

Report of Test

LLIA001503-005-R01*

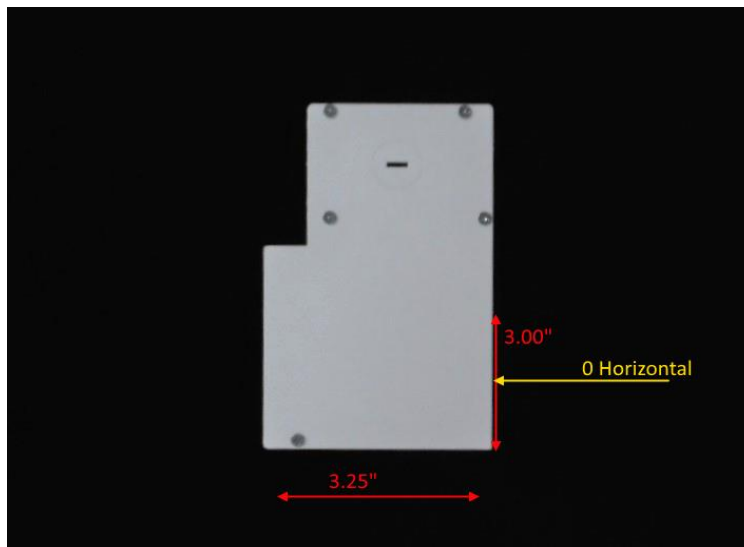
Indoor Distribution Photometry Test Report

Catalog Number: MLP3-G-3-750-35K-HTA-1% U

Recessed mounted, extruded aluminum housing, frosted plastic enclosure.

112 white LEDs, two Advance FO Strip PR 23.7 in 2200lm 835 LV5 LED boards with 56 LEDs each.

One Advance XI040C110V054BST2 LED driver labeled as 640mA



Prepared For:

Mercury Lighting Products Company, Inc.

20 Audrey Place

Fairfield, NJ 07004, USA

Performance Summary

Input Voltage	120.0 Vac	Luminous Flux	3281.6 Lumens
Input Current	0.2473 A	Total Efficacy	111.7 Lm/W
Input Power	29.37 W	Downward Flux	3129.7 Lumens
Frequency	60.00 Hz	Downward Flux	95.4 % of Total
Power Factor	0.990		
Current THD	8.0 %		

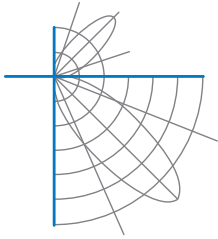
*This test report supersedes previous versions - see the end of this report for a list of revisions

