



UL Verification Services Inc.  
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Allentown, PA 18106  
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## Indoor Distribution Test Report

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

Prepared For  
**Mercury Lighting**  
20 Audrey Pl  
Fairfield, NJ 07004-3416  
United States

Catalog Number  
**MLR3-M-48-540-35K-ASO-A401-U**  
Order Number  
12182822  
Test Number  
12182822.30

Report Date

2018-03-20

Prepared By

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Approved By

Alexa Lambert, Project Handler

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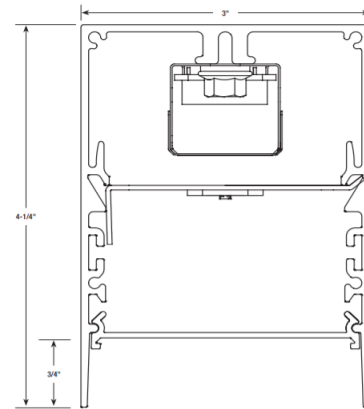


**Luminaire Description:** Extruded aluminum housing, frosted lens enclosure  
**Lamp:** 96 white LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** Philips XI040C110V054BST1

**Luminaire Photo**



**Luminaire Cross Section**



**Luminaire Characteristics**

Luminous Length: 47.00 in.  
Luminous Width: 3.000 in.

**Summary of Results**

Total Luminaire Output: 2145 Lumens  
Luminaire Efficacy: 71.3 lm/w  
Maximum Candela: 865 Candela

**Test Conditions**

Test Temperature: 25.0 °C  
Voltage: 120.0 VAC  
Current: 0.2520 A  
Power: 30.07 W  
Power Factor: 0.994  
Frequency: 60 Hz  
Current THD: 8.79 %

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



## Distribution - Goniophotometer

### Distribution Test Conditions

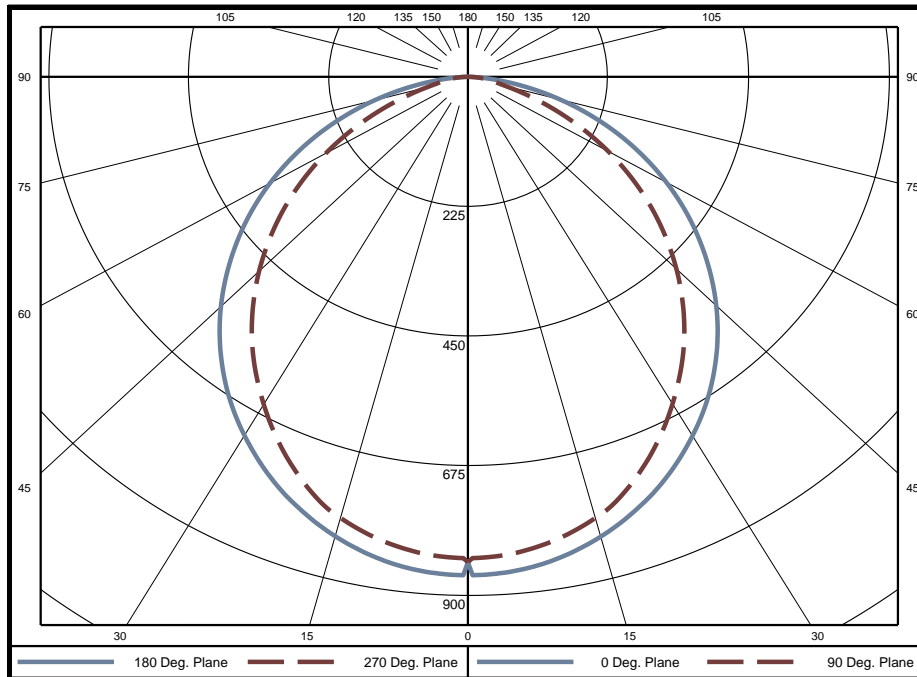
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.2520 A	30.07 W	0.994	60 Hz	8.79 %

