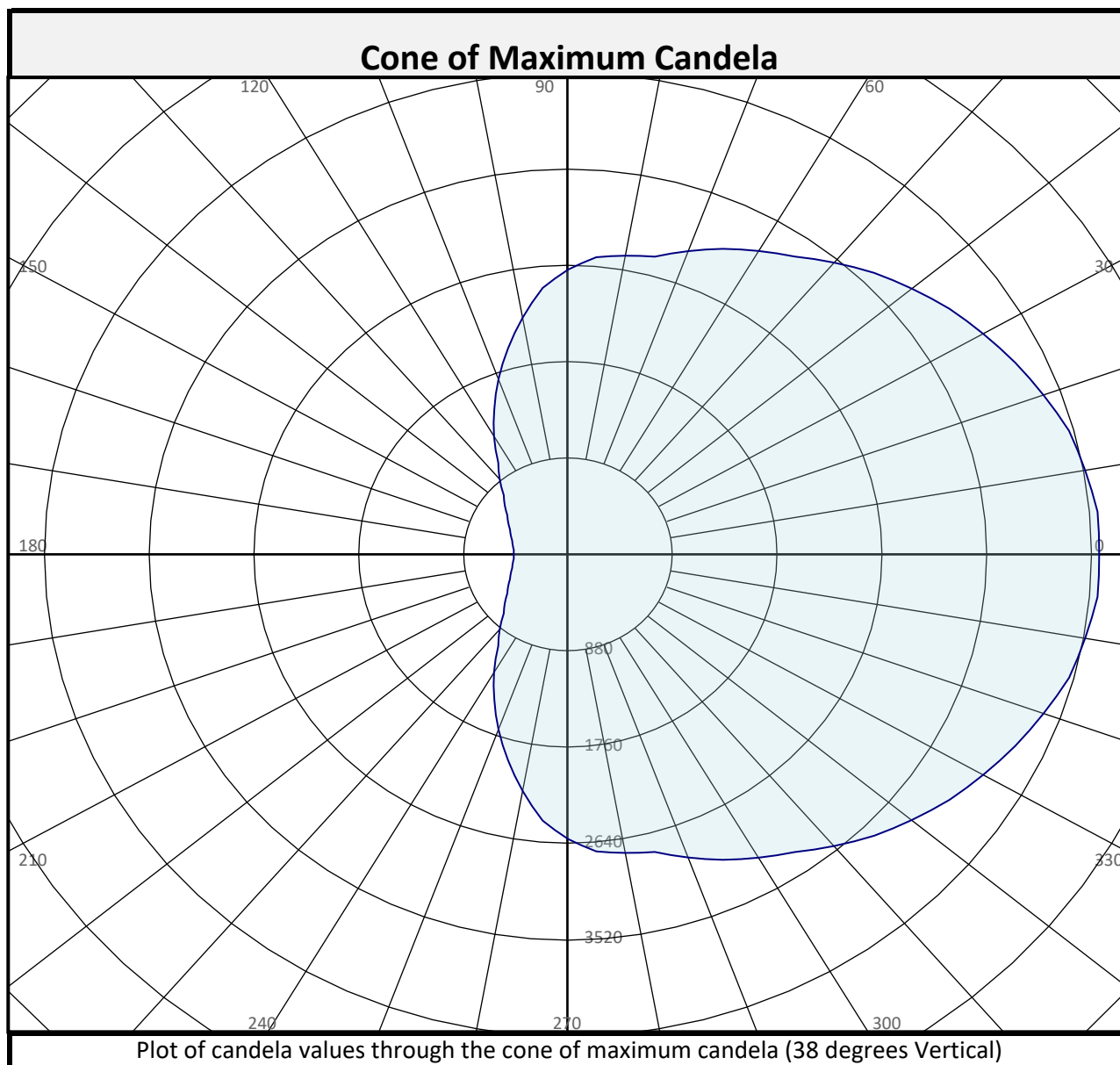


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	8189.2	72.7%	906.5	8.0%	9095.7	80.8%
House Side	2149.5	19.1%	18.2	0.2%	2167.8	19.2%
Total	10338.8	91.8%	924.7	8.2%	11263.4	100.0%

