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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
LR31-14-2100-35K-9A-U30-UNI-XXXX
Order Number
10921177
Test Number
1147375

Test Date

2015-08-21

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, 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: 2089 Lumens
Luminaire Efficacy: 98.2 lm/w
Maximum Candela: 967 Candela

Electrical Data

Test Temperature: 24.5 °C
Voltage: 120.0 VAC
Current: 0.1781 A
Power: 21.28 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 6.40 %

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
24.5 °C	120.0 VAC	0.1781 A	21.28 W	0.995	60 Hz	6.40 %

Summary of Results

Spacing Criteria

0-180: 1.20

90-270: 1.20

Total Lumen Output:

2089 Lumens

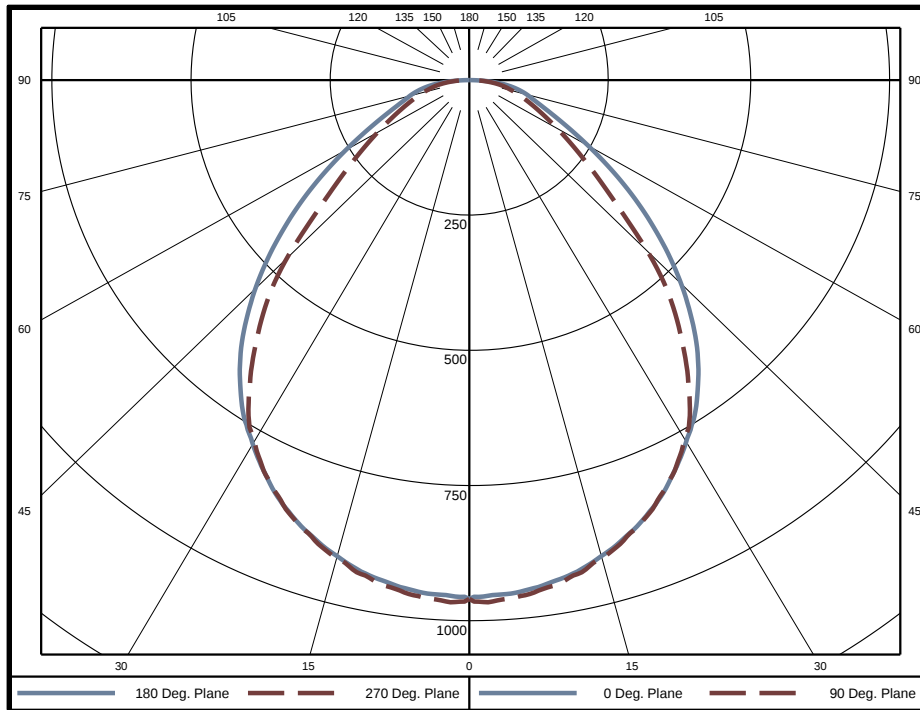
Luminaire Efficacy:

98.2 lm/w

Maximum Candela:

967 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	22.9	1.1%	60-65	85.9	4.1%	120-125	0	0.0%
5-10	67.9	3.3%	65-70	65.0	3.1%	125-130	0	0.0%
10-15	110.0	5.3%	70-75	51.1	2.4%	130-135	0	0.0%
15-20	147.7	7.1%	75-80	40.4	1.9%	135-140	0	0.0%
20-25	179.3	8.6%	80-85	28.5	1.4%	140-145	0	0.0%
25-30	202.6	9.7%	85-90	10.6	0.5%	145-150	0	0.0%
30-35	216.7	10.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	217.1	10.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	204.5	9.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	178.7	8.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	145.9	7.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	113.8	5.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1164	55.7%
0-60	1807	86.5%
0-90	2089	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	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8	959.8
	5	951.9	956.6	957.8	957.0	960.3	957.0	957.8	956.6	951.9	956.6	957.8	957.0	960.3	957.0	956.6
	10	937.1	941.3	940.6	941.8	944.8	941.8	940.6	941.3	937.1	941.3	940.6	941.8	944.8	941.8	940.6
	15	911.8	915.3	912.0	912.1	915.8	912.1	912.0	915.3	911.8	915.3	912.0	912.1	915.8	912.1	912.0
	20	878.4	877.8	875.9	877.6	881.0	877.6	875.9	877.8	878.4	877.8	875.9	877.6	881.0	877.6	875.9
	25	833.1	828.9	828.0	831.0	832.5	831.0	828.0	828.9	833.1	828.9	828.0	831.0	832.5	831.0	828.0
	30	775.4	769.0	767.5	769.6	770.9	769.6	767.5	769.0	775.4	769.0	767.5	769.6	770.9	769.6	767.5
	35	711.9	704.1	694.5	690.8	684.6	690.8	694.5	704.1	711.9	704.1	694.5	690.8	684.6	690.8	694.5
	40	632.5	617.4	602.0	590.3	579.3	590.3	602.0	617.4	632.5	617.4	602.0	590.3	579.3	590.3	602.0
	45	538.6	520.4	506.4	475.7	457.1	475.7	506.4	520.4	538.6	520.4	506.4	475.7	457.1	475.7	506.4
	50	438.1	423.7	397.2	342.8	328.2	342.8	397.2	423.7	438.1	423.7	397.2	342.8	328.2	342.8	397.2
	55	339.8	327.2	284.8	248.9	245.4	248.9	284.8	327.2	339.8	327.2	284.8	248.9	245.4	248.9	284.8
	60	250.1	236.8	196.8	181.5	185.7	181.5	196.8	236.8	250.1	236.8	196.8	181.5	185.7	181.5	196.8
	65	181.6	168.6	135.3	132.5	141.2	132.5	135.3	168.6	181.6	168.6	135.3	132.5	141.2	132.5	135.3
	70	136.3	125.3	94.4	100.3	108.9	100.3	94.4	125.3	136.3	125.3	94.4	100.3	108.9	100.3	94.4
	75	108.7	95.2	75.3	79.2	82.9	79.2	75.3	95.2	108.7	95.2	75.3	79.2	82.9	79.2	75.3
	80	81.8	71.9	59.1	57.2	60.8	57.2	59.1	71.9	81.8	71.9	59.1	57.2	60.8	57.2	59.1
	85	45.2	44.1	33.9	33.3	33.8	33.3	33.9	44.1	45.2	44.1	33.9	33.3	33.8	33.3	33.9
	90	0.6	1.4	1.2	1.3	1.0	1.3	1.2	1.4	0.6	1.4	1.2	1.3	1.0	1.3	1.2
	95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	3234	3234
	45	2567	2178
	55	1996	1442
	65	1448	1126
	75	1416	1079
	85	1746	1305



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	2487	2487	2487	2487	2429	2429	2429	2429	2321	2321	2321	2222	2222	2222	2131	2131	2131	2089
1	2296	2206	2126	2054	2240	2160	2087	2021	2072	2012	1957	1991	1942	1897	1917	1878	1841	1799
2	2113	1959	1831	1723	2061	1920	1803	1703	1848	1749	1664	1781	1699	1627	1719	1651	1591	1548
3	1947	1748	1594	1471	1898	1716	1573	1458	1655	1533	1433	1599	1496	1409	1548	1460	1385	1343
4	1798	1570	1403	1275	1753	1543	1387	1266	1492	1357	1249	1445	1328	1233	1401	1300	1217	1175
5	1666	1418	1246	1118	1624	1396	1234	1112	1353	1210	1101	1313	1188	1089	1276	1166	1078	1037
6	1547	1289	1116	991	1509	1270	1106	987	1233	1087	979	1199	1070	971	1167	1053	963	922
7	1441	1177	1006	887	1406	1161	999	884	1130	984	877	1101	969	871	1073	956	866	827
8	1346	1081	914	799	1315	1067	908	797	1040	895	792	1015	884	788	991	872	783	746
9	1261	997	835	725	1233	985	830	724	962	820	720	940	810	717	919	800	713	677
10	1185	924	767	662	1160	913	762	661	893	754	658	874	746	656	856	738	653	618

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	60.0	4.79
6.00	26.7	7.18
8.00	15.0	9.58
10.0	9.60	12.0
12.0	6.67	14.4
14.0	4.90	16.8
16.0	3.75	19.2

Cone of Light Plot

