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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

Catalog Number
LR31-14-5100-35K-9A-U55-UNI-XXXX
Order Number
10921177
Test Number
1147377

Test Date

2015-08-21

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing, steel reflector, frosted patterned plastic lens enclosure
Lamp: 72 white LEDs
Mounting: Recessed
Ballast/Driver: One Universal Everline D10CC30UNVTZ-C (.789 mA)

Luminaire



Luminaire Characteristics

Luminous Length: 46.00 in.
Luminous Width: 10.00 in.

Summary of Results

Total Luminaire Output: 4809 Lumens
Luminaire Efficacy: 91.3 lm/w
Maximum Candela: 2248 Candela

Electrical Data

Test Temperature: 24.4 °C
Voltage: 120.0 VAC
Current: 0.4394 A
Power: 52.68 W
Power Factor: 0.999
Frequency: 60 Hz
Current THD: 4.74 %

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
24.4 °C	120.0 VAC	0.4394 A	52.68 W	0.999	60 Hz	4.74 %

Summary of Results

Spacing Criteria

0-180: 1.20

90-270: 1.20

Total Lumen Output:

4809 Lumens

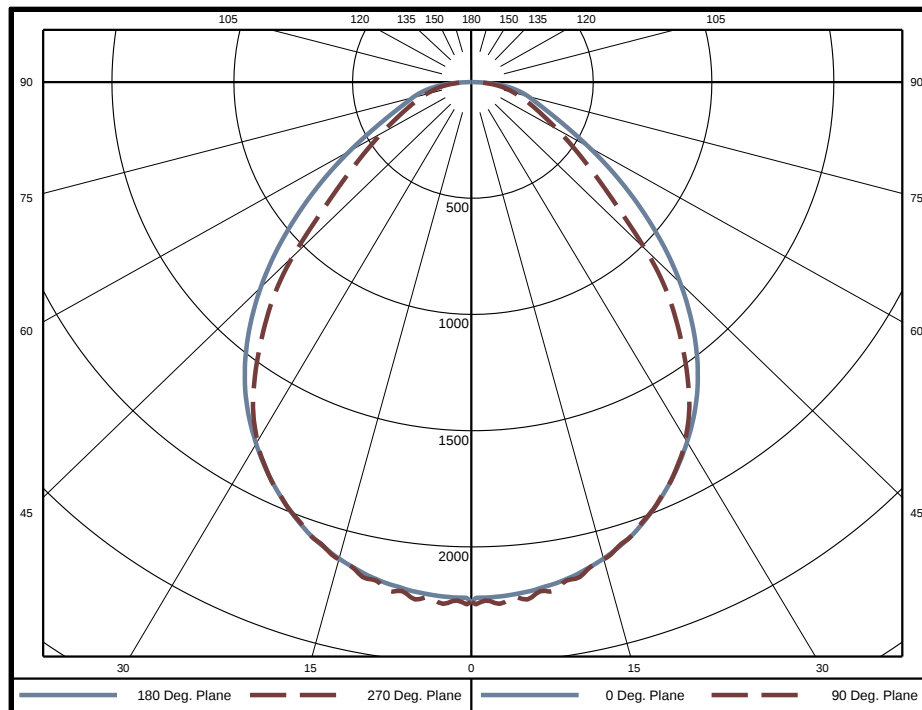
Luminaire Efficacy:

91.3 lm/w

Maximum Candela:

2248 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	53.2	1.1%	60-65	196.6	4.1%	120-125	0	0.0%
5-10	157.9	3.3%	65-70	149.3	3.1%	125-130	0	0.0%
10-15	255.6	5.3%	70-75	117.3	2.4%	130-135	0	0.0%
15-20	343.4	7.1%	75-80	92.8	1.9%	135-140	0	0.0%
20-25	415.8	8.6%	80-85	65.1	1.4%	140-145	0	0.0%
25-30	469.8	9.8%	85-90	24.1	0.5%	145-150	0	0.0%
30-35	499.1	10.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	498.4	10.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	468.7	9.7%	100-105	0	0.0%	160-165	0	0.0%
45-50	408.7	8.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	333.2	6.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	260.2	5.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2693	56.0%
0-60	4164	86.6%
0-90	4809	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	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238	2238
	5	2210	2213	2226	2215	2227	2215	2226	2213	2210	2213	2226	2215	2227	2215	2226
	10	2180	2184	2182	2197	2190	2197	2182	2184	2180	2184	2182	2197	2190	2197	2182
	15	2124	2134	2120	2120	2127	2120	2120	2134	2124	2134	2120	2120	2127	2120	2120
	20	2041	2042	2034	2040	2039	2040	2034	2042	2041	2042	2034	2040	2039	2040	2034
	25	1928	1931	1919	1926	1929	1926	1919	1931	1928	1931	1919	1926	1929	1926	1919
	30	1794	1789	1774	1781	1785	1781	1774	1789	1794	1789	1774	1781	1785	1781	1774
	35	1640	1621	1593	1588	1577	1588	1593	1621	1640	1621	1593	1588	1577	1588	1593
	40	1451	1417	1381	1354	1326	1354	1381	1417	1451	1417	1381	1354	1326	1354	1381
	45	1235	1193	1160	1086	1040	1086	1160	1193	1235	1193	1160	1086	1040	1086	1160
	50	1003	971	907	782	748	782	907	971	1003	971	907	782	748	782	907
	55	777	749	651	568	558	568	651	749	777	749	651	568	558	568	651
	60	574	543	450	414	422	414	450	543	574	543	450	414	422	414	450
	65	417	387	310	303	321	303	310	387	417	387	310	303	321	303	310
	70	315	288	218	230	250	230	218	288	315	288	218	230	250	230	218
	75	250	219	170	182	191	182	170	219	250	219	170	182	191	182	170
	80	188	166	136	131	139	131	136	166	188	166	136	131	139	131	136
	85	103	101	77	76	76	76	77	101	103	101	77	76	76	76	77
	90	2	3	3	4	3	4	3	3	2	3	3	4	3	4	3
	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	7541	7541
	45	5886	5529
	55	4562	3823
	65	3324	2470
	75	3256	2210
	85	3981	2990



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	5725	5725	5725	5725	5592	5592	5592	5592	5344	5344	5344	5116	5116	5116	4908	4908	4908	4809
1	5288	5082	4898	4732	5160	4974	4807	4655	4772	4634	4509	4586	4475	4371	4415	4326	4242	4145
2	4868	4513	4219	3972	4747	4424	4154	3925	4257	4031	3835	4103	3915	3749	3961	3806	3667	3569
3	4486	4029	3675	3393	4373	3955	3627	3363	3816	3536	3305	3687	3449	3249	3567	3367	3195	3097
4	4144	3619	3235	2941	4039	3558	3199	2922	3441	3129	2883	3332	3063	2845	3231	3000	2808	2711
5	3839	3271	2874	2582	3743	3219	2847	2568	3121	2793	2541	3029	2741	2515	2943	2692	2489	2394
6	3566	2973	2575	2290	3479	2929	2553	2280	2845	2511	2261	2767	2470	2242	2694	2430	2224	2131
7	3323	2717	2324	2049	3243	2679	2306	2042	2607	2272	2028	2540	2239	2014	2477	2207	2000	1911
8	3105	2495	2111	1848	3033	2462	2097	1842	2401	2069	1832	2343	2042	1821	2289	2016	1811	1725
9	2910	2302	1929	1678	2844	2274	1917	1674	2221	1894	1666	2170	1872	1658	2123	1850	1650	1567
10	2735	2133	1772	1533	2676	2109	1763	1530	2062	1743	1523	2019	1725	1517	1977	1706	1511	1431

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	140	4.75
6.00	62.2	7.13
8.00	35.0	9.50
10.0	22.4	11.9
12.0	15.5	14.3
14.0	11.4	16.6
16.0	8.74	19.0

Cone of Light Plot