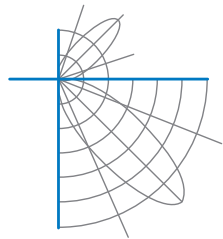


Report of Test

LLIA001528-006



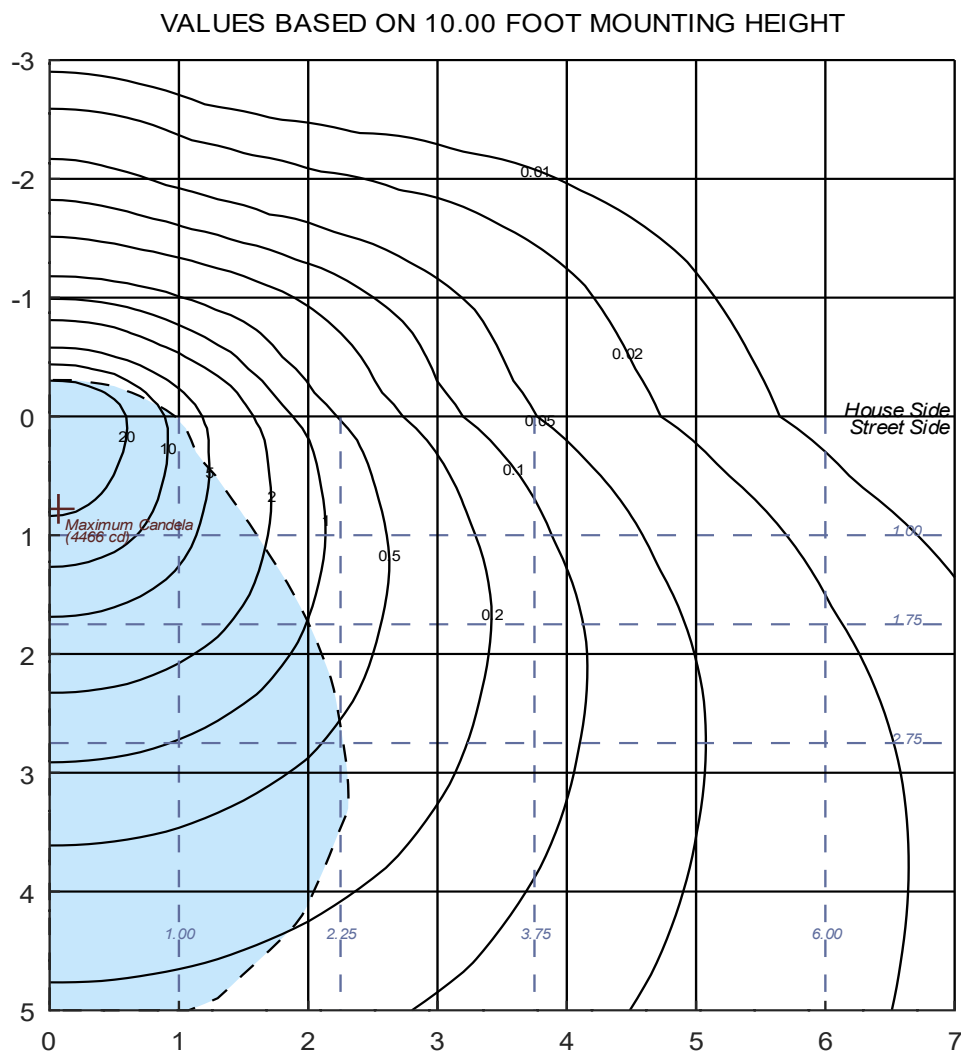
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	8189.2	72.7%	906.5	8.0%	9095.7	80.8%
House Side	2149.5	19.1%	18.2	0.2%	2167.8	19.2%
Total	10338.8	91.8%	924.7	8.2%	11263.4	100.0%



