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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting
Stephen Bambush
20 Audrey Pl.
Fairfield, NJ 07004-3416

Catalog Number
LW10-4-4500-35K-HTA-S50-UNV
Order Number
10692188
Test Number
1000160

Test Date

2015-04-01

Prepared By

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Approved By

Kyle Spaziani, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed white enamel steel housing, white enamel steel reflector, frosted plastic lens enclosure
Lamp: 120 white LEDs
Mounting: Surface
Ballast/Driver: One Osram OT50W/PRG1400C/UNV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 2.750 in.
Luminous Height: 2.00 in.

Summary of Results

Total Luminaire Output: 4485 Lumens
Luminaire Efficacy: 93.3 lm/w
Maximum Candela: 1301 Candela

Electrical Data

Test Temperature: 25.0 °C
Voltage: 120.0 VAC
Current: 0.4022 A
Power: 48.07 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 8.09 %

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



Distribution - Goniophotometer

Distribution Test Conditions

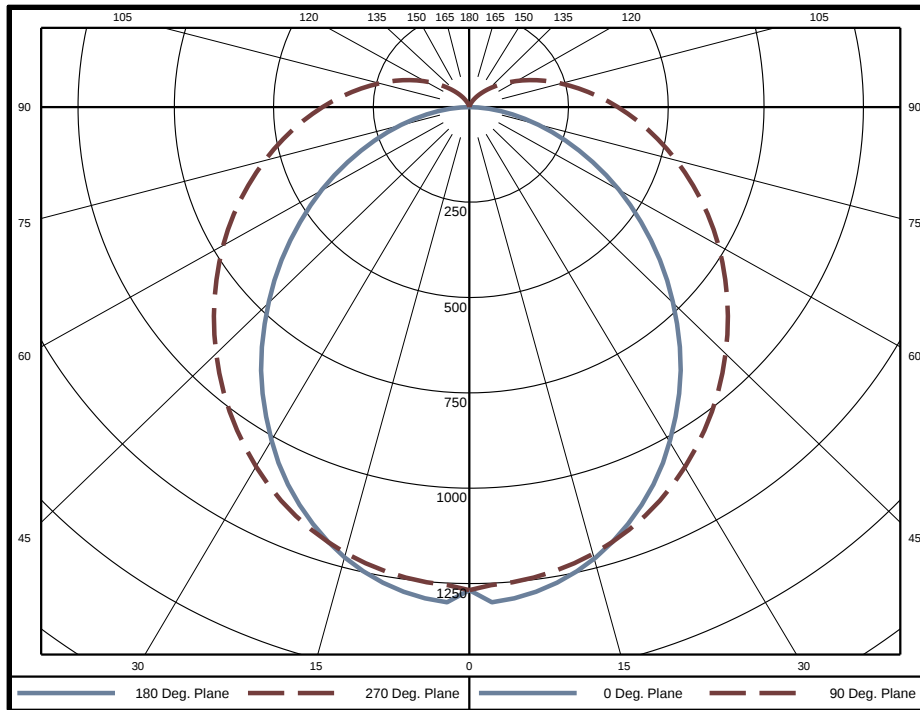
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.4022 A	48.07 W	0.996	60 Hz	8.09 %

Summary of Results

Spacing Criteria
 0-180: 1.18
 90-270: 1.28

Total Lumen Output: 4485 Lumens
Luminaire Efficacy: 93.3 lm/w
Maximum Candela: 1301 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	32.1	0.7%	60-65	263.7	5.9%	120-125	27.5	0.6%
5-10	89.4	2.0%	65-70	238.8	5.3%	125-130	20.2	0.4%
10-15	145.0	3.2%	70-75	212.0	4.7%	130-135	14.2	0.3%
15-20	195.1	4.3%	75-80	184.5	4.1%	135-140	9.7	0.2%
20-25	237.7	5.3%	80-85	157.6	3.5%	140-145	6.3	0.1%
25-30	271.5	6.1%	85-90	131.8	2.9%	145-150	3.8	0.1%
30-35	295.7	6.6%	90-95	109.9	2.5%	150-155	2.0	0.0%
35-40	310.3	6.9%	95-100	91.4	2.0%	155-160	1.0	0.0%
40-45	315.4	7.0%	100-105	74.8	1.7%	160-165	0.4	0.0%
45-50	312.1	7.0%	105-110	60.2	1.3%	165-170	0.1	0.0%
50-55	301.6	6.7%	110-115	47.5	1.1%	170-175	0.0	0.0%
55-60	285.0	6.4%	115-120	36.6	0.8%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	1576.8	35.2%
0-60	2791.0	62.2%
0-90	3979.4	88.7%
90-180	505.4	11.3%



