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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

John Andrews
20 Audrey Pl
Fairfield, NJ 07004-3416

Catalog Number
LW14-4-3800-35K-HTA-A40-UNI-XXXX

Order Number
11205397
Test Number
1227928

Test Date

2016-03-28

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed steel housnig, white steel reflectors, linear patterned frosted plastic lens enclosure
Lamp: 96 white LEDs, two boards with 48 LEDs each
Mounting: Surface
Ballast/Driver: One Philips Advance Xitanium XI040C110V054BPT1

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 11.50 in.
Luminous Height: 2.00 in.

Summary of Results

Total Luminaire Output: 3629 Lumens
Luminaire Efficacy: 114.1 lm/w
Maximum Candela: 1201 Candela

Test Conditions

Test Temperature: 24.1 °C
Voltage: 120.0 VAC
Current: 0.2659 A
Power: 31.82 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 6.16 %

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	0.2659 A	31.82 W	0.997	60 Hz	6.16 %

Summary of Results

Spacing Criteria

0-180: 1.19

90-270: 1.19

Total Lumen Output:

3629 Lumens

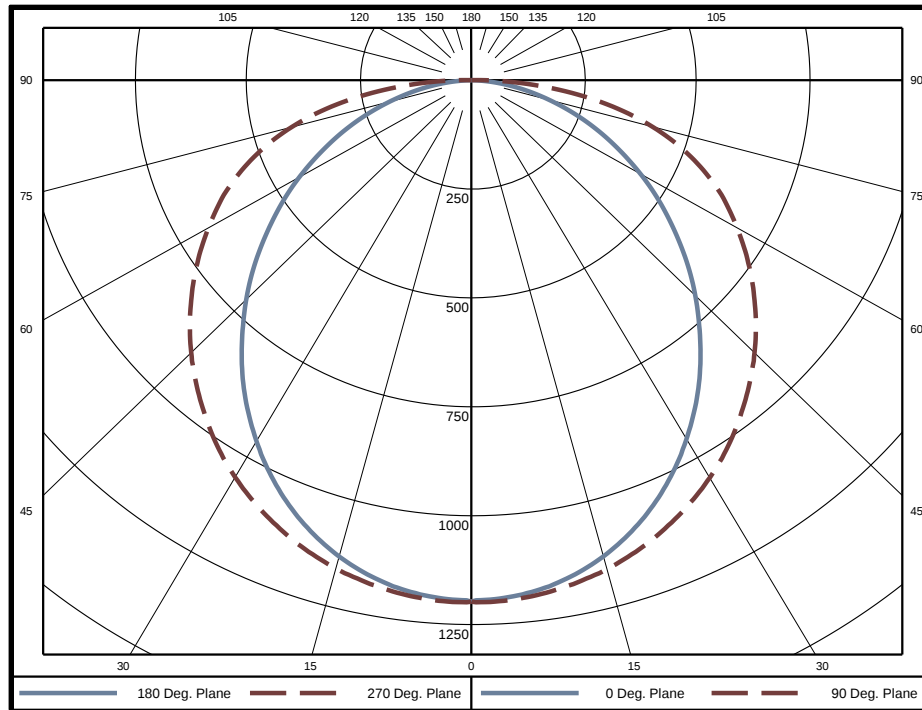
Luminaire Efficacy:

114.1 lm/w

Maximum Candela:

1201 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	28.6	0.8%	60-65	250.7	6.9%	120-125	0	0.0%
5-10	84.6	2.3%	65-70	221.1	6.1%	125-130	0	0.0%
10-15	137.7	3.8%	70-75	185.2	5.1%	130-135	0	0.0%
15-20	185.8	5.1%	75-80	142.8	3.9%	135-140	0	0.0%
20-25	227.4	6.3%	80-85	93.5	2.6%	140-145	0	0.0%
25-30	261.0	7.2%	85-90	39.2	1.1%	145-150	0	0.0%
30-35	285.8	7.9%	90-95	4.0	0.1%	150-155	0	0.0%
35-40	301.0	8.3%	95-100	0.8	0.0%	155-160	0	0.0%
40-45	306.9	8.5%	100-105	0.2	0.0%	160-165	0	0.0%
45-50	304.2	8.4%	105-110	0.0	0.0%	165-170	0	0.0%
50-55	293.3	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	275.0	7.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1512	41.7%
0-60	2691	74.2%
0-90	3624	99.9%
90-180	5	0.1%



