

## Report of Test

**LLIA001630-007**

Roadway/Area Light Distribution Photometry Test Report

Catalog Number: WPA-75W-PCTS-BZ-PC - 45W and 5000K Setting

Surface mounted wall pack, cast aluminum housings, clear plastic enclosure with perimeter prisms, linear lens above each row of LEDs with vertical linear micro prisms. Aimed straight down.

192 LEDs, 96 cool white and 96 warm white LEDs on white circuit board

One BQ BQE78-0720-100-PVF-PS LED driver



Prepared For:

Topaz Lighting Corp

925 Waverly Avenue

Holtsville, NY 11742, USA

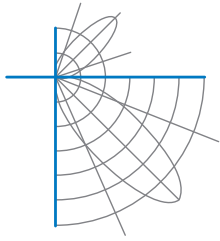
Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	6286.6 Lumens
Input Current	0.3775 A	Total Efficacy	141.0 Lm/W
Input Power	44.59 W		
Frequency	60.00 Hz		
Power Factor	0.984	Roadway Type	Area Light
Current THD	10.3 %	IES BUG Rating	B2 - U0 - G1

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

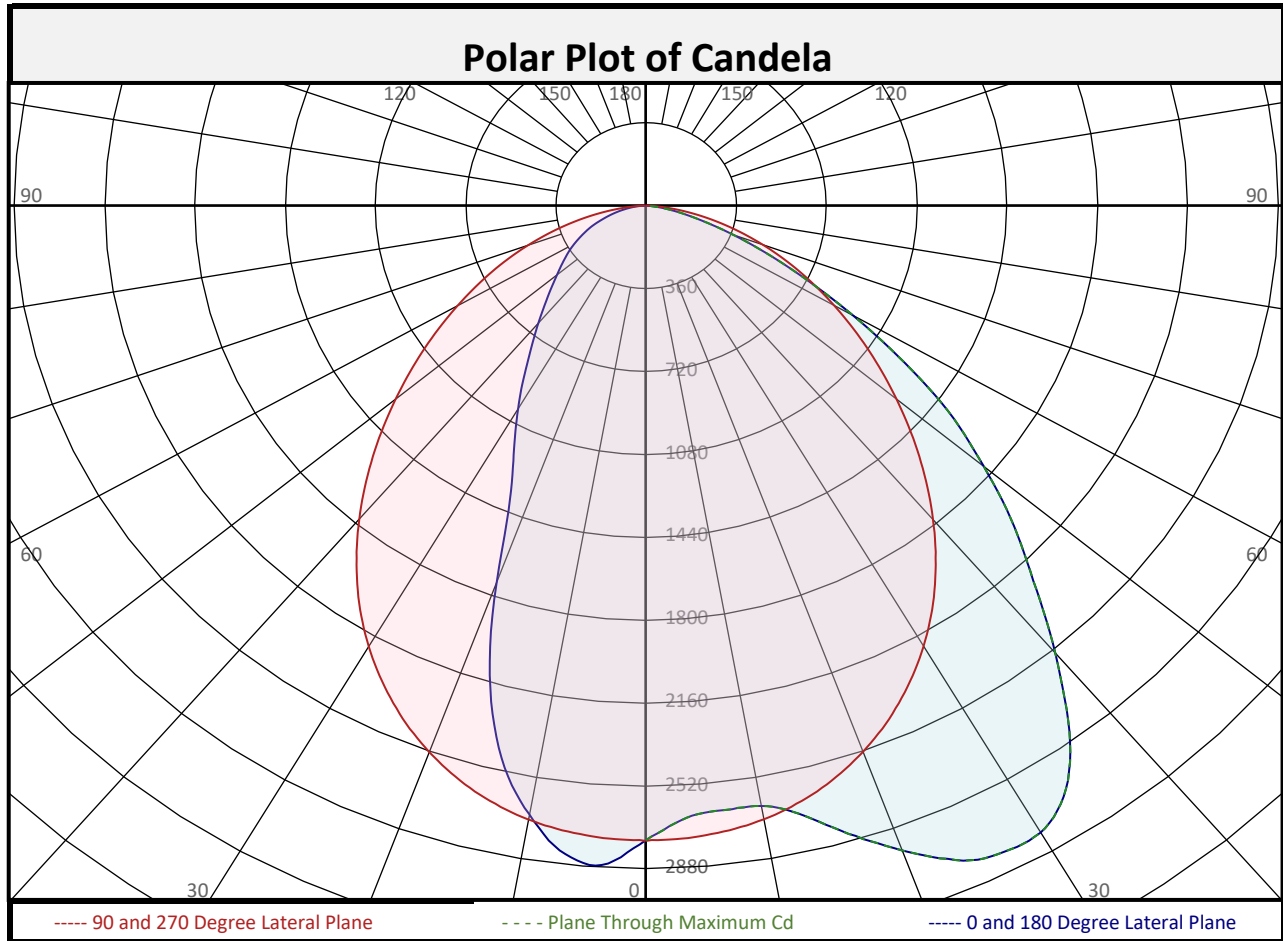
Test date: 01/14/2022

Report date: 01/14/2022

Signed: \_\_\_\_\_

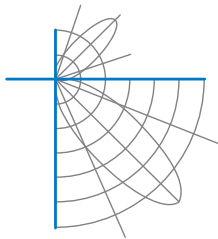


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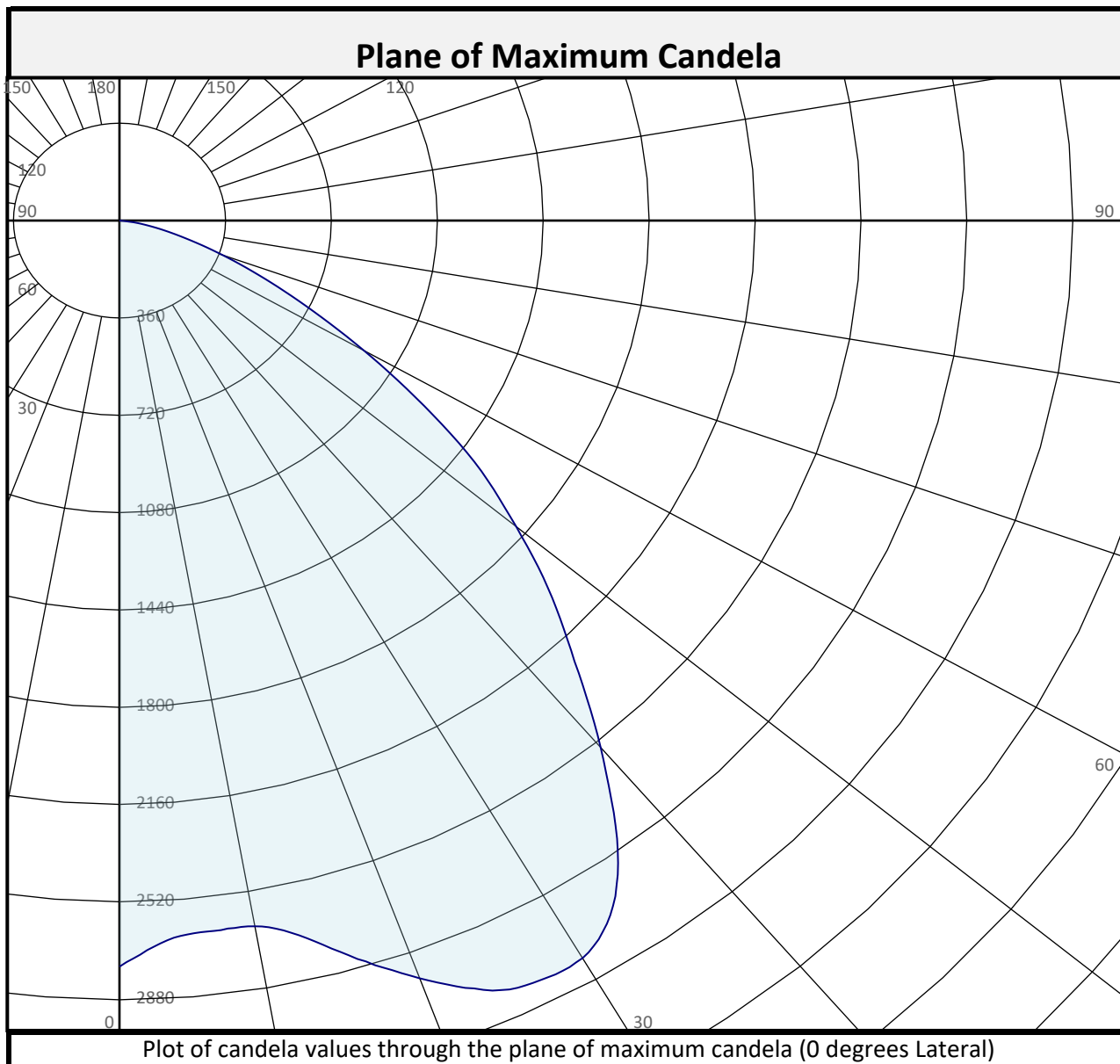