### Summary of Results

**Spacing Criteria**  
 0-180: 1.27  
 90-270: 1.17

**Total Lumen Output:** 2145 Lumens  
**Luminaire Efficacy:** 71.3 lm/w  
**Maximum Candela:** 865 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	20.1	0.9%	60-65	133.2	6.2%	120-125	0	0.0%
5-10	59.5	2.8%	65-70	102.5	4.8%	125-130	0	0.0%
10-15	96.5	4.5%	70-75	70.0	3.3%	130-135	0	0.0%
15-20	129.6	6.0%	75-80	40.5	1.9%	135-140	0	0.0%
20-25	157.4	7.3%	80-85	19.8	0.9%	140-145	0	0.0%
25-30	178.9	8.3%	85-90	5.0	0.2%	145-150	0	0.0%
30-35	193.7	9.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	201.6	9.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	201.9	9.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	194.6	9.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	180.3	8.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	159.6	7.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1037	48.4%
0-60	1774	82.7%
0-90	2145	100.0%
90-180	0	0.0%



**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	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7	842.7
5	860.9	842.5	831.7	831.6	830.7	831.6	831.7	842.5	860.9	842.5	831.7	831.6	830.7	831.6	831.7	842.5
10	847.8	829.0	818.5	817.5	815.8	817.5	818.5	829.0	847.8	829.0	818.5	817.5	815.8	817.5	818.5	829.0
15	826.0	806.7	796.5	794.5	792.9	794.5	796.5	806.7	826.0	806.7	796.5	794.5	792.9	794.5	796.5	806.7
20	797.0	777.4	765.6	761.3	757.7	761.3	765.6	777.4	797.0	777.4	765.6	761.3	757.7	761.3	765.6	777.4
25	762.0	741.8	727.5	715.8	710.7	715.8	727.5	741.8	762.0	741.8	727.5	715.8	710.7	715.8	727.5	741.8
30	720.4	700.8	680.4	664.5	657.8	664.5	680.4	700.8	720.4	700.8	680.4	664.5	657.8	664.5	680.4	700.8
35	674.0	654.1	628.4	609.2	601.7	609.2	628.4	654.1	674.0	654.1	628.4	609.2	601.7	609.2	628.4	654.1
40	621.6	601.9	571.7	549.8	540.9	549.8	571.7	601.9	621.6	601.9	571.7	549.8	540.9	549.8	571.7	601.9
45	564.1	543.0	509.7	485.3	475.7	485.3	509.7	543.0	564.1	543.0	509.7	485.3	475.7	485.3	509.7	543.0
50	501.9	479.5	443.5	417.7	407.1	417.7	443.5	479.5	501.9	479.5	443.5	417.7	407.1	417.7	443.5	479.5
55	437.1	413.2	375.1	347.5	336.1	347.5	375.1	413.2	437.1	413.2	375.1	347.5	336.1	347.5	375.1	413.2
60	368.9	344.5	304.4	275.3	263.3	275.3	304.4	344.5	368.9	344.5	304.4	275.3	263.3	275.3	304.4	344.5
65	298.5	273.8	232.8	202.1	190.3	202.1	232.8	273.8	298.5	273.8	232.8	202.1	190.3	202.1	232.8	273.8
70	226.4	203.3	161.2	131.7	121.3	131.7	161.2	203.3	226.4	203.3	161.2	131.7	121.3	131.7	161.2	203.3
75	154.4	133.3	93.9	71.4	64.7	71.4	93.9	133.3	154.4	133.3	93.9	71.4	64.7	71.4	93.9	133.3
80	86.4	69.4	41.7	39.2	39.6	39.2	41.7	69.4	86.4	69.4	41.7	39.2	39.6	39.2	41.7	69.4
85	30.1	20.4	19.9	19.5	19.1	19.5	19.9	20.4	30.1	20.4	19.9	19.5	19.1	19.5	19.9	20.4
90	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	0.0
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0