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	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197
	5	1187	1194	1188	1192	1195	1192	1188	1194	1187	1194	1188	1192	1195	1192	1188
	10	1166	1174	1172	1178	1182	1178	1172	1174	1166	1174	1172	1178	1182	1178	1172
	15	1132	1141	1144	1155	1161	1155	1144	1141	1132	1141	1144	1155	1161	1155	1144
	20	1085	1096	1105	1123	1133	1123	1105	1096	1085	1096	1105	1123	1133	1123	1105
	25	1025	1039	1056	1084	1096	1084	1056	1039	1025	1039	1056	1084	1096	1084	1056
	30	955	972	999	1037	1053	1037	999	972	955	972	999	1037	1053	1037	999
	35	877	896	935	982	1002	982	935	896	877	896	935	982	1002	982	935
	40	792	814	864	920	944	920	864	814	792	814	864	920	944	920	864
	45	705	728	789	856	883	856	789	728	705	728	789	856	883	856	789
	50	616	643	712	787	817	787	712	643	616	643	712	787	817	787	712
	55	526	556	633	715	748	715	633	556	526	556	633	715	748	715	633
	60	437	470	554	641	676	641	554	470	437	470	554	641	676	641	554
	65	350	387	476	568	603	568	476	387	350	387	476	568	603	568	476
	70	266	306	401	487	516	487	401	306	266	306	401	487	516	487	401
	75	185	231	323	393	414	393	323	231	185	231	323	393	414	393	323
	80	111	163	238	283	292	283	238	163	111	163	238	283	292	283	238
	85	46	95	138	154	153	154	138	95	46	95	138	154	153	154	138
	90	2	20	32	33	31	33	32	20	2	20	32	33	31	33	32
	95	0	4	5	1	0	1	5	4	0	4	5	1	0	1	5
	100	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2
	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	3586	3586
	45	2987	3341
	55	2747	3306
	65	2477	3375
	75	2136	3742
	85	1572	3272



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	4319	4319	4319	4319	4218	4218	4218	4218	4029	4029	4029	3857	3857	3857	3698	3698	3698	3624
1	3903	3711	3539	3384	3801	3627	3470	3328	3470	3340	3221	3325	3219	3121	3192	3106	3026	2947
2	3530	3208	2942	2718	3431	3137	2892	2684	3005	2799	2620	2884	2710	2558	2771	2628	2499	2417
3	3207	2802	2488	2239	3113	2743	2452	2217	2632	2382	2176	2529	2316	2137	2433	2253	2098	2015
4	2930	2474	2140	1885	2843	2424	2112	1871	2331	2059	1844	2244	2008	1817	2163	1959	1791	1709
5	2691	2206	1867	1616	2612	2164	1845	1607	2085	1803	1588	2011	1764	1569	1942	1725	1551	1471
6	2483	1983	1648	1407	2411	1948	1631	1400	1880	1597	1386	1818	1566	1373	1759	1535	1360	1283
7	2301	1796	1469	1240	2237	1766	1455	1235	1709	1429	1225	1655	1403	1215	1604	1378	1205	1131
8	2142	1638	1322	1104	2083	1613	1311	1101	1563	1289	1093	1517	1268	1085	1473	1247	1078	1007
9	2001	1503	1198	993	1948	1481	1189	990	1438	1171	984	1398	1153	978	1360	1136	972	904
10	1876	1387	1094	899	1828	1368	1086	897	1331	1071	892	1296	1056	888	1263	1042	883	818

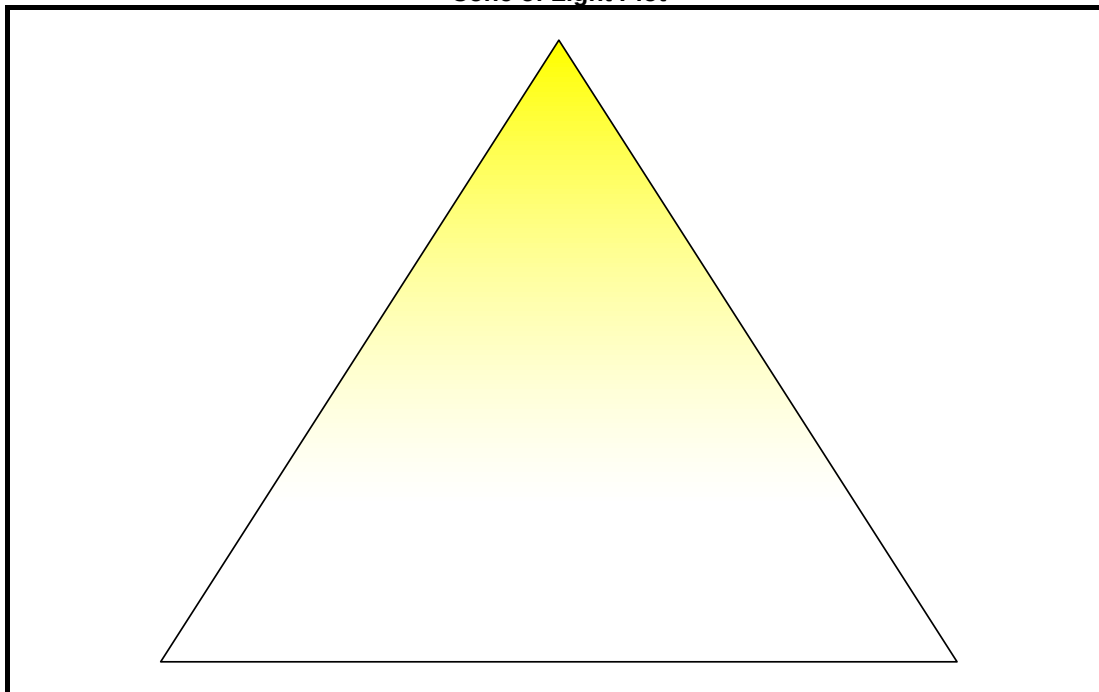
Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	74.8	4.98
6.00	33.3	7.47
8.00	18.7	9.97
10.0	12.0	12.5
12.0	8.31	14.9
14.0	6.11	17.4
16.0	4.68	19.9

