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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

Catalog Number
LW4-4-3800-35K-HTA-A40-UNI-SR-XXXX

Order Number
11205397
Test Number
1227932

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: 9.750 in.
Luminous Height: 2.00 in.

Summary of Results

Total Luminaire Output: 3605 Lumens
Luminaire Efficacy: 114.9 lm/w
Maximum Candela: 1213 Candela

Test Conditions

Test Temperature: 24.2 °C
Voltage: 120.0 VAC
Current: 0.2622 A
Power: 31.38 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 6.00 %

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
24.2 °C	120.0 VAC	0.2622 A	31.38 W	0.997	60 Hz	6.00 %

Summary of Results

Spacing Criteria

0-180: 1.18

90-270: 1.18

Total Lumen Output:

3605 Lumens

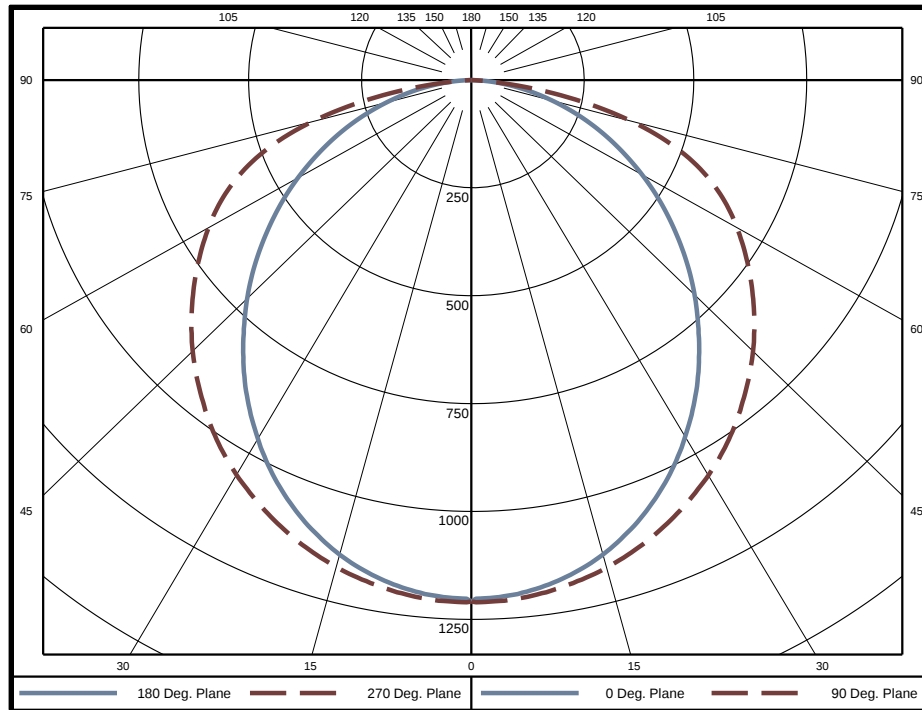
Luminaire Efficacy:

114.9 lm/w

Maximum Candela:

1213 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	28.8	0.8%	60-65	256.0	7.1%	120-125	0	0.0%
5-10	85.4	2.4%	65-70	225.9	6.3%	125-130	0	0.0%
10-15	138.8	3.9%	70-75	186.1	5.2%	130-135	0	0.0%
15-20	187.1	5.2%	75-80	133.7	3.7%	135-140	0	0.0%
20-25	228.7	6.3%	80-85	71.3	2.0%	140-145	0	0.0%
25-30	262.3	7.3%	85-90	16.2	0.4%	145-150	0	0.0%
30-35	287.2	8.0%	90-95	2.3	0.1%	150-155	0	0.0%
35-40	302.6	8.4%	95-100	0.8	0.0%	155-160	0	0.0%
40-45	308.9	8.6%	100-105	0.2	0.0%	160-165	0	0.0%
45-50	306.8	8.5%	105-110	0.0	0.0%	165-170	0	0.0%
50-55	296.7	8.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	279.4	7.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1521	42.2%
0-60	2713	75.2%
0-90	3602	99.9%
90-180	3	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	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209
	5	1196	1206	1200	1204	1206	1204	1200	1206	1196	1206	1200	1204	1206	1204	1200
	10	1174	1185	1183	1188	1192	1188	1183	1185	1174	1185	1183	1188	1192	1188	1183
	15	1139	1152	1153	1164	1169	1164	1153	1152	1139	1152	1153	1164	1169	1164	1153
	20	1090	1104	1112	1130	1138	1130	1112	1104	1090	1104	1112	1130	1138	1130	1112
	25	1030	1046	1062	1089	1100	1089	1062	1046	1030	1046	1062	1089	1100	1089	1062
	30	958	978	1004	1041	1057	1041	1004	978	958	978	1004	1041	1057	1041	1004
	35	880	902	939	987	1006	987	939	902	880	902	939	987	1006	987	939
	40	796	820	869	925	948	925	869	820	796	820	869	925	948	925	869
	45	710	735	796	861	887	861	796	735	710	735	796	861	887	861	796
	50	622	652	721	792	821	792	721	652	622	652	721	792	821	792	721
	55	533	568	643	721	752	721	643	568	533	568	643	721	752	721	643
	60	446	485	566	649	682	649	566	485	446	485	566	649	682	649	566
	65	359	403	489	575	605	575	489	403	359	403	489	575	605	575	489
	70	275	324	414	486	506	486	414	324	275	324	414	486	506	486	414
	75	193	247	328	367	370	367	328	247	193	247	328	367	370	367	328
	80	117	176	219	214	202	214	219	176	117	176	219	214	202	214	219
	85	49	93	84	60	49	60	84	93	49	93	84	60	49	60	84
	90	0	13	10	4	0	4	10	13	0	13	10	4	0	4	10
	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	4270	4270
	45	3545	3975
	55	3285	3962
	65	3000	4088
	75	2637	4390
	85	1988	2157



