



## Report of Test

**LLIA001349-001**

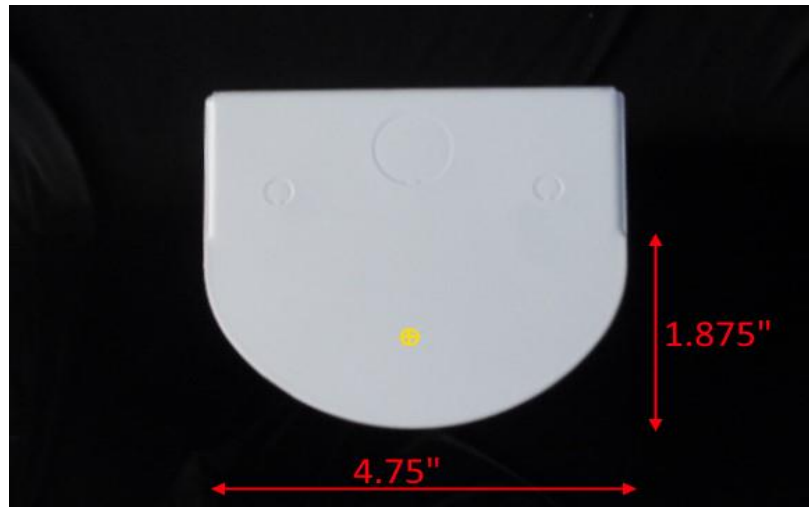
Indoor Distribution Photometry Test Report

Catalog Number: LW14-4-4800-35K-HTA-1%-UNI

Surface ceiling mounted, formed white enamel steel housing and reflectors, translucent white frosted linear ribbed plastic enclosure.

112 white LEDs, two Advance FO Strip PR22in 2200lm 835LV5 boards with 56 LEDs each

One Advance XI040C110V054BST2 LED driver labeled as 790mA



Prepared For:

Mercury Lighting Products Company, Inc.

20 Audrey Place

Fairfield, NJ 07004, USA

### Performance Summary

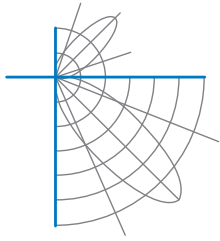
Input Voltage	120.0 V	Luminous Flux	4886.7 Lumens
Input Current	0.3089 A	Total Efficacy	133.1 Lm/W
Input Power	36.71 W	Downward Flux	4482.9 Lumens
Frequency	60.00 Hz	Downward Flux	91.7 % of Total
Power Factor	0.990		
Current THD	10.1 %		

