



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



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-48-770-35K-ASO-A401-U
Order Number
12182822
Test Number
12182822.28

Report Date

2018-03-20

Prepared By

Bhavik Shah, Laboratory Leader

Approved By

Alexa Lambert, Project Handler

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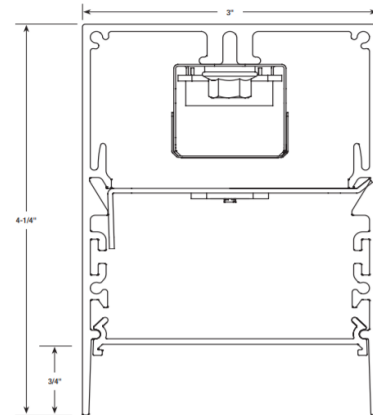


Luminaire Description: Extruded aluminum housing, frosted lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: Philips XI040C110V054BST1

Luminaire Photo



Luminaire Cross Section



Luminaire Characteristics

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

Summary of Results

Total Luminaire Output:	3073 Lumens
Luminaire Efficacy:	68.9 lm/w
Maximum Candela:	1206 Candela

Test Conditions

Test Temperature:	24.9 °C
Voltage:	120.1 VAC
Current:	0.3725 A
Power:	44.63 W
Power Factor:	0.998
Frequency:	60 Hz
Current THD:	5.28 %

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
24.9 °C	120.1 VAC	0.3725 A	44.63 W	0.998	60 Hz	5.28 %

Summary of Results

Spacing Criteria

0-180: 1.24
90-270: 1.18

Total Lumen Output:

3073 Lumens

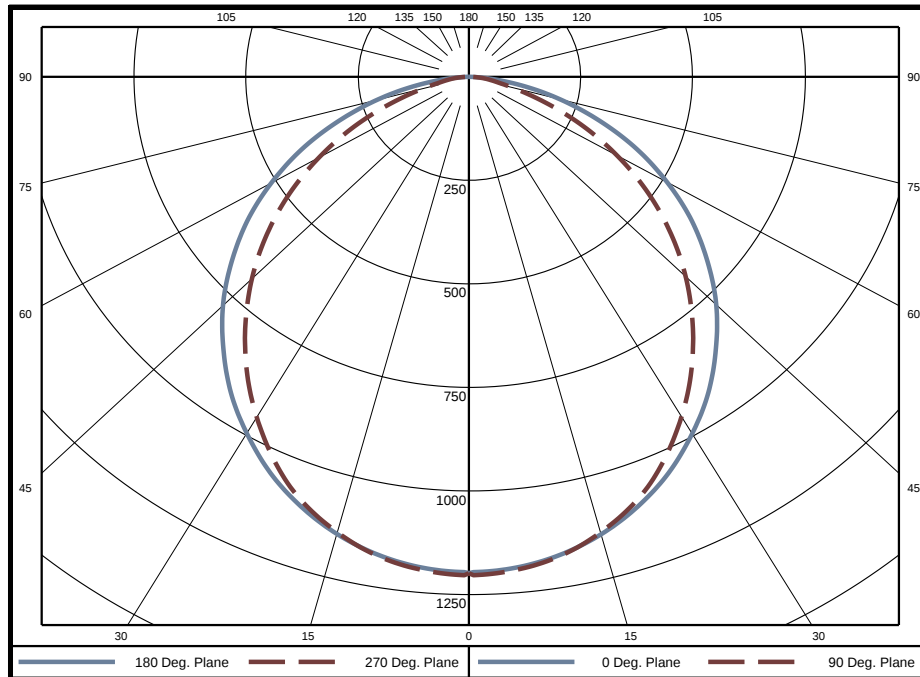
Luminaire Efficacy:

68.9 lm/w

Maximum Candela:

1206 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	28.6	0.9%	60-65	192.1	6.3%	120-125	0	0.0%
5-10	84.7	2.8%	65-70	148.4	4.8%	125-130	0	0.0%
10-15	137.4	4.5%	70-75	102.1	3.3%	130-135	0	0.0%
15-20	184.7	6.0%	75-80	59.9	1.9%	135-140	0	0.0%
20-25	224.7	7.3%	80-85	29.1	0.9%	140-145	0	0.0%
25-30	255.6	8.3%	85-90	8.7	0.3%	145-150	0	0.0%
30-35	276.5	9.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	287.2	9.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	287.7	9.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	278.1	9.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	258.4	8.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	229.3	7.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1479	48.1%
0-60	2533	82.4%
0-90	3073	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	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201
	5	1192	1196	1193	1192	1197	1192	1193	1196	1192	1196	1193	1192	1197	1192	1193
	10	1174	1178	1173	1172	1177	1172	1173	1178	1174	1178	1173	1172	1177	1172	1173
	15	1145	1148	1140	1137	1141	1137	1140	1148	1145	1148	1140	1137	1141	1137	1140
	20	1106	1107	1098	1091	1093	1091	1098	1107	1106	1107	1098	1091	1093	1091	1098
	25	1057	1055	1045	1031	1029	1031	1045	1055	1057	1055	1045	1031	1029	1031	1045
	30	998	996	979	956	952	956	979	996	998	996	979	956	952	956	979
	35	934	928	903	874	869	874	903	928	934	928	903	874	869	874	903
	40	860	854	820	788	781	788	820	854	860	854	820	788	781	788	820
	45	783	772	732	696	689	696	732	772	783	772	732	696	689	696	732
	50	698	684	639	601	592	601	639	684	698	684	639	601	592	601	639
	55	610	590	542	502	492	502	542	590	610	590	542	502	492	502	542
	60	514	493	441	400	388	400	441	493	514	493	441	400	388	400	441
	65	416	391	338	297	285	297	338	391	416	391	338	297	285	297	338
	70	313	289	236	198	185	198	236	289	313	289	236	198	185	198	236
	75	214	191	142	110	103	110	142	191	214	191	142	110	103	110	142
	80	120	102	66	58	57	58	66	102	120	102	66	58	57	58	66
	85	44	34	29	29	29	29	34	44	44	34	29	29	29	29	34
	90	2	4	5	5	5	5	5	4	2	4	5	5	5	5	4
	95	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
	105	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
	115	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
	125	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
	135	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
	145	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
	155	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
	165	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
	175	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

Average Luminance (cd/m²)

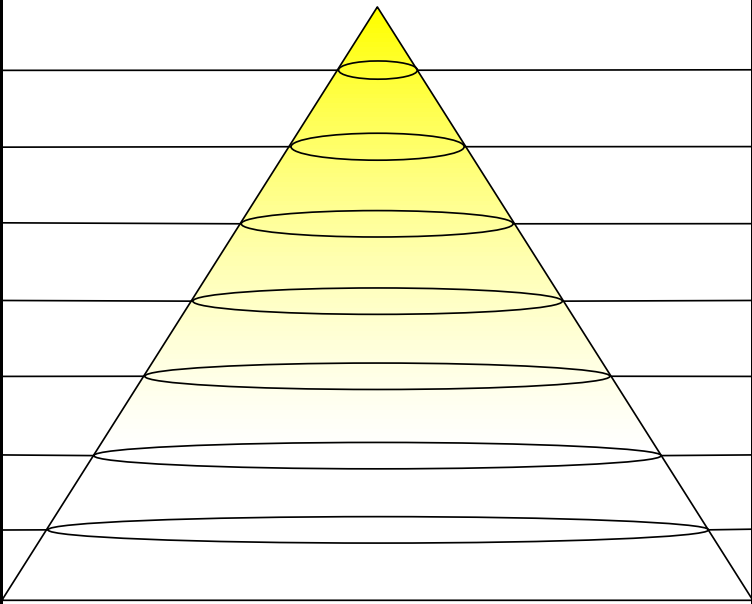
Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	13200	13200	13200
	45	12180	11380	10710
	55	11700	10390	9429
	65	10830	8800	7406
	75	9075	6025	4362
	85	5612	3636	3664



