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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

John Andrews
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Fairfield, NJ 07004-3416

Catalog Number
LW3-4-4500-35K-HTA-S50-UNI-XXXX (460mA)

Order Number
10644857
Test Number
868178

Test Date

2015-01-15

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: 2.500 in.

Summary of Results

Total Luminaire Output:	4151 Lumens
Luminaire Efficacy:	87.7 lm/w
Maximum Candela:	1418 Candela

Electrical Data

Test Temperature:	24.7 °C
Voltage:	120.0 VAC
Current:	0.3960 A
Power:	47.34 W
Power Factor:	0.996
Frequency:	60 Hz
Current THD:	7.83 %

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



Distribution - Goniophotometer

Distribution Test Conditions

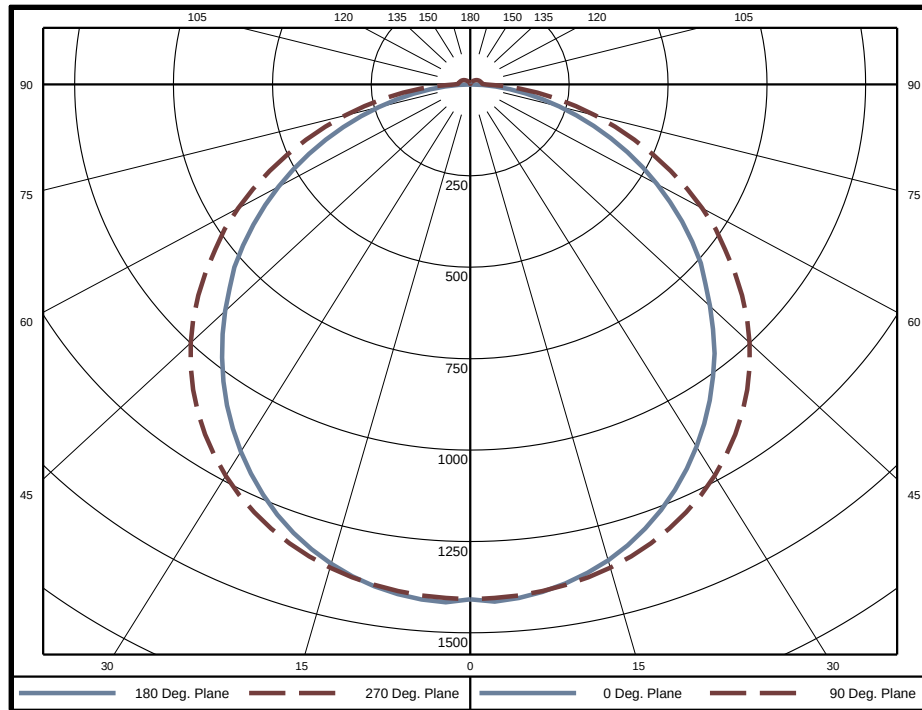
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.3960 A	47.34 W	0.996	60 Hz	7.83 %

