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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

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

Catalog Number
LR305-22G-3800-35K-A40-UNI-XXXX

Order Number
11228120
Test Number
1241926

Test Date

2016-04-28

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 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:	3635 Lumens
Luminaire Efficacy:	98.6 lm/w
Maximum Candela:	1287 Candela

Test Conditions

Test Temperature:	24.7 °C
Voltage:	120.0 VAC
Current:	0.3079 A
Power:	36.87 W
Power Factor:	0.998
Frequency:	60 Hz
Current THD:	5.53 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

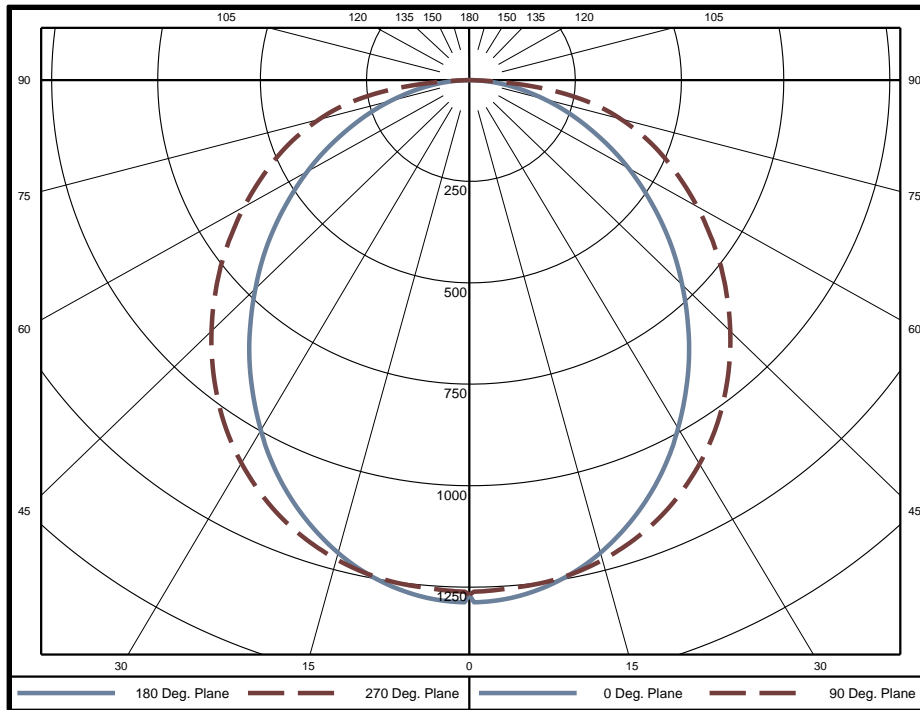
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.3079 A	36.87 W	0.998	60 Hz	5.53 %

Summary of Results

Spacing Criteria
 0-180: 1.17
 90-270: 1.17

Total Lumen Output: 3635 Lumens
Luminaire Efficacy: 98.6 lm/w
Maximum Candela: 1287 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	30.3	0.8%	60-65	242.8	6.7%	120-125	0	0.0%
5-10	89.6	2.5%	65-70	210.7	5.8%	125-130	0	0.0%
10-15	145.6	4.0%	70-75	175.1	4.8%	130-135	0	0.0%
15-20	196.0	5.4%	75-80	134.6	3.7%	135-140	0	0.0%
20-25	239.0	6.6%	80-85	84.9	2.3%	140-145	0	0.0%
25-30	273.0	7.5%	85-90	22.3	0.6%	145-150	0	0.0%
30-35	296.9	8.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	310.2	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	313.5	8.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	307.4	8.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	292.7	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	270.7	7.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1581	43.5%
0-60	2765	76.1%
0-90	3635	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269
5	1279	1263	1259	1258	1256	1258	1259	1263	1279	1263	1259	1258	1256	1258	1259	1263
10	1251	1237	1240	1247	1247	1247	1240	1237	1251	1237	1240	1247	1247	1247	1240	1237
15	1207	1197	1209	1222	1225	1222	1209	1197	1207	1197	1209	1222	1225	1222	1209	1197
20	1149	1146	1166	1186	1192	1186	1166	1146	1149	1146	1166	1186	1192	1186	1166	1146
25	1078	1082	1112	1140	1148	1140	1112	1082	1078	1082	1112	1140	1148	1140	1112	1082
30	996	1008	1047	1082	1093	1082	1047	1008	996	1008	1047	1082	1093	1082	1047	1008
35	908	926	974	1015	1029	1015	974	926	908	926	974	1015	1029	1015	974	926
40	816	839	893	940	956	940	893	839	816	839	893	940	956	940	893	839
45	722	750	809	860	877	860	809	750	722	750	809	860	877	860	809	750
50	629	660	723	776	794	776	723	660	629	660	723	776	794	776	723	660
55	534	570	636	691	710	691	636	570	534	570	636	691	710	691	636	570
60	444	481	549	606	625	606	549	481	444	481	549	606	625	606	549	481
65	354	395	465	521	543	521	465	395	354	395	465	521	543	521	465	395
70	270	313	384	441	462	441	384	313	270	313	384	441	462	441	384	313
75	191	235	304	354	374	354	304	235	191	235	304	354	374	354	304	235
80	119	161	219	256	270	256	219	161	119	161	219	256	270	256	219	161
85	55	81	110	119	123	119	110	81	55	81	110	119	123	119	110	81
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)