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

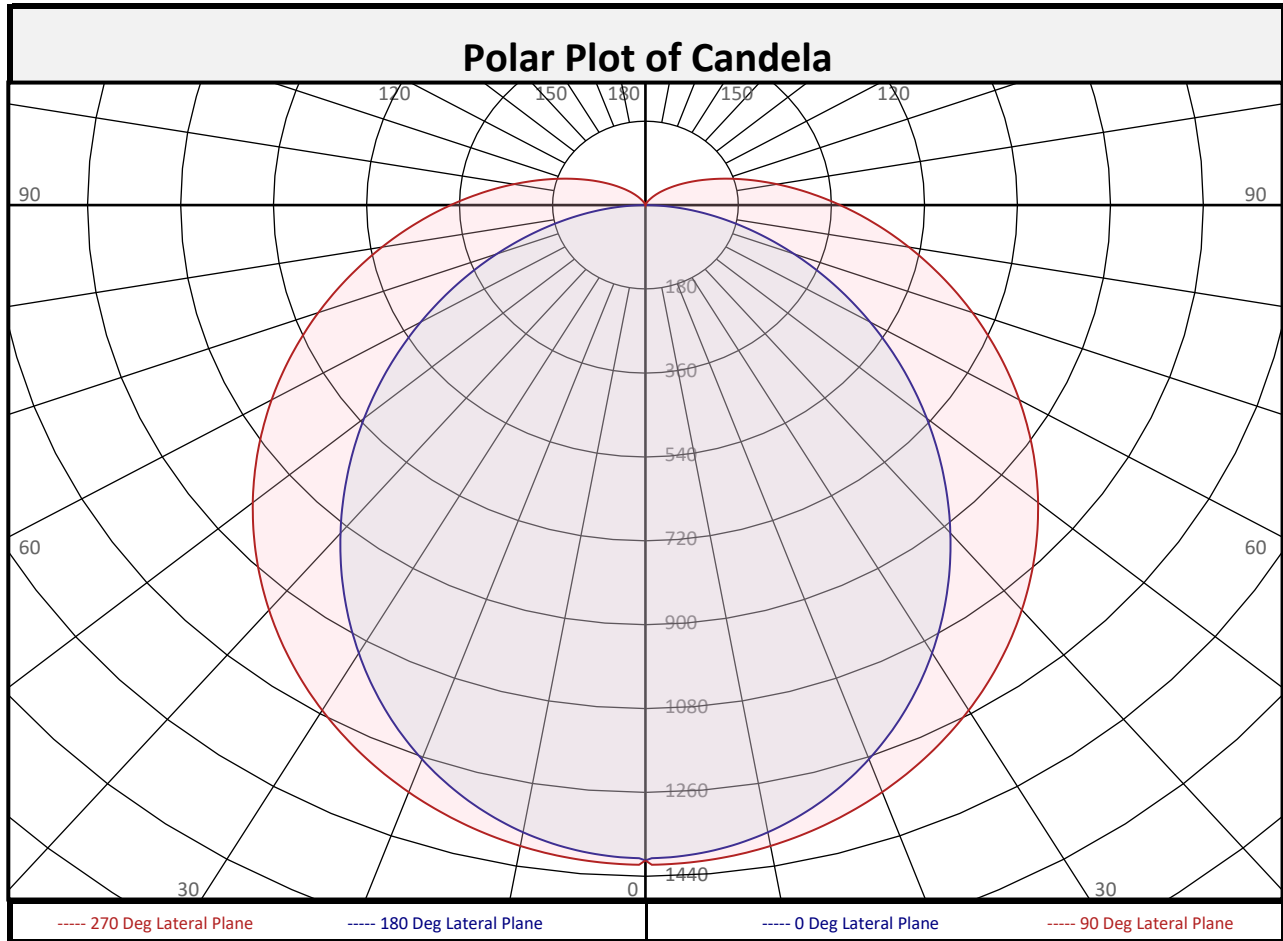
Test date: 11/09/2020

Report date: 11/10/2020

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

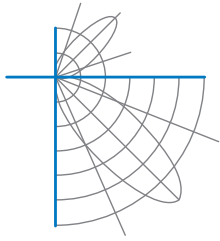


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### Zonal Flux Summary

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	133.0	2.7%	90-100	183.9	3.8%	0-20	512.6	10.5%
10-20	379.7	7.8%	100-110	109.6	2.2%	0-30	1086	22.2%
20-30	573.4	11.7%	110-120	60.6	1.2%	0-40	1777	36.4%
30-40	691.0	14.1%	120-130	30.5	0.6%	0-60	3180	65.1%
40-50	723.9	14.8%	130-140	13.5	0.3%	0-80	4188	85.7%
50-60	678.7	13.9%	140-150	4.6	0.1%	10-90	4350	89.0%
60-70	573.5	11.7%	150-160	1.0	0.0%	20-50	1988	40.7%
70-80	435.3	8.9%	160-170	0.1	0.0%	40-90	2706	55.4%
80-90	294.5	6.0%	170-180	0.0	0.0%	60-90	1303	26.7%
0-90	4483	91.7%	90-180	403.8	8.3%	0-180	4887	100.0%

