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## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

Prepared For  
**Mercury Lighting**

John Andrews  
20 Audrey Pl  
Fairfield, NJ 07004-3416

Catalog Number  
**LW5-4-3800-35K-HTA-A40-UNI-XXXX**

Order Number  
11205397  
Test Number  
1227935

Test Date

2016-03-30

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Formed steel housnig, squared linear patterned frosted plastic lens enclosure  
**Lamp:** 96 white LEDs, two boards with 48 LEDs each  
**Mounting:** Surface  
**Ballast/Driver:** One Philips Advance Xitanium XI040C110V054BPT1

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 45.00 in.  
Luminous Width: 4.500 in.  
Luminous Height: 2.00 in.

**Summary of Results**

Total Luminaire Output: 3766 Lumens  
Luminaire Efficacy: 120.1 lm/w  
Maximum Candela: 1069 Candela

**Test Conditions**

Test Temperature: 24.4 °C  
Voltage: 120.0 VAC  
Current: 0.2620 A  
Power: 31.35 W  
Power Factor: 0.998  
Frequency: 60 Hz  
Current THD: 5.73 %

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

### Distribution Test Conditions

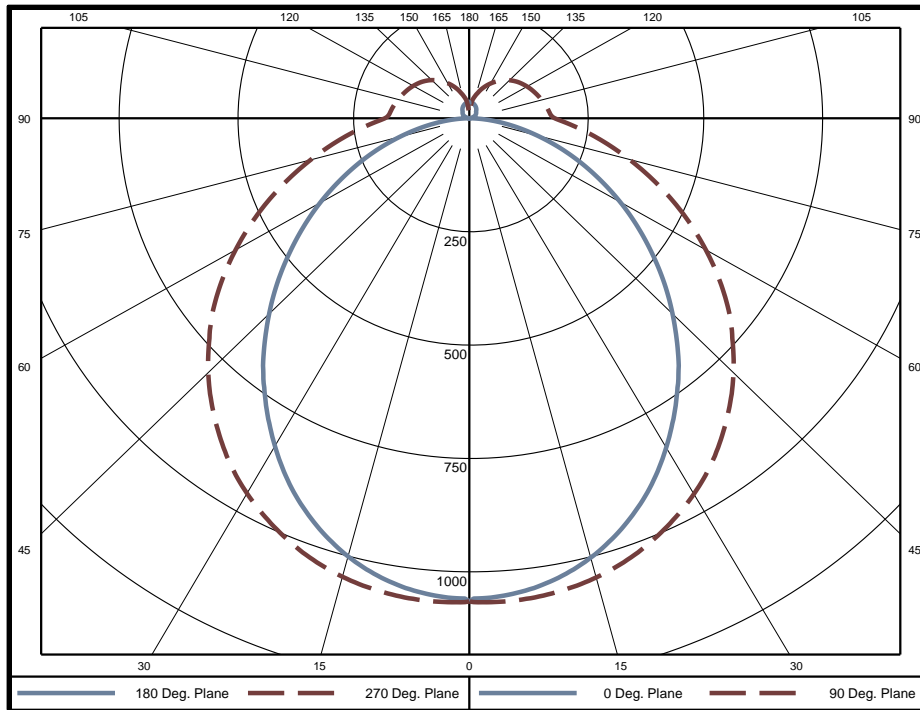
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.2620 A	31.35 W	0.998	60 Hz	5.73 %