Summary of Results

Spacing Criteria
 0-180: 1.21
 90-270: 1.30

Total Lumen Output: 4151 Lumens
Luminaire Efficacy: 87.7 lm/w
Maximum Candela: 1418 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	35.7	0.9%	60-65	272.1	6.6%	120-125	6.1	0.1%
5-10	99.7	2.4%	65-70	226.3	5.5%	125-130	5.2	0.1%
10-15	162.4	3.9%	70-75	176.7	4.3%	130-135	4.2	0.1%
15-20	219.7	5.3%	75-80	125.8	3.0%	135-140	3.3	0.1%
20-25	269.4	6.5%	80-85	76.7	1.8%	140-145	2.5	0.1%
25-30	309.7	7.5%	85-90	32.5	0.8%	145-150	1.9	0.0%
30-35	339.5	8.2%	90-95	10.4	0.3%	150-155	1.3	0.0%
35-40	357.5	8.6%	95-100	9.2	0.2%	155-160	0.9	0.0%
40-45	363.3	8.8%	100-105	8.8	0.2%	160-165	0.6	0.0%
45-50	356.7	8.6%	105-110	8.2	0.2%	165-170	0.4	0.0%
50-55	339.1	8.2%	110-115	7.6	0.2%	170-175	0.2	0.0%
55-60	310.7	7.5%	115-120	6.9	0.2%	175-180	0.1	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	113	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408	1408
	5	1410	1402	1397	1405	1403	1405	1397	1402	1414	1402	1397	1405	1403	1405	1397
	10	1386	1380	1380	1391	1390	1391	1380	1380	1394	1380	1380	1391	1390	1391	1380
	15	1347	1343	1351	1366	1368	1366	1351	1343	1357	1343	1351	1366	1368	1366	1351
	20	1293	1292	1310	1331	1336	1331	1310	1292	1305	1292	1310	1331	1336	1331	1310
	25	1224	1228	1258	1284	1291	1284	1258	1228	1238	1228	1258	1284	1291	1284	1258
	30	1144	1154	1195	1226	1236	1226	1195	1154	1159	1154	1195	1226	1236	1226	1195
	35	1055	1068	1121	1156	1168	1156	1121	1068	1071	1068	1121	1156	1168	1156	1121
	40	961	975	1037	1076	1090	1076	1037	975	975	975	1037	1076	1090	1076	1037
	45	857	876	944	984	999	984	944	876	875	876	944	984	999	984	944
	50	761	775	843	882	897	882	843	775	778	775	843	882	897	882	843
	55	654	670	740	778	787	778	740	670	669	670	740	778	787	778	740
	60	545	562	628	664	678	664	628	562	559	562	628	664	678	664	628
	65	438	454	513	546	559	546	513	454	449	454	513	546	559	546	513
	70	332	348	401	430	441	430	401	348	341	348	401	430	441	430	401
	75	233	248	294	318	328	318	294	248	239	248	294	318	328	318	294
	80	143	157	194	212	221	212	194	157	145	157	194	212	221	212	194
	85	65	77	103	117	124	117	103	77	64	77	103	117	124	117	103
	90	0	10	26	36	41	36	26	10	0	10	26	36	41	36	26
	95	0	8	20	27	30	27	20	8	0	8	20	27	30	27	20
	100	0	8	19	25	29	25	19	8	0	8	19	25	29	25	19
	105	0	8	19	24	27	24	19	8	0	8	19	24	27	24	19
	110	0	8	18	23	26	23	18	8	0	8	18	23	26	23	18
	115	1	7	17	22	25	22	17	7	1	7	17	22	25	22	17
	120	1	7	16	20	23	20	16	7	1	7	16	20	23	20	16
	125	1	6	14	19	21	19	14	6	2	6	14	19	21	19	14
	130	1	6	13	16	18	16	13	6	2	6	13	16	18	16	13
	135	1	5	11	14	16	14	11	5	2	5	11	14	16	14	11
	140	2	4	9	12	13	12	9	4	2	4	9	12	13	12	9
	145	2	4	7	9	11	9	7	4	3	4	7	9	11	9	7
	150	2	4	6	7	9	7	6	4	3	4	6	7	9	7	6
	155	2	4	5	6	7	6	5	4	3	4	5	6	7	6	5
	160	2	3	4	4	6	4	4	3	3	3	4	4	6	4	4
	165	2	3	4	3	4	3	4	3	3	3	4	3	4	3	4
	170	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	175	3	3	3	3	2	3	3	3	3	3	3	2	3	3	3
	180	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Average Luminance (cd/m²)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	45	16690	18390	19460
	55	15700	17770	18890
	65	14290	16740	18230
	75	12410	15660	17460
	85	10240	16330	19550



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	4926	4926	4926	4926	4803	4803	4803	4803	4572	4572	4572	4361	4361	4361	4168	4168	4168	4077
1	4483	4278	4094	3928	4361	4175	4008	3856	3984	3846	3720	3808	3696	3592	3645	3556	3472	3378
2	4070	3720	3430	3186	3952	3634	3368	3142	3473	3249	3056	3325	3138	2975	3188	3034	2897	2802
3	3707	3261	2916	2642	3596	3189	2870	2613	3053	2781	2556	2928	2696	2501	2811	2616	2449	2353
4	3391	2886	2516	2234	3289	2825	2481	2214	2711	2411	2175	2604	2346	2136	2505	2283	2099	2005
5	3117	2577	2199	1921	3023	2525	2171	1906	2428	2117	1878	2337	2064	1850	2252	2014	1823	1732
6	2877	2319	1944	1674	2792	2275	1921	1664	2192	1877	1642	2114	1835	1622	2041	1794	1601	1513
7	2667	2101	1734	1477	2590	2064	1716	1469	1992	1680	1453	1925	1645	1436	1862	1612	1420	1336
8	2482	1917	1561	1316	2412	1884	1545	1310	1822	1516	1297	1764	1487	1284	1710	1459	1272	1191
9	2319	1758	1415	1183	2255	1730	1402	1178	1677	1377	1168	1626	1353	1157	1579	1330	1147	1070
10	2174	1622	1292	1072	2116	1597	1281	1068	1551	1260	1059	1507	1239	1051	1465	1220	1042	969

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	88.0	5.03
6.00	39.1	7.54
8.00	22.0	10.1
10.0	14.1	12.6
12.0	9.78	15.1
14.0	7.19	17.6
16.0	5.50	20.1

Cone of Light Plot

