



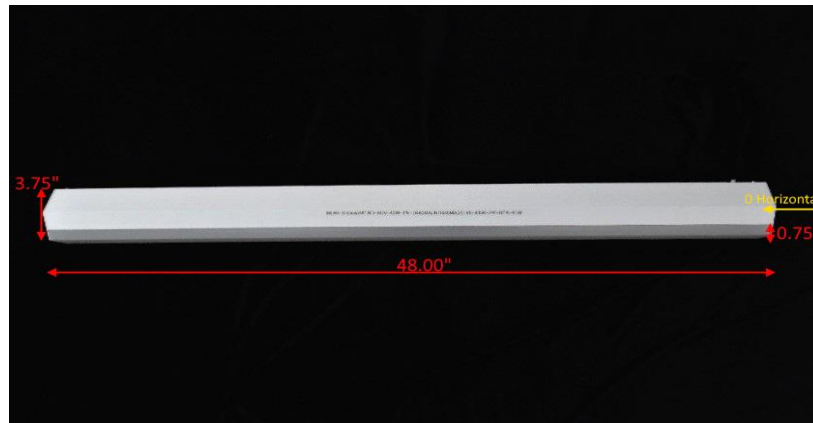
Report of Test

LLIA001503-004-R01*

Indoor Distribution Photometry Test Report

Catalog Number: MLH4-DI-48-680-675-35K-HTA-BW-1%-2C-U

Pendant mounted, extruded aluminum housing, frosted plastic upper enclosure, frosted plastic lower enclosure. 224 white LEDs, two Advance FO Strip PR 22 in 2200lm 835 LV5 LED boards with 56 LEDs each in indirect section, two Advance FO Strip PR 23.7 in 2200lm 835 LV5 LED boards with 56 LEDs each in direct section Two Advance XI040C110V054BST2 LED drivers labeled as 460mA(direct) and 445mA(indirect)



Prepared For:
Mercury Lighting Products Company, Inc.
20 Audrey Place
Fairfield, NJ 07004, USA

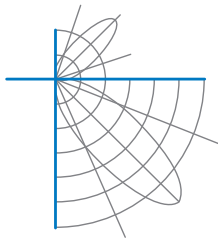
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	5428.2 Lumens
Input Current	0.3435 A	Total Efficacy	133.4 Lm/W
Input Power	40.68 W	Downward Flux	2725.3 Lumens
Frequency	60.00 Hz	Downward Flux	50.2 % of Total
Power Factor	0.987		
Current THD	6.2 %		

*This test report supersedes test report LLIA001503-004

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

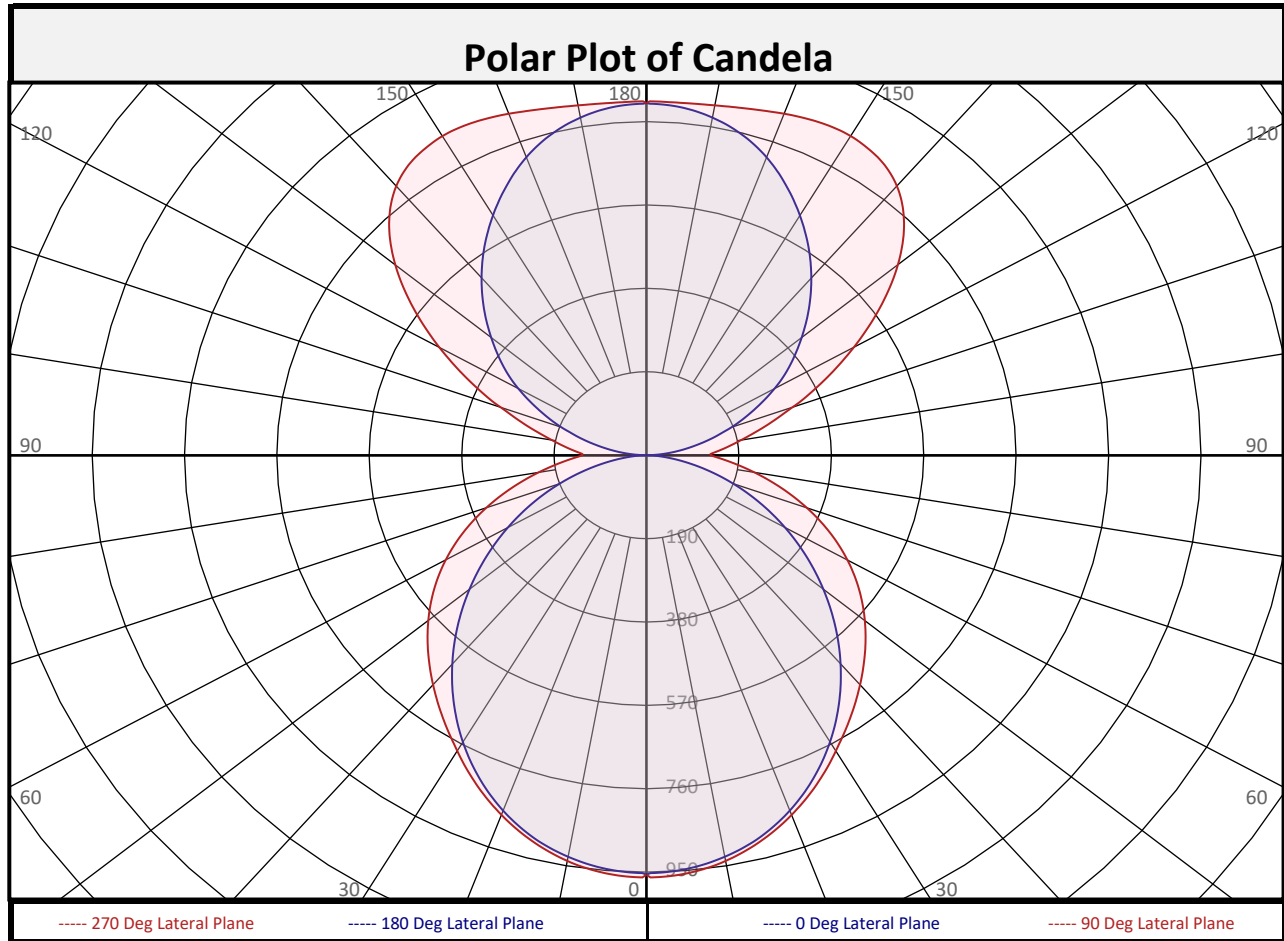
Test date: 08/02/2021
Report date: 08/19/2021

