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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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Fairfield, NJ 07004-3416  
United States

Catalog Number  
**LR402-24G-5000-35K-1%-UNI**

Order Number  
11170243  
Test Number  
1215244

Test Date

2016-02-25

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:** 112 white LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** One Universal Everline D10CC55UNVTW-LS  
**Note:** Paint Reflectance = 89.3%

### Luminaire



### Luminaire Characteristics

Luminous Length: 47.00 in.  
Luminous Width: 23.00 in.

### Summary of Results

Total Luminaire Output: 5068 Lumens  
Luminaire Efficacy: 98.7 lm/w  
Maximum Candela: 1800 Candela

### Electrical Data

Test Temperature: 24.8 °C  
Voltage: 120.0 VAC  
Current: 0.4289 A  
Power: 51.35 W  
Power Factor: 0.998  
Frequency: 60 Hz  
Current THD: 5.03 %

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
24.8 °C	120.0 VAC	0.4289 A	51.35 W	0.998	60 Hz	5.03 %

### Summary of Results

#### Spacing Criteria

0-180: 1.17  
90-270: 1.17

#### Total Lumen Output:

5068 Lumens

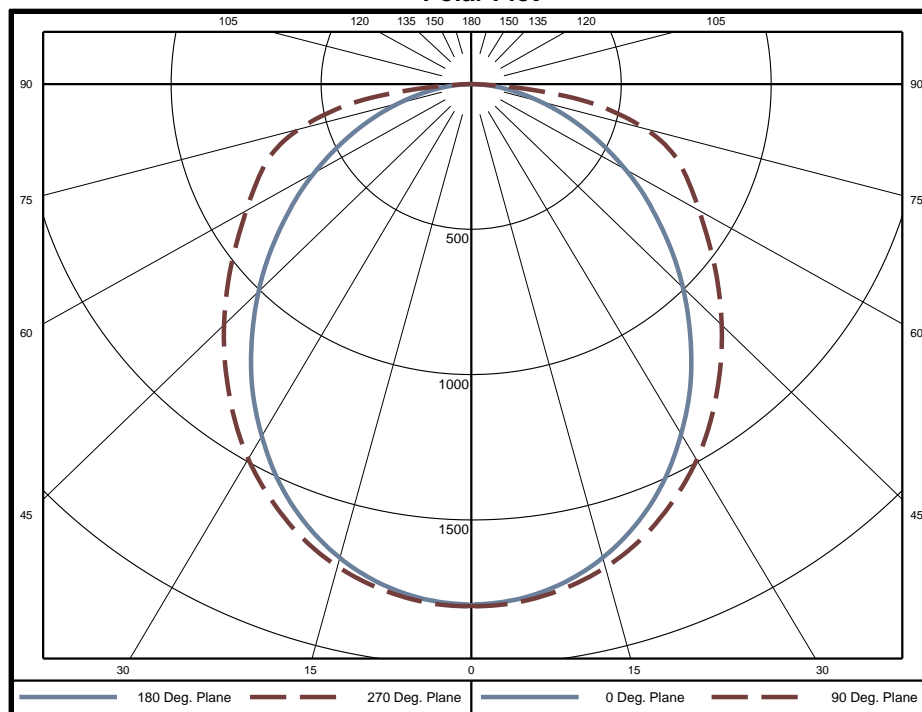
#### Luminaire Efficacy:

98.7 lm/w

#### Maximum Candela:

1800 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	42.8	0.8%	60-65	334.4	6.6%	120-125	0	0.0%
5-10	126.6	2.5%	65-70	300.0	5.9%	125-130	0	0.0%
10-15	205.3	4.1%	70-75	259.9	5.1%	130-135	0	0.0%
15-20	275.5	5.4%	75-80	206.2	4.1%	135-140	0	0.0%
20-25	334.3	6.6%	80-85	131.8	2.6%	140-145	0	0.0%
25-30	379.5	7.5%	85-90	33.4	0.7%	145-150	0	0.0%
30-35	409.9	8.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	425.1	8.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	426.3	8.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	415.6	8.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	394.7	7.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	366.6	7.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2199	43.4%
0-60	3802	75.0%
0-90	5068	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	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795	1795
5	1780	1789	1780	1785	1791	1785	1780	1789	1780	1789	1780	1785	1791	1785	1780	1789
10	1746	1756	1751	1759	1764	1759	1751	1756	1746	1756	1751	1759	1764	1759	1751	1756
15	1689	1702	1702	1715	1721	1715	1702	1702	1689	1702	1702	1715	1721	1715	1702	1702
20	1611	1627	1633	1652	1661	1652	1633	1627	1611	1627	1633	1652	1661	1652	1633	1627
25	1514	1532	1548	1573	1584	1573	1548	1532	1514	1532	1548	1573	1584	1573	1548	1532
30	1398	1422	1447	1480	1495	1480	1447	1422	1398	1422	1447	1480	1495	1480	1447	1422
35	1274	1299	1334	1376	1393	1376	1334	1299	1274	1299	1334	1376	1393	1376	1334	1299
40	1138	1167	1212	1264	1285	1264	1212	1167	1138	1167	1212	1264	1285	1264	1212	1167
45	1001	1033	1088	1152	1175	1152	1088	1033	1001	1033	1088	1152	1175	1152	1088	1033
50	864	898	967	1041	1068	1041	967	898	864	898	967	1041	1068	1041	967	898
55	730	766	849	935	966	935	849	766	730	766	849	935	966	935	849	766
60	600	642	740	837	875	837	740	642	600	642	740	837	875	837	740	642
65	474	524	642	754	795	754	642	524	474	524	642	754	795	754	642	524
70	356	416	556	679	718	679	556	416	356	416	556	679	718	679	556	416
75	246	319	470	570	599	570	470	319	246	319	470	570	599	570	470	319
80	149	233	351	413	435	413	351	233	149	233	351	413	435	413	351	233
85	67	132	176	176	170	176	176	132	67	132	176	176	170	176	176	132
90	0	3	2	1	1	1	2	3	0	3	2	1	1	1	2	3
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/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	2573	2573	2573
45	2031	2207	2384
55	1826	2123	2413
65	1607	2179	2698
75	1360	2602	3317
85	1108	2896	2801



### 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	6033	6033	6033	6033	5893	5893	5893	5893	5631	5631	5631	5391	5391	5391	5171	5171	5171	5068
1	5464	5201	4965	4753	5323	5084	4870	4675	4866	4689	4526	4666	4521	4386	4482	4364	4255	4145
2	4948	4505	4139	3831	4812	4408	4071	3784	4226	3941	3695	4057	3819	3609	3901	3704	3528	3414
3	4502	3944	3512	3168	4373	3863	3462	3139	3709	3365	3082	3567	3273	3027	3435	3187	2974	2859
4	4119	3490	3030	2678	4000	3422	2992	2659	3293	2918	2621	3173	2848	2584	3061	2781	2548	2435
5	3788	3119	2651	2305	3680	3061	2621	2292	2952	2564	2266	2850	2509	2240	2755	2456	2215	2105
6	3500	2809	2346	2014	3401	2761	2323	2004	2668	2277	1985	2581	2233	1967	2500	2191	1949	1842
7	3247	2549	2097	1780	3158	2508	2078	1773	2428	2041	1759	2354	2006	1746	2285	1972	1733	1630
8	3025	2329	1891	1590	2944	2293	1875	1585	2225	1845	1574	2161	1816	1564	2101	1788	1554	1456
9	2828	2139	1718	1433	2755	2109	1705	1429	2050	1680	1421	1995	1656	1413	1943	1633	1405	1311
10	2653	1976	1571	1301	2587	1949	1560	1298	1898	1539	1292	1850	1519	1285	1805	1500	1279	1190

### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	112	4.81
6.00	49.9	7.22
8.00	28.0	9.63
10.0	17.9	12.0
12.0	12.5	14.4
14.0	9.16	16.8
16.0	7.01	19.3

### Cone of Light Plot