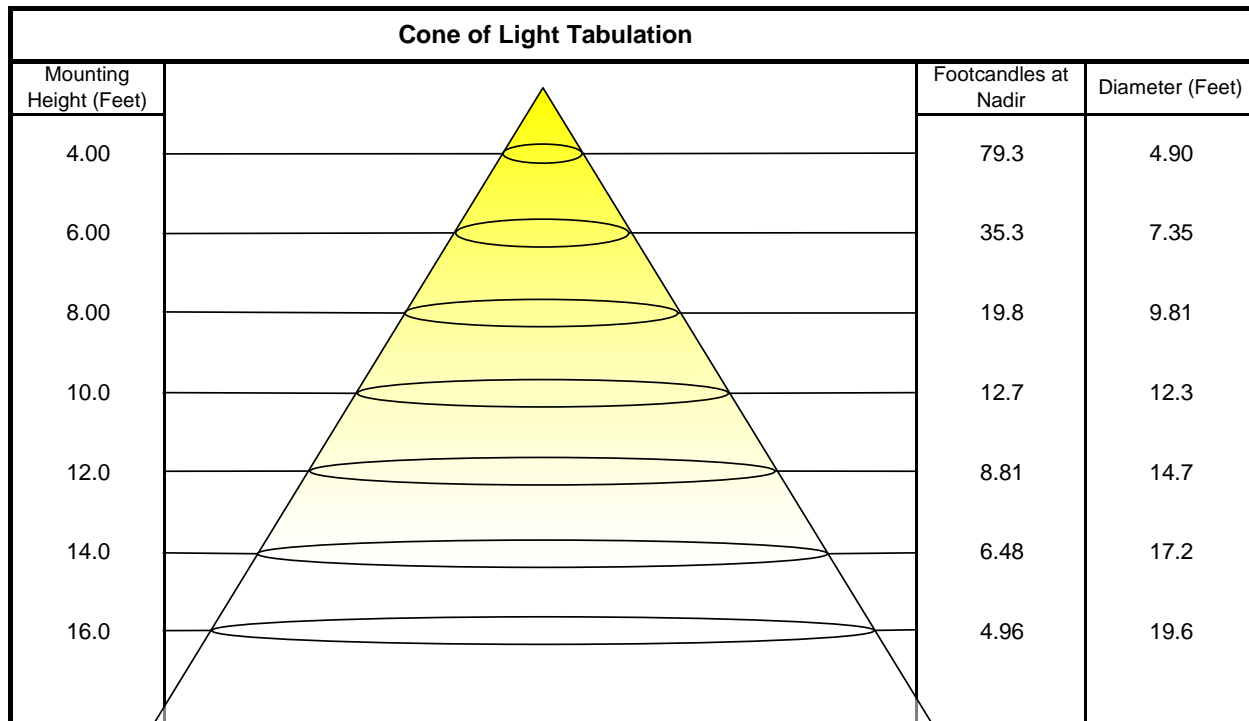
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	4122	4122	4122
45	3314	3716	4026
55	3025	3599	4019
65	2722	3570	4169
75	2395	3816	4687
85	2066	4093	4585