Signed: _____



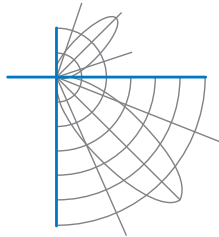
Report of Test

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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	90.2	1.7%	90-100	124.0	2.3%	0-20	344.7	6.4%
10-20	254.6	4.7%	100-110	223.5	4.1%	0-30	721.1	13.3%
20-30	376.4	6.9%	110-120	342.2	6.3%	0-40	1163	21.4%
30-40	442.0	8.1%	120-130	440.9	8.1%	0-60	2033	37.5%
40-50	453.3	8.4%	130-140	479.8	8.8%	0-80	2600	47.9%
50-60	416.2	7.7%	140-150	443.5	8.2%	10-90	2635	48.5%
60-70	337.2	6.2%	150-160	350.2	6.5%	20-50	1272	23.4%
70-80	229.8	4.2%	160-170	222.5	4.1%	40-90	1562	28.8%
80-90	125.6	2.3%	170-180	76.3	1.4%	60-90	692.7	12.8%
0-90	2725	50.2%	90-180	2703	49.8%	0-180	5428	100.0%

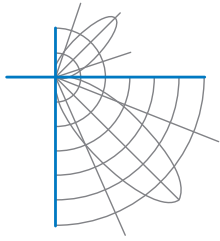


Report of Test

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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	956	956	956	956	956	956	956	956	956
	2.5	951	951	953	957	960	957	953	951	951
	5	946	946	949	953	956	953	949	946	946
	7.5	939	939	941	945	948	945	941	939	939
	10	929	929	931	935	938	935	931	929	929
	12.5	917	916	918	922	925	922	918	916	917
	15	901	900	902	906	909	906	902	900	901
	17.5	883	882	884	888	892	888	884	882	883
	20	862	861	863	868	872	868	863	861	862
	22.5	838	837	841	846	850	846	841	837	838
	25	812	812	816	822	827	822	816	812	812
	27.5	784	784	790	797	803	797	790	784	784
	30	755	755	762	772	778	772	762	755	755
	32.5	723	724	734	745	754	745	734	724	723
	35	690	692	704	719	730	719	704	692	690
	37.5	656	659	674	694	707	694	674	659	656
	40	621	625	643	669	683	669	643	625	621
	42.5	585	591	613	643	659	643	613	591	585
	45	548	556	583	618	635	618	583	556	548
	47.5	512	521	554	592	611	592	554	521	512
50	475	487	524	566	586	566	524	487	475	
52.5	438	452	494	539	560	539	494	452	438	
55	401	417	464	512	533	512	464	417	401	
57.5	364	383	435	484	506	484	435	383	364	
60	328	351	404	455	477	455	404	351	328	
62.5	293	318	374	425	447	425	374	318	293	
65	258	287	344	395	416	395	344	287	258	
67.5	224	256	313	364	384	364	313	256	224	
70	190	225	283	333	351	333	283	225	190	
72.5	158	195	253	301	319	301	253	195	158	
75	127	166	224	270	287	270	224	166	127	
77.5	98	138	196	241	256	241	196	138	98	
80	71	113	169	212	226	212	169	113	71	
82.5	48	89	145	185	198	185	145	89	48	
85	28	69	123	161	173	161	123	69	28	
87.5	12	52	104	139	151	139	104	52	12	
90	0	38	88	122	132	122	88	38	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	38	88	122	132	122	88	38	0
	92.5	16	58	104	131	138	131	104	58	16
	95	36	78	127	150	156	150	127	78	36
	97.5	57	97	150	171	175	171	150	97	57
