



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
MLP3-1-48-900-35K-ASO-A401-U
Order Number
12198978
Test Number
12198978.01

Test Date

2018-03-06

Revised 2018-03-21

Prepared By

Josh Mitchell, Technician

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White formed aluminum housing, white formed aluminum reflector, frosted plastic lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: One Philips XI040C110V054BST1 driver

Luminaire



Luminaire Characteristics

Luminous Length: 3.25 in.
Luminous Width: 48.00 in.
Luminous Height: 1.00 in.

Summary of Results

Total Luminaire Output: 3645 Lumens
Luminaire Efficacy: 82.5 lm/w
Maximum Candela: 1331 Candela

Test Conditions

Test Temperature: 25.4 °C
Voltage: 120.1 VAC
Current: 0.3690 A
Power: 44.21 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.43 %

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
25.4 °C	120.1 VAC	0.3690 A	44.21 W	0.998	60 Hz	5.43 %

Summary of Results

Spacing Criteria

0-180: 1.31
90-270: 1.24

Total Lumen Output:

3645 Lumens

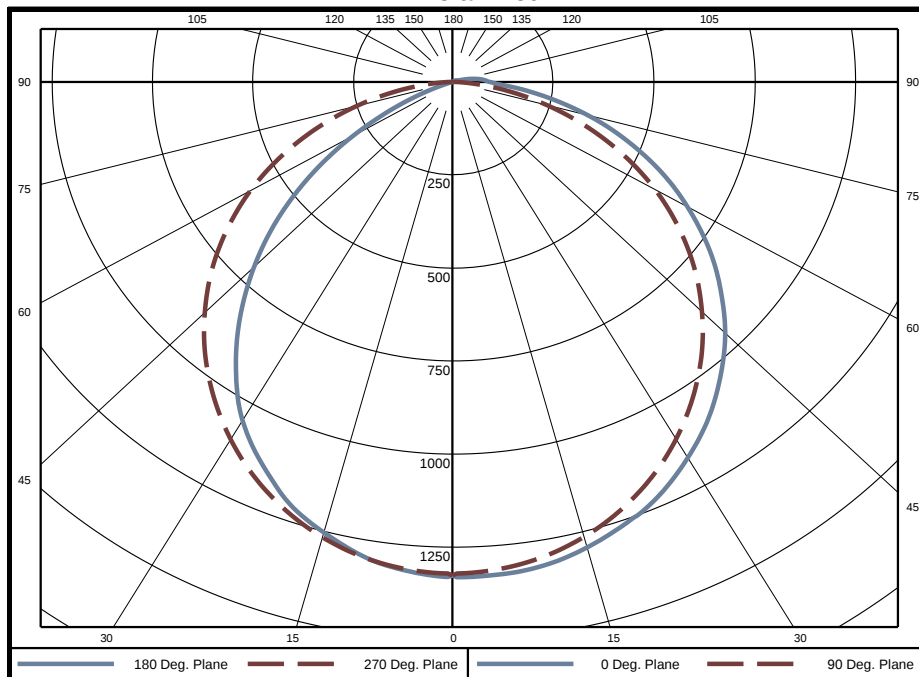
Luminaire Efficacy:

82.5 lm/w

Maximum Candela:

1331 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	31.6	0.9%	60-65	232.3	6.4%	120-125	0.7	0.0%
5-10	93.8	2.6%	65-70	182.2	5.0%	125-130	0.4	0.0%
10-15	152.5	4.2%	70-75	129.9	3.6%	130-135	0.2	0.0%
15-20	205.9	5.6%	75-80	83.5	2.3%	135-140	0.1	0.0%
20-25	252.2	6.9%	80-85	46.4	1.3%	140-145	0.0	0.0%
25-30	289.5	7.9%	85-90	22.2	0.6%	145-150	0	0.0%
30-35	316.5	8.7%	90-95	12.7	0.3%	150-155	0	0.0%
35-40	332.1	9.1%	95-100	7.7	0.2%	155-160	0	0.0%
40-45	335.8	9.2%	100-105	3.6	0.1%	160-165	0	0.0%
45-50	327.3	9.0%	105-110	1.9	0.1%	165-170	0	0.0%
50-55	306.8	8.4%	110-115	1.4	0.0%	170-175	0	0.0%
55-60	274.7	7.5%	115-120	1.0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1674	45.9%
0-60	2919	80.1%
0-90	3615	99.2%
90-180	30	0.8%