### Zonal Flux Summary

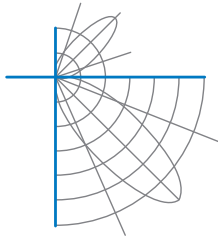
Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	261.1	4.2%	90-100	0.0	0.0%	0-20	989.2	15.7%
10-20	728.1	11.6%	100-110	0.0	0.0%	0-30	2033	32.3%
20-30	1043	16.6%	110-120	0.0	0.0%	0-40	3227	51.3%
30-40	1195	19.0%	120-130	0.0	0.0%	0-60	5293	84.2%
40-50	1137	18.1%	130-140	0.0	0.0%	0-80	6227	99.1%
50-60	929.3	14.8%	140-150	0.0	0.0%	10-90	6026	95.9%
60-70	625.7	10.0%	150-160	0.0	0.0%	20-50	3375	53.7%
70-80	308.3	4.9%	160-170	0.0	0.0%	40-90	3059	48.7%
80-90	59.3	0.9%	170-180	0.0	0.0%	60-90	993.3	15.8%
0-90	6287	100.0%	90-180	0.0	0.0%	0-180	6287	100.0%



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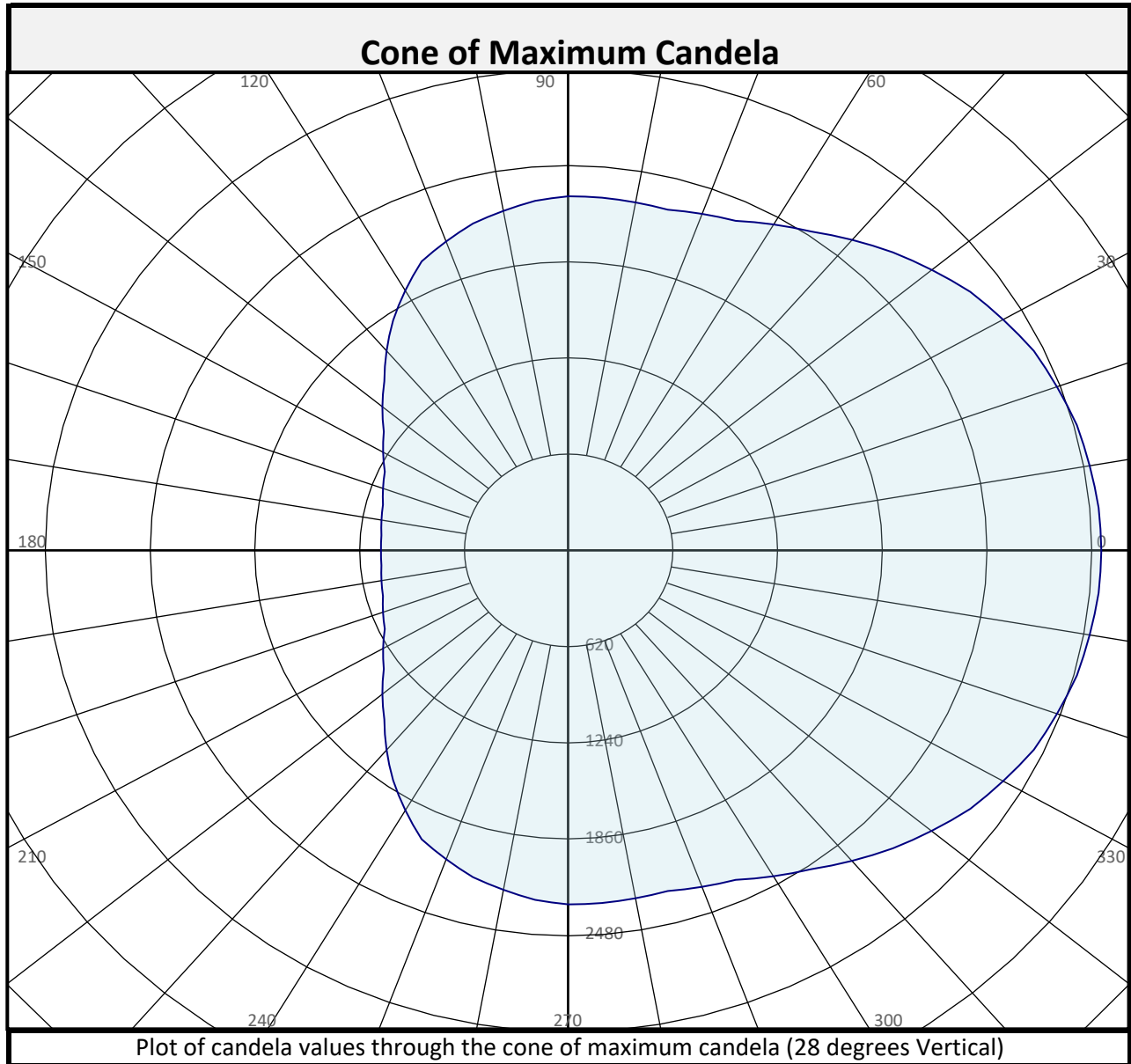


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	4060.7	64.6%	0.0	0.0%	4060.7	64.6%
House Side	2226.0	35.4%	0.0	0.0%	2226.0	35.4%
<b>Total</b>	<b>6286.6</b>	<b>100.0%</b>	<b>0.0</b>	<b>0.0%</b>	<b>6286.6</b>	<b>100.0%</b>