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	4328	4328	4328	4328	4227	4227	4227	4227	4039	4039	4039	3867	3867	3867	3710	3710	3710	3635
1	3927	3742	3576	3426	3826	3659	3507	3370	3503	3378	3263	3359	3257	3162	3227	3145	3068	2990
2	3560	3246	2986	2767	3462	3176	2937	2734	3045	2844	2669	2925	2756	2608	2813	2674	2549	2468
3	3239	2842	2535	2290	3147	2784	2499	2269	2674	2429	2228	2572	2364	2188	2478	2301	2150	2068
4	2963	2515	2186	1935	2878	2466	2159	1921	2373	2106	1894	2287	2055	1868	2207	2007	1842	1761
5	2724	2246	1911	1665	2646	2204	1890	1655	2126	1849	1636	2053	1809	1618	1985	1772	1600	1521
6	2516	2022	1690	1452	2445	1987	1673	1446	1920	1641	1432	1858	1609	1419	1800	1579	1406	1330
7	2333	1833	1510	1283	2269	1804	1496	1278	1747	1470	1268	1694	1444	1258	1644	1420	1248	1175
8	2172	1674	1360	1144	2115	1648	1349	1141	1599	1327	1133	1554	1306	1126	1510	1286	1119	1048
9	2030	1537	1234	1030	1978	1515	1225	1027	1473	1207	1022	1433	1190	1016	1396	1173	1010	943
10	1904	1419	1128	934	1857	1399	1120	932	1363	1105	928	1328	1091	923	1296	1077	919	855

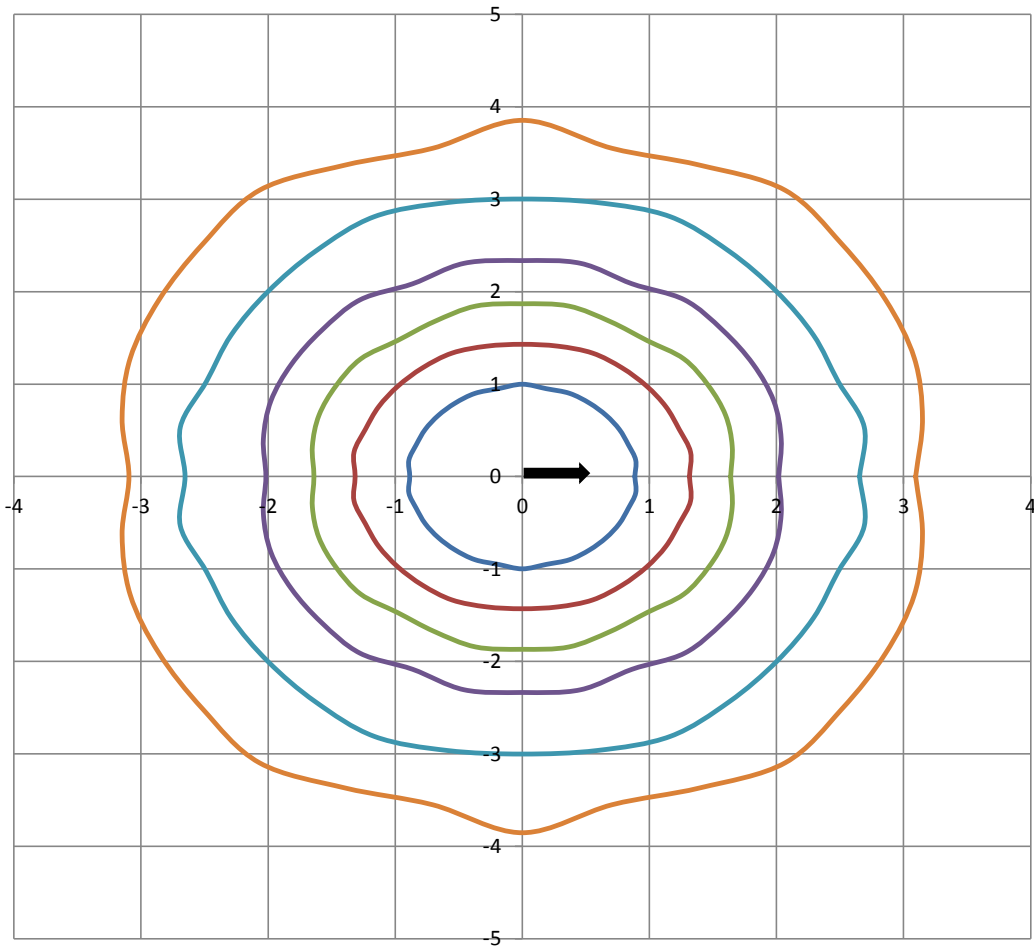
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1269 Candela
Central Cone Intensity:	1267 Candela
Beam Flux:	2496.4 Lumens
Beam Angle (0-180):	99.4 Degrees
Beam Angle (90-270):	118.9 Degrees
Field Angle (0-180):	158.8 Degrees
Field Angle (90-270):	169.8 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