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	4291	4291	4291	4291	4191	4191	4191	4191	4004	4004	4004	3833	3833	3833	3676	3676	3676	3602
1	3894	3711	3546	3398	3794	3628	3478	3342	3473	3349	3235	3330	3229	3135	3198	3117	3041	2963
2	3524	3211	2951	2734	3426	3141	2903	2700	3011	2810	2636	2891	2722	2574	2780	2640	2516	2435
3	3202	2804	2497	2252	3110	2746	2461	2231	2637	2392	2190	2535	2326	2151	2441	2264	2113	2031
4	2925	2476	2147	1897	2840	2427	2120	1883	2335	2067	1855	2249	2017	1829	2169	1969	1803	1722
5	2686	2207	1873	1626	2608	2166	1851	1616	2088	1810	1598	2015	1771	1579	1947	1733	1561	1482
6	2478	1984	1653	1415	2407	1949	1636	1408	1883	1603	1395	1821	1572	1381	1762	1541	1368	1292
7	2296	1797	1473	1247	2232	1767	1460	1242	1710	1433	1232	1657	1408	1222	1607	1383	1212	1139
8	2137	1639	1325	1110	2079	1613	1314	1106	1564	1293	1099	1519	1272	1092	1475	1252	1084	1014
9	1996	1503	1202	998	1944	1481	1192	995	1439	1175	989	1400	1157	983	1362	1140	978	910
10	1871	1387	1097	904	1824	1368	1089	902	1331	1074	897	1297	1060	893	1264	1046	888	824

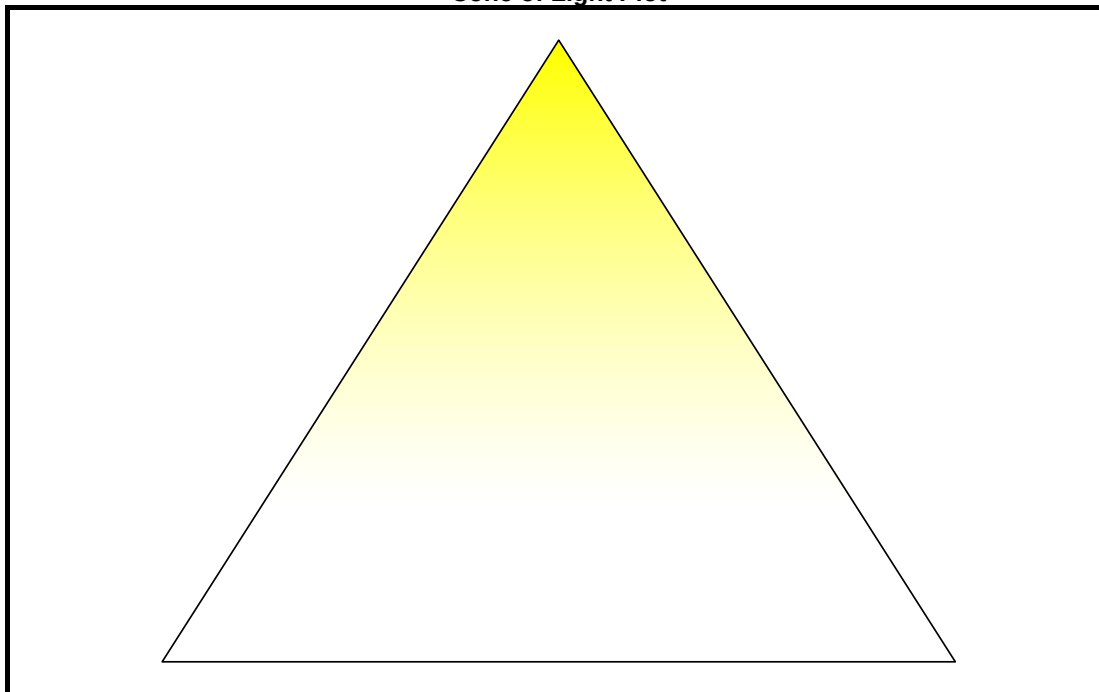
Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	75.5	4.96
6.00	33.6	7.45
8.00	18.9	9.93
10.0	12.1	12.4
12.0	8.39	14.9
14.0	6.17	17.4
16.0	4.72	19.9

