



Report of Test

LLIA002278-001-R01*

Indoor Distribution Photometry Test Report

Catalog Number: MLD2-M-4FT-48-750-35K-BW-1%-U

Pendant mounted, extruded aluminum housing with steel endcaps, formed white painted aluminum reflector, translucent frosted linear prismatic plastic lens.

112 white LEDs, two Advance FO Strip PR 23.7in 2200lm 835 LV5 LED boards with 56 LEDs each
One Advance XI040C110V054BST2 LED driver measured at 603mA



Prepared For:

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

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	3017.6 Lumens
Input Current	0.2296 A	Total Efficacy	110.7 lm/W
Input Power	27.26 W	Downward Flux	3017.6 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.990		
Current THD	7.5 %		

*This test report supersedes previous versions - see the end of this report for a list of revisions

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

Test date: 12/08/2023

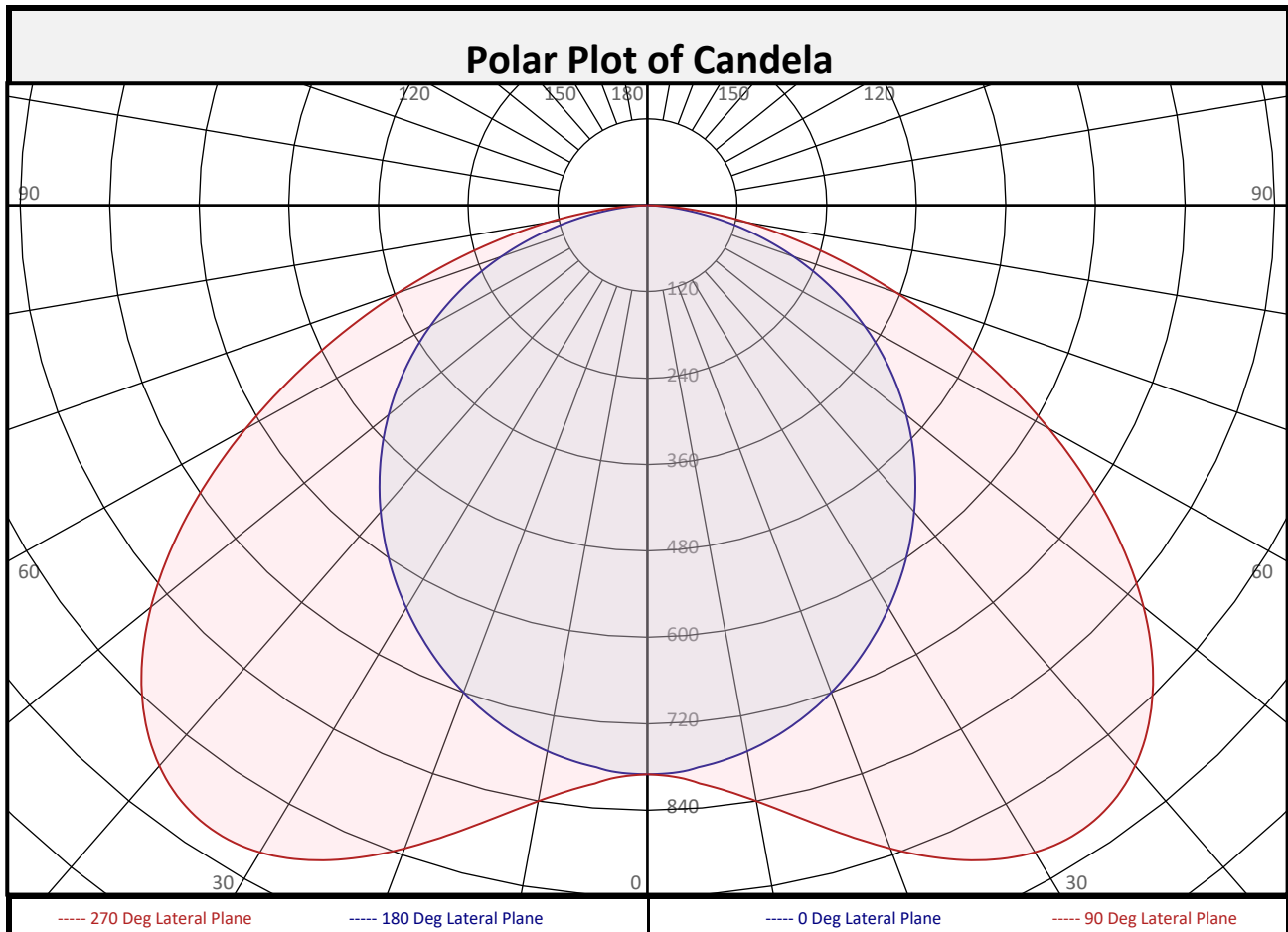
Report date: 12/19/2023

Signed: _____



Report of Test

LLIA002278-001-R01



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	76.1	2.5%		90-100	0.0	0.0%		0-20	308.6	10.2%
10-20	232.5	7.7%		100-110	0.0	0.0%		0-30	698.4	23.1%
20-30	389.8	12.9%		110-120	0.0	0.0%		0-40	1217	40.3%
30-40	518.4	17.2%		120-130	0.0	0.0%		0-60	2331	77.3%
40-50	576.7	19.1%		130-140	0.0	0.0%		0-80	2962	98.2%
50-60	537.6	17.8%		140-150	0.0	0.0%		10-90	2941	97.5%
60-70	406.5	13.5%		150-160	0.0	0.0%		20-50	1485	49.2%
70-80	224.6	7.4%		160-170	0.0	0.0%		40-90	1801	59.7%
80-90	55.4	1.8%		170-180	0.0	0.0%		60-90	686.5	22.7%
0-90	3018	100.0%		90-180	0.0	0.0%		0-180	3018	100.0%