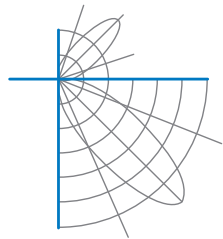
Report of Test

LLIA001528-006

Iso-Illuminance Plot



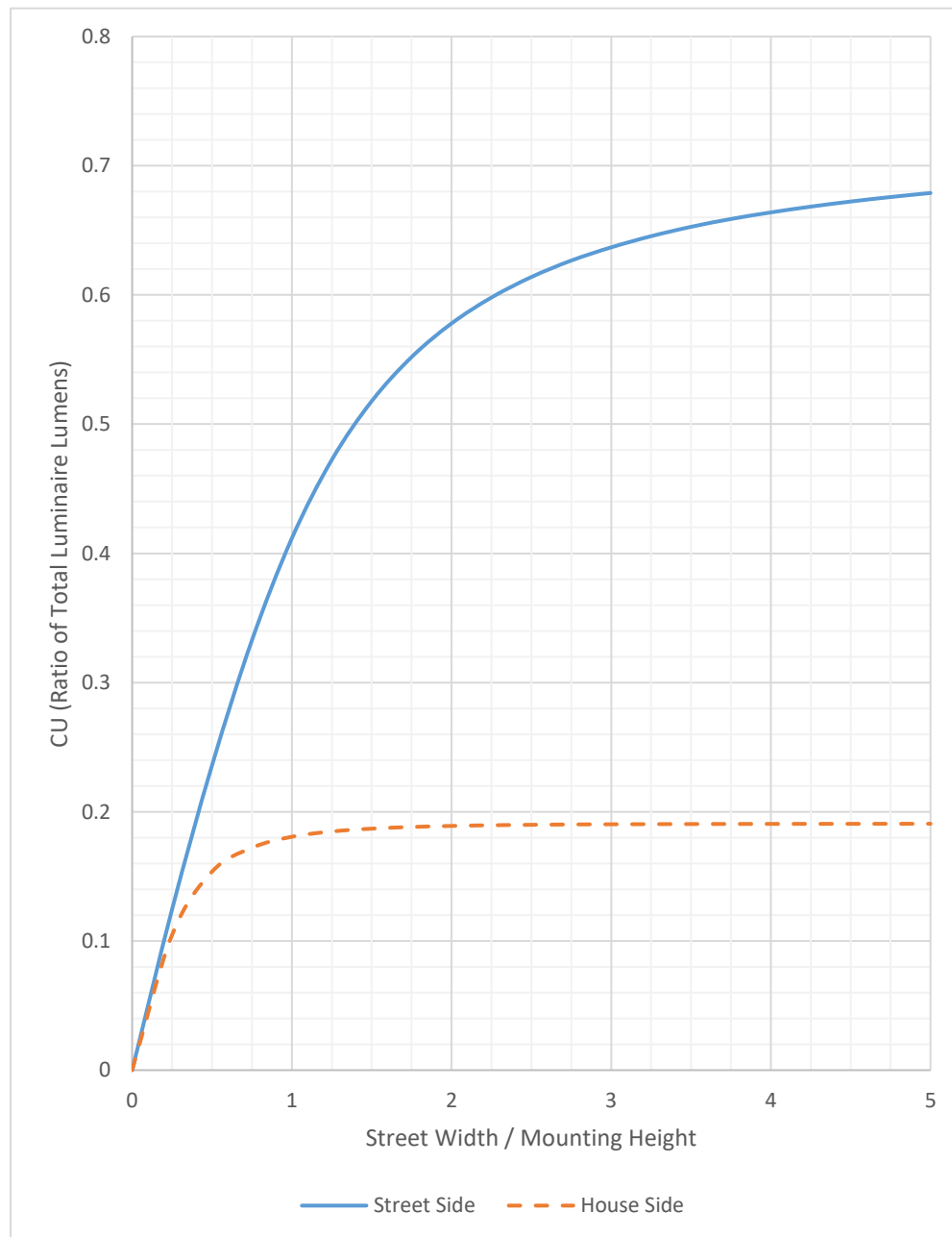
The isofootcandle values shown in the plot above are based on a mounting height of $h = 10.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the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

