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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
United States

Catalog Number
LSA-4-5200-35K-HTA-S50-UNI-XXXX

Order Number
11366070
Test Number
1266972

Test Date

2016-07-14

Prepared By

Javier Caban, Technician

Approved By

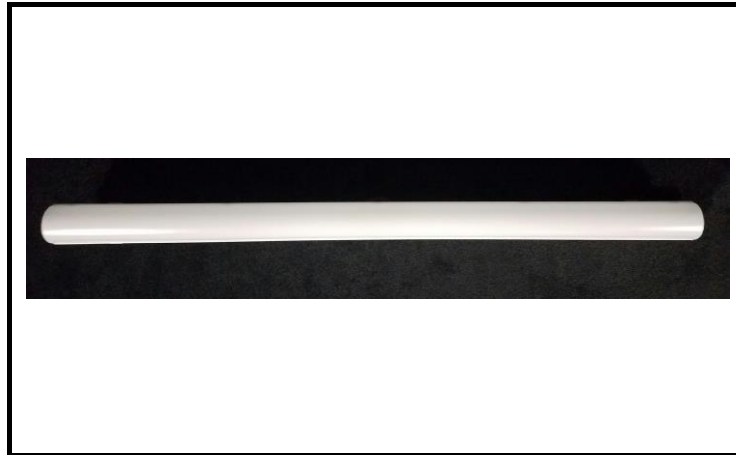
Timothy Wagner, Project Handler

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Luminaire Description: Formed steel, white housing, frosted plastic lens enclosure
Lamp: 96 white LEDs
Mounting: Surface mount
Ballast/Driver: One OSRAM Optotronic OT50W/PRG1400C/UNV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 2.75 in.
Luminous Width: 46.00 in.
Luminous Height: 3.50 in.

Summary of Results

Total Luminaire Output: 5224 Lumens
Luminaire Efficacy: 108.8 lm/w
Maximum Candela: 1317 Candela

Test Conditions

Test Temperature: 25.3 °C
Voltage: 120.0 VAC
Current: 0.4017 A
Power: 48.03 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 7.72 %

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



Distribution - Goniophotometer

Distribution Test Conditions

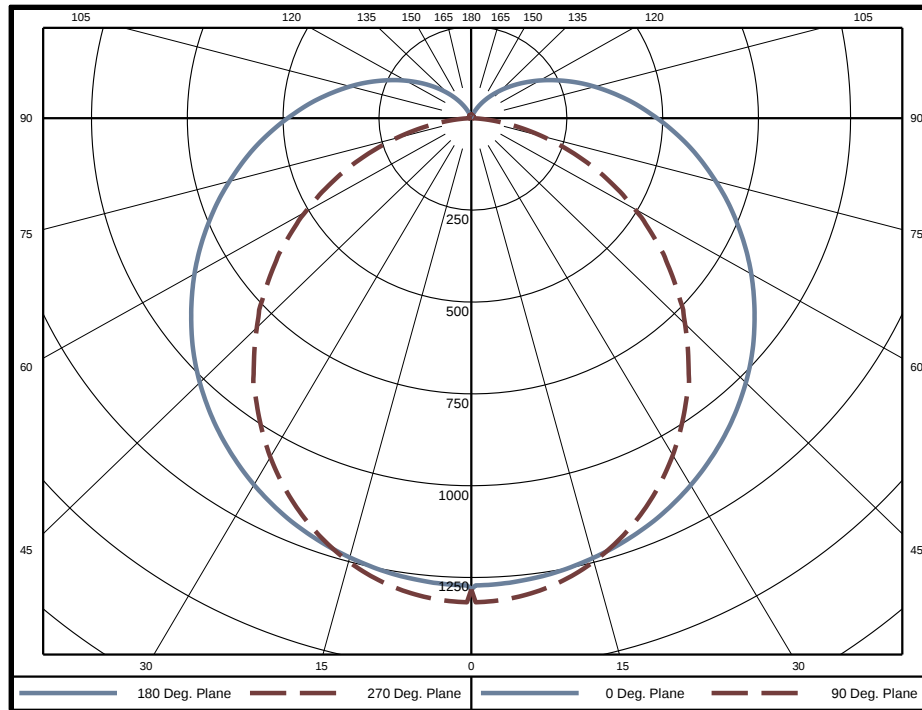
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.3 °C	120.0 VAC	0.4017 A	48.03 W	0.996	60 Hz	7.72 %

