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Allentown, PA 18106
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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-F-4-3300-(825 LM/FT)-35K-HTA-A401-U
Order Number
11654729
Test Number
11654729.18

Test Date

2017-03-28

Prepared By

Javier Caban, Technician

Approved By

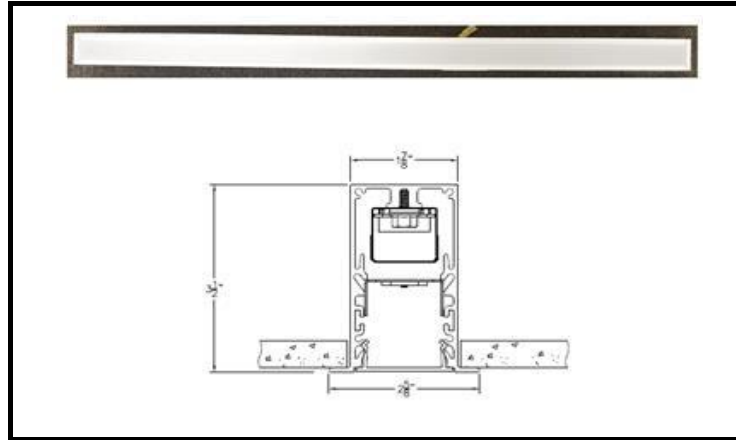
Tiffany Hamm, Project Handler

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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 G 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:	3259 Lumens
Luminaire Efficacy:	88 lm/w
Maximum Candela:	1681 Candela

Test Conditions

Test Temperature:	25.5 °C
Voltage:	120.0 VAC
Current:	0.3094 A
Power:	37.04 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	5.59 %

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
25.5 °C	120.0 VAC	0.3094 A	37.04 W	0.997	60 Hz	5.59 %

Summary of Results

Spacing Criteria

0-180: 1.19

90-270: 1.19

Total Lumen Output:

3259 Lumens

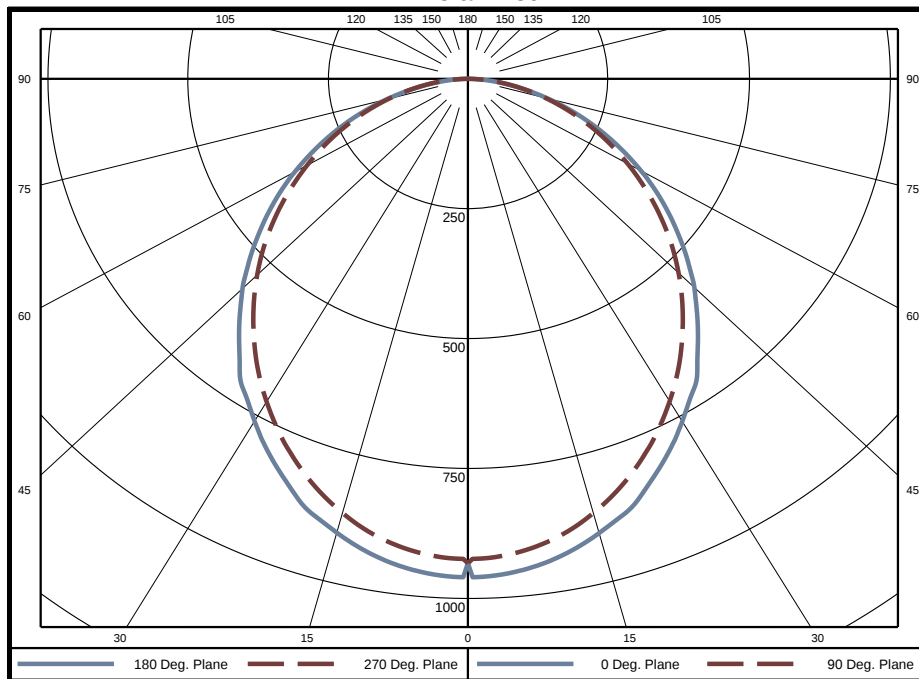
Luminaire Efficacy:

88.0 lm/w

Maximum Candela:

1681 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	38.8	1.2%	60-65	171.7	5.3%	120-125	0	0.0%
5-10	113.6	3.5%	65-70	136.0	4.2%	125-130	0	0.0%
10-15	180.0	5.5%	70-75	99.9	3.1%	130-135	0	0.0%
15-20	234.3	7.2%	75-80	65.3	2.0%	135-140	0	0.0%
20-25	273.3	8.4%	80-85	34.9	1.1%	140-145	0	0.0%
25-30	296.1	9.1%	85-90	12.1	0.4%	145-150	0	0.0%
30-35	304.8	9.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	301.4	9.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	287.0	8.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	265.8	8.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	238.0	7.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	206.3	6.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1742	53.5%
0-60	2739	84.1%
0-90	3259	100.0%
90-180	0	0.0%



Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632
5	1669	1626	1601	1597	1591	1597	1601	1626	1669	1626	1601	1597	1591	1597	1601	1626
10	1635	1587	1548	1529	1519	1529	1548	1587	1635	1587	1548	1529	1519	1529	1548	1587
15	1585	1525	1463	1422	1402	1422	1463	1525	1585	1525	1463	1422	1402	1422	1463	1525
20	1512	1444	1354	1286	1257	1286	1354	1444	1512	1444	1354	1286	1257	1286	1354	1444
25	1415	1338	1228	1136	1101	1136	1228	1338	1415	1338	1228	1136	1101	1136	1228	1338
30	1302	1212	1086	987	951	987	1086	1212	1302	1212	1086	987	951	987	1086	1212
35	1186	1089	945	848	814	848	945	1089	1186	1089	945	848	814	848	945	1089
40	1042	952	812	723	693	723	812	952	1042	952	812	723	693	723	812	952
45	912	814	690	612	585	612	690	814	912	814	690	612	585	612	690	814
50	766	686	578	513	489	513	578	686	766	686	578	513	489	513	578	686
55	633	565	477	422	403	422	477	565	633	565	477	422	403	422	477	565
60	507	454	384	341	326	341	384	454	507	454	384	341	326	341	384	454
65	389	352	298	267	256	267	298	352	389	352	298	267	256	267	298	352
70	283	258	220	200	193	200	220	258	283	258	220	200	193	200	220	258
75	185	171	150	139	135	139	150	171	185	171	150	139	135	139	150	171
80	101	96	89	86	85	86	89	96	101	96	89	86	85	86	89	96
85	34	38	41	43	44	43	41	38	34	38	41	43	44	43	41	38
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	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	0
105	0	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	0
115	0	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	0
125	0	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	0
135	0	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	0
145	0	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	0
155	0	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	0
165	0	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	0
175	0	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	0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	30110	30110	30110
45	23800	18000	15270
55	20370	15350	12960
65	16980	13000	11170
75	13190	10680	9609
85	7285	8678	9280



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	3880	3880	3880	3880	3790	3790	3790	3790	3621	3621	3621	3467	3467	3467	3326	3326	3326	3259
1	3577	3435	3308	3193	3490	3362	3246	3142	3225	3130	3043	3098	3021	2950	2982	2920	2863	2797
2	3283	3036	2832	2660	3200	2976	2788	2629	2862	2704	2568	2757	2626	2511	2660	2552	2455	2388
3	3018	2700	2454	2258	2940	2650	2422	2238	2555	2360	2200	2467	2301	2162	2385	2245	2126	2058
4	2783	2419	2153	1950	2711	2377	2128	1936	2297	2081	1910	2223	2036	1885	2154	1993	1860	1794
5	2575	2183	1909	1707	2509	2147	1890	1698	2080	1853	1680	2017	1818	1662	1959	1785	1645	1579
6	2391	1983	1709	1512	2331	1953	1694	1506	1896	1665	1493	1842	1637	1480	1792	1610	1468	1404
7	2228	1812	1542	1353	2174	1786	1530	1348	1737	1507	1339	1692	1484	1330	1649	1463	1321	1259
8	2083	1665	1402	1222	2034	1643	1392	1218	1601	1373	1211	1561	1355	1204	1524	1337	1197	1138
9	1953	1538	1283	1111	1909	1519	1275	1108	1482	1259	1103	1448	1244	1097	1416	1229	1092	1035
10	1838	1427	1181	1017	1797	1410	1174	1015	1379	1161	1011	1349	1148	1007	1321	1136	1002	948