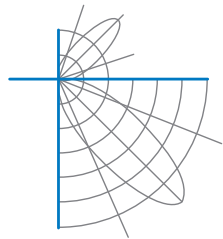


Report of Test

LLIA001528-006

Coefficients of Utilization Plot

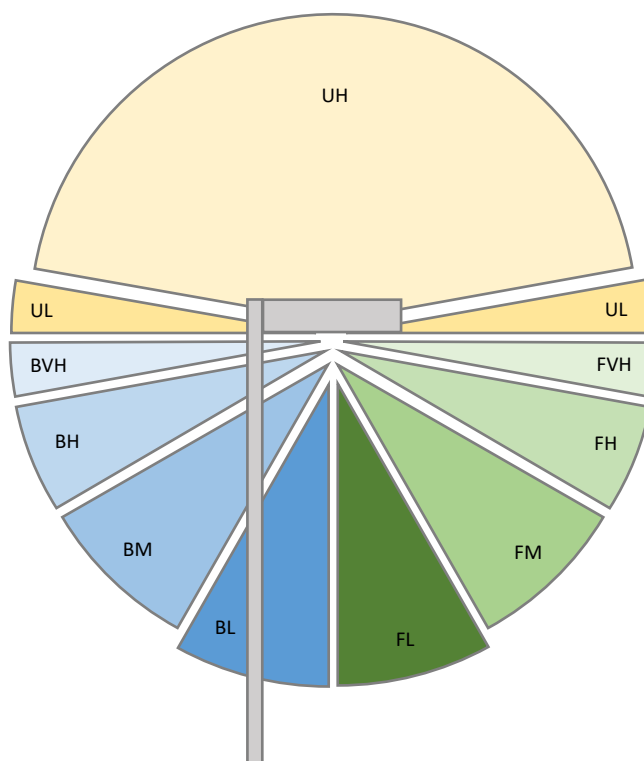




Report of Test

LLIA001528-006

LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	1096.7 Lm
BM - Back Mid (30°-60°)	887.1 Lm
BH - Back High (60°-80°)	149.2 Lm
BVH - Back Very High (80°-90°)	16.5 Lm

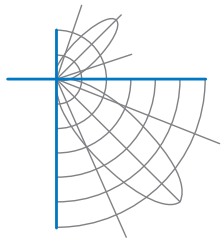
Uplight

UL - Upward Low (90°-100°)	387.7 Lm
UH - Upward High (100°-180°)	537.0 Lm

Forward Light

FL - Forward Low (0°-30°)	1590.6 Lm
FM - Forward Mid (30°-60°)	3833.3 Lm
FH - Forward High (60°-80°)	2156.0 Lm
FVH - Forward Very High (80°-90°)	609.4 Lm