Summary of Results

Spacing Criteria
 0-180: 1.34
 90-270: 1.34

Total Lumen Output: 5224 Lumens
Luminaire Efficacy: 108.8 lm/w
Maximum Candela: 1317 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	30.6	0.6%	60-65	313.0	6.0%	120-125	44.4	0.8%
5-10	90.7	1.7%	65-70	288.4	5.5%	125-130	33.5	0.6%
10-15	147.7	2.8%	70-75	260.1	5.0%	130-135	24.2	0.5%
15-20	199.9	3.8%	75-80	229.9	4.4%	135-140	16.7	0.3%
20-25	245.8	4.7%	80-85	199.7	3.8%	140-145	11.0	0.2%
25-30	284.0	5.4%	85-90	171.1	3.3%	145-150	6.7	0.1%
30-35	313.9	6.0%	90-95	146.7	2.8%	150-155	3.7	0.1%
35-40	335.0	6.4%	95-100	125.4	2.4%	155-160	2.1	0.0%
40-45	347.0	6.6%	100-105	105.8	2.0%	160-165	1.4	0.0%
45-50	350.1	6.7%	105-110	87.9	1.7%	165-170	1.0	0.0%
50-55	345.0	6.6%	110-115	71.6	1.4%	170-175	0.6	0.0%
55-60	332.2	6.4%	115-120	57.1	1.1%	175-180	0.2	0.0%

Zone	Lumens	% of Luminaire
0-40	1648	31.5%
0-60	3022	57.8%
0-90	4484	85.8%
90-180	740	14.2%



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	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282
	5	1267	1268	1267	1282	1310	1282	1267	1268	1267	1268	1267	1282	1310	1282	1267
	10	1256	1254	1249	1260	1287	1260	1249	1254	1256	1254	1249	1260	1287	1260	1249
	15	1238	1234	1223	1226	1249	1226	1223	1234	1238	1234	1223	1226	1249	1226	1223
	20	1214	1207	1186	1179	1198	1179	1186	1207	1214	1207	1186	1179	1198	1179	1186
	25	1186	1173	1141	1122	1135	1122	1141	1173	1186	1173	1141	1122	1135	1122	1141
	30	1150	1133	1089	1055	1062	1055	1089	1133	1150	1133	1089	1055	1062	1055	1089
	35	1110	1088	1032	981	980	981	1032	1088	1110	1088	1032	981	980	981	1032
	40	1064	1038	969	901	893	901	969	1038	1064	1038	969	901	893	901	969
	45	1015	984	902	818	799	818	902	984	1015	984	902	818	799	818	902
	50	961	925	832	734	702	734	832	925	961	925	832	734	702	734	832
	55	903	865	761	648	603	648	761	865	903	865	761	648	603	648	761
	60	844	802	689	562	501	562	689	802	844	802	689	562	501	562	689
	65	784	740	619	477	399	477	619	740	784	740	619	477	399	477	619
	70	723	677	551	395	297	395	551	677	723	677	551	395	297	395	551
	75	661	615	487	319	199	319	487	615	661	615	487	319	199	319	487
	80	602	556	427	252	111	252	427	556	602	556	427	252	111	252	427
	85	543	497	370	194	41	194	370	497	543	497	370	194	41	194	370
	90	486	442	319	147	5	147	319	442	486	442	319	147	5	147	319
	95	433	390	273	112	5	112	273	390	433	390	273	112	5	112	273
	100	381	342	233	86	5	86	233	342	381	342	233	86	5	86	233
	105	333	298	196	66	6	66	196	298	333	298	196	66	6	66	196
	110	288	256	164	51	6	51	164	256	288	256	164	51	6	51	164
	115	245	216	135	39	6	39	135	216	245	216	135	39	6	39	135
	120	206	180	110	29	7	29	110	180	206	180	110	29	7	29	110
	125	170	148	87	21	7	21	87	148	170	148	87	21	7	21	87
	130	137	118	67	14	7	14	67	118	137	118	67	14	7	14	67
	135	107	92	49	10	7	10	49	92	107	92	49	10	7	10	49
	140	81	68	33	9	7	9	33	68	81	68	33	9	7	9	33
	145	58	47	21	9	8	9	21	47	58	47	21	9	8	9	21
	150	38	29	12	9	8	9	12	29	38	29	12	9	8	9	12
	155	21	15	9	9	8	9	9	15	21	15	9	9	8	9	9
	160	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	165	8	8	8	8	9	8	8	8	8	8	8	9	8	8	8
	170	8	7	8	9	9	9	8	7	8	7	8	9	9	9	8
	175	4	6	8	9	10	9	8	6	4	6	8	9	10	9	8
	180	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8

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

Vertical Angle (Degrees)	0	45	90
	0	15710	15710
	45	7738	12860
	55	6848	11630
	65	6092	9943
	75	5443	7340
	85	4911	3092