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	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267	1267
	5	1294	1265	1251	1253	1252	1253	1251	1265	1294	1265	1251	1253	1252	1253	1251
	10	1267	1241	1231	1237	1237	1237	1231	1241	1267	1241	1231	1237	1237	1237	1231
	15	1224	1202	1199	1210	1213	1210	1199	1202	1224	1202	1199	1210	1213	1210	1199
	20	1164	1148	1154	1174	1180	1174	1154	1148	1164	1148	1154	1174	1180	1174	1154
	25	1093	1081	1100	1129	1139	1129	1100	1081	1093	1081	1100	1129	1139	1129	1100
	30	1008	1004	1035	1075	1090	1075	1035	1004	1008	1004	1035	1075	1090	1075	1035
	35	918	921	965	1016	1036	1016	965	921	918	921	965	1016	1036	1016	965
	40	822	831	889	952	977	952	889	831	822	831	889	952	977	952	889
	45	722	738	810	886	916	886	810	738	722	738	810	886	916	886	810
	50	624	647	731	819	853	819	731	647	624	647	731	819	853	819	731
	55	526	557	654	753	790	753	654	557	526	557	654	753	790	753	654
	60	433	471	580	687	727	687	580	471	433	471	580	687	727	687	580
	65	342	390	510	623	665	623	510	390	342	390	510	623	665	623	510
	70	257	316	446	560	602	560	446	316	257	316	446	560	602	560	446
	75	179	250	386	501	542	501	386	250	179	250	386	501	542	501	386
	80	110	194	332	444	483	444	332	194	110	194	332	444	483	444	332
	85	50	146	282	390	428	390	282	146	50	146	282	390	428	390	282
	90	0	108	238	340	375	340	238	108	0	108	238	340	375	340	238
	95	0	79	199	293	326	293	199	79	0	79	199	293	326	293	199
	100	0	57	165	251	281	251	165	57	0	57	165	251	281	251	165
	105	0	40	135	212	239	212	135	40	0	40	135	212	239	212	135
	110	0	28	108	177	202	177	108	28	0	28	108	177	202	177	108
	115	0	20	86	146	167	146	86	20	0	20	86	146	167	146	86
	120	0	15	67	117	136	117	67	15	0	15	67	117	136	117	67
	125	0	11	51	93	109	93	51	11	0	11	51	93	109	93	51
	130	0	8	39	72	85	72	39	8	0	8	39	72	85	72	39
	135	0	5	28	55	65	55	28	5	0	5	28	55	65	55	28
	140	0	4	19	40	49	40	19	4	0	4	19	40	49	40	19
	145	0	2	13	29	35	29	13	2	0	2	13	29	35	29	13
	150	0	2	8	19	23	19	8	2	0	2	8	19	23	19	8
	155	0	1	5	11	15	11	5	1	0	1	5	11	15	11	5
	160	0	0	3	6	8	6	3	0	0	0	3	6	8	6	3
	165	0	0	1	2	4	2	1	0	0	0	1	2	4	2	1
	170	0	0	0	1	1	1	0	0	0	0	0	1	1	1	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)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	15880	15880
	45	12790	14340
	55	11480	14270
	65	10130	15130
	75	8684	18700
	85	7170	40580



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	5220	5220	5220	5220	5040	5040	5040	5040	4704	4704	4704	4397	4397	4397	4114	4114	4114	3982
1	4661	4406	4177	3971	4482	4253	4045	3858	3966	3797	3643	3702	3566	3441	3459	3352	3251	3117
2	4207	3795	3455	3169	4037	3665	3355	3091	3421	3164	2942	3196	2985	2799	2988	2816	2663	2533
3	3820	3311	2918	2604	3661	3200	2839	2547	2992	2688	2437	2799	2545	2331	2620	2409	2229	2104
4	3489	2922	2507	2190	3343	2827	2443	2147	2649	2321	2062	2483	2205	1980	2329	2094	1900	1782
5	3204	2604	2184	1875	3071	2523	2133	1841	2369	2032	1774	2226	1936	1709	2092	1844	1645	1533
6	2956	2340	1926	1630	2835	2270	1883	1602	2137	1799	1548	2012	1719	1495	1896	1642	1443	1337
7	2738	2118	1716	1434	2629	2057	1680	1411	1941	1609	1367	1833	1540	1322	1731	1475	1279	1180
8	2547	1930	1542	1275	2448	1877	1511	1256	1776	1450	1218	1680	1392	1181	1591	1335	1144	1051
9	2379	1769	1396	1144	2288	1723	1369	1128	1633	1317	1096	1549	1267	1064	1470	1218	1032	944
10	2229	1631	1273	1034	2147	1590	1250	1020	1510	1204	993	1436	1160	965	1365	1117	938	855

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	79.2	4.89
6.00	35.2	7.34
8.00	19.8	9.79
10.0	12.7	12.2
12.0	8.80	14.7
14.0	6.47	17.1
16.0	4.95	19.6

Cone of Light Plot