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

Test date: 07/29/2021

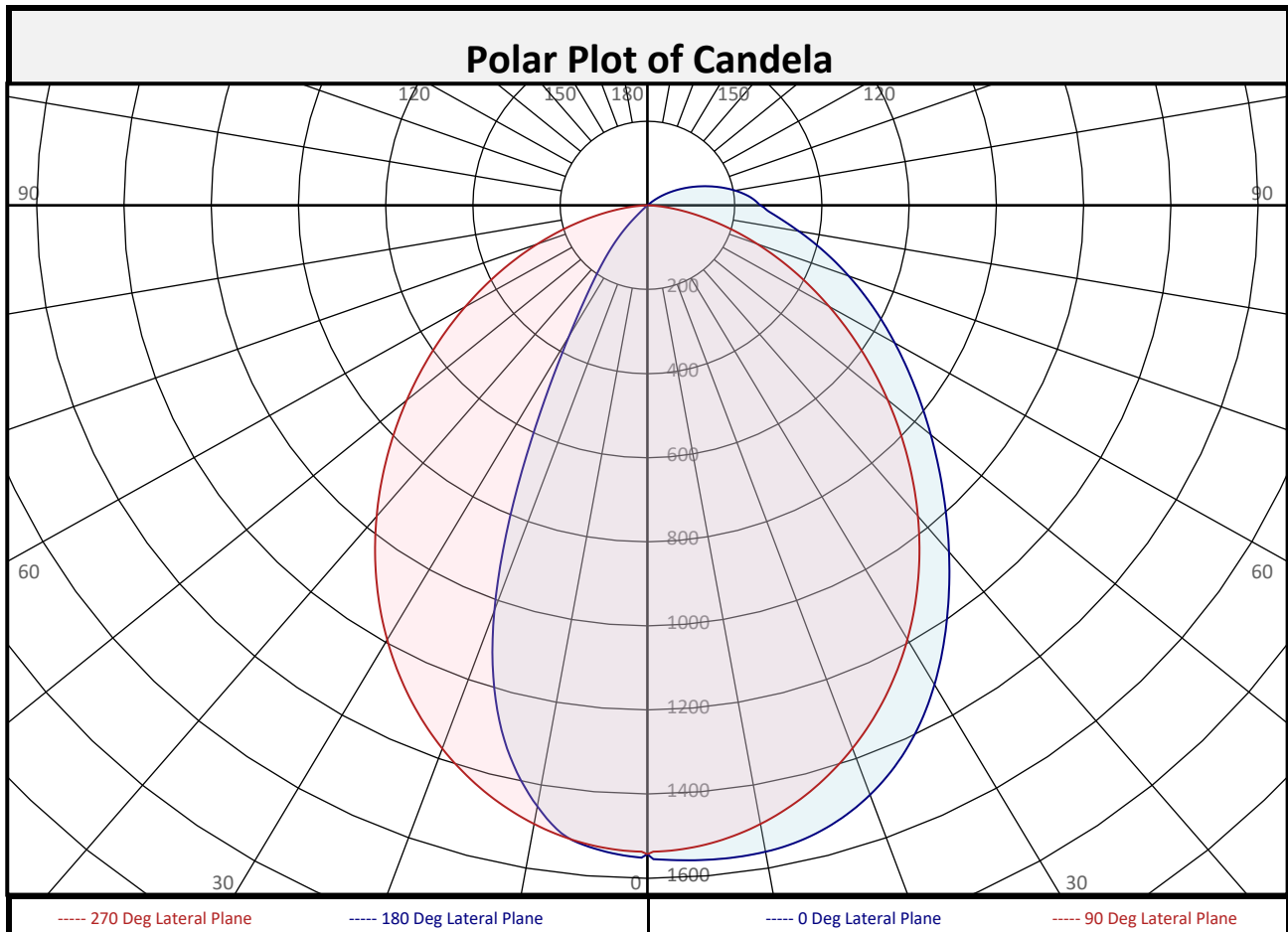
Report date: 03/10/2023

Signed: _____

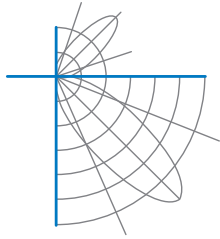


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	145.6	4.4%		90-100	75.8	2.3%		0-20	548.3	16.7%
10-20	402.7	12.3%		100-110	46.7	1.4%		0-30	1093	33.3%
20-30	544.3	16.6%		110-120	22.5	0.7%		0-40	1645	50.1%
30-40	552.9	16.8%		120-130	6.6	0.2%		0-60	2529	77.1%
40-50	490.8	15.0%		130-140	0.3	0.0%		0-80	3015	91.9%
50-60	392.4	12.0%		140-150	0.0	0.0%		10-90	2984	90.9%
60-70	291.3	8.9%		150-160	0.0	0.0%		20-50	1588	48.4%
70-80	194.7	5.9%		160-170	0.0	0.0%		40-90	1484	45.2%
80-90	115.1	3.5%		170-180	0.0	0.0%		60-90	601.1	18.3%
0-90	3130	95.4%		90-180	151.9	4.6%		0-180	3282	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 - Data was acquired in 0.5° increments, 2.5° increments shown.	0	1543	1543	1543	1543	1543	1543	1543	1543	1543
	2.5	1559	1553	1544	1536	1534	1532	1535	1542	1545
	5	1562	1556	1543	1531	1526	1522	1524	1530	1531
	7.5	1563	1556	1539	1522	1512	1507	1507	1508	1506
	10	1561	1553	1530	1507	1494	1487	1481	1462	1452
	12.5	1553	1544	1518	1489	1470	1461	1437	1398	1382
	15	1539	1530	1502	1466	1443	1431	1379	1320	1292
	17.5	1519	1510	1480	1439	1410	1395	1312	1220	1175
	20	1492	1483	1454	1409	1374	1350	1234	1096	1027
	22.5	1458	1450	1422	1374	1334	1297	1143	943	847
	25	1417	1412	1386	1336	1290	1237	1036	769	656
	27.5	1369	1367	1346	1296	1243	1174	914	596	489
	30	1316	1317	1302	1251	1192	1105	779	447	360
	32.5	1258	1262	1254	1204	1139	1033	639	335	271
	35	1197	1204	1203	1155	1083	955	507	255	209
	37.5	1136	1144	1149	1104	1025	875	393	197	161
	40	1075	1083	1092	1050	965	790	302	151	119
	42.5	1015	1023	1034	996	904	703	232	112	79
	45	957	964	976	942	843	614	178	73	31
	47.5	901	907	918	887	781	524	135	28	0
50	847	852	860	832	719	436	98	0	0	
52.5	796	799	804	777	658	352	64	0	0	
55	746	748	749	723	598	275	25	0	0	
57.5	700	699	696	669	539	208	4	0	0	
60	655	652	644	615	481	152	4	0	0	
62.5	611	606	594	563	425	106	3	0	0	
65	570	563	545	511	371	69	3	0	0	
67.5	530	521	498	460	318	39	3	0	0	
70	491	480	452	410	267	10	0	0	0	
72.5	454	441	408	360	219	5	0	0	0	
75	418	404	366	311	173	4	0	0	0	
77.5	384	369	326	265	131	3	0	0	0	
80	352	336	289	221	93	1	0	0	0	
82.5	323	306	255	181	60	0	0	0	0	
85	297	279	224	145	31	0	0	0	0	
87.5	275	256	200	114	9	0	0	0	0	
90	260	241	181	92	0	0	0	0	0	

