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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

Stephen Bambush
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Fiarfield, NJ 07004-3416
United States

Catalog Number
LW14-4-4500-35K-HTA-S50-UNI-SRA-XXXX

Order Number
11164490
Test Number
1211847

Test Date

2016-02-23

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: White enamel steel housing / reflector, frosted plastic lens, no enclosure
Lamp: 120 white LEDs
Mounting: Surface
Ballast/Driver: One Osram Optronix OT50W/PRG1400C/UNV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 11.25 in.

Summary of Results

Total Luminaire Output: 4605 Lumens
Luminaire Efficacy: 95.2 lm/w
Maximum Candela: 1548 Candela

Electrical Data

Test Temperature: 24.1 °C
Voltage: 120.0 VAC
Current: 0.4049 A
Power: 48.38 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 8.49 %

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



Distribution - Goniophotometer

Distribution Test Conditions

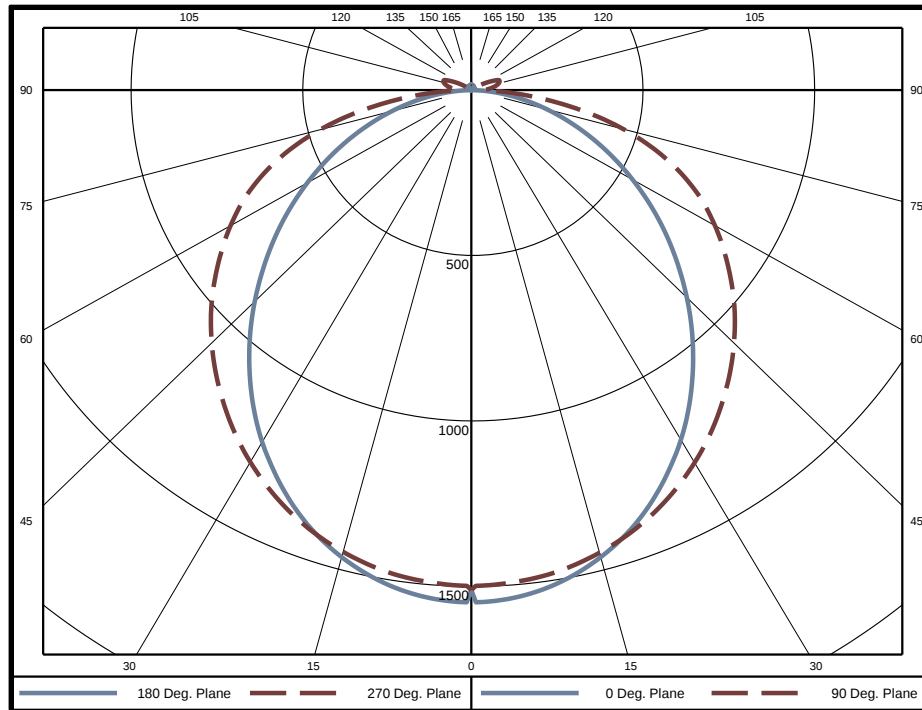
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.1 °C	120.0 VAC	0.4049 A	48.38 W	0.996	60 Hz	8.49 %

Summary of Results

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

Total Lumen Output: 4605 Lumens
Luminaire Efficacy: 95.2 lm/w
Maximum Candela: 1548 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	36.0	0.8%	60-65	306.0	6.6%	120-125	5.2	0.1%
5-10	106.8	2.3%	65-70	267.6	5.8%	125-130	3.6	0.1%
10-15	173.5	3.8%	70-75	221.2	4.8%	130-135	3.5	0.1%
15-20	233.7	5.1%	75-80	166.2	3.6%	135-140	3.4	0.1%
20-25	285.2	6.2%	80-85	104.3	2.3%	140-145	3.3	0.1%
25-30	326.5	7.1%	85-90	42.8	0.9%	145-150	3.2	0.1%
30-35	356.3	7.7%	90-95	18.4	0.4%	150-155	3.0	0.1%
35-40	374.2	8.1%	95-100	22.7	0.5%	155-160	2.8	0.1%
40-45	380.4	8.3%	100-105	24.9	0.5%	160-165	2.3	0.0%
45-50	375.6	8.2%	105-110	23.6	0.5%	165-170	1.8	0.0%
50-55	360.9	7.8%	110-115	17.6	0.4%	170-175	1.1	0.0%
55-60	337.1	7.3%	115-120	9.9	0.2%	175-180	0.4	0.0%

Zone	Lumens	% of Luminaire
0-40	1892	41.1%
0-60	3346	72.7%
0-90	4454	96.7%
90-180	151	3.3%



