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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
LW4-4-4500-35K-HTA-S50-UNI-SRA-XXXX

Order Number
11164490
Test Number
1211845

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: 9.500 in.

Summary of Results

Total Luminaire Output: 4435 Lumens
Luminaire Efficacy: 91.5 lm/w
Maximum Candela: 1446 Candela

Electrical Data

Test Temperature: 25.1 °C
Voltage: 120.0 VAC
Current: 0.4057 A
Power: 48.48 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 8.22 %

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



Distribution - Goniophotometer

Distribution Test Conditions

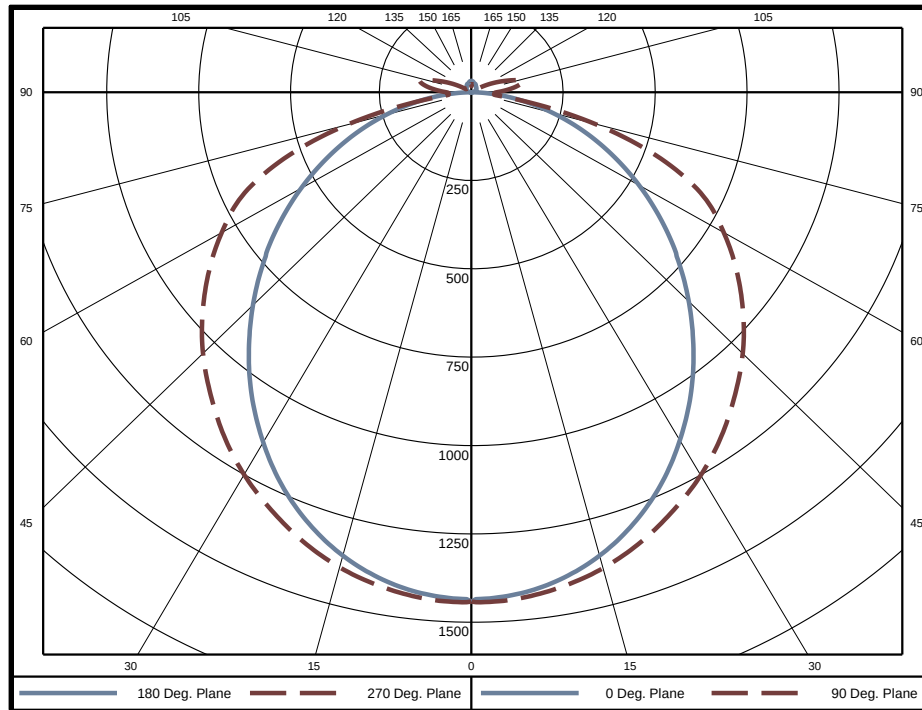
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.4057 A	48.48 W	0.996	60 Hz	8.22 %

Summary of Results

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

Total Lumen Output: 4435 Lumens
Luminaire Efficacy: 91.5 lm/w
Maximum Candela: 1446 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	34.4	0.8%	60-65	299.8	6.8%	120-125	6.8	0.2%
5-10	101.9	2.3%	65-70	261.5	5.9%	125-130	6.4	0.1%
10-15	165.5	3.7%	70-75	207.6	4.7%	130-135	6.1	0.1%
15-20	223.0	5.0%	75-80	138.2	3.1%	135-140	5.9	0.1%
20-25	272.1	6.1%	80-85	66.2	1.5%	140-145	5.6	0.1%
25-30	311.5	7.0%	85-90	29.8	0.7%	145-150	5.4	0.1%
30-35	340.4	7.7%	90-95	31.1	0.7%	150-155	5.3	0.1%
35-40	358.0	8.1%	95-100	40.6	0.9%	155-160	4.8	0.1%
40-45	364.8	8.2%	100-105	39.2	0.9%	160-165	4.1	0.1%
45-50	361.8	8.2%	105-110	27.8	0.6%	165-170	3.1	0.1%
50-55	349.5	7.9%	110-115	16.7	0.4%	170-175	2.0	0.0%
55-60	328.5	7.4%	115-120	9.5	0.2%	175-180	0.7	0.0%

Zone	Lumens	% of Luminaire
0-40	1807	40.7%
0-60	3211	72.4%
0-90	4215	95.0%
90-180	221	5.0%