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

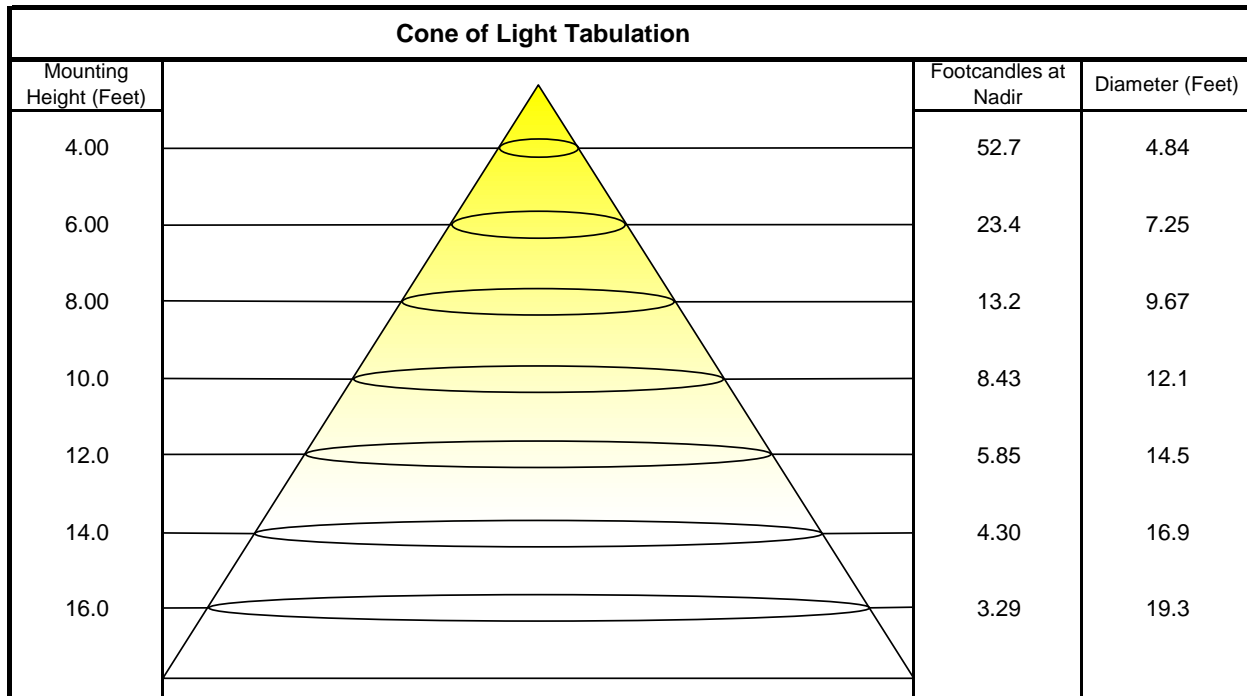
	0	45	90
0	9264	9264	9264
45	8769	7923	7396
55	8377	7188	6442
65	7763	6055	4949
75	6558	3989	2746
85	3795	2514	2411



### 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	2553	2553	2553	2553	2494	2494	2494	2494	2383	2383	2383	2282	2282	2282	2188	2188	2188	2145
1	2348	2252	2166	2089	2290	2204	2126	2055	2113	2049	1990	2030	1978	1929	1953	1911	1872	1828
2	2145	1977	1838	1721	2090	1937	1809	1700	1861	1754	1661	1792	1702	1623	1727	1653	1587	1542
3	1962	1745	1577	1443	1910	1711	1555	1430	1648	1515	1405	1589	1476	1380	1535	1439	1357	1311
4	1800	1552	1370	1230	1752	1523	1353	1222	1470	1322	1205	1421	1293	1189	1375	1264	1173	1128
5	1658	1390	1203	1065	1614	1367	1190	1059	1321	1166	1047	1280	1143	1036	1240	1121	1025	981
6	1534	1255	1067	933	1493	1234	1058	929	1196	1038	921	1160	1020	913	1127	1002	905	861
7	1423	1140	956	827	1387	1122	948	824	1090	932	818	1059	917	812	1030	903	806	764
8	1326	1041	862	739	1293	1027	856	737	998	843	733	972	831	728	947	819	724	684
9	1240	957	784	667	1210	944	779	665	920	768	662	897	758	658	875	748	655	616
10	1163	884	717	606	1136	873	713	605	852	704	602	832	695	599	813	687	596	559