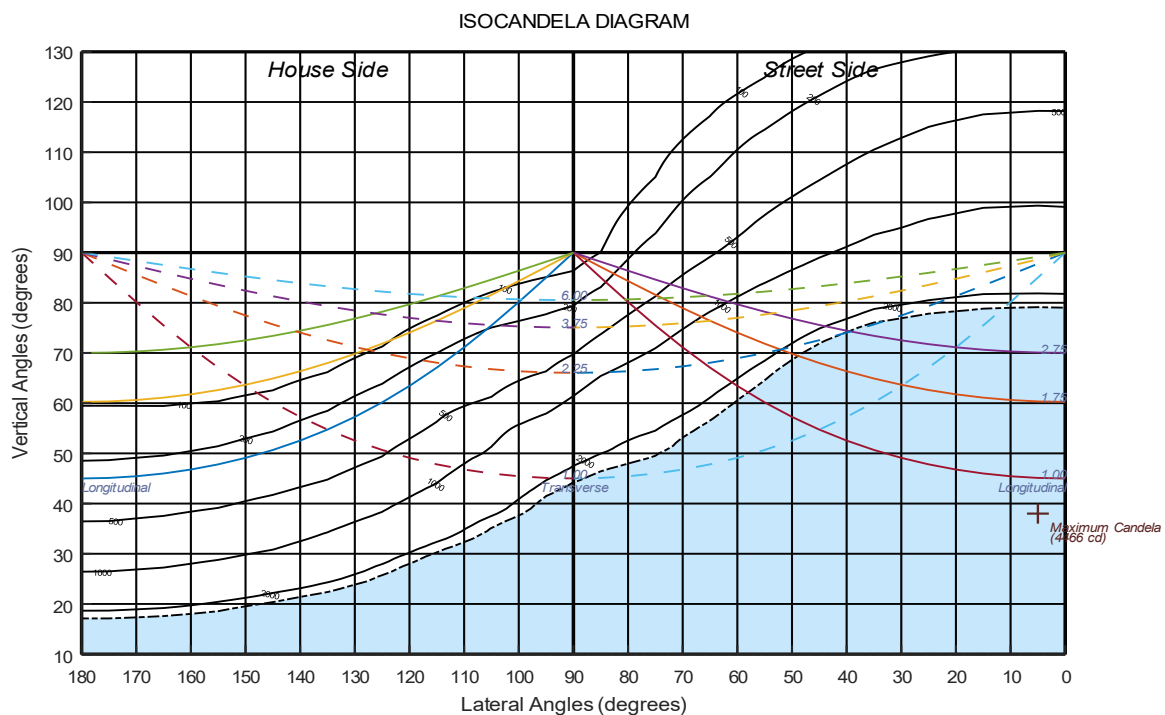
BUG Ratings: B3 - U4 - G4



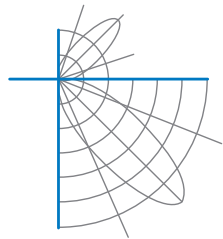
Report of Test

LLIA001528-006

Iso-Candela Plot



Half-max Candela Contour Line

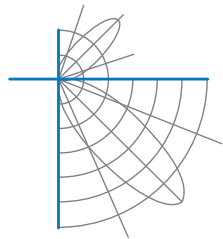


Report of Test

LLIA001528-006

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	4089	4089	4089	4089	4089	4089	4089	4089	4089	4089	4089
	2.5	4119	4119	4099	4082	4087	4097	4098	4098	4083	4055	4042
	5	4077	4068	4042	4077	4048	4068	4080	4077	4040	4018	3996
	7.5	3941	3925	3945	3924	3976	3981	4035	4059	4040	4031	4001
	10	3903	3879	3892	3873	3887	3909	3972	4040	4044	4056	4023
	12.5	3899	3860	3839	3846	3857	3880	3899	3961	3988	4020	3991
	15	3902	3871	3869	3848	3850	3837	3824	3819	3891	3902	3867
	17.5	3863	3843	3840	3836	3825	3779	3751	3705	3781	3805	3762
	20	3799	3793	3764	3787	3766	3721	3695	3691	3745	3729	3683
	22.5	3820	3816	3768	3723	3707	3666	3698	3671	3680	3679	3630
	25	3885	3882	3827	3741	3644	3665	3662	3616	3586	3569	3520
	27.5	4001	4002	3927	3815	3672	3639	3618	3552	3459	3439	3364
	30	4094	4088	4018	3892	3775	3629	3533	3461	3322	3277	3192
	32.5	4241	4235	4126	3952	3843	3622	3451	3343	3171	3083	2979
	35	4397	4391	4257	4058	3882	3644	3395	3225	3014	2949	2850
	37.5	4458	4459	4343	4134	3912	3634	3330	3105	2852	2758	2642
	40	4435	4440	4366	4189	3937	3593	3268	2964	2738	2635	2497
	42.5	4389	4397	4338	4194	3959	3559	3156	2910	2634	2485	2346
	45	4345	4350	4289	4158	3943	3524	3073	2806	2503	2323	2175
	47.5	4363	4366	4300	4128	3875	3468	3010	2687	2357	2166	2002
	50	4260	4269	4238	4099	3818	3389	2916	2566	2210	1997	1817
	52.5	4160	4163	4111	4011	3770	3297	2822	2442	2082	1922	1749
	55	4000	4006	3993	3921	3683	3220	2708	2310	1978	1788	1595
	57.5	3912	3916	3869	3765	3579	3130	2583	2184	1837	1544	1306
	60	3744	3740	3708	3627	3440	3019	2464	2058	1659	1361	1100
	62.5	3578	3575	3568	3466	3285	2878	2337	1930	1517	1195	930
	65	3404	3409	3391	3294	3122	2724	2208	1782	1372	1028	769
	67.5	3173	3181	3187	3112	2943	2555	2061	1640	1216	857	618
	70	2990	3002	3039	2894	2751	2381	1897	1500	1058	698	486
	72.5	2795	2797	2781	2707	2543	2192	1729	1350	910	559	380
	75	2582	2590	2576	2476	2337	1989	1556	1196	775	446	300
	77.5	2359	2369	2350	2261	2104	1782	1385	1043	653	355	237
	80	2145	2152	2136	2040	1895	1586	1229	902	548	277	188
	82.5	1939	1947	1930	1840	1693	1408	1083	777	458	214	147
	85	1739	1747	1732	1644	1501	1234	941	660	380	163	114
	87.5	1547	1555	1532	1455	1320	1079	813	557	314	126	91
	90	1369	1378	1369	1288	1167	948	706	472	262	101	76