	100	80	120	175	194	196	194	175	120	80
	102.5	104	144	201	221	221	221	201	144	104
	105	130	170	232	249	251	249	232	170	130
	107.5	157	196	264	282	282	282	264	196	157
	110	186	225	300	320	318	320	300	225	186
	112.5	215	254	336	358	360	358	336	254	215
	115	244	285	374	399	402	399	374	285	244
	117.5	274	317	411	441	446	441	411	317	274
	120	304	349	447	486	492	486	447	349	304
	122.5	334	380	483	530	539	530	483	380	334
	125	362	410	517	574	585	574	517	410	362
	127.5	389	439	550	617	631	617	550	439	389
	130	416	467	581	657	674	657	581	467	416
	132.5	444	495	609	694	714	694	609	495	444
	135	472	522	634	726	749	726	634	522	472
	137.5	500	548	656	752	778	752	656	548	500
	140	527	572	678	773	801	773	678	572	527
	142.5	554	596	696	789	817	789	696	596	554
	145	581	618	712	800	829	800	712	618	581
	147.5	606	640	726	809	836	809	726	640	606
150	631	661	738	814	840	814	738	661	631	
152.5	655	681	749	816	840	816	749	681	655	
155	679	701	759	816	838	816	759	701	679	
157.5	701	719	767	815	833	815	767	719	701	
160	722	736	774	814	828	814	774	736	722	
162.5	741	751	781	811	822	811	781	751	741	
165	757	764	786	809	817	809	786	764	757	
167.5	770	775	790	808	813	808	790	775	770	
170	781	784	794	806	810	806	794	784	781	
172.5	790	791	797	806	807	806	797	791	790	
175	796	796	800	805	806	805	800	796	796	
177.5	800	799	801	805	806	805	801	799	800	
180	803	803	803	803	803	803	803	803	803	



Report of Test

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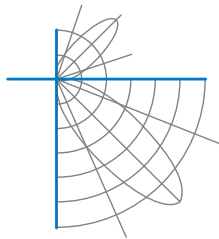
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	107	107	107	107		99	99	99	99		83	83	83		69	69	69		56	56	56	50
1	97	92	88	84		89	85	82	78		72	69	67		60	58	56		49	47	46	41
2	88	80	74	68		81	74	69	64		63	58	55		52	49	46		42	40	38	33
3	80	70	63	57		74	65	58	53		55	50	46		46	42	39		37	35	32	28
4	73	62	54	48		67	57	50	45		49	43	39		41	37	33		33	30	28	24
5	67	55	47	41		62	51	44	38		44	38	33		36	32	29		30	27	24	21
6	62	49	41	35		57	46	39	33		39	33	29		33	28	25		27	24	21	18
7	57	45	37	31		53	41	34	29		36	30	26		30	25	22		25	21	19	16
8	53	40	33	27		49	38	31	26		32	27	23		27	23	20		23	19	17	14
9	49	37	29	24		45	34	28	23		30	24	20		25	21	18		21	17	15	13
10	46	34	27	22		42	32	25	21		27	22	18		23	19	16		19	16	14	12

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	26.5	7.08	7.29
8.0	14.9	9.44	9.72
10.0	9.6	11.80	12.15
12.0	6.6	14.16	14.58
14.0	4.9	16.52	17.01
16.0	3.7	18.88	19.44

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	14524	14524	14524
45	11784	10032	10088
55	10622	9072	9397
65	9272	8049	8508
75	7465	6814	7268
85	4836	5548	5995

