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Indoor Distribution Test Report

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

*Mercury Typed Notes Added:

The LR202 (4" Depth) and the LR102 (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
LR202-22G-5500-35K-1%-UNI-XXXX

Order Number
11228120
Test Number
1241929

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:	5468 Lumens
Luminaire Efficacy:	111.7 lm/w
Maximum Candela:	1987 Candela

Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.4094 A
Power:	48.96 W
Power Factor:	0.996
Frequency:	60 Hz
Current THD:	7.03 %

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	0.4094 A	48.96 W	0.996	60 Hz	7.03 %

Summary of Results

Spacing Criteria

0-180: 1.17

90-270: 1.17

Total Lumen Output:

5468 Lumens

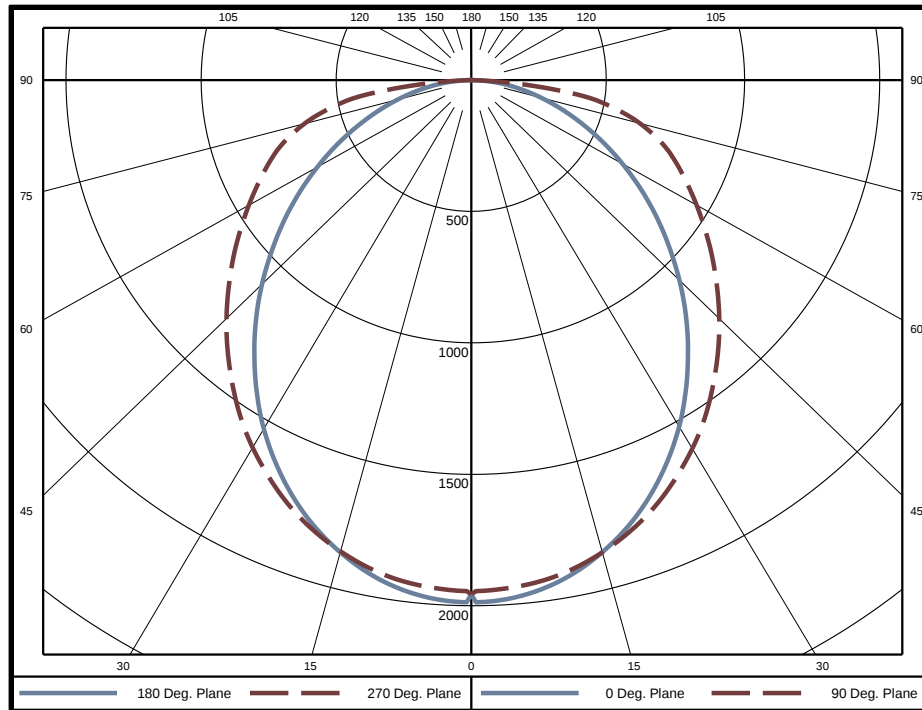
Luminaire Efficacy:

111.7 lm/w

Maximum Candela:

1987 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	46.6	0.9%	60-65	360.2	6.6%	120-125	0	0.0%
5-10	137.9	2.5%	65-70	319.2	5.8%	125-130	0	0.0%
10-15	223.2	4.1%	70-75	273.3	5.0%	130-135	0	0.0%
15-20	298.9	5.5%	75-80	217.1	4.0%	135-140	0	0.0%
20-25	362.4	6.6%	80-85	140.1	2.6%	140-145	0	0.0%
25-30	411.1	7.5%	85-90	34.0	0.6%	145-150	0	0.0%
30-35	444.1	8.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	460.7	8.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	462.5	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	451.0	8.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	428.5	7.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	397.4	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2385	43.6%
0-60	4124	75.4%
0-90	5468	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	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957	1957
	5	1973	1947	1940	1939	1934	1939	1940	1947	1973	1947	1940	1939	1934	1939	1940	1947
	10	1931	1907	1905	1910	1908	1910	1905	1907	1931	1907	1905	1910	1908	1910	1905	1907
	15	1861	1842	1848	1859	1860	1859	1848	1842	1861	1842	1848	1859	1860	1859	1848	1842
	20	1771	1756	1770	1791	1796	1791	1770	1756	1771	1756	1770	1791	1796	1791	1770	1756
	25	1659	1651	1677	1706	1715	1706	1677	1651	1659	1651	1677	1706	1715	1706	1677	1651
	30	1531	1530	1565	1607	1621	1607	1565	1530	1531	1530	1565	1607	1621	1607	1565	1530
	35	1388	1395	1443	1497	1516	1497	1443	1395	1388	1395	1443	1497	1516	1497	1443	1395
	40	1241	1252	1312	1378	1403	1378	1312	1252	1241	1252	1312	1378	1403	1378	1312	1252
	45	1090	1109	1179	1257	1288	1257	1179	1109	1090	1109	1179	1257	1288	1257	1179	1109
	50	939	963	1047	1138	1172	1138	1047	963	939	963	1047	1138	1172	1138	1047	963
	55	793	823	918	1021	1062	1021	918	823	793	823	918	1021	1062	1021	918	823
	60	651	686	797	910	957	910	797	686	651	686	797	910	957	910	797	686
	65	517	560	683	807	858	807	683	560	517	560	683	807	858	807	683	560
	70	390	443	580	710	764	710	580	443	390	443	580	710	764	710	580	443
	75	276	337	477	594	644	594	477	337	276	337	477	594	644	594	477	337
	80	173	236	356	443	484	443	356	236	173	236	356	443	484	443	356	236
	85	81	122	183	194	197	194	183	122	81	122	183	194	197	194	183	122
	90	0	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	0
	100	0	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	0
	110	0	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	0
	120	0	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	0
	130	0	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	0
	140	0	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	0
	150	0	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	0
	160	0	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	0
	170	0	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	0
	180	0	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	6354	6354	6354
	45	5006	5416	5915
	55	4492	5197	6012
	65	3969	5250	6596
	75	3464	5982	8076
	85	3036	6811	7327



