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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
LR402-22G-4300-35K-1%-UNI

Order Number
11170243
Test Number
1215241

Test Date

2016-02-24

Prepared By

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Approved By

Kyle Spaziani, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing / reflector, frosted plastic lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: One Universal Everline D10CC55UNVTW-LS

Luminaire



Luminaire Characteristics

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

Summary of Results

Total Luminaire Output: 4395 Lumens
Luminaire Efficacy: 98.9 lm/w
Maximum Candela: 1607 Candela

Electrical Data

Test Temperature: 24.6 °C
Voltage: 120.0 VAC
Current: 0.3712 A
Power: 44.44 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 4.92 %

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	0.3712 A	44.44 W	0.998	60 Hz	4.92 %

Summary of Results

Spacing Criteria

0-180: 1.17
90-270: 1.17

Total Lumen Output:

4395 Lumens

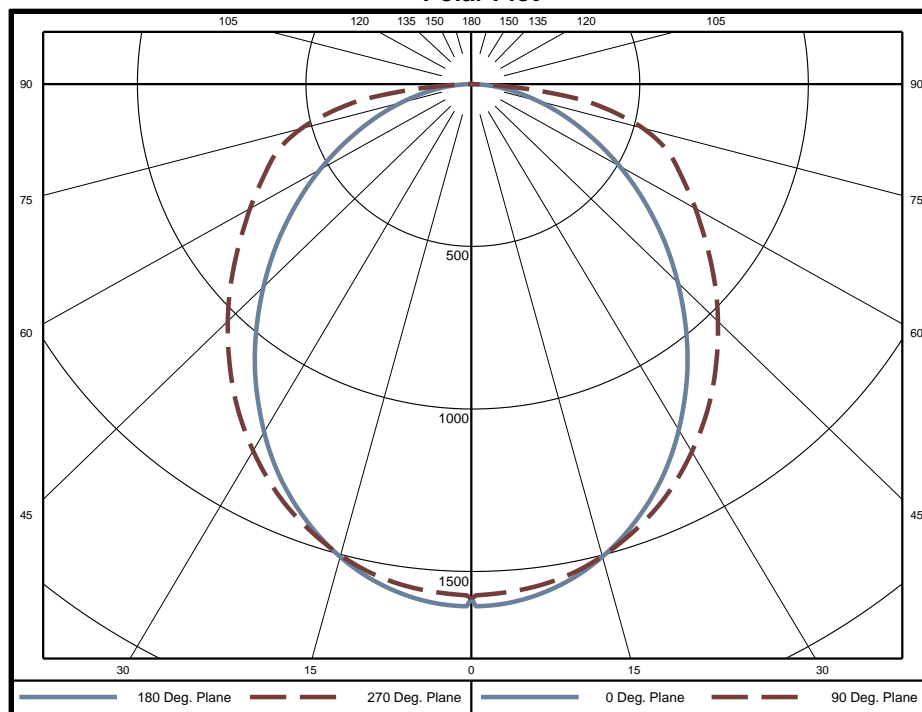
Luminaire Efficacy:

98.9 lm/w

Maximum Candela:

1607 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	37.8	0.9%	60-65	287.4	6.5%	120-125	0	0.0%
5-10	111.7	2.5%	65-70	255.2	5.8%	125-130	0	0.0%
10-15	180.7	4.1%	70-75	219.7	5.0%	130-135	0	0.0%
15-20	241.9	5.5%	75-80	173.1	3.9%	135-140	0	0.0%
20-25	293.2	6.7%	80-85	108.8	2.5%	140-145	0	0.0%
25-30	332.5	7.6%	85-90	26.4	0.6%	145-150	0	0.0%
30-35	358.7	8.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	371.8	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	372.5	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	362.6	8.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	343.6	7.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	317.8	7.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1928	43.9%
0-60	3325	75.6%
0-90	4395	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	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584	1584
5	1596	1576	1571	1570	1565	1570	1571	1576	1596	1576	1571	1570	1565	1570	1571	1576
10	1563	1544	1544	1547	1543	1547	1544	1544	1563	1544	1544	1547	1543	1547	1544	1544
15	1507	1492	1497	1504	1504	1504	1497	1492	1507	1492	1497	1504	1504	1504	1497	1492
20	1432	1421	1434	1449	1451	1449	1434	1421	1432	1421	1434	1449	1451	1449	1434	1421
25	1343	1336	1357	1380	1386	1380	1357	1336	1343	1336	1357	1380	1386	1380	1357	1336
30	1236	1236	1267	1299	1308	1299	1267	1236	1236	1236	1267	1299	1308	1299	1267	1236
35	1121	1126	1167	1209	1224	1209	1167	1126	1121	1126	1167	1209	1224	1209	1167	1126
40	999	1009	1060	1112	1130	1112	1060	1009	999	1009	1060	1112	1130	1112	1060	1009
45	875	890	950	1013	1036	1013	950	890	875	890	950	1013	1036	1013	950	890
50	753	772	841	915	942	915	841	772	753	772	841	915	942	915	841	772
55	632	655	736	820	851	820	736	655	632	655	736	820	851	820	736	655
60	517	545	636	731	769	731	636	545	517	545	636	731	769	731	636	545
65	406	440	544	650	694	650	544	440	406	440	544	650	694	650	544	440
70	305	347	462	578	626	578	462	347	305	347	462	578	626	578	462	347
75	212	261	383	486	529	486	383	261	212	261	383	486	529	486	383	261
80	130	180	282	354	385	354	282	180	130	180	282	354	385	354	282	180
85	59	89	137	153	160	153	137	89	59	89	137	153	160	153	137	89
90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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	4641	4641	4641
45	3626	3937	4292
55	3230	3761	4347
65	2815	3770	4809
75	2400	4336	5994
85	1981	4588	5371



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	5233	5233	5233	5233	5111	5111	5111	5111	4884	4884	4884	4676	4676	4676	4485	4485	4485	4395
1	4745	4519	4317	4135	4623	4418	4234	4067	4230	4077	3938	4056	3932	3817	3896	3796	3702	3608
2	4300	3920	3604	3339	4182	3835	3545	3299	3677	3432	3221	3531	3327	3147	3397	3227	3076	2977
3	3915	3434	3062	2765	3803	3363	3018	2740	3230	2934	2690	3108	2855	2642	2993	2779	2596	2497
4	3583	3041	2644	2340	3480	2981	2610	2323	2869	2546	2290	2766	2485	2258	2669	2427	2227	2129
5	3296	2718	2314	2016	3202	2668	2288	2004	2573	2238	1981	2485	2191	1959	2403	2145	1937	1842
6	3045	2449	2049	1762	2960	2407	2028	1753	2327	1989	1737	2252	1951	1721	2181	1914	1706	1613
7	2826	2223	1832	1558	2748	2187	1816	1552	2118	1784	1540	2054	1753	1528	1994	1723	1517	1428
8	2632	2031	1652	1392	2563	2000	1639	1388	1941	1613	1379	1886	1588	1370	1834	1563	1361	1276
9	2461	1866	1501	1255	2398	1839	1490	1251	1789	1469	1245	1741	1448	1238	1696	1428	1231	1150
10	2310	1724	1373	1140	2253	1701	1364	1137	1657	1346	1132	1615	1329	1126	1576	1312	1121	1043

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	99.0	4.78
6.00	44.0	7.17
8.00	24.7	9.56
10.0	15.8	12.0
12.0	11.0	14.3
14.0	8.08	16.7
16.0	6.19	19.1

Cone of Light Plot