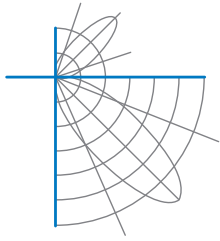


## Report of Test

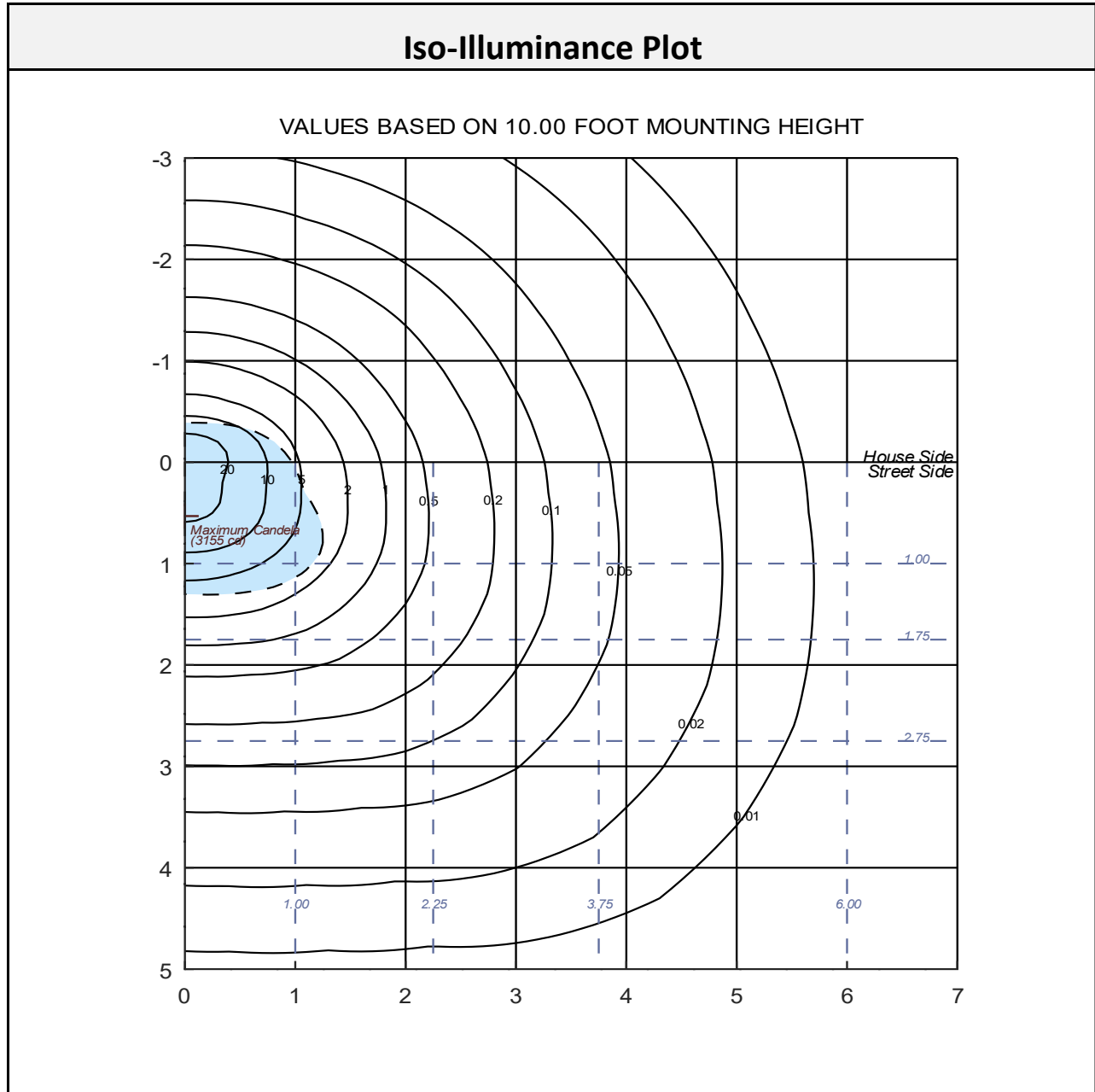
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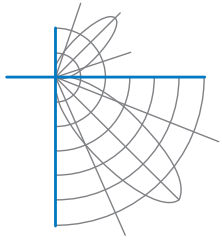
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	4060.7	64.6%	0.0	0.0%	4060.7	64.6%
House Side	2226.0	35.4%	0.0	0.0%	2226.0	35.4%
<b>Total</b>	<b>6286.6</b>	<b>100.0%</b>	<b>0.0</b>	<b>0.0%</b>	<b>6286.6</b>	<b>100.0%</b>