### Summary of Results

**Spacing Criteria**  
 0-180: 1.17  
 90-270: 1.17

**Total Lumen Output:** 3766 Lumens  
**Luminaire Efficacy:** 120.1 lm/w  
**Maximum Candela:** 1069 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	25.4	0.7%	60-65	217.1	5.8%	120-125	40.0	1.1%
5-10	75.6	2.0%	65-70	187.9	5.0%	125-130	36.0	1.0%
10-15	123.3	3.3%	70-75	156.0	4.1%	130-135	31.5	0.8%
15-20	166.7	4.4%	75-80	123.9	3.3%	135-140	26.7	0.7%
20-25	204.3	5.4%	80-85	94.0	2.5%	140-145	22.3	0.6%
25-30	234.7	6.2%	85-90	67.6	1.8%	145-150	17.7	0.5%
30-35	257.0	6.8%	90-95	54.6	1.4%	150-155	13.6	0.4%
35-40	270.7	7.2%	95-100	52.8	1.4%	155-160	10.0	0.3%
40-45	275.7	7.3%	100-105	51.0	1.4%	160-165	7.0	0.2%
45-50	272.5	7.2%	105-110	49.0	1.3%	165-170	4.4	0.1%
50-55	261.2	6.9%	110-115	46.5	1.2%	170-175	2.4	0.1%
55-60	242.1	6.4%	115-120	43.6	1.2%	175-180	0.7	0.0%

Zone	Lumens	% of Luminaire
0-40	1358	36.1%
0-60	2409	64.0%
0-90	3256	86.4%
90-180	510	13.5%



**Candela Tabulation**  
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	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065	1065
5	1053	1064	1061	1065	1068	1065	1061	1064	1053	1064	1061	1065	1068	1065	1061	1064
10	1033	1047	1049	1058	1061	1058	1049	1047	1033	1047	1049	1058	1061	1058	1049	1047
15	1001	1019	1027	1041	1047	1041	1027	1019	1001	1019	1027	1041	1047	1041	1027	1019
20	956	979	995	1016	1024	1016	995	979	956	979	995	1016	1024	1016	995	979
25	900	928	954	982	993	982	954	928	900	928	954	982	993	982	954	928
30	833	868	905	941	955	941	905	868	833	868	905	941	955	941	905	868
35	761	800	848	892	909	892	848	800	761	800	848	892	909	892	848	800
40	686	728	784	835	853	835	784	728	686	728	784	835	853	835	784	728
45	606	654	717	772	793	772	717	654	606	654	717	772	793	772	717	654
50	525	576	647	707	727	707	647	576	525	576	647	707	727	707	647	576
55	444	497	571	634	656	634	571	497	444	497	571	634	656	634	571	497
60	366	418	494	557	579	557	494	418	366	418	494	557	579	557	494	418
65	290	342	417	480	502	480	417	342	290	342	417	480	502	480	417	342
70	218	269	343	404	425	404	343	269	218	269	343	404	425	404	343	269
75	149	200	273	332	353	332	273	200	149	200	273	332	353	332	273	200
80	89	139	210	267	287	267	210	139	89	139	210	267	287	267	210	139
85	38	88	155	209	230	209	155	88	38	88	155	209	230	209	155	88
90	0	49	112	163	182	163	112	49	0	49	112	163	182	163	112	49
95	0	48	106	153	170	153	106	48	0	48	106	153	170	153	106	48
100	3	48	105	149	165	149	105	48	3	48	105	149	165	149	105	48
105	6	48	103	144	159	144	103	48	6	48	103	144	159	144	103	48
110	10	49	101	140	153	140	101	49	10	49	101	140	153	140	101	49
115	13	50	99	135	147	135	99	50	13	50	99	135	147	135	99	50
120	15	49	96	130	141	130	96	49	15	49	96	130	141	130	96	49
125	17	47	92	124	135	124	92	47	17	47	92	124	135	124	92	47
130	19	45	86	118	127	118	86	45	19	45	86	118	127	118	86	45
135	20	43	78	110	119	110	78	43	20	43	78	110	119	110	78	43
140	23	41	69	101	110	101	69	41	23	41	69	101	110	101	69	41
145	26	40	62	90	99	90	62	40	26	40	62	90	99	90	62	40
150	28	38	55	75	88	75	55	38	28	38	55	75	88	75	55	38
155	30	36	50	62	77	62	50	36	30	36	50	62	77	62	50	36
160	32	35	44	52	65	52	44	35	32	35	44	52	65	52	44	35
165	33	35	38	42	53	42	38	35	33	35	38	42	53	42	38	35
170	35	35	35	33	43	33	35	35	35	35	35	33	43	33	35	35
175	36	34	34	29	19	29	34	34	36	34	34	29	19	29	34	34
180	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