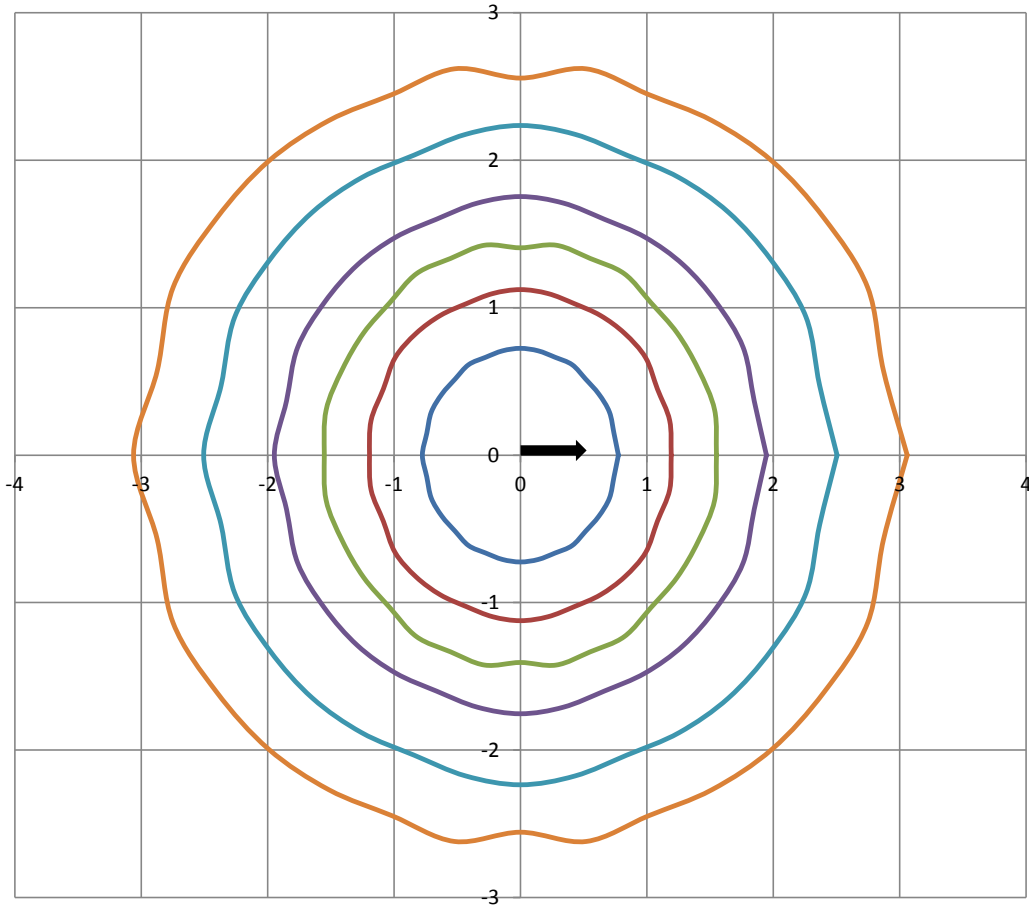
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	842.7 Candela
Central Cone Intensity:	841 Candela
Beam Flux:	1515.7 Lumens
Beam Angle (0-180):	112.4 Degrees
Beam Angle (90-270):	98.0 Degrees
Field Angle (0-180):	160.3 Degrees
Field Angle (90-270):	146.2 Degrees





### ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