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



Report of Test

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UGR TABLE - CORRECTED

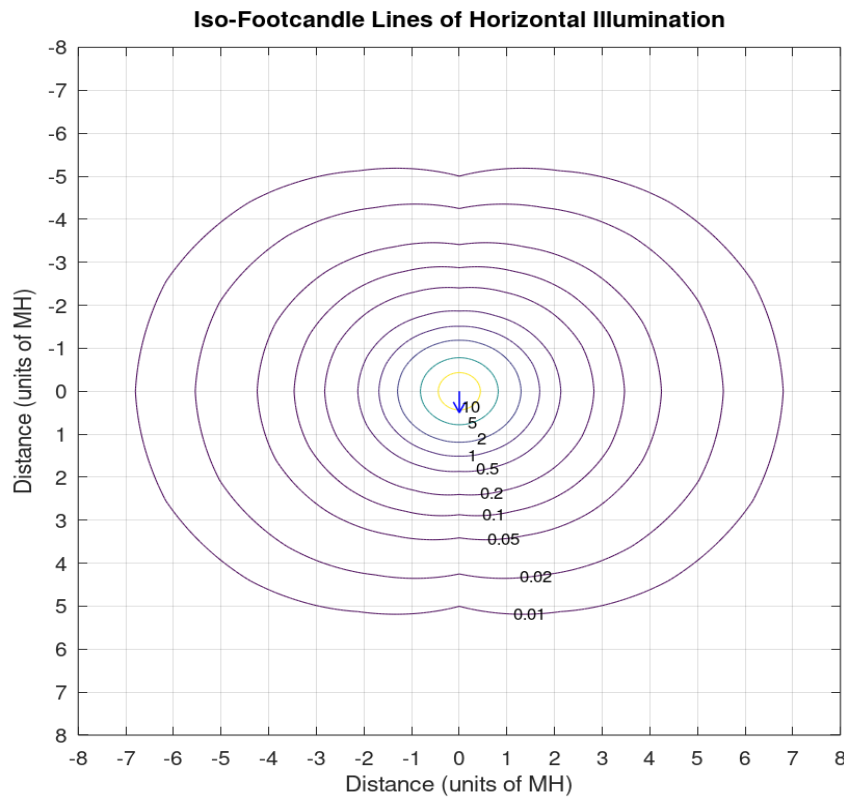
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H Y=2H		13.7	14.6	14.7	15.6	16.8	16.1	17.0	17.1	18.0	19.2
	3H	15.1	15.9	16.1	16.9	18.2	18.4	19.2	19.4	20.2	21.5
	4H	15.6	16.3	16.5	17.3	18.6	19.5	20.2	20.4	21.2	22.5
	6H	15.8	16.5	16.8	17.5	18.8	20.5	21.2	21.5	22.1	23.5
	8H	15.8	16.5	16.8	17.5	18.8	20.9	21.6	21.9	22.6	23.9
	12H	15.8	16.5	16.8	17.5	18.8	21.5	22.1	22.5	23.1	24.4
4H	2H	14.6	15.3	15.6	16.3	17.6	16.5	17.2	17.4	18.2	19.5
	3H	16.2	16.9	17.2	17.9	19.2	19.0	19.6	20.0	20.6	21.9
	4H	16.8	17.4	17.8	18.4	19.7	20.2	20.8	21.2	21.8	23.1
	6H	17.2	17.7	18.2	18.7	20.0	21.4	21.9	22.4	22.9	24.2
	8H	17.2	17.7	18.2	18.7	20.1	22.0	22.4	23.0	23.5	24.8
	12H	17.2	17.7	18.3	18.7	20.1	22.6	23.0	23.6	24.1	25.4
8H	4H	17.4	17.9	18.4	18.9	20.3	20.3	20.8	21.4	21.8	23.2
	6H	17.9	18.3	19.0	19.4	20.7	21.7	22.1	22.7	23.2	24.5
	8H	18.1	18.5	19.2	19.5	20.9	22.4	22.8	23.5	23.8	25.2
	12H	18.2	18.5	19.2	19.5	21.0	23.2	23.5	24.3	24.6	26.0
12H	4H	17.5	18.0	18.6	19.0	20.4	20.3	20.7	21.3	21.8	23.1
	6H	18.2	18.5	19.2	19.6	21.0	21.7	22.1	22.7	23.1	24.5
	8H	18.4	18.7	19.5	19.8	21.2	22.5	22.8	23.5	23.8	25.2

Maximum UGR = 26.0

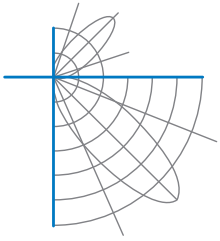


Report of Test LLIA001503-004-R01

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.



Report of Test
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Additional Pictures of Test Subject





Report of Test

LLIA001503-004-R01

Test Distance 9.5 m
Ambient Temperature 25.1 °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.

Revision

R01 - 08/19/2021 - Revised catalog number