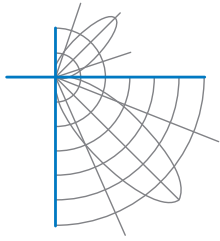


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	1406	1406	1406	1406	1406	1406	1406	1406	1406
	2.5	1399	1399	1402	1408	1414	1408	1402	1399	1399
	5	1392	1393	1397	1404	1410	1404	1397	1393	1392
	7.5	1381	1383	1389	1398	1404	1398	1389	1383	1381
	10	1366	1369	1377	1389	1396	1389	1377	1369	1366
	12.5	1346	1351	1362	1377	1385	1377	1362	1351	1346
	15	1323	1329	1344	1363	1372	1363	1344	1329	1323
	17.5	1296	1303	1323	1346	1357	1346	1323	1303	1296
	20	1265	1274	1299	1327	1340	1327	1299	1274	1265
	22.5	1230	1242	1272	1305	1321	1305	1272	1242	1230
	25	1193	1207	1242	1282	1299	1282	1242	1207	1193
	27.5	1153	1169	1210	1256	1276	1256	1210	1169	1153
	30	1110	1128	1176	1229	1251	1229	1176	1128	1110
	32.5	1065	1085	1140	1199	1224	1199	1140	1085	1065
	35	1017	1041	1102	1168	1196	1168	1102	1041	1017
	37.5	969	994	1062	1135	1165	1135	1062	994	969
	40	918	947	1021	1101	1133	1101	1021	947	918
	42.5	867	898	978	1065	1100	1065	978	898	867
	45	815	848	935	1027	1065	1027	935	848	815
	47.5	763	798	891	989	1029	989	891	798	763
50	711	748	846	950	992	950	846	748	711	
52.5	658	698	801	910	954	910	801	698	658	
55	606	647	756	869	915	869	756	647	606	
57.5	554	598	711	828	876	828	711	598	554	
60	503	548	666	787	836	787	666	548	503	
62.5	452	500	622	746	795	746	622	500	452	
65	402	453	578	705	755	705	578	453	402	
67.5	353	407	536	664	714	664	536	407	353	
70	306	362	495	623	674	623	495	362	306	
72.5	260	320	454	583	634	583	454	320	260	
75	216	279	416	544	594	544	416	279	216	
77.5	174	241	379	506	556	506	379	241	174	
80	135	205	344	469	518	469	344	205	135	
82.5	97	172	311	434	481	434	311	172	97	
85	61	143	279	399	445	399	279	143	61	
87.5	27	117	250	366	411	366	250	117	27	
90	0	95	222	335	378	335	222	95	0	

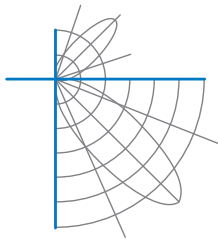


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	90	0	95	222	335	378	335	222	95	0
	92.5	0	76	197	305	346	305	197	76	0
	95	0	60	175	276	315	276	175	60	0
	97.5	0	48	153	249	286	249	153	48	0
	100	0	38	134	224	259	224	134	38	0
	102.5	0	30	117	201	233	201	117	30	0
	105	0	24	102	179	209	179	102	24	0
	107.5	0	20	88	159	187	159	88	20	0
	110	0	16	76	140	167	140	76	16	0
	112.5	0	13	66	124	148	124	66	13	0
	115	0	11	56	108	130	108	56	11	0
	117.5	0	9	48	95	115	95	48	9	0
	120	0	7	41	82	100	82	41	7	0
	122.5	0	6	35	71	87	71	35	6	0
	125	0	5	30	61	75	61	30	5	0
	127.5	0	4	25	52	64	52	25	4	0
	130	0	4	21	44	55	44	21	4	0
	132.5	0	3	18	37	46	37	18	3	0
	135	0	3	15	31	39	31	15	3	0
	137.5	0	2	12	26	32	26	12	2	0
	140	0	2	9	21	26	21	9	2	0
	142.5	0	2	7	17	21	17	7	2	0
	145	0	0	6	13	17	13	6	0	0
	147.5	0	0	4	10	13	10	4	0	0
	150	0	0	3	8	10	8	3	0	0
	152.5	0	0	2	5	7	5	2	0	0
	155	0	0	2	4	5	4	2	0	0
157.5	0	0	2	3	3	3	2	0	0	
160	0	0	0	2	2	2	0	0	0	
162.5	0	0	0	2	2	2	0	0	0	
165	0	0	0	0	0	0	0	0	0	
167.5	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	
172.5	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	
177.5	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	



