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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

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United States

Catalog Number
LR215-24G-5700-35K-A541-UNI-XXXX

Order Number
11540194
Test Number
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2016-11-28

Prepared By

Daniel Booth, Technician

Approved By

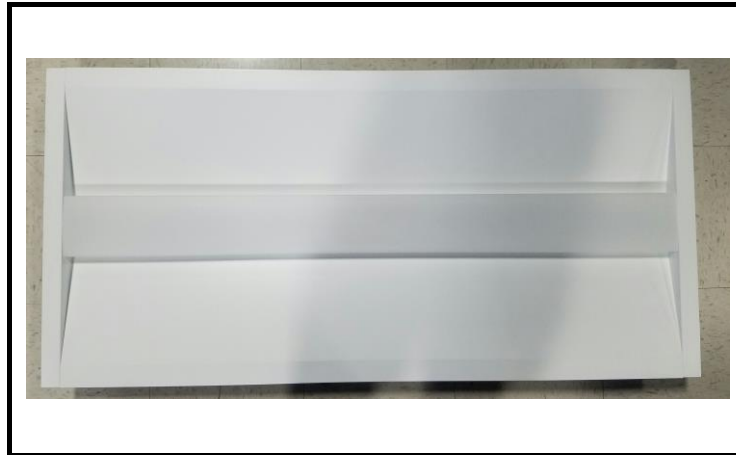
Timothy Wagner, Project Handler

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Luminaire Description: Formed steel housing, formed steel reflectors, frosted linear patterned plastic lens enclosure
Lamp: 88 white LEDs, two boards with 44 LEDs each
Mounting: Recessed
Ballast/Driver: One Philips Advance Xitanium XI054C150V054BST1

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 20.50 in.

Summary of Results

Total Luminaire Output:	5641 Lumens
Luminaire Efficacy:	111.4 lm/w
Maximum Candela:	1925 Candela

Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.4232 A
Power:	50.64 W
Power Factor:	0.998
Frequency:	60 Hz
Current THD:	5.62 %

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
25.1 °C	120.0 VAC	0.4232 A	50.64 W	0.998	60 Hz	5.62 %

Summary of Results

Spacing Criteria

0-180: 1.18

90-270: 1.18

Total Lumen Output:

5641 Lumens

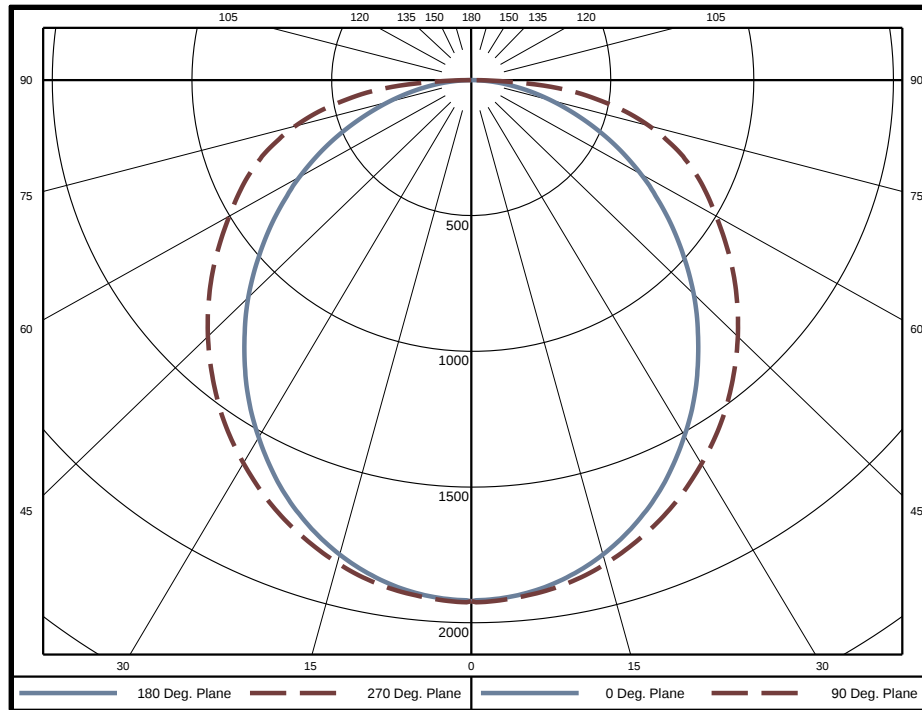
Luminaire Efficacy:

111.4 lm/w

Maximum Candela:

1925 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	45.8	0.8%	60-65	382.6	6.8%	120-125	0	0.0%
5-10	135.5	2.4%	65-70	337.8	6.0%	125-130	0	0.0%
10-15	219.7	3.9%	70-75	285.4	5.1%	130-135	0	0.0%
15-20	295.4	5.2%	75-80	224.0	4.0%	135-140	0	0.0%
20-25	359.9	6.4%	80-85	151.1	2.7%	140-145	0	0.0%
25-30	411.0	7.3%	85-90	55.0	1.0%	145-150	0	0.0%
30-35	447.9	7.9%	90-95	0	0.0%	150-155	0	0.0%
35-40	469.9	8.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	477.4	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	470.8	8.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	451.3	8.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	420.8	7.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2385	42.3%
0-60	4205	74.6%
0-90	5641	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	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920
	5	1906	1911	1908	1909	1913	1909	1908	1911	1906	1911	1908	1909	1913	1909	1908
	10	1869	1875	1876	1881	1889	1881	1876	1875	1869	1875	1876	1881	1889	1881	1876
	15	1811	1818	1825	1835	1844	1835	1825	1818	1811	1818	1825	1835	1844	1835	1825
	20	1731	1742	1757	1774	1786	1774	1757	1742	1731	1742	1757	1774	1786	1774	1757
	25	1634	1646	1673	1700	1716	1700	1673	1646	1634	1646	1673	1700	1716	1700	1673
	30	1518	1537	1575	1613	1633	1613	1575	1537	1518	1537	1575	1613	1633	1613	1575
	35	1394	1415	1467	1518	1543	1518	1467	1415	1394	1415	1467	1518	1543	1518	1467
	40	1259	1286	1351	1414	1442	1414	1351	1286	1259	1286	1351	1414	1442	1414	1351
	45	1124	1153	1229	1303	1337	1303	1229	1153	1124	1153	1229	1303	1337	1303	1229
	50	981	1015	1101	1189	1227	1189	1101	1015	981	1015	1101	1189	1227	1189	1101
	55	841	876	971	1072	1115	1072	971	876	841	876	971	1072	1115	1072	971
	60	703	744	842	956	1003	956	842	744	703	744	842	956	1003	956	842
	65	565	607	724	847	901	847	724	607	565	607	724	847	901	847	724
	70	427	476	605	739	789	739	605	476	427	476	605	739	789	739	605
	75	301	355	493	610	654	610	493	355	301	355	493	610	654	610	493
	80	187	247	365	455	488	455	365	247	187	247	365	455	488	455	365
	85	87	140	210	264	285	264	210	140	87	140	210	264	285	264	210
	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	3227	3227
	45	2670	3177
	55	2462	3266
	65	2246	3580
	75	1954	4245
	85	1674	5486



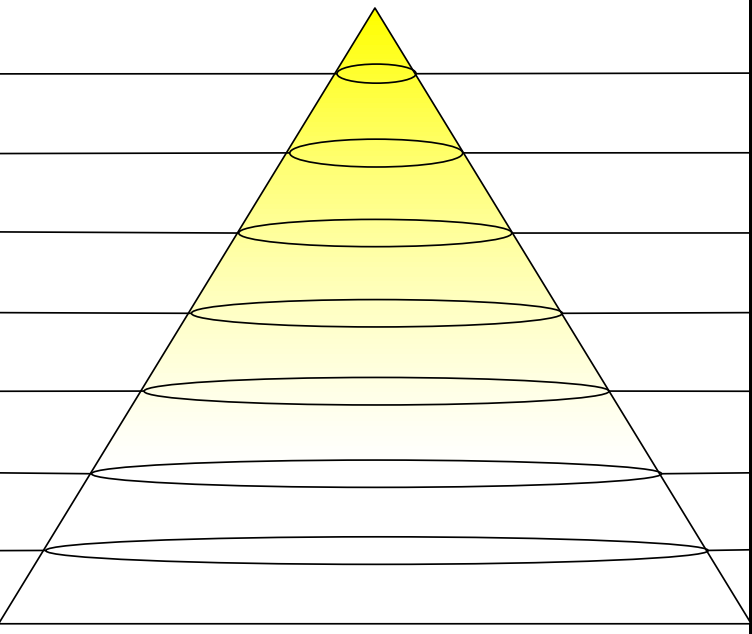
Utilization of Lumens - Zonal Cavity Method

