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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
LW14-4-4500-35K-HTA-S50-UNI-SR-XXXX
Order Number
10910728
Test Number
1142144

Test Date

2015-08-14

Prepared By

Approved By

Signature:

Signature:

Name and Title:

Name and Title:

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing / reflector, frosted plastic lens enclosure
Lamp: 120 white LEDs
Mounting: Recessed
Ballast/Driver: One Osram Optotronic OTC50W/PRG1400C/ONV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 3.000 in.

Summary of Results

Total Luminaire Output: 4487 Lumens
Luminaire Efficacy: 90.3 lm/w
Maximum Candela: 1492 Candela

Electrical Data

Test Temperature: 25.2 °C
Voltage: 120.0 VAC
Current: 0.4156 A
Power: 49.71 W
Power Factor: 0.886
Frequency: 60 Hz
Current THD: 7.87 %

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



Distribution - Goniophotometer

Distribution Test Conditions

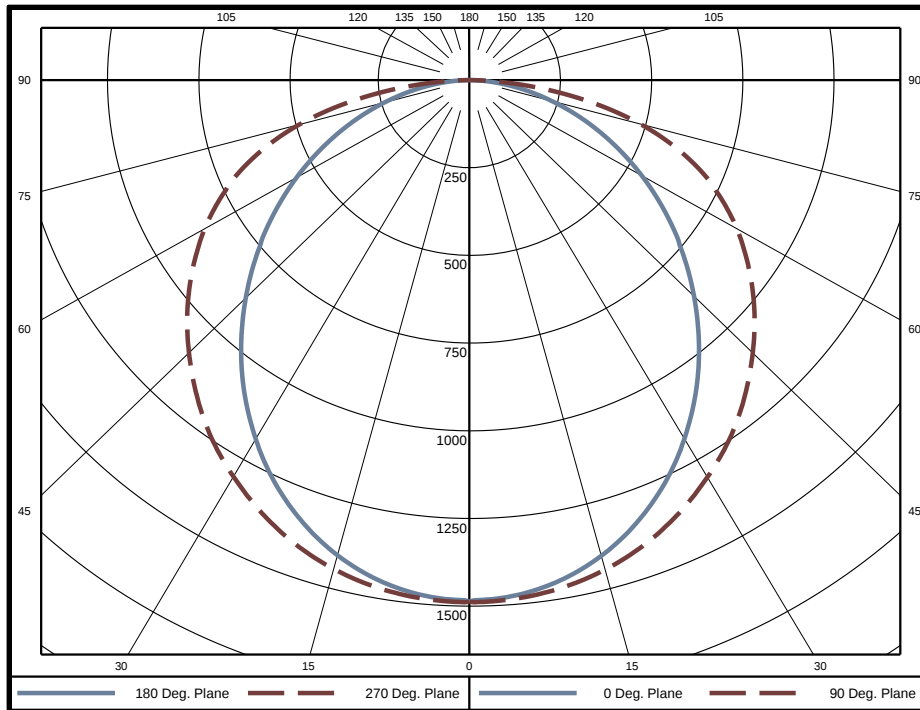
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.0 VAC	0.4156 A	49.71 W	0.886	60 Hz	7.87 %

