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Indoor Distribution Test Report

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

*Mercury Typed Notes Added:

The LR225 (4" Depth) and the LR125 (3" Depth) use the same reflector & lens.
The LED distance to the lens is the same so the photometrics would be equal.

Prepared For Mercury Lighting

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Catalog Number
LR225-22G-3800-35K-A40-UNI-XXXX

Order Number
11228120
Test Number
1241927

Test Date

2016-04-27

Prepared By

Dane Hernandez-Adams, Technician

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 housing, steel reflectors, frosted plastic patterned lens enclosure
Lamp: 44 white LEDs
Mounting: Recessed
Ballast/Driver: One Philips Advance Xitanium XI040C110V054BPT1

Luminaire



Luminaire Characteristics

Luminous Length: 23.00 in.
Luminous Width: 20.75 in.

Summary of Results

Total Luminaire Output:	3671 Lumens
Luminaire Efficacy:	99.8 lm/w
Maximum Candela:	1262 Candela

Test Conditions

Test Temperature:	24.5 °C
Voltage:	120.0 VAC
Current:	0.3074 A
Power:	36.79 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	6.38 %

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
24.5 °C	120.0 VAC	0.3074 A	36.79 W	0.997	60 Hz	6.38 %

Summary of Results

Spacing Criteria

0-180: 1.21

90-270: 1.21

Total Lumen Output:

3671 Lumens

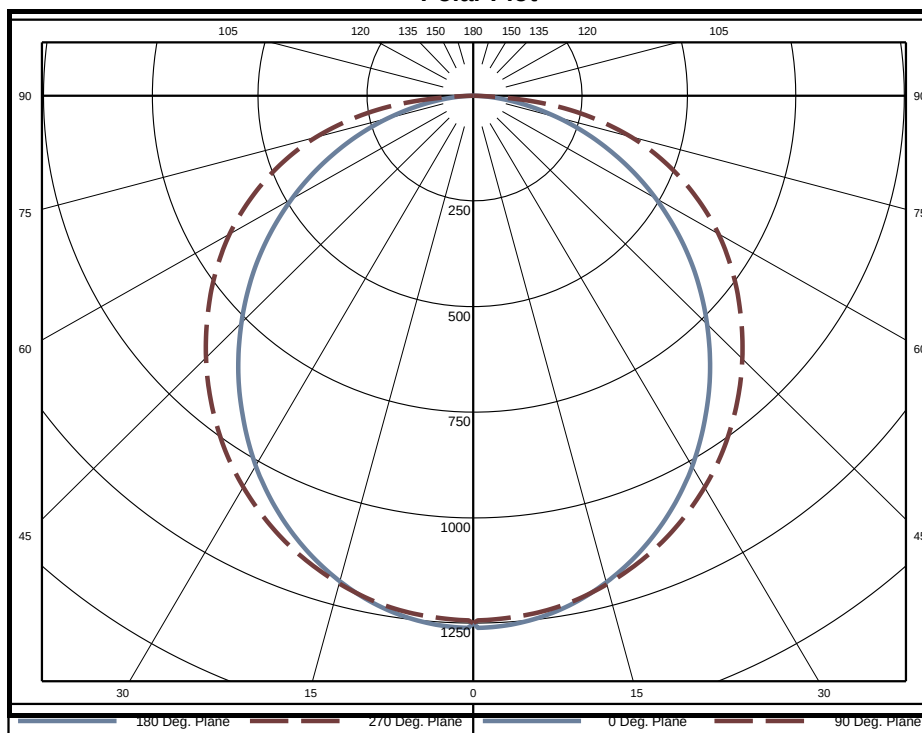
Luminaire Efficacy:

99.8 lm/w

Maximum Candela:

1262 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	29.8	0.8%	60-65	254.4	6.9%	120-125	0	0.0%
5-10	88.4	2.4%	65-70	218.9	6.0%	125-130	0	0.0%
10-15	143.5	3.9%	70-75	177.4	4.8%	130-135	0	0.0%
15-20	193.4	5.3%	75-80	129.9	3.5%	135-140	0	0.0%
20-25	236.4	6.4%	80-85	77.4	2.1%	140-145	0	0.0%
25-30	271.2	7.4%	85-90	19.8	0.5%	145-150	0	0.0%
30-35	296.8	8.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	312.7	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	318.9	8.7%	100-105	0	0.0%	160-165	0	0.0%
45-50	315.7	8.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	303.6	8.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	282.9	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1572	42.8%
0-60	2793	76.1%
0-90	3671	100.0%
90-180	0	0.0%



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	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
	5	1254	1246	1242	1241	1238	1241	1242	1246	1254	1246	1242	1241	1238	1241	1242
	10	1232	1225	1224	1225	1224	1225	1224	1225	1232	1225	1224	1225	1224	1225	1224
	15	1195	1189	1193	1198	1198	1198	1193	1189	1195	1189	1193	1198	1198	1198	1193
	20	1146	1143	1151	1161	1164	1161	1151	1143	1146	1143	1151	1161	1164	1161	1151
	25	1086	1086	1100	1117	1122	1117	1100	1086	1086	1086	1100	1117	1122	1117	1100
	30	1017	1020	1040	1063	1072	1063	1040	1020	1017	1020	1040	1063	1072	1063	1040
	35	939	945	972	1003	1015	1003	972	945	939	945	972	1003	1015	1003	972
	40	857	865	898	935	950	935	898	865	857	865	898	935	950	935	898
	45	770	781	819	863	881	863	819	781	770	781	819	863	881	863	819
	50	681	693	737	787	809	787	737	693	681	693	737	787	809	787	737
	55	588	604	651	708	734	708	651	604	588	604	651	708	734	708	651
	60	493	509	563	628	656	628	563	509	493	509	563	628	656	628	563
	65	397	415	473	541	570	541	473	415	397	415	473	541	570	541	473
	70	301	322	384	450	480	450	384	322	301	322	384	450	480	450	384
	75	208	231	291	352	380	352	291	231	208	231	291	352	380	352	291
	80	121	145	195	241	264	241	195	145	121	145	195	241	264	241	195
	85	49	64	93	115	124	115	93	64	49	64	93	115	124	115	93
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	4060	4060
	45	3535	3762
	55	3327	3685
	65	3048	3638
	75	2614	3653
	85	1816	3458



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	4370	4370	4370	4370	4269	4269	4269	4269	4079	4079	4079	3906	3906	3906	3746	3746	3746	3671
1	3968	3783	3616	3466	3867	3699	3547	3409	3541	3416	3301	3396	3294	3199	3263	3181	3103	3025
2	3595	3278	3016	2796	3497	3208	2967	2762	3076	2873	2697	2955	2784	2635	2842	2701	2575	2493
3	3269	2868	2557	2309	3176	2809	2520	2288	2698	2450	2246	2595	2384	2207	2500	2321	2168	2085
4	2988	2534	2202	1948	2902	2485	2174	1934	2391	2121	1906	2304	2070	1879	2224	2021	1853	1772
5	2746	2261	1922	1672	2667	2219	1900	1662	2140	1859	1643	2066	1819	1625	1998	1781	1607	1527
6	2534	2033	1697	1456	2462	1998	1680	1449	1931	1647	1436	1868	1615	1423	1809	1585	1410	1332
7	2348	1842	1514	1284	2284	1812	1500	1279	1755	1474	1269	1701	1448	1259	1650	1423	1250	1175
8	2186	1680	1362	1144	2127	1654	1351	1140	1605	1329	1133	1559	1308	1125	1515	1288	1118	1047
9	2042	1542	1235	1029	1989	1519	1226	1026	1477	1208	1020	1437	1191	1014	1399	1174	1008	940
10	1914	1422	1128	932	1867	1403	1120	930	1366	1105	925	1331	1091	921	1298	1076	916	851