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	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441	1441
	5	1426	1438	1431	1435	1439	1435	1431	1438	1426	1438	1431	1435	1439	1435	1431
	10	1400	1413	1410	1417	1421	1417	1410	1413	1400	1413	1410	1417	1421	1417	1410
	15	1358	1372	1375	1387	1393	1387	1375	1372	1358	1372	1375	1387	1393	1387	1375
	20	1300	1316	1325	1344	1353	1344	1325	1316	1300	1316	1325	1344	1353	1344	1325
	25	1228	1246	1262	1291	1304	1291	1262	1246	1228	1246	1262	1291	1304	1291	1262
	30	1142	1164	1190	1232	1250	1232	1190	1164	1142	1164	1190	1232	1250	1232	1190
	35	1049	1072	1111	1164	1187	1164	1111	1072	1049	1072	1111	1164	1187	1164	1111
	40	948	973	1025	1089	1117	1089	1025	973	948	973	1025	1089	1117	1089	1025
	45	845	871	937	1013	1045	1013	937	871	845	871	937	1013	1045	1013	937
	50	741	768	846	932	966	932	846	768	741	768	846	932	966	932	846
	55	640	670	756	845	881	845	756	670	640	670	756	845	881	845	756
	60	535	569	665	757	793	757	665	569	535	569	665	757	793	757	665
	65	433	472	573	668	697	668	573	472	433	472	573	668	697	668	573
	70	334	379	482	541	549	541	482	379	334	379	482	541	549	541	482
	75	238	290	367	369	352	369	367	290	238	290	367	369	352	369	367
	80	147	206	219	173	150	173	219	206	147	206	219	173	150	173	219
	85	65	99	64	63	62	63	64	99	65	99	64	63	62	63	64
	90	1	35	53	66	69	66	53	35	1	35	53	66	69	66	53
	95	3	44	76	98	106	98	76	44	3	44	76	98	106	98	76
	100	5	23	94	128	137	128	94	23	5	23	94	128	137	128	94
	105	8	10	62	114	133	114	62	10	8	10	62	114	133	114	62
	110	11	10	32	76	92	76	32	10	11	10	32	76	92	76	32
	115	14	10	15	42	56	42	15	10	14	10	15	42	56	42	15
	120	16	11	14	16	23	16	14	11	16	11	14	16	23	16	14
	125	17	12	14	16	16	16	14	12	17	12	14	16	16	16	14
	130	17	14	14	15	16	15	14	14	17	14	14	15	16	15	14
	135	19	16	14	15	15	15	14	16	19	16	14	15	15	15	14
	140	20	18	13	15	15	15	13	18	20	18	13	15	15	15	13
	145	22	20	16	16	16	16	16	20	22	20	16	16	16	16	16
	150	24	22	19	17	17	17	19	22	24	22	19	17	17	17	19
	155	26	24	22	20	19	20	22	24	26	24	22	20	19	20	22
	160	26	26	24	22	22	22	24	26	26	26	24	22	22	22	24
	165	28	28	25	23	23	23	25	28	28	28	25	23	23	23	25
	170	30	30	27	24	24	24	27	30	30	30	27	24	24	24	27
	175	32	31	30	26	25	26	30	31	32	31	30	26	25	26	30
	180	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

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

Vertical Angle (Degrees)	0	45	90
	0	5226	5226
	45	4335	5357
	55	4042	5571
	65	3714	5980
	75	3328	4931
	85	2723	2590



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	5228	5228	5228	5228	5080	5080	5080	5080	4806	4806	4806	4554	4554	4554	4323	4323	4323	4214
1	4753	4533	4336	4158	4608	4410	4232	4070	4180	4034	3901	3969	3851	3742	3775	3680	3593	3484
2	4307	3930	3618	3356	4168	3827	3541	3299	3632	3394	3188	3453	3256	3083	3288	3126	2982	2872
3	3916	3437	3067	2772	3785	3350	3008	2732	3185	2894	2655	3032	2787	2581	2891	2685	2509	2401
4	3578	3036	2639	2336	3458	2962	2593	2308	2822	2504	2252	2692	2418	2197	2571	2337	2144	2039
5	3286	2707	2302	2003	3176	2644	2265	1982	2524	2193	1940	2412	2124	1898	2308	2058	1858	1756
6	3032	2433	2032	1743	2931	2379	2001	1727	2276	1942	1694	2180	1886	1661	2090	1831	1629	1532
7	2809	2203	1811	1536	2718	2157	1786	1522	2068	1737	1496	1984	1690	1470	1906	1644	1444	1351
8	2613	2008	1628	1367	2531	1968	1607	1356	1891	1566	1334	1818	1526	1313	1750	1488	1292	1204
9	2441	1842	1475	1228	2366	1807	1457	1219	1739	1422	1201	1675	1389	1183	1615	1356	1165	1081
10	2287	1698	1346	1111	2219	1667	1331	1104	1608	1301	1088	1552	1271	1073	1499	1243	1058	979

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	90.1	4.94
6.00	40.0	7.41
8.00	22.5	9.88
10.0	14.4	12.3
12.0	10.0	14.8
14.0	7.35	17.3
16.0	5.63	19.8

Cone of Light Plot