Report of Test

LLIA002278-001-R01

Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	790	790	790	790	790	790	790	790	790
	2.5	789	789	791	793	794	793	791	789	789
	5	783	785	793	802	806	802	793	785	783
	7.5	778	782	797	814	821	814	797	782	778
	10	770	778	803	829	840	829	803	778	770
	12.5	760	773	810	848	864	848	810	773	760
	15	748	767	817	870	892	870	817	767	748
	17.5	735	759	825	893	921	893	825	759	735
	20	720	750	832	917	951	917	832	750	720
	22.5	703	740	838	939	979	939	838	740	703
	25	685	728	843	959	1003	959	843	728	685
	27.5	666	714	846	976	1024	976	846	714	666
	30	646	698	846	988	1038	988	846	698	646
	32.5	625	681	843	994	1044	994	843	681	625
	35	602	662	837	994	1043	994	837	662	602
	37.5	579	642	827	987	1034	987	827	642	579
	40	555	619	813	973	1016	973	813	619	555
	42.5	531	595	794	952	991	952	794	595	531
	45	505	569	771	924	957	924	771	569	505
	47.5	479	542	744	890	916	890	744	542	479
50	452	513	713	849	867	849	713	513	452	
52.5	424	482	678	801	812	801	678	482	424	
55	396	450	639	749	752	749	639	450	396	
57.5	366	417	596	691	688	691	596	417	366	
60	336	383	551	630	621	630	551	383	336	
62.5	305	348	502	567	553	567	502	348	305	
65	273	311	452	502	486	502	452	311	273	
67.5	241	274	400	437	419	437	400	274	241	
70	208	237	347	373	355	373	347	237	208	
72.5	175	200	294	311	294	311	294	200	175	
75	143	164	242	252	236	252	242	164	143	
77.5	111	128	191	196	183	196	191	128	111	
80	80	94	142	144	134	144	142	94	80	
82.5	52	63	97	97	89	97	97	63	52	
85	28	36	57	55	50	55	57	36	28	
87.5	10	14	22	20	18	20	22	14	10	
90	0	0	0	0	0	0	0	0	0	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