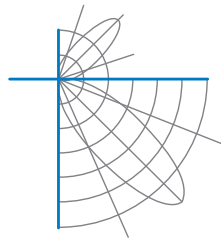


Report of Test

LLIA001528-006

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	1369	1378	1369	1288	1167	948	706	472	262	101	76
	92.5	1232	1242	1226	1157	1043	840	619	409	220	85	65
	95	1120	1128	1122	1055	942	752	554	363	184	75	58
	97.5	1043	1051	1041	976	861	681	499	321	155	67	54
	100	975	981	969	904	786	613	442	279	132	61	51
	102.5	907	912	897	829	711	548	388	238	114	56	48
	105	838	842	826	757	640	486	341	201	100	53	45
	107.5	770	773	757	688	573	432	299	171	90	50	43
	110	705	707	690	622	512	384	263	148	81	47	40
	112.5	642	644	626	560	456	339	228	129	71	43	37
	115	582	583	566	501	403	294	193	113	62	39	33
	117.5	518	519	501	440	352	254	163	99	55	35	30
	120	457	457	439	380	301	217	137	86	48	31	27
	122.5	400	400	381	326	257	185	116	73	41	27	23
	125	343	341	322	276	222	158	99	61	34	22	19
	127.5	285	283	266	228	185	132	84	51	28	18	16
	130	228	227	215	186	152	109	71	42	23	15	13
	132.5	185	184	175	154	126	91	60	36	19	12	10
	135	153	152	145	128	105	78	52	31	15	10	8
	137.5	124	124	118	104	88	65	43	26	12	8	6
	140	99	99	95	84	71	53	36	20	8	6	4
	142.5	78	78	76	67	57	43	29	16	6	4	3
	145	61	62	60	53	44	35	24	12	5	3	2
	147.5	48	48	47	41	35	28	19	8	3	1	0
	150	39	39	37	33	28	22	14	5	2	0	0
	152.5	32	32	31	28	23	17	10	2	0	0	0
	155	26	26	25	22	18	12	6	0	0	0	0
	157.5	20	20	19	17	13	8	2	0	0	0	0
	160	15	15	13	11	8	4	0	0	0	0	0
	162.5	10	10	9	7	4	0	0	0	0	0	0
	165	5	5	5	3	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