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	3659	3659	3659	3659	3573	3573	3573	3573	3415	3415	3415	3269	3269	3269	3136	3136	3136	3073
1	3363	3225	3101	2989	3280	3155	3043	2941	3025	2933	2848	2906	2831	2761	2796	2736	2679	2616
2	3071	2829	2629	2461	2992	2772	2587	2431	2663	2509	2375	2564	2434	2321	2471	2365	2270	2205
3	2808	2496	2255	2062	2733	2448	2224	2044	2357	2165	2007	2273	2110	1973	2195	2057	1939	1874
4	2577	2219	1957	1758	2507	2179	1934	1745	2102	1890	1721	2031	1847	1698	1965	1807	1676	1610
5	2373	1988	1719	1520	2309	1954	1701	1512	1889	1666	1496	1829	1633	1480	1773	1601	1464	1400
6	2194	1794	1525	1332	2136	1765	1511	1326	1710	1483	1315	1659	1457	1303	1610	1432	1292	1230
7	2037	1629	1365	1180	1984	1604	1354	1176	1557	1332	1167	1513	1310	1159	1472	1290	1150	1090
8	1897	1489	1232	1055	1850	1468	1223	1052	1427	1205	1046	1389	1187	1039	1353	1170	1033	975
9	1774	1368	1120	952	1731	1350	1112	949	1315	1097	944	1282	1082	939	1251	1068	935	879
10	1664	1264	1024	865	1625	1248	1018	863	1217	1005	859	1189	993	855	1162	981	851	798

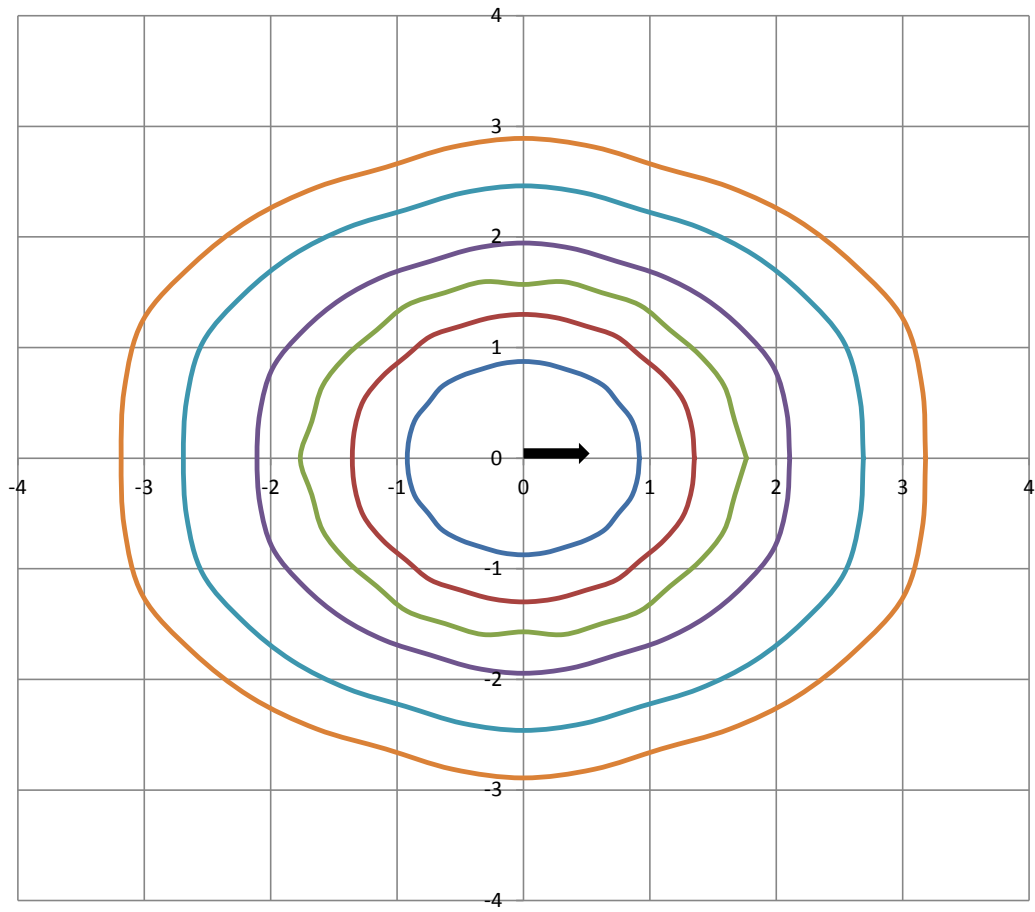
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1201 Candela
Central Cone Intensity:	1198 Candela
Beam Flux:	2171.3 Lumens
Beam Angle (0-180):	111.1 Degrees
Beam Angle (90-270):	99.2 Degrees
Field Angle (0-180):	160.0 Degrees
Field Angle (90-270):	147.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		75.1	4.84
6.00		33.4	7.27
8.00		18.8	9.69
10.0		12.0	12.1
12.0		8.34	14.5
14.0		6.13	17.0
16.0		4.69	19.4



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

