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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

Stephen Bambush
20 Audrey Pl
Fairfield, NJ 07004-3416
United States

Catalog Number
LR225-22G-5300-35K-A75-UNI-XXXX

Order Number
11228120
Test Number
1241931

Test Date

2016-04-28

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: 88 white LEDs
Mounting: Recessed
Ballast/Driver: One Philips Advance Xitanium XI075C200V054BPT1

Luminaire



Luminaire Characteristics

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

Summary of Results

Total Luminaire Output:	5597 Lumens
Luminaire Efficacy:	113.7 lm/w
Maximum Candela:	1926 Candela

Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.4118 A
Power:	49.24 W
Power Factor:	0.996
Frequency:	60 Hz
Current THD:	6.94 %

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
24.6 °C	120.0 VAC	0.4118 A	49.24 W	0.996	60 Hz	6.94 %

Summary of Results

Spacing Criteria

0-180: 1.20

90-270: 1.22

Total Lumen Output:

5597 Lumens

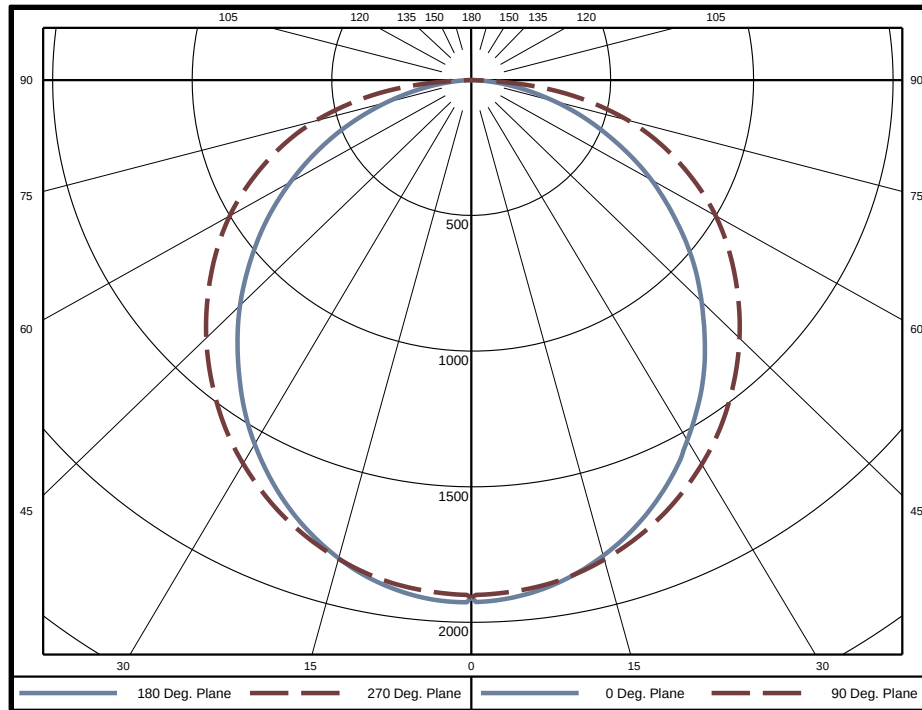
Luminaire Efficacy:

113.7 lm/w

Maximum Candela:

1926 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	45.5	0.8%	60-65	387.5	6.9%	120-125	0	0.0%
5-10	134.8	2.4%	65-70	333.1	6.0%	125-130	0	0.0%
10-15	219.1	3.9%	70-75	270.0	4.8%	130-135	0	0.0%
15-20	295.2	5.3%	75-80	197.8	3.5%	135-140	0	0.0%
20-25	360.9	6.4%	80-85	117.7	2.1%	140-145	0	0.0%
25-30	413.9	7.4%	85-90	30.4	0.5%	145-150	0	0.0%
30-35	453.0	8.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	477.1	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	486.4	8.7%	100-105	0	0.0%	160-165	0	0.0%
45-50	481.4	8.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	462.4	8.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	430.8	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2400	42.9%
0-60	4261	76.1%
0-90	5597	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	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908	1908
	5	1911	1901	1895	1894	1890	1894	1897	1902	1918	1902	1897	1894	1890	1894	1895
	10	1875	1869	1868	1871	1869	1870	1868	1869	1885	1869	1868	1870	1869	1871	1868
	15	1816	1815	1819	1829	1830	1829	1820	1816	1830	1816	1820	1829	1830	1829	1819
	20	1741	1744	1756	1773	1778	1773	1757	1745	1756	1745	1757	1773	1778	1773	1756
	25	1649	1657	1678	1704	1713	1704	1680	1659	1665	1659	1680	1704	1713	1704	1678
	30	1538	1555	1586	1623	1636	1623	1590	1558	1559	1558	1590	1623	1636	1623	1586
	35	1423	1441	1483	1531	1549	1530	1485	1444	1441	1444	1485	1530	1549	1531	1483
	40	1296	1318	1368	1427	1450	1427	1372	1322	1313	1322	1372	1427	1450	1427	1368
	45	1163	1189	1247	1316	1345	1317	1252	1194	1183	1194	1252	1317	1345	1316	1247
	50	1029	1054	1120	1199	1234	1201	1125	1060	1044	1060	1125	1201	1234	1199	1120
	55	886	914	987	1078	1120	1081	994	921	903	921	994	1081	1120	1078	987
	60	745	773	852	953	1001	957	860	780	756	780	860	957	1001	953	852
	65	597	628	717	820	869	826	725	636	609	636	725	826	869	820	717
	70	454	486	580	680	730	687	590	495	461	495	590	687	730	680	580
	75	314	348	439	532	578	540	449	357	316	357	449	540	578	532	439
	80	183	217	293	362	400	369	303	226	184	226	303	369	400	362	293
	85	75	93	137	170	189	177	147	104	72	104	147	177	189	170	137
	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	6198	6198
	45	5340	6180
	55	5014	6343
	65	4588	6678
	75	3942	7246
	85	2793	7024