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

North America (issuing laboratory)

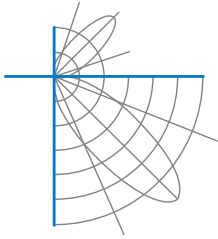
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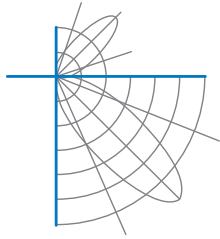
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	260	241	181	92	0	0	0	0	0
	92.5	248	229	170	81	0	0	0	0	0
	95	235	216	157	68	0	0	0	0	0
	97.5	220	201	143	54	0	0	0	0	0
	100	204	185	127	42	0	0	0	0	0
	102.5	187	168	111	31	0	0	0	0	0
	105	169	151	95	21	0	0	0	0	0
	107.5	151	133	80	12	0	0	0	0	0
	110	134	117	66	6	0	0	0	0	0
	112.5	117	100	52	5	0	0	0	0	0
	115	100	84	40	5	0	0	0	0	0
	117.5	84	70	28	4	0	0	0	0	0
	120	69	55	17	4	0	0	0	0	0
	122.5	54	42	7	3	0	0	0	0	0
	125	40	29	4	3	0	0	0	0	0
	127.5	27	16	4	3	0	0	0	0	0
	130	14	5	3	0	0	0	0	0	0
	132.5	0	0	3	0	0	0	0	0	0
	135	0	0	3	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.



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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	70	50	30	10	70	50	30	10	70	50	30	10	0
RCR																					
0	118	118	118	118	115	115	115	115	109	109	109	109	103	103	103	103	98	98	98	98	95
1	108	103	99	95	105	100	96	93	95	92	89	89	91	88	86	86	86	84	82	80	80
2	99	91	84	79	96	88	82	77	84	79	75	75	80	76	73	73	77	73	70	68	68
3	91	81	73	67	88	79	72	66	75	69	64	64	72	67	62	62	69	64	61	58	58
4	84	72	64	58	81	71	63	57	68	61	56	56	65	59	54	54	62	57	53	51	51
5	77	65	57	50	75	64	56	50	61	54	49	49	59	53	48	48	57	51	47	45	45
6	72	59	51	45	70	58	50	44	56	49	44	44	54	48	43	43	52	46	42	40	40
7	67	54	46	40	65	53	45	40	51	44	39	39	49	43	39	39	48	42	38	36	36
8	63	50	42	36	61	49	41	36	47	40	35	35	46	40	35	35	44	39	35	33	33
9	59	46	38	33	57	45	38	33	44	37	32	32	42	36	32	32	41	36	32	30	30
10	55	43	35	30	54	42	35	30	41	34	30	30	40	34	29	29	38	33	29	27	27

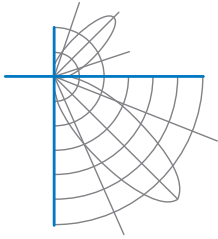
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	42.9	6.08	6.95
8.0	24.1	8.10	9.27
10.0	15.4	10.13	11.58
12.0	10.7	12.15	13.90
14.0	7.9	14.18	16.22
16.0	6.0	16.20	18.53

Spacing Criterion	
0 deg:	1.3
90 deg:	1.2
180 deg:	0.8
270 deg:	1.2

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	16608	16608	16608
45	7283	8700	12826
55	5769	6997	11222
65	4616	5518	9442
75	3672	4185	7208
85	2954	3051	3785

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	76.5°
Field Angle:	144.5°
90-270 Degree Plane	
Beam Angle:	94.9°
Field Angle:	152.0°



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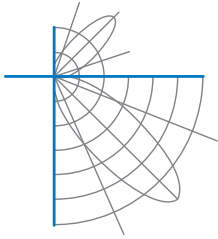
UGR Table - Corrected