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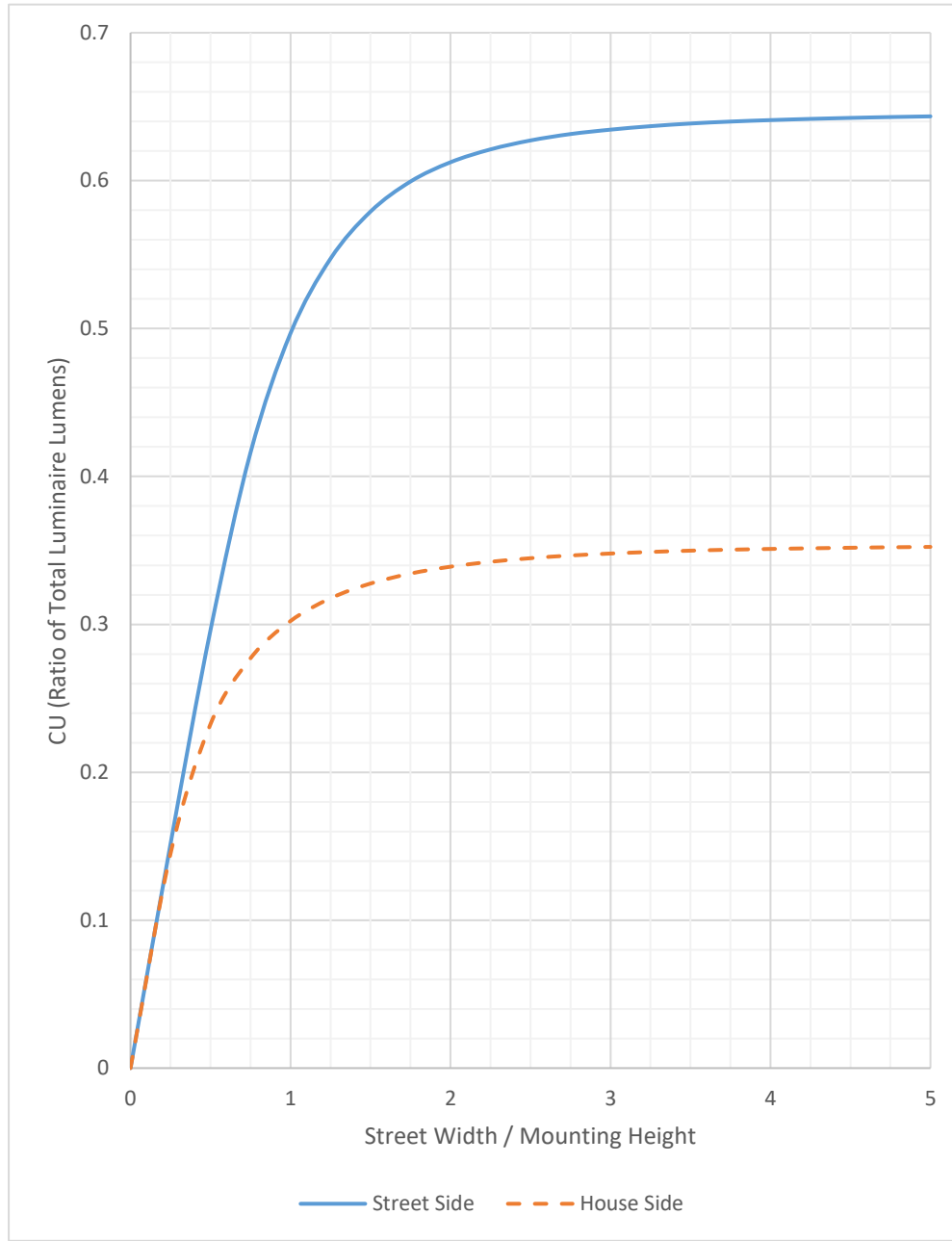


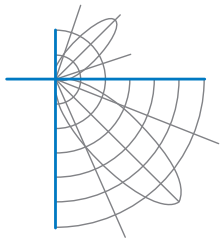
The isofootcandle values shown in the plot above are based on a mounting height of  $h = 10.0$  feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the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



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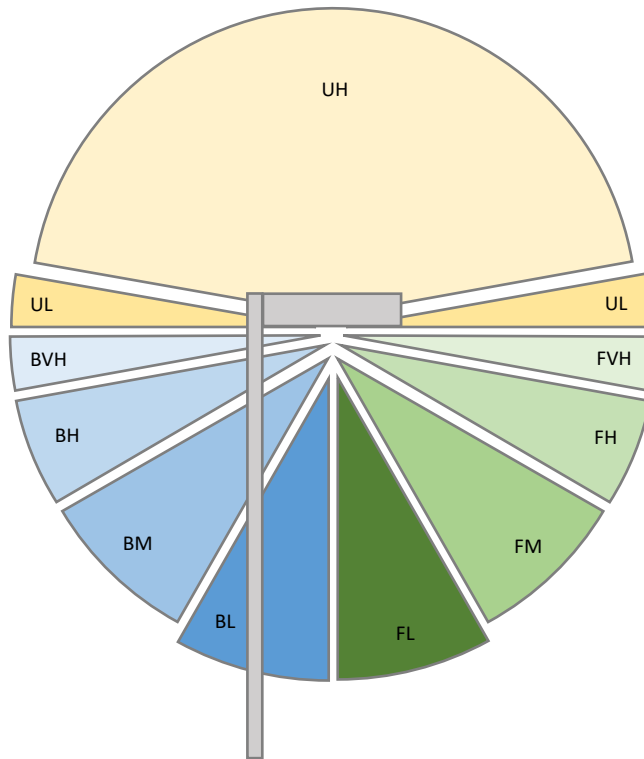
### Coefficients of Utilization Plot