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	6043	6043	6043	6043	5816	5816	5816	5816	5393	5393	5393	5006	5006	5006	4651	4651	4651	4484
1	5367	5060	4784	4536	5142	4866	4617	4391	4503	4301	4116	4170	4007	3857	3862	3734	3614	3447
2	4829	4338	3931	3589	4615	4172	3802	3488	3862	3557	3293	3577	3327	3107	3312	3110	2930	2769
3	4374	3769	3302	2929	4175	3628	3199	2854	3363	3004	2708	3117	2818	2567	2889	2642	2431	2278
4	3988	3316	2824	2448	3805	3195	2741	2390	2967	2582	2276	2755	2430	2166	2558	2285	2059	1914
5	3656	2946	2451	2085	3489	2842	2383	2039	2646	2251	1948	2462	2125	1859	2291	2004	1773	1637
6	3368	2641	2154	1804	3216	2551	2097	1766	2380	1986	1692	2221	1880	1619	2072	1777	1547	1420
7	3117	2386	1913	1581	2979	2308	1864	1549	2159	1770	1487	2019	1679	1426	1888	1592	1366	1247
8	2896	2170	1714	1400	2771	2102	1672	1374	1971	1592	1321	1848	1513	1269	1732	1438	1218	1106
9	2702	1986	1548	1252	2588	1926	1512	1229	1810	1442	1184	1701	1374	1139	1598	1308	1095	991
10	2530	1828	1408	1128	2426	1774	1377	1108	1672	1315	1070	1575	1256	1031	1483	1198	993	894

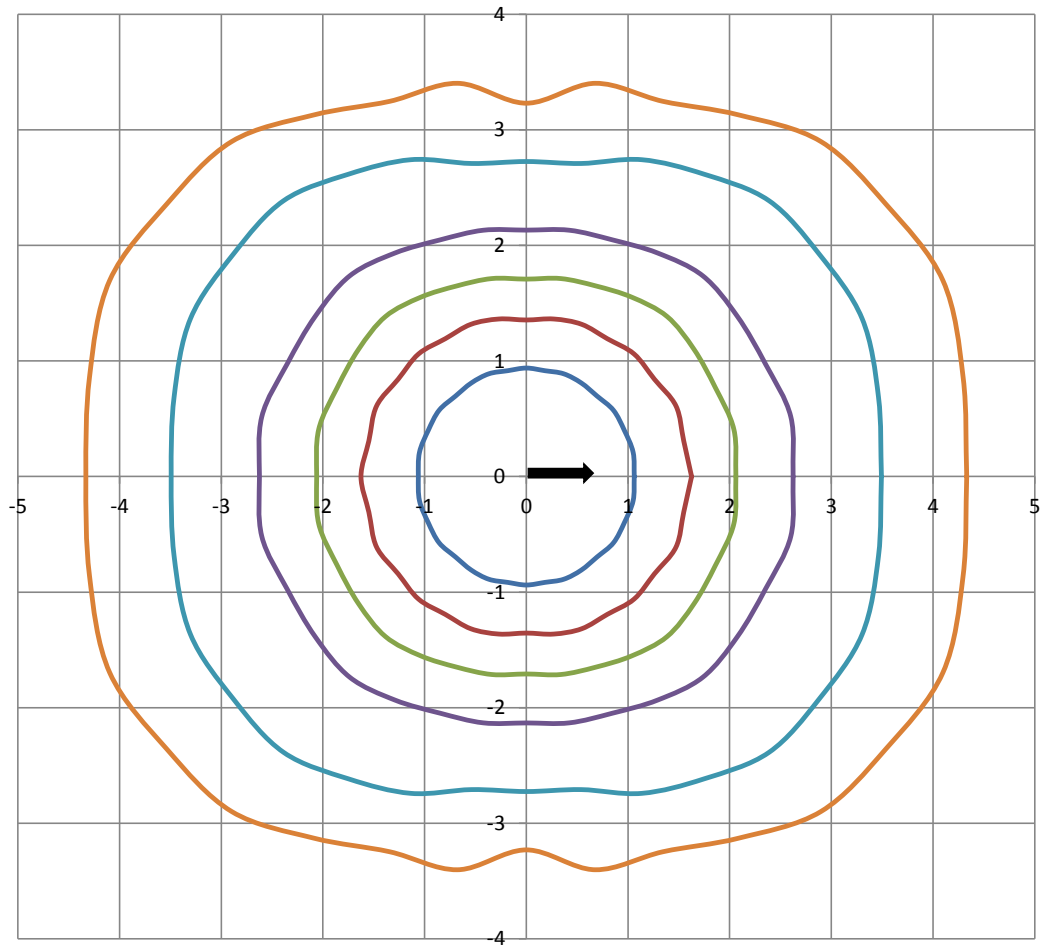
Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	1282 Candela
Central Cone Intensity:	1280 Candela
Beam Flux:	3354.9 Lumens
Beam Angle (0-180):	153.3 Degrees
Beam Angle (90-270):	106.3 Degrees
Field Angle (0-180):	262.9 Degrees
Field Angle (90-270):	157.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		80.2	5.09
6.00		35.6	7.63
8.00		20.0	10.2
10.0		12.8	12.7
12.0		8.91	15.3
14.0		6.54	17.8
16.0		5.01	20.4



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

— 5 fc — 2 fc — 1 fc — 0.5 fc — 0.2 fc — 0.1 fc