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1209 Candela
Central Cone Intensity:	1206 Candela
Beam Flux:	2622.5 Lumens
Beam Angle (0-180):	101.9 Degrees
Beam Angle (90-270):	130.1 Degrees
Field Angle (0-180):	159.5 Degrees
Field Angle (90-270):	164.9 Degrees

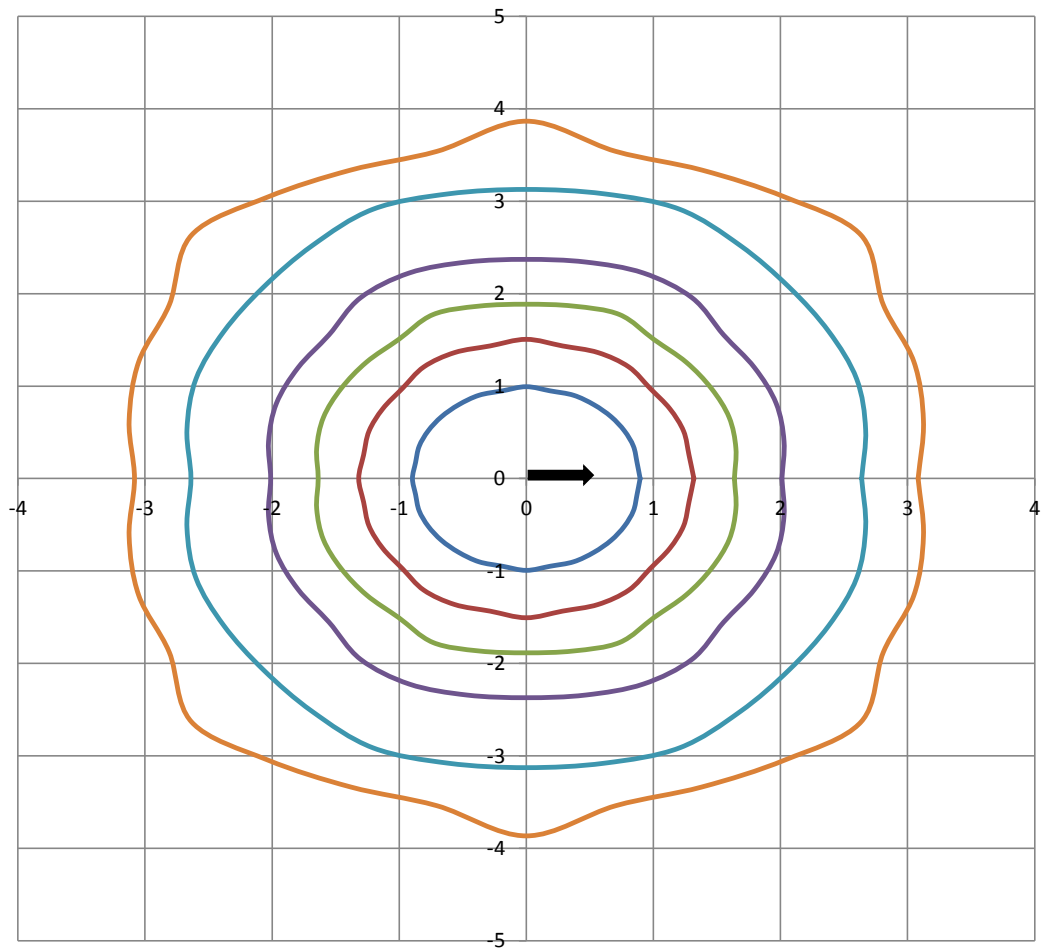
Cone of Light Plot





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