Summary of Results

Spacing Criteria
 0-180: 1.19
 90-270: 1.19

Total Lumen Output: 4487 Lumens
Luminaire Efficacy: 90.3 lm/w
Maximum Candela: 1492 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	35.5	0.8%	60-65	314.8	7.0%	120-125	0	0.0%
5-10	105.2	2.3%	65-70	276.9	6.2%	125-130	0	0.0%
10-15	171.1	3.8%	70-75	229.4	5.1%	130-135	0	0.0%
15-20	231.0	5.1%	75-80	172.5	3.8%	135-140	0	0.0%
20-25	282.5	6.3%	80-85	105.9	2.4%	140-145	0	0.0%
25-30	324.2	7.2%	85-90	36.3	0.8%	145-150	0	0.0%
30-35	355.0	7.9%	90-95	0	0.0%	150-155	0	0.0%
35-40	374.4	8.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	382.0	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	379.0	8.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	366.4	8.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	344.7	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1879	41.9%
0-60	3351	74.7%
0-90	4487	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	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487	1487
	5	1475	1483	1477	1481	1484	1481	1477	1483	1475	1483	1477	1481	1484	1481	1477
	10	1448	1458	1456	1464	1469	1464	1456	1458	1448	1458	1456	1464	1469	1464	1456
	15	1404	1418	1422	1437	1444	1437	1422	1418	1404	1418	1422	1437	1444	1437	1422
	20	1345	1361	1374	1397	1408	1397	1374	1361	1345	1361	1374	1397	1408	1397	1374
	25	1271	1290	1313	1346	1361	1346	1313	1290	1271	1290	1313	1346	1361	1346	1313
	30	1184	1208	1242	1286	1305	1286	1242	1208	1184	1208	1242	1286	1305	1286	1242
	35	1089	1115	1162	1219	1245	1219	1162	1115	1089	1115	1162	1219	1245	1219	1162
	40	986	1015	1075	1144	1174	1144	1075	1015	986	1015	1075	1144	1174	1144	1075
	45	878	910	982	1064	1098	1064	982	910	878	910	982	1064	1098	1064	982
	50	769	803	887	980	1019	980	887	803	769	803	887	980	1019	980	887
	55	662	699	789	893	934	893	789	699	662	699	789	893	934	893	789
	60	553	592	695	802	846	802	695	592	553	592	695	802	846	802	695
	65	446	488	600	710	744	710	600	488	446	488	600	710	744	710	600
	70	341	389	504	599	629	599	504	389	341	389	504	599	629	599	504
	75	241	296	400	470	485	470	400	296	241	296	400	470	485	470	400
	80	149	210	285	316	314	316	285	210	149	210	285	316	314	316	285
	85	66	121	149	145	136	145	149	121	66	121	149	145	136	145	149
	90	3	23	20	11	4	11	20	23	3	23	20	11	4	11	20
	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)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	17070	17070
	45	14250	15940
	55	13240	15800
	65	12100	16300
	75	10700	17760
	85	8631	19590



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	5341	5341	5341	5341	5217	5217	5217	5217	4985	4985	4985	4773	4773	4773	4578	4578	4578	4487
1	4835	4601	4392	4203	4710	4498	4307	4134	4305	4147	4003	4128	3999	3879	3964	3860	3763	3666
2	4374	3979	3652	3377	4252	3892	3592	3336	3730	3477	3257	3581	3368	3182	3443	3267	3110	3008
3	3973	3475	3089	2782	3859	3403	3045	2756	3266	2959	2706	3140	2878	2657	3023	2801	2611	2508
4	3630	3068	2656	2342	3524	3007	2623	2325	2892	2557	2292	2786	2495	2259	2686	2435	2228	2127
5	3334	2735	2317	2008	3237	2684	2290	1996	2587	2239	1973	2496	2191	1951	2412	2144	1929	1830
6	3076	2459	2045	1747	2988	2415	2024	1739	2333	1983	1723	2256	1944	1707	2184	1907	1691	1595
7	2850	2227	1823	1540	2771	2190	1806	1534	2119	1773	1522	2053	1742	1510	1991	1712	1498	1406
8	2653	2031	1640	1371	2581	1999	1626	1367	1939	1599	1358	1882	1574	1349	1828	1549	1340	1252
9	2478	1863	1487	1232	2413	1836	1475	1229	1784	1453	1222	1734	1432	1215	1688	1411	1208	1124
10	2323	1719	1357	1116	2265	1695	1348	1114	1650	1329	1108	1607	1311	1103	1567	1294	1097	1017

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	92.9	4.98
6.00	41.3	7.47
8.00	23.2	9.96
10.0	14.9	12.5
12.0	10.3	14.9
14.0	7.59	17.4
16.0	5.81	19.9

Cone of Light Plot