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

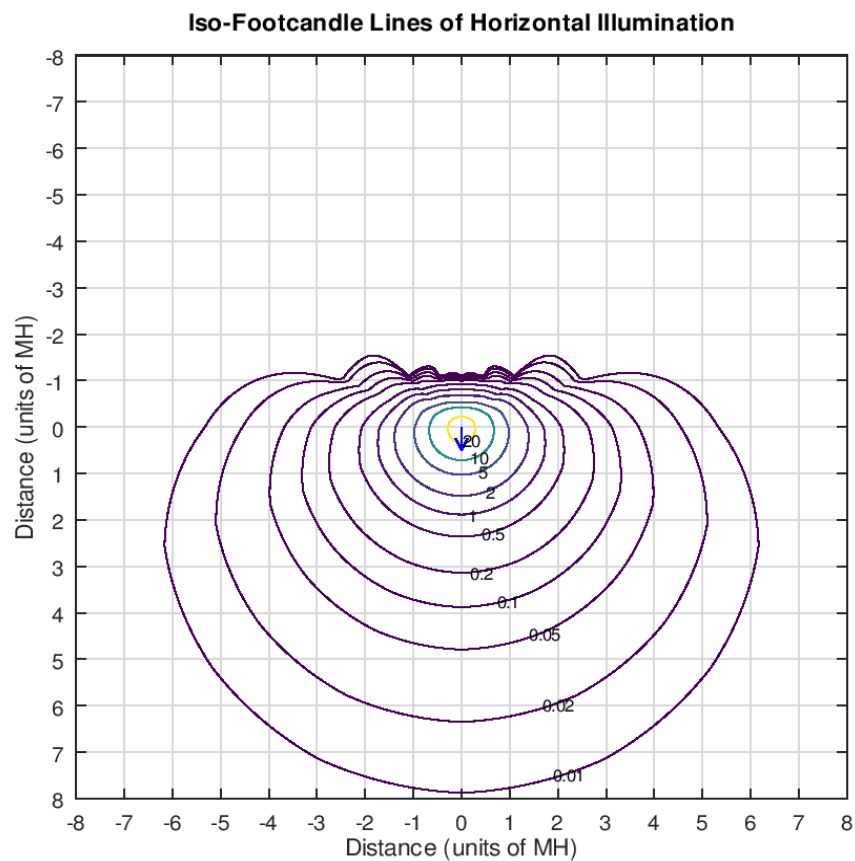
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.3	21.7	20.7	22.2	22.6	16.3	17.8	16.8	18.2	18.6
	3H	22.6	23.9	23.0	24.3	24.8	17.5	18.8	18.0	19.3	19.8
	4H	23.6	24.8	24.1	25.3	25.8	17.9	19.1	18.4	19.6	20.1
	6H	24.7	25.9	25.2	26.3	26.8	18.1	19.2	18.5	19.7	20.2
	8H	25.3	26.4	25.8	26.9	27.4	18.1	19.2	18.6	19.7	20.2
	12H	25.9	26.9	26.4	27.4	28.0	18.1	19.1	18.6	19.6	20.1
4H	2H	20.7	21.9	21.2	22.3	22.8	17.0	18.2	17.5	18.7	19.2
	3H	23.1	24.1	23.6	24.6	25.1	18.5	19.5	19.0	20.0	20.5
	4H	24.3	25.2	24.8	25.7	26.3	19.0	19.9	19.5	20.4	21.0
	6H	25.5	26.4	26.1	26.9	27.5	19.3	20.1	19.8	20.6	21.2
	8H	26.2	27.0	26.7	27.5	28.1	19.3	20.1	19.9	20.6	21.2
	12H	26.9	27.6	27.5	28.2	28.7	19.3	20.0	19.9	20.6	21.2
8H	4H	24.4	25.2	25.0	25.7	26.3	19.5	20.2	20.0	20.8	21.3
	6H	25.8	26.5	26.4	27.0	27.6	19.9	20.6	20.5	21.1	21.7
	8H	26.6	27.2	27.1	27.7	28.3	20.1	20.6	20.6	21.2	21.8
	12H	27.4	27.9	28.0	28.5	29.2	20.1	20.7	20.7	21.2	21.9
12H	4H	24.4	25.1	25.0	25.7	26.3	19.6	20.3	20.1	20.8	21.4
	6H	25.8	26.4	26.4	27.0	27.6	20.1	20.7	20.7	21.3	21.9
	8H	26.6	27.2	27.2	27.7	28.4	20.3	20.8	20.9	21.4	22.1

Maximum UGR = 29.2

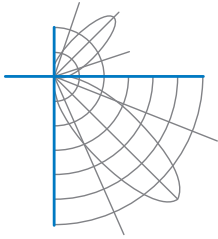


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Iso-Illuminance Plot



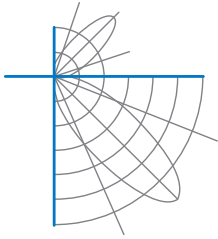
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution 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 25.1 °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 History: R01 - 03/10/2023 - Revised catalog number