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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
LW3-4-4500-35K-HTA-U55-UNI-XXXX

Order Number
10910728
Test Number
1142145

Test Date

2015-08-14

Prepared By

Kevin Rodriguez, Technician

Approved By

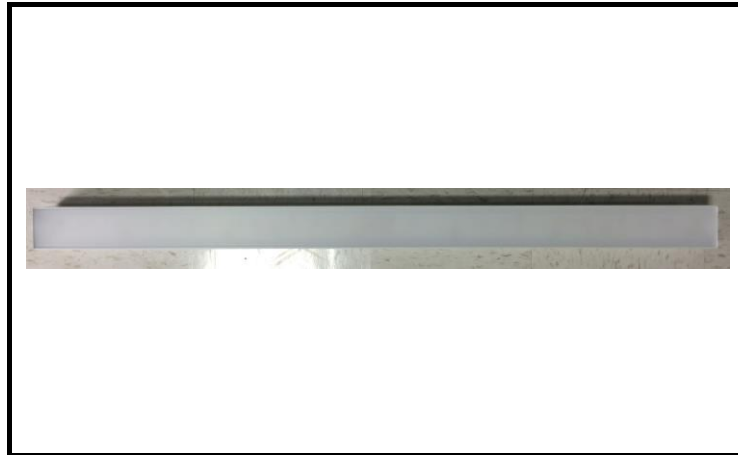
Kyle Spaziani, Project Handler

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Luminaire Description: Formed white enamel steel housing, white enamel steel reflector, frosted plastic lens enclosure
Lamp: 112 white LEDs
Mounting: Surface
Ballast/Driver: One Universal D10CC55UNVTZ-C (1050mA)

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 3.000 in.

Summary of Results

Total Luminaire Output: 4548 Lumens
Luminaire Efficacy: 89.6 lm/w
Maximum Candela: 1649 Candela

Electrical Data

Test Temperature: 24.7 °C
Voltage: 120.0 VAC
Current: 0.4237 A
Power: 50.73 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.25 %

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	0.4237 A	50.73 W	0.998	60 Hz	5.25 %

Summary of Results

Spacing Criteria

0-180: 1.19
90-270: 1.19

Total Lumen Output:

4548 Lumens

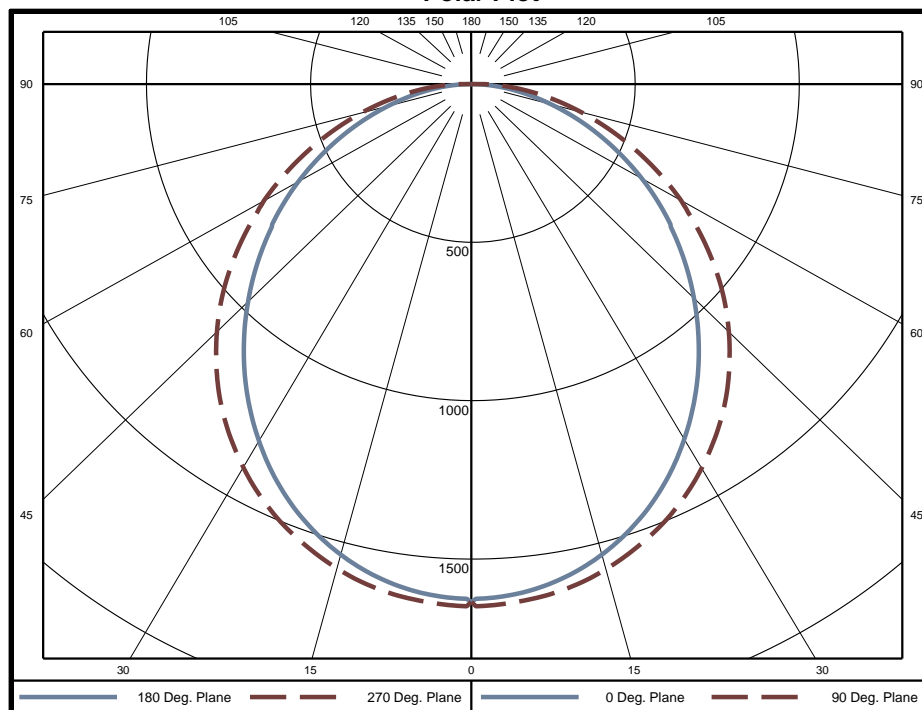
Luminaire Efficacy:

89.6 lm/w

Maximum Candela:

1649 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	39.0	0.9%	60-65	297.5	6.5%	120-125	0	0.0%
5-10	115.5	2.5%	65-70	246.6	5.4%	125-130	0	0.0%
10-15	187.7	4.1%	70-75	191.5	4.2%	130-135	0	0.0%
15-20	252.7	5.6%	75-80	136.0	3.0%	135-140	0	0.0%
20-25	308.4	6.8%	80-85	83.1	1.8%	140-145	0	0.0%
25-30	352.7	7.8%	85-90	34.4	0.8%	145-150	0	0.0%
30-35	384.2	8.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	402.1	8.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	406.0	8.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	396.4	8.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	373.7	8.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	340.6	7.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2042	44.9%
0-60	3559	78.3%
0-90	4548	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	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636
5	1616	1626	1626	1628	1641	1628	1626	1626	1616	1626	1626	1628	1641	1628	1626	1626
10	1587	1597	1601	1607	1622	1607	1601	1597	1587	1597	1601	1607	1622	1607	1601	1597
15	1539	1551	1561	1571	1586	1571	1561	1551	1539	1551	1561	1571	1586	1571	1561	1551
20	1474	1489	1506	1520	1537	1520	1506	1489	1474	1489	1506	1520	1537	1520	1506	1489
25	1394	1411	1437	1458	1476	1458	1437	1411	1394	1411	1437	1458	1476	1458	1437	1411
30	1299	1320	1355	1382	1401	1382	1355	1320	1299	1320	1355	1382	1401	1382	1355	1320
35	1195	1217	1262	1295	1315	1295	1262	1217	1195	1217	1262	1295	1315	1295	1262	1217
40	1082	1107	1159	1196	1217	1196	1159	1107	1082	1107	1159	1196	1217	1196	1159	1107
45	964	991	1047	1088	1108	1088	1047	991	964	991	1047	1088	1108	1088	1047	991
50	844	870	929	970	991	970	929	870	844	870	929	970	991	970	929	870
55	728	751	804	845	864	845	804	751	728	751	804	845	864	845	804	751
60	606	630	681	720	738	720	681	630	606	630	681	720	738	720	681	630
65	485	509	554	590	605	590	554	509	485	509	554	590	605	590	554	509
70	369	390	430	462	474	462	430	390	369	390	430	462	474	462	430	390
75	259	278	312	340	349	340	312	278	259	278	312	340	349	340	312	278
80	162	177	205	228	235	228	205	177	162	177	205	228	235	228	205	177
85	77	88	108	125	131	125	108	88	77	88	108	125	131	125	108	88
90	2	12	24	35	40	35	24	12	2	12	24	35	40	35	24	12
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	18780	18780	18780
45	15650	17010	17990
55	14570	16090	17290
65	13180	15050	16430
75	11500	13850	15500
85	10160	14240	17200



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	5414	5414	5414	5414	5288	5288	5288	5288	5053	5053	5053	4838	4838	4838	4641	4641	4641	4548
1	4932	4709	4509	4328	4808	4605	4423	4258	4411	4260	4123	4232	4110	3996	4068	3969	3877	3780
2	4483	4101	3785	3520	4362	4015	3724	3477	3852	3607	3396	3702	3498	3318	3564	3395	3243	3144
3	4086	3600	3225	2925	3972	3528	3180	2899	3392	3093	2847	3265	3011	2796	3148	2933	2748	2647
4	3741	3191	2787	2479	3636	3130	2753	2462	3015	2687	2427	2908	2624	2394	2809	2564	2361	2261
5	3441	2852	2440	2136	3345	2801	2414	2124	2704	2362	2100	2613	2313	2077	2529	2266	2054	1957
6	3179	2569	2160	1866	3091	2525	2139	1857	2443	2098	1840	2366	2058	1824	2294	2021	1807	1713
7	2948	2330	1930	1649	2869	2293	1913	1643	2223	1880	1630	2157	1848	1618	2095	1817	1606	1515
8	2746	2127	1739	1472	2674	2096	1725	1467	2035	1698	1458	1978	1672	1448	1925	1647	1439	1352
9	2566	1954	1579	1325	2501	1926	1567	1322	1874	1545	1314	1824	1523	1307	1778	1502	1300	1217
10	2406	1803	1443	1202	2348	1780	1433	1199	1734	1414	1194	1691	1396	1188	1651	1379	1183	1103

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	102	4.92
6.00	45.4	7.38
8.00	25.6	9.84
10.0	16.4	12.3
12.0	11.4	14.8
14.0	8.35	17.2
16.0	6.39	19.7

Cone of Light Plot

