



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002

Prepared For
Mercury Lighting
20 Audrey PL
Fairfield, NJ 07004-3416
United States

Catalog Number
MLS2-S-4-2500-(625 LM/FT)-35K-HTA-A401-U
Order Number
11654729
Test Number
11654729.20

Test Date

2017-03-24

Prepared By

Javier Caban, Technician

Approved By

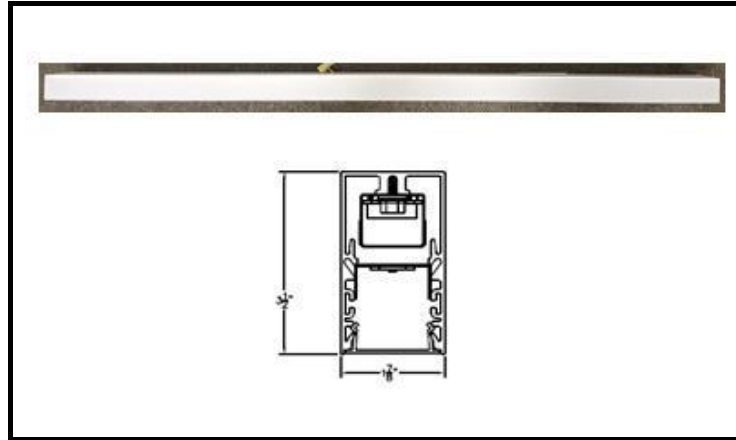
Tiffany Hamm, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



Luminaire Description: Formed white aluminum housing, frosted plastic lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: Philips Advanced XI040C110V054BST1
Note: Tested as MLS2 M 4 3300 35K HTA A401 U

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 1.750 in.

Summary of Results

Total Luminaire Output:	2538 Lumens
Luminaire Efficacy:	91.9 lm/w
Maximum Candela:	1324 Candela

Test Conditions

Test Temperature:	25.0 °C
Voltage:	120.0 VAC
Current:	0.2313 A
Power:	27.61 W
Power Factor:	0.995
Frequency:	60 Hz
Current THD:	8.10 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.2313 A	27.61 W	0.995	60 Hz	8.10 %

Summary of Results

Spacing Criteria

0-180: 1.19

90-270: 1.19

Total Lumen Output:

2538 Lumens

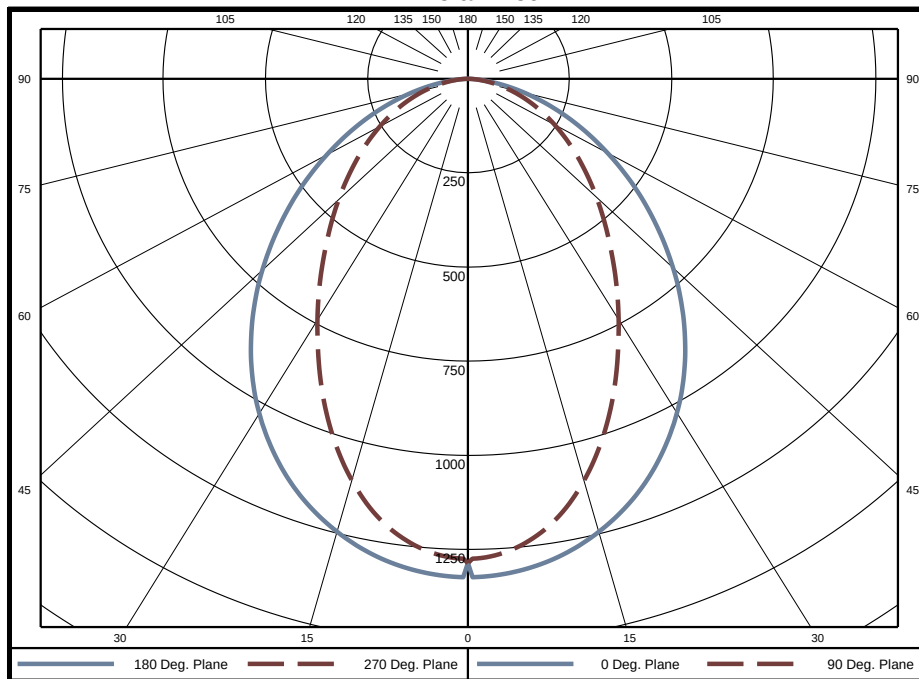
Luminaire Efficacy:

91.9 lm/w

Maximum Candela:

1324 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	30.6	1.2%	60-65	133.0	5.2%	120-125	0	0.0%
5-10	89.5	3.5%	65-70	104.9	4.1%	125-130	0	0.0%
10-15	141.9	5.6%	70-75	76.4	3.0%	130-135	0	0.0%
15-20	184.4	7.3%	75-80	48.7	1.9%	135-140	0	0.0%
20-25	214.8	8.5%	80-85	24.2	1.0%	140-145	0	0.0%
25-30	232.6	9.2%	85-90	6.3	0.2%	145-150	0	0.0%
30-35	239.0	9.4%	90-95	0.0	0.0%	150-155	0	0.0%
35-40	235.6	9.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	224.2	8.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	206.8	8.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	185.1	7.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	160.1	6.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1368	53.9%
0-60	2145	84.5%
0-90	2538	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286
	5	1315	1281	1262	1259	1254	1259	1262	1281	1315	1281	1262	1259	1254	1259	1262
	10	1289	1251	1221	1206	1197	1206	1221	1251	1289	1251	1221	1206	1197	1206	1221
	15	1246	1201	1154	1121	1105	1121	1154	1201	1246	1201	1154	1121	1105	1121	1154
	20	1188	1133	1066	1014	990	1014	1066	1133	1188	1133	1066	1014	990	1014	1066
	25	1115	1052	963	892	865	892	963	1052	1115	1052	963	892	865	892	963
	30	1028	957	852	772	743	772	852	957	1028	957	852	772	743	772	852
	35	931	854	741	660	632	660	741	854	931	854	741	660	632	660	741
	40	826	748	635	560	534	560	635	748	826	748	635	560	534	560	635
	45	717	641	536	471	450	471	536	641	717	641	536	471	450	471	536
	50	607	539	448	394	375	394	448	539	607	539	448	394	375	394	448
	55	502	443	368	324	309	324	368	443	502	443	368	324	309	324	368
	60	400	355	296	261	249	261	296	355	400	355	296	261	249	261	296
	65	308	274	229	204	195	204	229	274	308	274	229	204	195	204	229
	70	223	201	168	151	145	151	168	201	223	201	168	151	145	151	168
	75	146	133	113	103	99	103	113	133	146	133	113	103	99	103	113
	80	79	73	64	59	58	59	64	73	79	73	64	59	58	59	64
	85	27	26	25	24	24	24	25	26	27	26	25	24	24	24	25
	90	0	0	1	1	1	1	1	0	0	0	1	1	1	1	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	23730	23730	23730
	45	18700	13990	11740
	55	16140	11850	9947
	65	13440	10000	8521
	75	10410	8040	7050
	85	5781	5249	5086



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	3022	3022	3022	3022	2951	2951	2951	2951	2820	2820	2820	2700	2700	2700	2590	2590	2590	2538
1	2789	2680	2582	2494	2722	2623	2534	2454	2516	2443	2377	2418	2359	2304	2328	2280	2236	2185
2	2561	2371	2213	2081	2497	2324	2179	2056	2235	2114	2009	2154	2052	1964	2078	1995	1920	1868
3	2355	2109	1919	1768	2295	2070	1894	1752	1996	1846	1722	1928	1800	1692	1865	1757	1664	1612
4	2172	1891	1684	1527	2116	1858	1665	1517	1796	1629	1496	1738	1594	1477	1685	1560	1457	1405
5	2011	1707	1494	1338	1960	1679	1480	1330	1627	1451	1316	1578	1424	1303	1533	1398	1289	1238
6	1867	1551	1338	1186	1821	1527	1326	1180	1483	1304	1170	1441	1282	1161	1402	1261	1151	1102
7	1740	1417	1208	1061	1698	1397	1199	1058	1359	1181	1050	1324	1163	1043	1290	1146	1036	988
8	1627	1303	1099	958	1589	1285	1091	956	1253	1076	950	1222	1062	945	1193	1048	939	893
9	1526	1203	1005	872	1491	1188	999	870	1160	987	866	1134	975	861	1109	964	857	813
10	1436	1117	926	798	1404	1104	920	797	1079	910	793	1056	900	790	1034	891	787	745