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	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326	1326
	5	1328	1320	1320	1323	1315	1322	1319	1318	1318	1319	1322	1315	1323	1320	1320
	10	1319	1303	1303	1304	1296	1302	1299	1298	1294	1298	1299	1302	1296	1304	1303
	15	1294	1275	1273	1274	1265	1271	1267	1264	1252	1264	1267	1271	1265	1274	1273
	20	1261	1237	1234	1232	1224	1229	1223	1218	1203	1218	1223	1229	1224	1232	1234
	25	1221	1191	1185	1180	1172	1174	1170	1157	1132	1157	1170	1174	1172	1180	1185
	30	1166	1133	1128	1117	1110	1110	1101	1083	1052	1083	1101	1110	1110	1117	1128
	35	1105	1069	1062	1048	1039	1038	1022	994	947	994	1022	1038	1039	1048	1062
	40	1034	996	990	970	962	958	934	885	830	885	934	958	962	970	990
	45	957	917	909	889	876	869	829	765	704	765	829	869	876	889	909
	50	868	829	822	799	786	774	710	638	572	638	710	774	786	799	822
	55	775	733	726	706	687	671	584	502	430	502	584	671	687	706	726
	60	674	632	625	606	583	557	453	362	284	362	453	557	583	606	625
	65	571	528	518	503	473	436	316	222	148	222	316	436	473	503	518
	70	460	419	410	392	359	307	182	98	40	98	182	307	359	392	410
	75	350	311	302	285	246	182	69	19	0	19	69	182	246	285	302
	80	241	208	200	182	141	73	12	1	0	1	12	73	141	182	200
	85	146	122	109	91	53	14	2	0	0	0	2	14	53	91	109
	90	94	81	62	33	8	1	0	0	0	0	0	1	8	33	62
	95	75	60	40	14	0	0	0	0	0	0	0	0	0	14	40
	100	49	33	18	4	0	0	0	0	0	0	0	0	0	4	18
	105	19	14	9	2	0	0	0	0	0	0	0	0	0	2	9
	110	13	11	7	1	0	0	0	0	0	0	0	0	0	1	7
	115	10	9	5	0	0	0	0	0	0	0	0	0	0	0	5
	120	8	7	3	0	0	0	0	0	0	0	0	0	0	0	3
	125	6	5	2	0	0	0	0	0	0	0	0	0	0	0	2
	130	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	140	1	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	13180	13180	13180
	45	10280	10360	12060
	55	9325	9444	11560
	65	8081	8129	10640
	75	6251	6207	8767
	85	3675	3413	4893



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	4332	4332	4332	4332	4228	4228	4228	4228	4033	4033	4033	3855	3855	3855	3692	3692	3692	3615
1	3966	3795	3642	3504	3864	3710	3570	3444	3549	3435	3330	3402	3309	3223	3266	3192	3122	3044
2	3613	3318	3074	2868	3515	3247	3022	2832	3113	2924	2761	2990	2832	2694	2875	2746	2630	2550
3	3298	2920	2627	2394	3206	2860	2589	2370	2748	2515	2324	2643	2446	2280	2547	2380	2237	2157
4	3022	2591	2275	2033	2937	2540	2245	2017	2445	2189	1986	2357	2135	1956	2275	2084	1926	1847
5	2781	2317	1993	1753	2703	2274	1970	1742	2194	1926	1720	2119	1884	1699	2049	1843	1678	1600
6	2569	2087	1764	1532	2498	2051	1746	1524	1983	1711	1508	1919	1677	1493	1859	1645	1477	1402
7	2383	1893	1576	1354	2318	1862	1562	1348	1804	1533	1336	1749	1506	1324	1697	1479	1313	1240
8	2218	1728	1420	1209	2159	1702	1408	1204	1651	1385	1195	1603	1362	1186	1559	1340	1176	1107
9	2073	1587	1289	1088	2019	1564	1279	1084	1520	1259	1077	1478	1240	1070	1439	1222	1062	996
10	1943	1464	1177	987	1895	1444	1169	984	1406	1153	978	1370	1137	972	1336	1121	966	902