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LCS Tables and Bug Classification



**Back Light**

BL - Back Low (0°-30°)	903.0 Lm
BM - Back Mid (30°-60°)	1004.0 Lm
BH - Back High (60°-80°)	295.3 Lm
BVH - Back Very High (80°-90°)	23.6 Lm

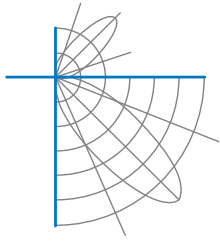
**Forward Light**

FL - Forward Low (0°-30°)	1129.5 Lm
FM - Forward Mid (30°-60°)	2256.8 Lm
FH - Forward High (60°-80°)	638.7 Lm
FVH - Forward Very High (80°-90°)	35.7 Lm

**Uplight**

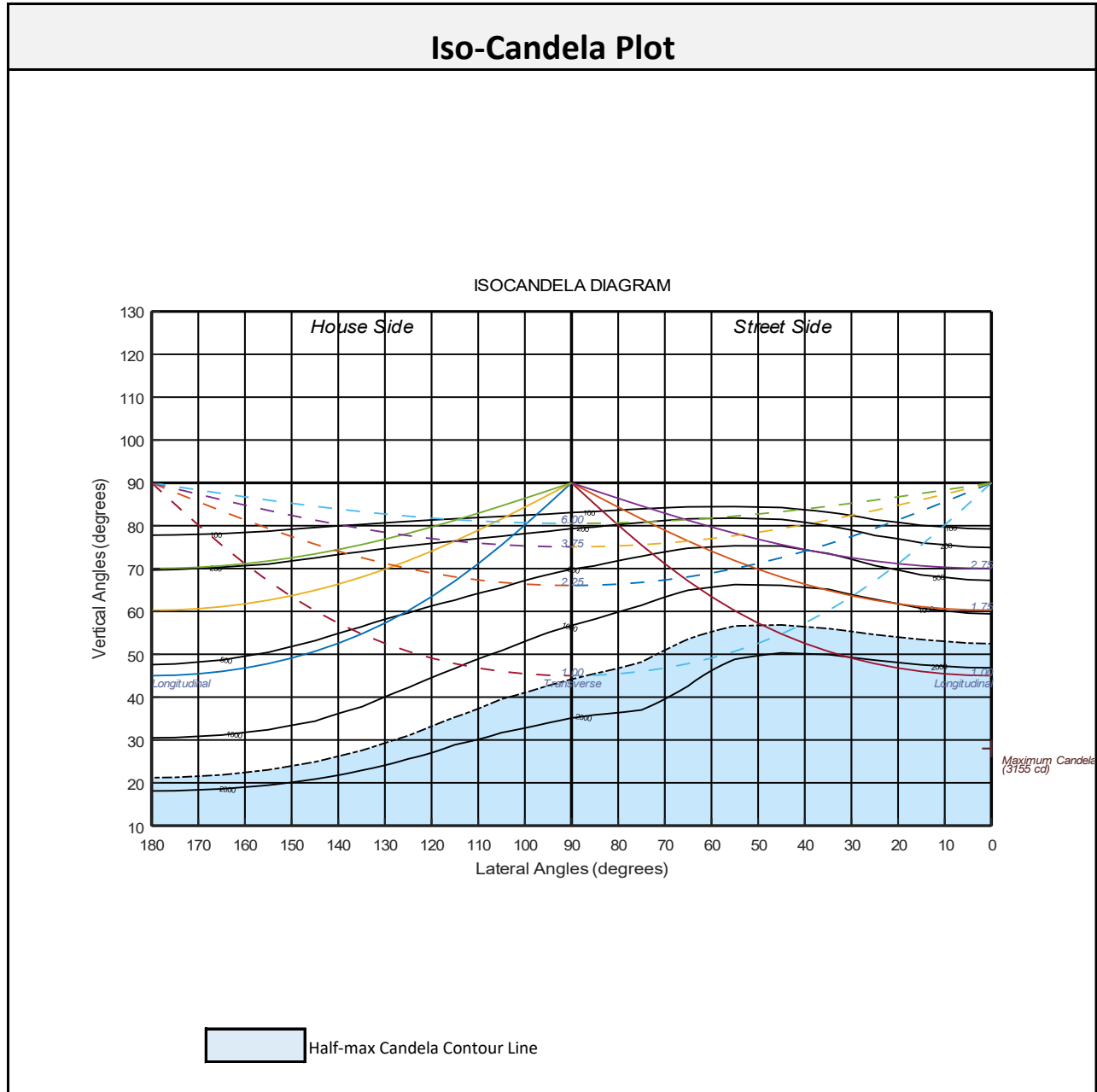
UL - Upward Low (90°-100°)	0.0 Lm
UH - Upward High (100°-180°)	0.0 Lm