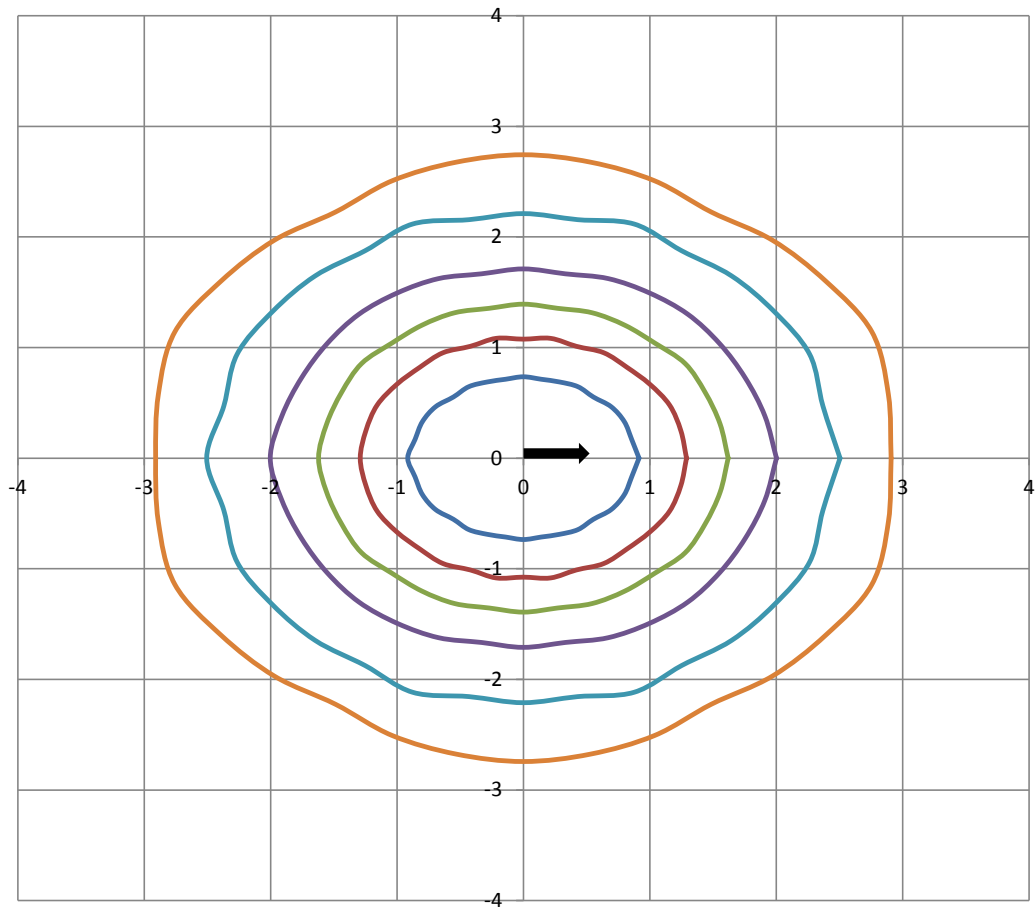
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1286 Candela
Central Cone Intensity:	1281 Candela
Beam Flux:	1416.2 Lumens
Beam Angle (0-180):	96.7 Degrees
Beam Angle (90-270):	69.0 Degrees
Field Angle (0-180):	152.5 Degrees
Field Angle (90-270):	143.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		80.4	4.16
6.00		35.7	6.24
8.00		20.1	8.32
10.0		12.9	10.4
12.0		8.93	12.5
14.0		6.56	14.6
16.0		5.02	16.6



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