Report of Test

LLIA002278-001-R01

Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles									
		0	22.5	45	67.5	90	112.5	135	157.5	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	
	92.5	0	0	0	0	0	0	0	0	0	
	95	0	0	0	0	0	0	0	0	0	
	97.5	0	0	0	0	0	0	0	0	0	
	100	0	0	0	0	0	0	0	0	0	
	102.5	0	0	0	0	0	0	0	0	0	
	105	0	0	0	0	0	0	0	0	0	
	107.5	0	0	0	0	0	0	0	0	0	
	110	0	0	0	0	0	0	0	0	0	
	112.5	0	0	0	0	0	0	0	0	0	
	115	0	0	0	0	0	0	0	0	0	
	117.5	0	0	0	0	0	0	0	0	0	
	120	0	0	0	0	0	0	0	0	0	
	122.5	0	0	0	0	0	0	0	0	0	
	125	0	0	0	0	0	0	0	0	0	
	127.5	0	0	0	0	0	0	0	0	0	
	130	0	0	0	0	0	0	0	0	0	
	132.5	0	0	0	0	0	0	0	0	0	
	135	0	0	0	0	0	0	0	0	0	
	137.5	0	0	0	0	0	0	0	0	0	
	140	0	0	0	0	0	0	0	0	0	
	142.5	0	0	0	0	0	0	0	0	0	
	145	0	0	0	0	0	0	0	0	0	
	147.5	0	0	0	0	0	0	0	0	0	
	150	0	0	0	0	0	0	0	0	0	
	152.5	0	0	0	0	0	0	0	0	0	
	155	0	0	0	0	0	0	0	0	0	
	157.5	0	0	0	0	0	0	0	0	0	
	160	0	0	0	0	0	0	0	0	0	
	162.5	0	0	0	0	0	0	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		

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



Report of Test

LLIA002278-001-R01

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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100		
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	85	83		
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	70	68		
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	59	57		
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	54	50	50	48		
5	74	61	51	45	72	60	51	44	58	50	44	55	49	43	54	48	43	43	41		
6	68	54	45	38	66	53	45	38	52	44	38	50	43	38	48	42	37	37	35		
7	63	49	40	34	61	48	40	33	47	39	33	45	38	33	44	37	33	33	31		
8	59	45	36	30	57	44	35	30	42	35	29	41	34	29	40	34	29	29	27		
9	55	41	32	26	53	40	32	26	39	31	26	38	31	26	37	30	26	26	24		
10	51	37	29	24	50	37	29	24	36	29	24	35	28	23	34	28	23	23	22		

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	22.0	7.31	11.03
8.0	12.3	9.75	14.70
10.0	7.9	12.18	18.38
12.0	5.5	14.62	22.05
14.0	4.0	17.06	25.73
16.0	3.1	19.49	29.41

Spacing Criterion	
0 deg:	1.2
90 deg:	1.8
180 deg:	1.2
270 deg:	1.8

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	15704	15704	15704
45	14204	21676	26897
55	13707	22126	26065
65	12834	21265	22829
75	10952	18544	18125
85	6410	12906	11306

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	86.7°
Field Angle:	156.0°
90-270 Degree Plane	
Beam Angle:	127.3°
Field Angle:	163.2°