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Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	117	117	117	117		113	113	113	113		107	107	107		100	100	100		94	94	94	92
1	105	99	94	89		101	96	91	87		90	86	83		85	82	79		80	77	75	72
2	95	85	78	71		91	83	76	70		78	72	67		73	68	64		69	65	62	59
3	86	74	66	59		83	72	64	58		68	61	55		64	58	53		60	56	52	49
4	78	66	56	49		75	64	55	48		60	53	47		57	50	45		54	48	44	41
5	72	58	49	42		69	57	48	42		54	46	40		51	44	39		48	43	38	36
6	66	53	43	37		64	51	42	36		48	41	35		46	39	34		44	38	33	31
7	61	48	39	32		59	46	38	32		44	36	31		42	35	30		40	34	29	27
8	57	43	35	29		55	42	34	28		40	33	28		38	32	27		37	31	26	24
9	53	40	31	26		52	39	31	25		37	30	25		35	29	24		34	28	24	22
10	50	37	29	23		48	36	28	23		34	27	22		33	26	22		31	26	22	20

For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Circle of Light Plot				
Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)		
		0-180 deg	90-270 deg	
6.0	39.0	7.08	7.95	
8.0	22.0	9.44	10.60	
10.0	14.1	11.80	13.25	
12.0	9.8	14.16	15.90	
14.0	7.2	16.52	18.55	
16.0	5.5	18.88	21.19	

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	10194	10194	10194
45	8361	7497	7831
55	7661	6833	7398
65	6899	6208	7012
75	6059	5705	6732
85	5099	5542	6719

Spacing Criterion	
0 degree plane:	1.2
90 degree plane:	1.3
180 degree plane:	1.2
270 degree plane:	1.3



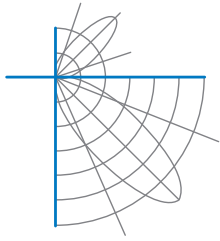
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#### UGR TABLE - CORRECTED