BUG Ratings: B2 - U0 - G1

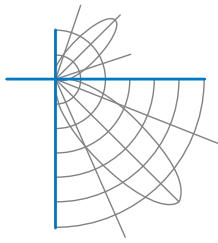


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**Iso-Candela Plot**





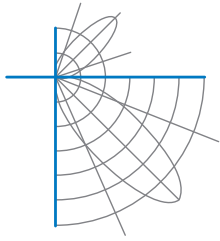


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Luminous Intensity (Candela) Table

	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	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757
	2.5	2686	2687	2693	2694	2702	2707	2713	2723	2733	2744	2752
	5	2648	2649	2652	2652	2657	2661	2673	2686	2707	2729	2743
	7.5	2645	2644	2646	2642	2641	2638	2640	2650	2676	2707	2727
	10	2648	2649	2649	2638	2633	2622	2617	2619	2642	2679	2705
	12.5	2696	2697	2684	2657	2631	2607	2594	2589	2605	2645	2673
	15	2785	2785	2763	2713	2659	2603	2571	2555	2564	2602	2633
	17.5	2885	2886	2858	2792	2708	2617	2550	2518	2518	2555	2582
	20	2980	2980	2945	2868	2767	2642	2535	2479	2468	2499	2524
	22.5	3069	3069	3028	2937	2819	2671	2527	2437	2412	2439	2458
	25	3135	3135	3095	3000	2867	2694	2519	2395	2352	2372	2382
	27.5	3152	3149	3116	3037	2901	2713	2510	2353	2287	2296	2300
	30	3147	3142	3108	3030	2912	2721	2496	2308	2217	2217	2209
	32.5	3081	3080	3061	2994	2886	2715	2473	2260	2145	2129	2111
	35	2951	2954	2960	2924	2833	2682	2443	2204	2066	2034	2006
	37.5	2758	2767	2802	2810	2754	2623	2400	2144	1983	1933	1895
	40	2543	2551	2600	2653	2643	2538	2342	2078	1894	1825	1777
	42.5	2329	2337	2390	2469	2507	2435	2264	2003	1803	1714	1658
	45	2134	2140	2188	2272	2345	2314	2171	1921	1706	1600	1539
	47.5	1953	1956	2003	2081	2171	2172	2063	1831	1605	1484	1418
	50	1759	1765	1818	1901	1996	2021	1942	1733	1503	1368	1300
	52.5	1576	1585	1642	1719	1821	1861	1812	1625	1395	1253	1184
	55	1372	1385	1467	1550	1647	1698	1671	1509	1286	1141	1074
	57.5	1156	1170	1263	1391	1478	1535	1525	1387	1176	1030	966
	60	956	969	1057	1214	1320	1375	1373	1260	1064	923	864
	62.5	773	785	866	1024	1167	1217	1222	1129	951	818	766
	65	619	629	698	846	1012	1064	1074	997	839	716	673
	67.5	486	495	552	682	854	918	929	866	729	618	582
	70	373	380	428	537	701	780	787	737	620	524	494
	72.5	276	282	321	410	557	646	649	611	515	434	410
	75	197	201	230	299	422	514	516	488	414	348	329
	77.5	137	139	159	207	301	385	392	372	317	268	252
	80	87	88	101	132	199	265	276	264	226	191	181
	82.5	48	50	58	77	118	159	171	166	143	121	114
	85	12	13	15	20	34	64	83	81	71	60	57
	87.5	0	0	0	0	1	3	9	14	18	16	15
90	0	0	0	0	0	0	0	0	0	0	0	

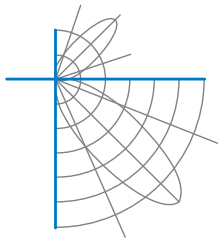


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Luminous Intensity (Candela) Table