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	6663	6663	6663	6663	6508	6508	6508	6508	6219	6219	6219	5954	5954	5954	5711	5711	5711	5597
1	6050	5767	5513	5285	5896	5639	5408	5198	5399	5208	5033	5179	5022	4878	4975	4850	4732	4612
2	5482	4999	4600	4264	5331	4892	4524	4212	4691	4381	4113	4505	4246	4018	4334	4119	3927	3802
3	4985	4373	3899	3522	4843	4283	3844	3490	4114	3737	3426	3958	3636	3365	3812	3540	3306	3180
4	4557	3865	3358	2971	4426	3789	3316	2950	3647	3234	2908	3514	3157	2867	3391	3083	2827	2702
5	4187	3448	2932	2550	4067	3384	2899	2536	3264	2835	2507	3151	2774	2479	3047	2716	2451	2329
6	3864	3101	2589	2222	3755	3047	2563	2211	2945	2513	2191	2849	2464	2170	2759	2418	2150	2032
7	3581	2810	2309	1959	3482	2764	2289	1951	2676	2248	1936	2594	2209	1921	2517	2171	1906	1793
8	3333	2563	2078	1745	3244	2523	2061	1740	2448	2028	1728	2378	1996	1717	2311	1965	1706	1597
9	3114	2352	1885	1569	3033	2318	1871	1565	2253	1843	1556	2192	1816	1547	2134	1791	1539	1435
10	2920	2170	1721	1422	2847	2140	1709	1419	2084	1686	1412	2031	1664	1405	1980	1642	1398	1299

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1908 Candela
Central Cone Intensity:	1905 Candela
Beam Flux:	4012.8 Lumens
Beam Angle (0-180):	105.8 Degrees
Beam Angle (90-270):	123.7 Degrees
Field Angle (0-180):	159.4 Degrees
Field Angle (90-270):	169.9 Degrees

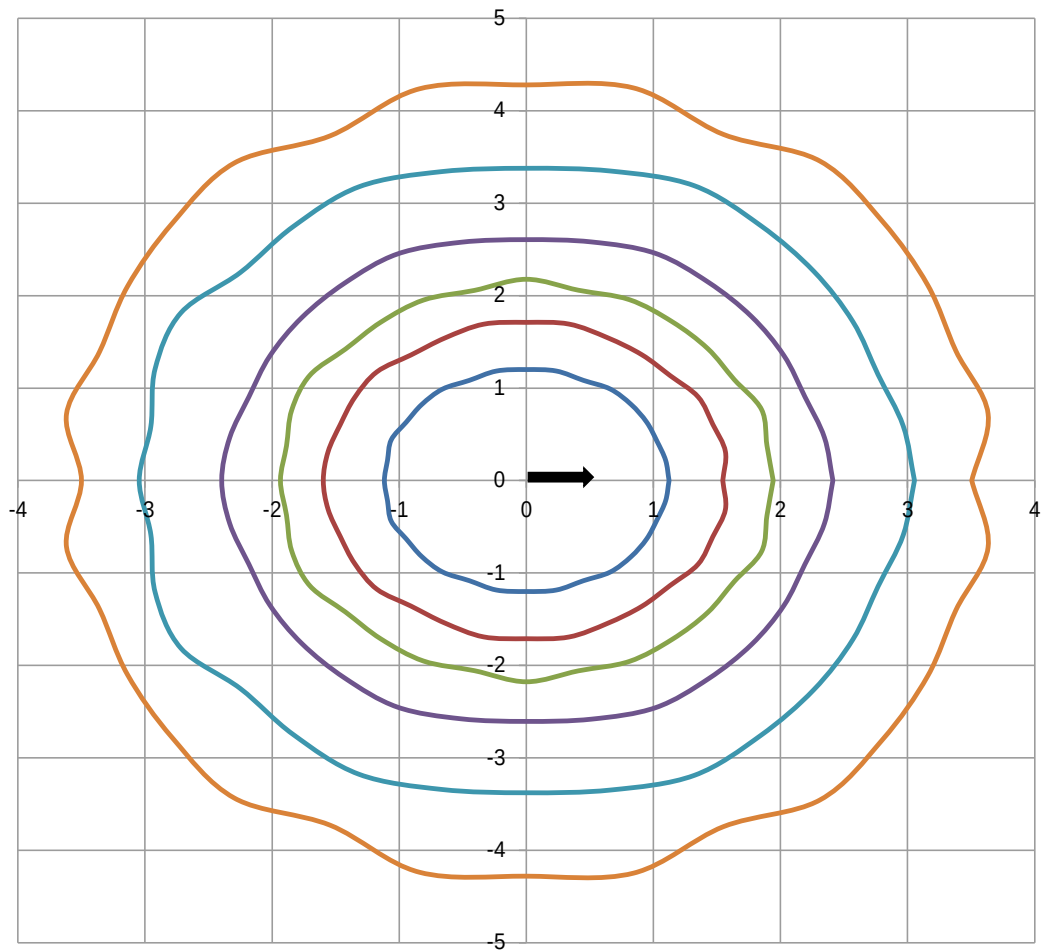
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		119	4.96
6.00		53.0	7.44
8.00		29.8	9.92
10.0		19.1	12.4
12.0		13.3	14.9
14.0		9.74	17.4
16.0		7.45	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