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1250 Candela
Central Cone Intensity:	1248 Candela
Beam Flux:	2636.2 Lumens
Beam Angle (0-180):	106.0 Degrees
Beam Angle (90-270):	123.7 Degrees
Field Angle (0-180):	159.5 Degrees
Field Angle (90-270):	169.9 Degrees

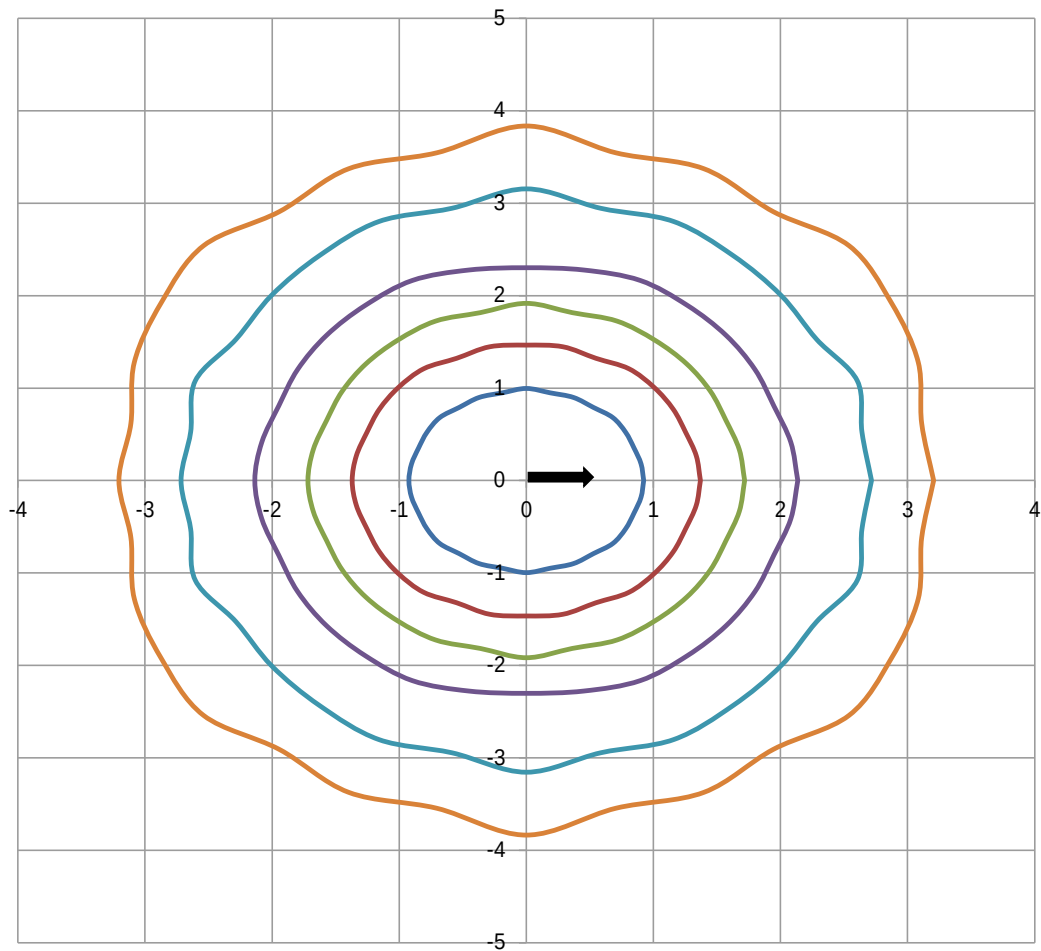
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		78.1	4.96
6.00		34.7	7.44
8.00		19.5	9.92
10.0		12.5	12.4
12.0		8.68	14.9
14.0		6.38	17.4
16.0		4.88	19.8



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