	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	



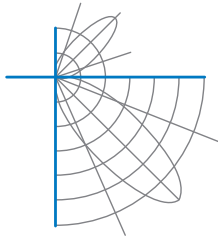
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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles											
	90	95	105	115	125	135	145	155	165	175	180	
0	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757	
2.5	2752	2759	2773	2790	2806	2820	2832	2842	2846	2845	2847	
5	2743	2757	2788	2816	2841	2859	2866	2869	2869	2864	2866	
7.5	2727	2749	2789	2820	2837	2834	2826	2818	2811	2803	2804	
10	2705	2729	2772	2793	2788	2772	2745	2719	2698	2683	2684	
12.5	2673	2700	2737	2737	2716	2678	2632	2589	2559	2542	2541	
15	2633	2656	2681	2662	2621	2561	2489	2423	2373	2342	2338	
17.5	2582	2603	2607	2571	2508	2415	2310	2207	2126	2079	2073	
20	2524	2537	2520	2467	2374	2242	2089	1934	1816	1751	1742	
22.5	2458	2463	2423	2351	2221	2036	1823	1635	1503	1439	1432	
25	2382	2375	2318	2223	2045	1803	1566	1395	1297	1260	1256	
27.5	2300	2281	2205	2084	1849	1581	1369	1227	1160	1134	1132	
30	2209	2177	2085	1929	1651	1402	1210	1101	1047	1023	1020	
32.5	2111	2068	1959	1765	1479	1252	1081	995	946	920	917	
35	2006	1953	1827	1598	1334	1122	976	901	849	823	820	
37.5	1895	1835	1692	1441	1206	1009	887	814	765	742	739	
40	1777	1711	1552	1303	1091	913	806	736	692	672	668	
42.5	1658	1587	1414	1180	988	830	732	667	627	608	604	
45	1539	1462	1280	1069	895	756	666	606	570	553	550	
47.5	1418	1340	1152	969	810	687	607	553	521	504	501	
50	1300	1223	1037	875	734	625	556	508	477	463	460	
52.5	1184	1110	931	787	665	572	511	466	440	426	424	
55	1074	1002	837	707	602	525	470	429	405	393	391	
57.5	966	900	749	632	545	481	430	393	372	362	360	
60	864	804	665	565	492	438	391	357	338	329	327	
62.5	766	713	586	503	444	395	351	319	303	295	294	
65	673	624	514	446	398	352	312	283	269	263	262	
67.5	582	537	446	389	351	309	274	248	237	232	230	
70	494	454	381	335	302	266	236	214	205	197	195	
72.5	410	376	319	281	253	224	200	181	170	164	163	
75	329	301	259	229	206	183	164	148	137	133	132	
77.5	252	231	201	178	160	143	129	115	108	104	103	
80	181	166	145	130	117	104	95	84	79	76	76	
82.5	114	105	93	84	77	69	63	56	53	51	51	
85	57	52	47	43	41	38	35	31	28	27	26	
87.5	15	14	13	13	13	11	9	8	7	7	6	
90	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.

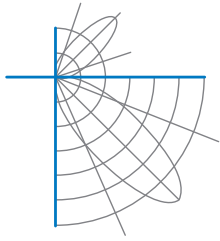


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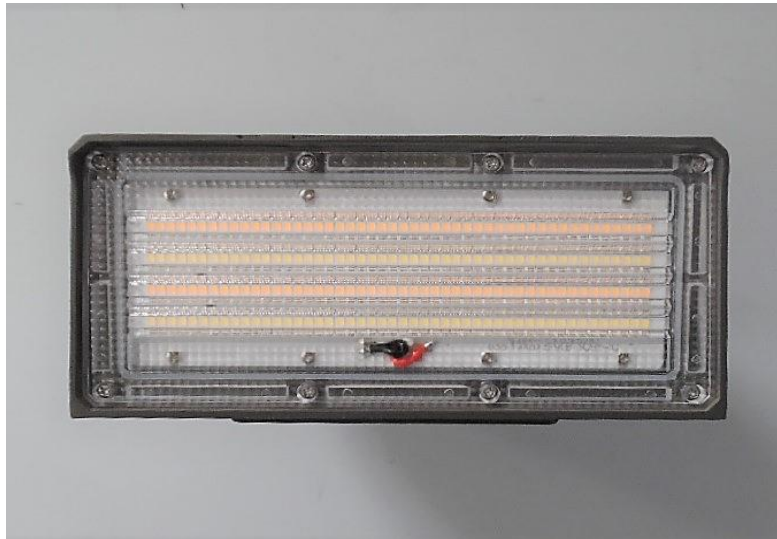
Luminous Intensity (Candela) Table

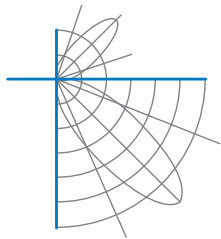
	Lateral (C-Plane) Angles											
	90	95	105	115	125	135	145	155	165	175	180	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0
	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 LLIA001630-007

### Additional Pictures of Test Subject





## Report of Test

### LLIA001630-007

Test Distance                    9.5 m  
Ambient Temperature        24.9 °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.