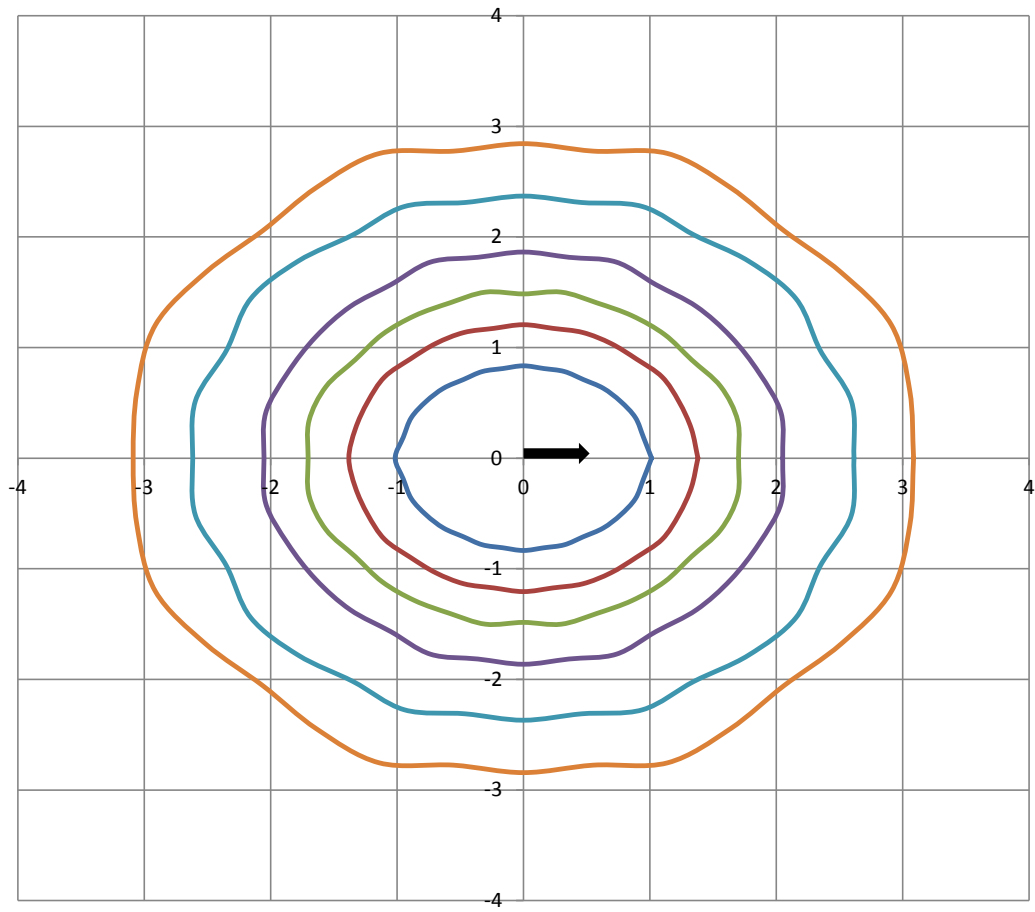
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1632 Candela
Central Cone Intensity:	1626 Candela
Beam Flux:	1813.2 Lumens
Beam Angle (0-180):	96.5 Degrees
Beam Angle (90-270):	69.8 Degrees
Field Angle (0-180):	152.5 Degrees
Field Angle (90-270):	144.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		102	4.17
6.00		45.3	6.26
8.00		25.5	8.34
10.0		16.3	10.4
12.0		11.3	12.5
14.0		8.33	14.6
16.0		6.37	16.7



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