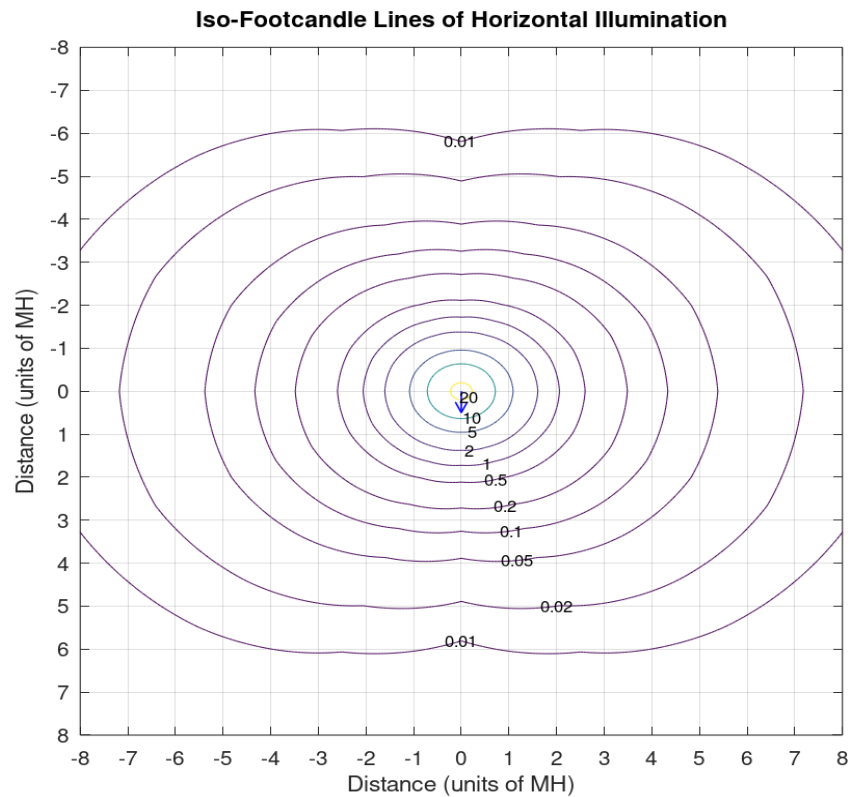
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.3	17.8	16.7	18.3	18.8	19.6	21.1	20.0	21.6	22.1
	3H	17.7	19.1	18.2	19.6	20.1	22.2	23.6	22.7	24.0	24.6
	4H	18.2	19.5	18.7	20.0	20.6	23.4	24.8	24.0	25.3	25.8
	6H	18.5	19.8	19.1	20.3	20.9	24.8	26.0	25.3	26.5	27.1
	8H	18.6	19.8	19.1	20.3	20.9	25.5	26.7	26.0	27.2	27.8
	12H	18.7	19.8	19.2	20.3	20.9	26.2	27.4	26.8	27.9	28.5
4H	2H	17.3	18.7	17.9	19.2	19.7	19.9	21.2	20.4	21.7	22.3
	3H	19.0	20.2	19.5	20.7	21.3	22.7	23.9	23.3	24.4	25.0
	4H	19.6	20.7	20.2	21.2	21.8	24.2	25.2	24.8	25.8	26.4
	6H	20.1	21.0	20.6	21.6	22.2	25.8	26.7	26.3	27.3	27.9
	8H	20.2	21.0	20.8	21.6	22.3	26.6	27.4	27.1	28.0	28.6
	12H	20.3	21.0	20.9	21.7	22.3	27.4	28.2	28.0	28.8	29.5
8H	4H	20.5	21.4	21.1	21.9	22.6	24.4	25.3	25.0	25.8	26.5
	6H	21.1	21.9	21.7	22.5	23.1	26.1	26.8	26.7	27.5	28.1
	8H	21.3	22.0	21.9	22.6	23.3	27.0	27.7	27.7	28.3	29.0
	12H	21.5	22.1	22.1	22.7	23.4	28.1	28.7	28.7	29.3	30.1
12H	4H	20.8	21.6	21.4	22.2	22.8	24.4	25.2	25.0	25.8	26.4
	6H	21.5	22.2	22.1	22.8	23.5	26.1	26.8	26.8	27.4	28.1
	8H	21.8	22.4	22.4	23.0	23.8	27.1	27.7	27.8	28.4	29.1

Maximum UGR = 30.1

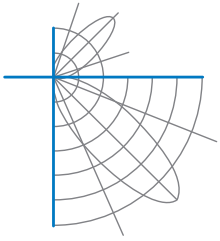


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### Iso-Illuminance Plot



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.

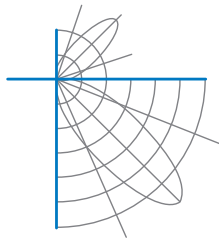


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**Additional Pictures of Test Subject**







## Report of Test

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Test Distance                    9.5 m  
Ambient Temperature        25.8 °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 IES LM-79-19. Format of reports and angular increments based on IES LM-41-14 and LM-46-04.

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 CIE C-Gamma coordinate system as defined in CIE publication number 121.

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.