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	6716	6716	6716	6716	6559	6559	6559	6559	6268	6268	6268	6001	6001	6001	5756	5756	5756	5641
1	6071	5775	5509	5269	5914	5645	5402	5182	5402	5201	5017	5178	5014	4862	4972	4840	4716	4593
2	5494	4996	4584	4237	5341	4887	4508	4186	4684	4363	4086	4496	4227	3992	4322	4099	3901	3773
3	4994	4368	3882	3496	4850	4277	3826	3463	4105	3718	3400	3947	3617	3339	3799	3520	3280	3152
4	4566	3860	3343	2948	4432	3783	3300	2927	3639	3218	2885	3505	3140	2844	3380	3065	2805	2677
5	4196	3444	2919	2532	4074	3380	2886	2517	3258	2822	2488	3144	2761	2460	3038	2702	2432	2308
6	3873	3099	2579	2207	3763	3045	2553	2196	2941	2502	2175	2844	2454	2155	2754	2407	2135	2016
7	3591	2809	2302	1947	3491	2763	2281	1939	2674	2240	1924	2591	2201	1909	2513	2162	1894	1779
8	3343	2563	2073	1736	3253	2524	2056	1730	2448	2022	1719	2376	1990	1707	2309	1959	1696	1586
9	3124	2353	1881	1562	3043	2319	1867	1557	2253	1839	1549	2192	1812	1540	2133	1786	1531	1426
10	2930	2172	1718	1416	2857	2142	1706	1413	2085	1683	1406	2032	1661	1399	1981	1639	1392	1292

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	1920 Candela
Central Cone Intensity:	1916 Candela
Beam Flux:	3889.6 Lumens
Beam Angle (0-180):	101.5 Degrees
Beam Angle (90-270):	124.1 Degrees
Field Angle (0-180):	159.5 Degrees
Field Angle (90-270):	173.1 Degrees

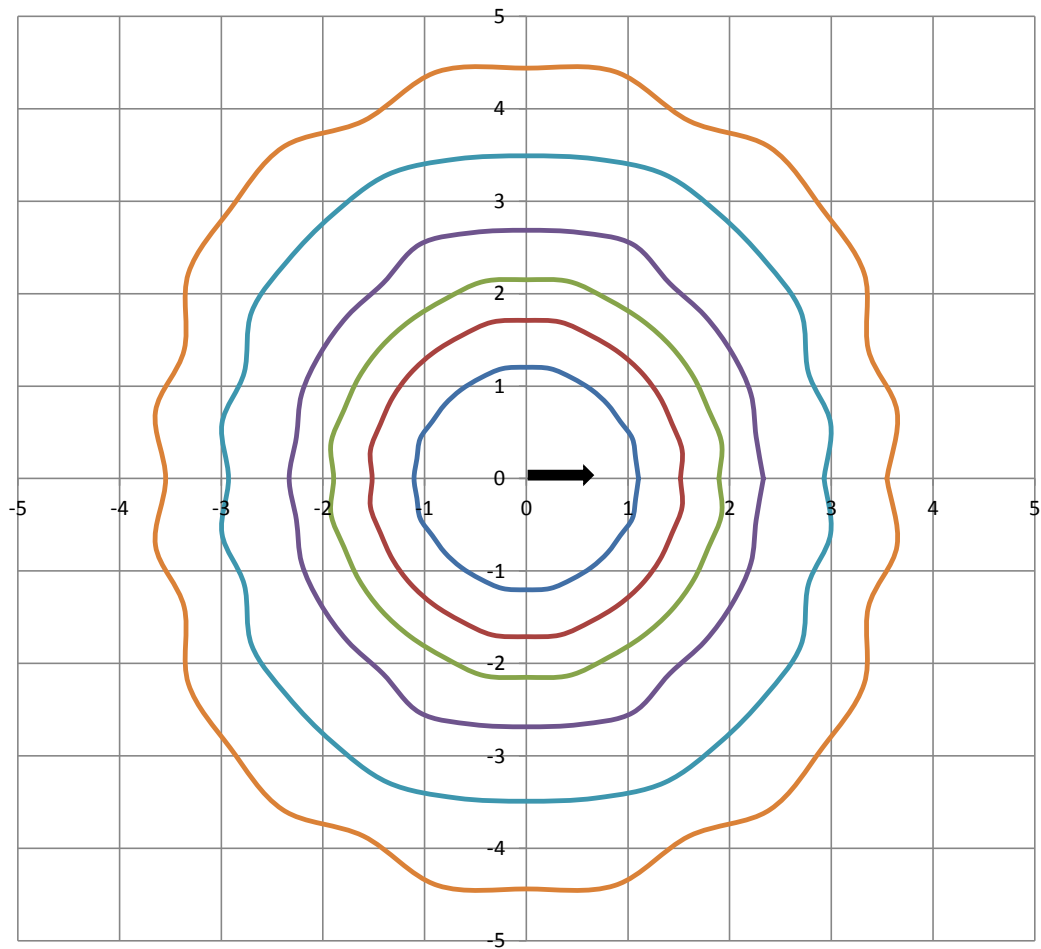
Cone of Light Tabulation

Mounting Height (Feet)			Footcandles at Nadir	Diameter (Feet)
4.00			120	4.89
6.00			53.3	7.33
8.00			30.0	9.78
10.0			19.2	12.2
12.0			13.3	14.7
14.0			9.80	17.1
16.0			7.50	19.6



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