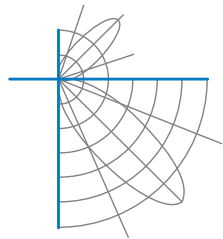


Report of Test

LLIA001528-006

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	4089	4089	4089	4089	4089	4089	4089	4089	4089	4089	4089
	2.5	4042	4033	4029	4021	4019	4013	3983	3950	3955	3987	3994
	5	3996	3982	3947	3949	3937	3891	3834	3872	3827	3839	3859
	7.5	4001	3979	3919	3879	3837	3736	3692	3600	3600	3558	3579
	10	4023	3991	3890	3827	3716	3549	3437	3363	3311	3275	3290
	12.5	3991	3951	3824	3717	3567	3382	3193	3046	2963	2916	2920
	15	3867	3822	3708	3506	3356	3185	2942	2726	2590	2552	2553
	17.5	3762	3700	3554	3296	3097	2868	2610	2376	2246	2170	2168
	20	3683	3607	3409	3091	2823	2534	2283	2056	1866	1781	1775
	22.5	3630	3555	3290	2925	2549	2217	1958	1670	1462	1395	1389
	25	3520	3434	3144	2747	2299	1903	1569	1353	1206	1148	1142
	27.5	3364	3283	2939	2523	2057	1586	1278	1116	977	912	907
	30	3192	3090	2697	2263	1783	1334	1065	907	801	757	753
	32.5	2979	2863	2444	1984	1515	1118	881	761	679	641	639
	35	2850	2713	2246	1726	1260	948	746	646	584	549	547
	37.5	2642	2488	2003	1508	1054	790	642	556	501	472	470
	40	2497	2325	1788	1272	896	667	555	474	425	398	396
	42.5	2346	2162	1614	1096	758	572	476	400	358	330	329
	45	2175	1973	1424	946	641	494	404	332	294	271	270
	47.5	2002	1784	1240	814	555	428	343	273	239	219	217
	50	1817	1594	1060	696	485	367	285	223	193	180	179
	52.5	1749	1501	942	599	423	311	232	183	159	152	151
	55	1595	1326	810	530	366	261	189	151	134	130	129
	57.5	1306	1040	657	475	318	216	155	125	114	113	113
	60	1100	846	545	416	271	177	126	103	96	97	97
	62.5	930	690	463	351	224	142	101	84	81	83	83
	65	769	560	402	295	181	113	80	66	66	69	69
	67.5	618	454	350	245	144	88	61	49	51	52	52
	70	486	369	300	200	114	67	45	34	35	35	35
	72.5	380	302	249	161	89	49	29	19	17	15	15
	75	300	247	201	128	69	35	15	1	0	0	0
	77.5	237	204	160	99	50	22	6	0	0	0	0
	80	188	165	125	75	34	15	4	0	0	0	0
	82.5	147	132	96	57	27	12	3	0	0	0	0
	85	114	101	75	46	21	9	2	0	0	0	0
	87.5	91	79	61	37	18	8	2	0	0	0	0
	90	76	67	51	31	15	7	1	0	0	0	0

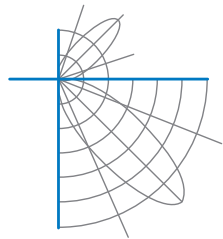


Report of Test

LLIA001528-006

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	76	67	51	31	15	7	1	0	0	0	0
	92.5	65	59	43	27	13	6	0	0	0	0	0
	95	58	52	38	23	12	5	0	0	0	0	0
	97.5	54	47	34	20	10	5	0	0	0	0	0
	100	51	44	30	18	9	4	0	0	0	0	0
	102.5	48	41	27	15	8	3	0	0	0	0	0
	105	45	39	25	13	7	3	0	0	0	0	0
	107.5	43	36	22	11	5	2	0	0	0	0	0
	110	40	33	19	9	5	1	0	0	0	0	0
	112.5	37	30	16	8	4	1	0	0	0	0	0
	115	33	27	14	7	3	0	0	0	0	0	0
	117.5	30	24	12	6	3	0	0	0	0	0	0
	120	27	21	11	5	3	0	0	0	0	0	0
	122.5	23	18	9	5	2	0	0	0	0	0	0
	125	19	15	8	4	1	0	0	0	0	0	0
	127.5	16	13	6	3	1	0	0	0	0	0	0
	130	13	10	5	2	0	0	0	0	0	0	0
	132.5	10	8	4	1	0	0	0	0	0	0	0
	135	8	6	3	0	0	0	0	0	0	0	0
	137.5	6	4	1	0	0	0	0	0	0	0	0
	140	4	3	0	0	0	0	0	0	0	0	0
	142.5	3	2	0	0	0	0	0	0	0	0	0
	145	2	1	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 LLIA001528-006

Additional Pictures of Test Subject



Report of Test

LLIA001528-006

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-31-95 and LM-10-96.

The luminous intensity values, 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.

Photometric intensity values are reported using the IES C-Type spherical coordinate system as defined in IES LM-75-01.

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.