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	6510	6510	6510	6510	6358	6358	6358	6358	6076	6076	6076	5817	5817	5817	5580	5580	5580	5468
1	5900	5618	5365	5138	5748	5492	5262	5053	5257	5067	4893	5041	4886	4742	4842	4717	4600	4482
2	5346	4870	4477	4146	5198	4765	4403	4096	4568	4263	3999	4387	4131	3906	4219	4007	3818	3696
3	4865	4265	3801	3431	4726	4177	3747	3400	4012	3642	3338	3859	3543	3278	3717	3450	3221	3098
4	4452	3776	3280	2902	4324	3702	3239	2881	3563	3160	2840	3433	3084	2800	3313	3011	2762	2640
5	4095	3374	2871	2499	3977	3312	2838	2484	3194	2776	2456	3085	2717	2429	2982	2660	2402	2283
6	3783	3040	2541	2183	3677	2987	2516	2173	2887	2466	2153	2794	2419	2133	2707	2374	2113	1998
7	3510	2758	2272	1930	3414	2714	2251	1923	2628	2211	1908	2548	2173	1893	2473	2136	1879	1768
8	3270	2520	2048	1724	3183	2481	2032	1719	2408	1999	1707	2339	1968	1696	2275	1937	1685	1580
9	3057	2315	1861	1554	2978	2282	1847	1550	2219	1820	1541	2159	1794	1532	2103	1769	1524	1423
10	2868	2138	1702	1411	2797	2110	1690	1408	2055	1668	1401	2003	1646	1394	1954	1625	1388	1291

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1957 Candela
Central Cone Intensity:	1952 Candela
Beam Flux:	3597.2 Lumens
Beam Angle (0-180):	97.3 Degrees
Beam Angle (90-270):	117.9 Degrees
Field Angle (0-180):	157.7 Degrees
Field Angle (90-270):	170.0 Degrees

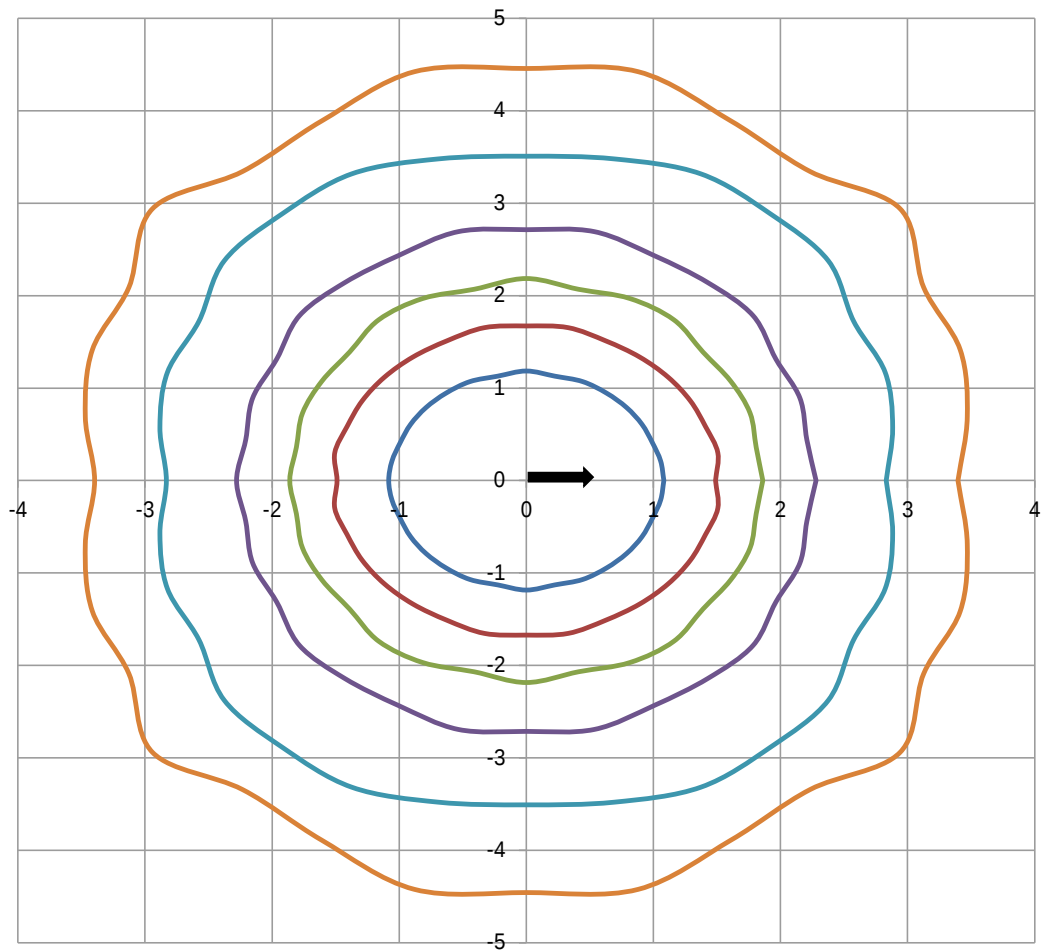
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		122	4.79
6.00		54.3	7.18
8.00		30.6	9.58
10.0		19.6	12.0
12.0		13.6	14.4
14.0		9.98	16.8
16.0		7.64	19.2



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