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1197 Candela
Central Cone Intensity:	1195 Candela
Beam Flux:	2594.4 Lumens
Beam Angle (0-180):	101.9 Degrees
Beam Angle (90-270):	130.5 Degrees
Field Angle (0-180):	158.8 Degrees
Field Angle (90-270):	172.4 Degrees

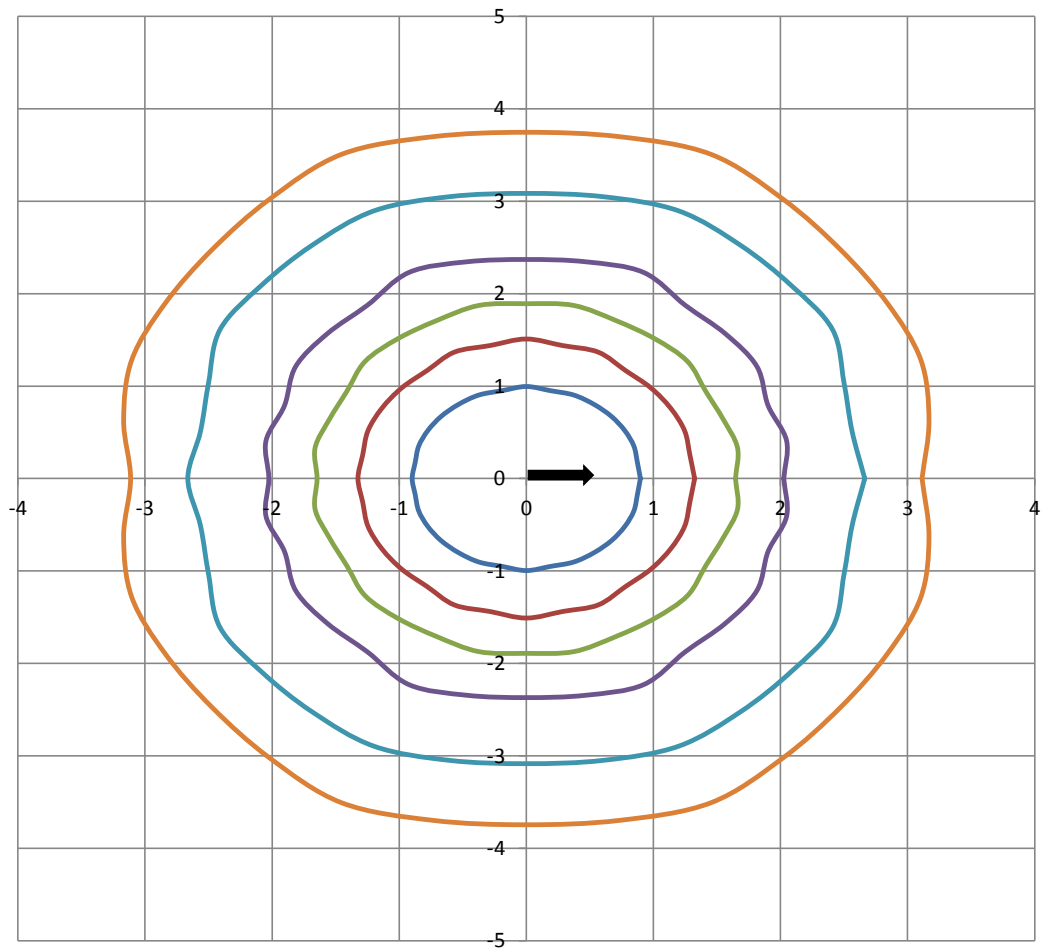
Cone of Light Plot





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