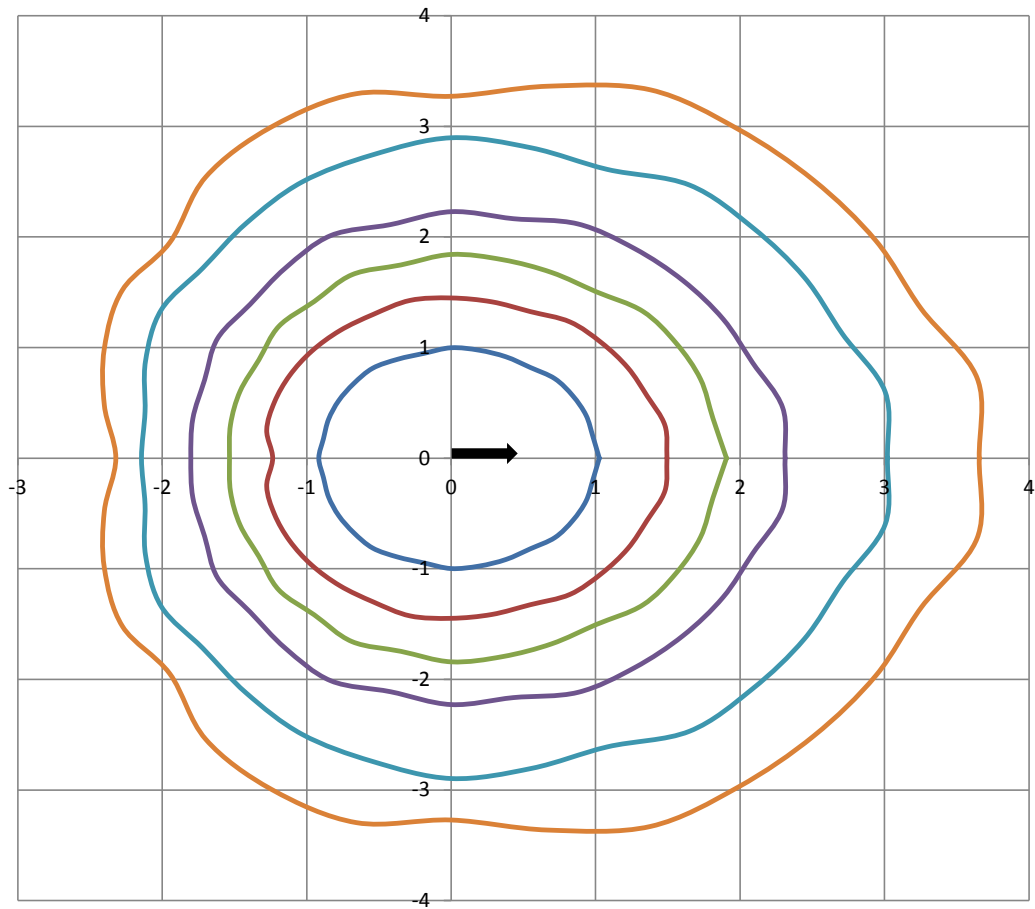
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1326 Candela
Central Cone Intensity:	1324 Candela
Beam Flux:	2664.2 Lumens
Beam Angle (0-180):	107.1 Degrees
Beam Angle (90-270):	112.4 Degrees
Field Angle (0-180):	151.4 Degrees
Field Angle (90-270):	160.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		82.9	4.98
6.00		36.8	7.47
8.00		20.7	9.97
10.0		13.3	12.5
12.0		9.21	14.9
14.0		6.77	17.4
16.0		5.18	19.9



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