	0	45	90
0	8155	8155	8155
45	6554	7763	8580
55	5928	7619	8204
65	5248	6955	7411
75	4418	6039	6601
85	3341	5351	6125



### 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	4362	4362	4362	4362	4201	4201	4201	4201	3901	3901	3901	3626	3626	3626	3374	3374	3374	3256
1	3932	3735	3558	3399	3776	3599	3440	3295	3344	3216	3098	3110	3008	2913	2895	2814	2739	2624
2	3560	3234	2964	2736	3412	3118	2873	2664	2901	2699	2525	2701	2537	2392	2516	2383	2265	2155
3	3237	2828	2511	2259	3099	2730	2439	2206	2544	2301	2102	2372	2171	2002	2212	2047	1905	1800
4	2959	2498	2161	1904	2831	2414	2103	1863	2254	1991	1782	2106	1884	1704	1968	1782	1628	1528
5	2717	2227	1884	1631	2601	2154	1836	1599	2016	1744	1535	1888	1655	1472	1769	1570	1411	1317
6	2506	2001	1661	1418	2400	1938	1621	1392	1818	1544	1339	1707	1469	1288	1602	1398	1238	1149
7	2321	1810	1479	1247	2225	1755	1446	1225	1651	1380	1182	1553	1316	1139	1462	1255	1097	1014
8	2158	1649	1328	1108	2071	1601	1299	1090	1509	1243	1053	1423	1188	1017	1342	1136	981	903
9	2014	1511	1202	994	1935	1468	1177	978	1387	1128	946	1311	1081	915	1239	1035	885	811
10	1887	1391	1095	897	1814	1354	1073	884	1282	1030	857	1214	989	830	1150	949	803	734

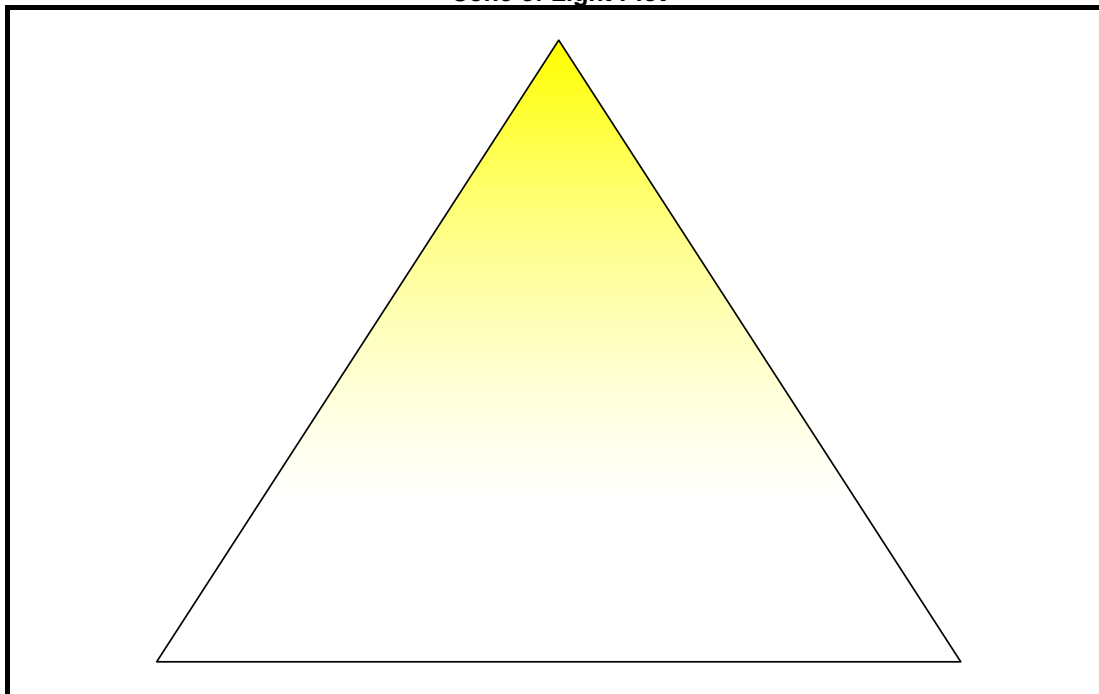
#### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	66.6	5.03
6.00	29.6	7.54
8.00	16.6	10.1
10.0	10.7	12.6
12.0	7.40	15.1
14.0	5.44	17.6
16.0	4.16	20.1