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	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511	1511
	5	1538	1511	1494	1494	1492	1494	1494	1511	1538	1511	1494	1494	1492	1494	1511
	10	1509	1484	1472	1475	1476	1475	1472	1484	1509	1484	1472	1475	1476	1475	1484
	15	1462	1440	1434	1444	1447	1444	1434	1440	1462	1440	1434	1444	1447	1444	1440
	20	1399	1379	1383	1402	1408	1402	1383	1379	1399	1379	1383	1402	1408	1402	1379
	25	1318	1305	1320	1348	1358	1348	1320	1305	1318	1305	1320	1348	1358	1348	1305
	30	1226	1218	1245	1284	1300	1284	1245	1218	1226	1218	1245	1284	1300	1284	1218
	35	1122	1120	1161	1213	1233	1213	1161	1120	1122	1120	1161	1213	1233	1213	1120
	40	1010	1015	1070	1134	1159	1134	1070	1015	1010	1015	1070	1134	1159	1134	1015
	45	895	905	973	1051	1080	1051	973	905	895	905	973	1051	1080	1051	905
	50	778	794	875	965	998	965	875	794	778	794	875	965	998	965	794
	55	664	684	776	873	909	873	776	684	664	684	776	873	909	873	684
	60	550	575	678	782	818	782	678	575	550	575	678	782	818	782	575
	65	440	472	581	687	719	687	581	472	440	472	581	687	719	687	472
	70	335	375	489	577	601	577	489	375	335	375	489	577	601	577	375
	75	236	285	389	450	461	450	389	285	236	285	389	450	461	450	389
	80	145	205	277	303	302	303	277	205	145	205	277	303	302	303	277
	85	64	119	152	153	147	153	152	119	64	119	152	153	147	153	152
	90	2	30	39	42	41	42	39	30	2	30	39	42	41	42	39
	95	2	27	43	52	53	52	43	27	2	27	43	52	53	52	43
	100	3	23	54	67	71	67	54	23	3	23	54	67	71	67	54
	105	4	7	60	78	83	78	60	7	4	7	60	78	83	78	60
	110	6	5	38	78	87	78	38	5	6	5	38	78	87	78	38
	115	7	5	15	51	64	51	15	5	7	5	15	51	64	51	15
	120	9	6	8	25	36	25	8	6	9	6	8	25	36	25	8
	125	11	7	7	8	12	8	7	7	11	7	7	8	12	8	7
	130	12	8	8	8	8	8	8	12	8	8	8	8	8	8	8
	135	12	10	8	8	8	8	10	12	10	8	8	8	8	8	10
	140	12	11	9	9	9	9	11	12	11	9	9	9	9	9	11
	145	13	11	10	9	9	9	10	11	13	11	10	9	9	10	11
	150	14	13	11	10	10	10	11	13	14	13	11	10	10	10	11
	155	15	14	12	12	12	12	14	15	14	12	12	12	12	12	14
	160	15	15	13	13	12	13	13	15	15	15	13	13	12	13	13
	165	15	15	14	13	13	13	14	15	15	15	14	13	13	13	14
	170	16	17	15	14	14	14	15	17	16	17	15	14	14	14	15
	175	18	18	17	15	14	15	17	18	18	18	17	15	14	15	17
	180	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	4627	4627
	45	3874	4678
	55	3543	4851
	65	3187	5212
	75	2792	5450
	85	2246	5171



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	5446	5446	5446	5446	5302	5302	5302	5302	5033	5033	5033	4787	4787	4787	4561	4561	4561	4454
1	4932	4695	4483	4291	4789	4575	4382	4207	4350	4191	4046	4143	4014	3894	3952	3849	3752	3643
2	4466	4066	3735	3456	4328	3965	3661	3403	3775	3520	3300	3600	3388	3202	3438	3263	3108	2997
3	4060	3555	3165	2853	3931	3470	3109	2817	3310	3001	2747	3161	2899	2680	3023	2803	2614	2504
4	3712	3142	2725	2406	3592	3070	2681	2380	2933	2597	2331	2807	2517	2282	2689	2441	2235	2127
5	3410	2802	2378	2065	3300	2741	2343	2046	2625	2276	2009	2517	2212	1973	2416	2151	1938	1834
6	3147	2520	2100	1798	3047	2468	2072	1784	2369	2017	1755	2276	1965	1728	2189	1915	1700	1600
7	2916	2283	1873	1585	2826	2238	1850	1574	2153	1805	1552	2073	1762	1530	1998	1720	1508	1412
8	2714	2082	1685	1412	2633	2043	1666	1403	1969	1628	1385	1900	1592	1367	1835	1557	1350	1259
9	2535	1910	1528	1269	2462	1877	1511	1262	1812	1480	1247	1752	1449	1232	1694	1419	1218	1131
10	2377	1762	1394	1150	2310	1733	1381	1143	1676	1354	1131	1623	1328	1119	1573	1302	1107	1024

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	94.5	4.93
6.00	42.0	7.40
8.00	23.6	9.87
10.0	15.1	12.3
12.0	10.5	14.8
14.0	7.71	17.3
16.0	5.90	19.7

Cone of Light Plot