Report of Test

LLIA002278-001-R01

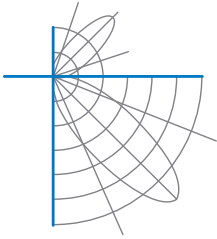
UGR Table - Corrected

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

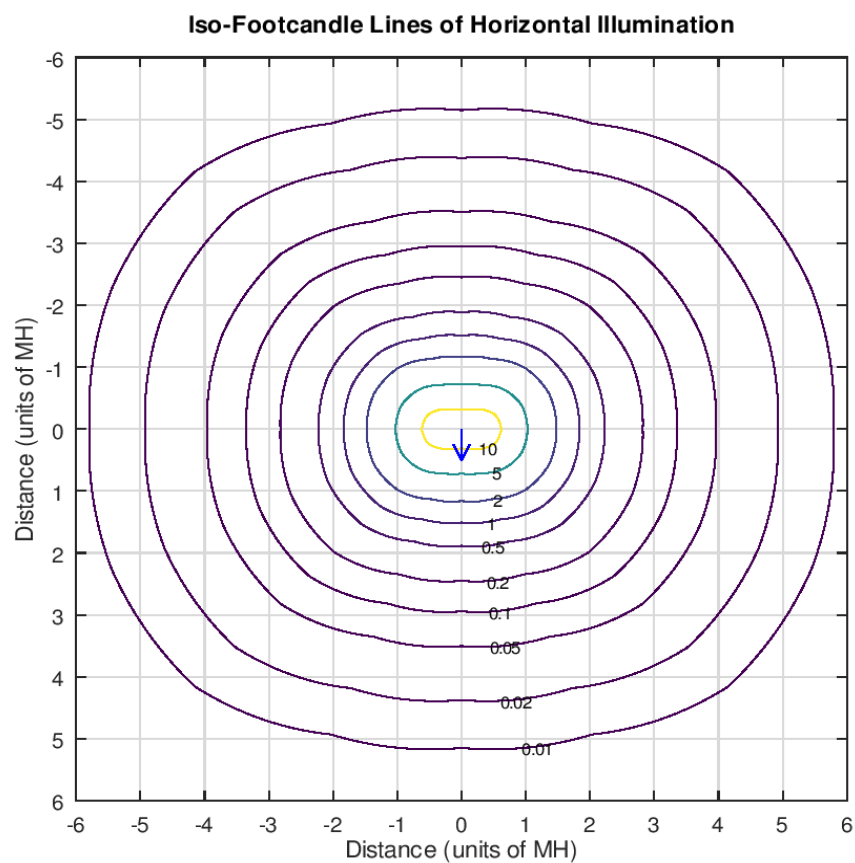
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.8	22.5	21.1	22.8	23.1	24.4	26.1	24.8	26.5	26.8
	3H	22.5	24.0	22.9	24.4	24.7	26.1	27.6	26.5	28.0	28.3
	4H	23.1	24.6	23.5	24.9	25.3	26.7	28.1	27.1	28.4	28.8
	6H	23.5	24.9	23.9	25.2	25.6	27.0	28.4	27.4	28.7	29.1
	8H	23.6	24.9	24.0	25.3	25.7	27.1	28.4	27.6	28.8	29.2
	12H	23.7	24.9	24.1	25.3	25.7	27.2	28.4	27.6	28.8	29.2
4H	2H	22.2	23.7	22.6	24.0	24.4	24.9	26.4	25.3	26.7	27.1
	3H	24.1	25.3	24.5	25.7	26.1	26.8	28.0	27.2	28.4	28.8
	4H	24.7	25.8	25.1	26.2	26.6	27.5	28.6	28.0	29.1	29.5
	6H	25.2	26.1	25.6	26.6	27.0	28.1	29.0	28.5	29.5	29.9
	8H	25.3	26.2	25.8	26.6	27.1	28.2	29.1	28.7	29.6	30.0
	12H	25.4	26.2	25.8	26.6	27.1	28.3	29.1	28.8	29.6	30.1
8H	4H	25.3	26.2	25.8	26.7	27.1	27.8	28.7	28.2	29.1	29.6
	6H	25.9	26.7	26.4	27.2	27.6	28.4	29.2	28.9	29.7	30.1
	8H	26.1	26.8	26.6	27.3	27.7	28.6	29.3	29.1	29.8	30.3
	12H	26.2	26.8	26.7	27.3	27.8	28.8	29.4	29.3	29.9	30.4
12H	4H	25.4	26.2	25.9	26.7	27.2	27.8	28.6	28.3	29.1	29.5
	6H	26.0	26.7	26.6	27.2	27.7	28.5	29.1	29.0	29.6	30.1
	8H	26.3	26.9	26.8	27.4	27.9	28.7	29.3	29.2	29.8	30.4

Maximum UGR = 30.4



Report of Test LLIA002278-001-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

LLIA002278-001-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-41-20 and LM-46-20.

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 History: R01 - 12/19/2023 - Revised catalog number