#### Beam and Field Information

CIE Type:	Semi-Direct
Center Beam Intensity:	1065 Candela
Central Cone Intensity:	1065 Candela
Beam Flux:	2288.6 Lumens
Beam Angle (0-180):	99.0 Degrees
Beam Angle (90-270):	126.0 Degrees
Field Angle (0-180):	157.0 Degrees
Field Angle (90-270):	283.1 Degrees

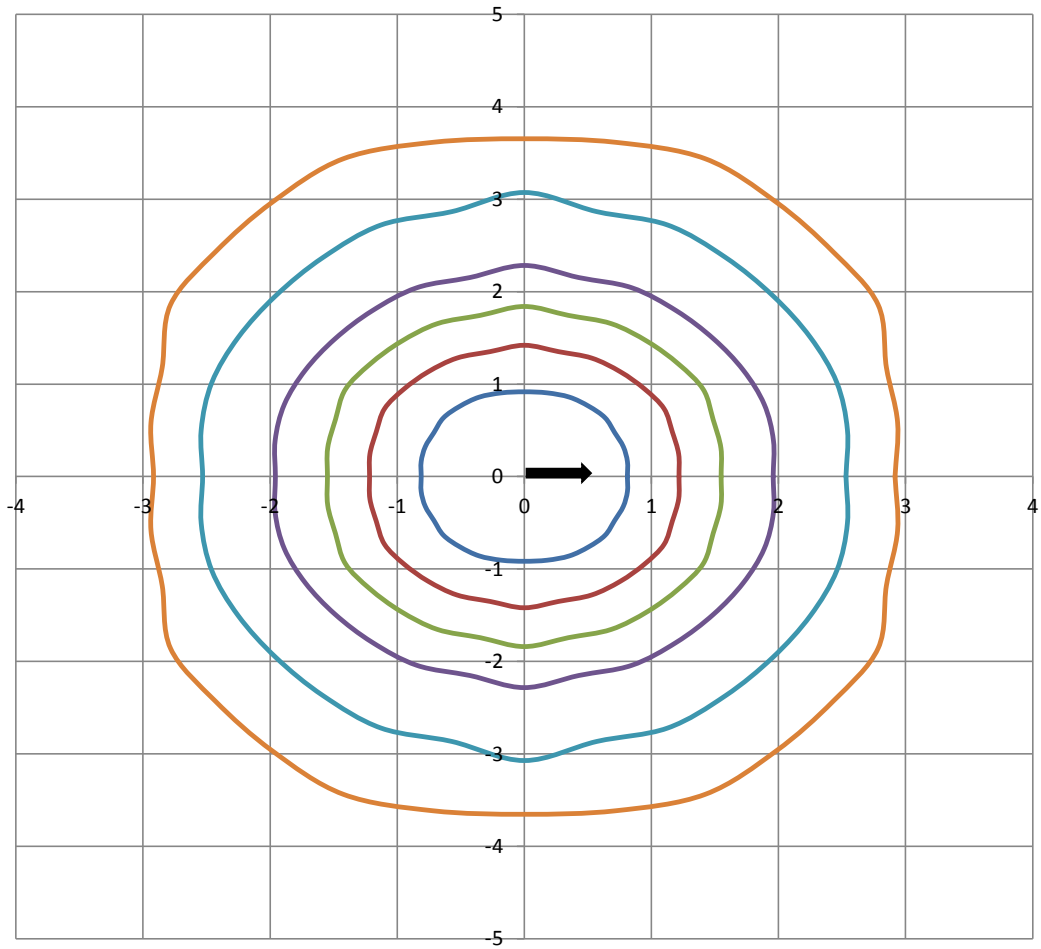
#### Cone of Light Plot





# ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

