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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
MLD3-N5/F-48-840-35K-A05-A401-U
Order Number
12182822
Test Number
12182822.21

Test Date

2018-03-20

Prepared By

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Approved By

Alexa Lambert, Project Handler

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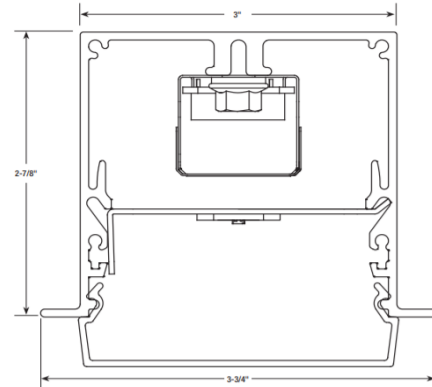


Luminaire Description: Extruded aluminum housing, frosted lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: Philips XI040C110V054BST1

Luminaire Photo



Luminaire Cross Section



Luminaire Characteristics

Luminous Length: 47.00 in.
Luminous Width: 3.000 in.
Luminous Height: 0.50 in.

Summary of Results

Total Luminaire Output: 3370 Lumens
Luminaire Efficacy: 84.8 lm/w
Maximum Candela: 1026 Candela

Test Conditions

Test Temperature: 25.0 °C
Voltage: 119.9 VAC
Current: 0.3324 A
Power: 39.75 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 6.08 %

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	119.9 VAC	0.3324 A	39.75 W	0.997	60 Hz	6.08 %

Summary of Results

Spacing Criteria

0-180: 1.29
90-270: 1.30

Total Lumen Output:

3370 Lumens

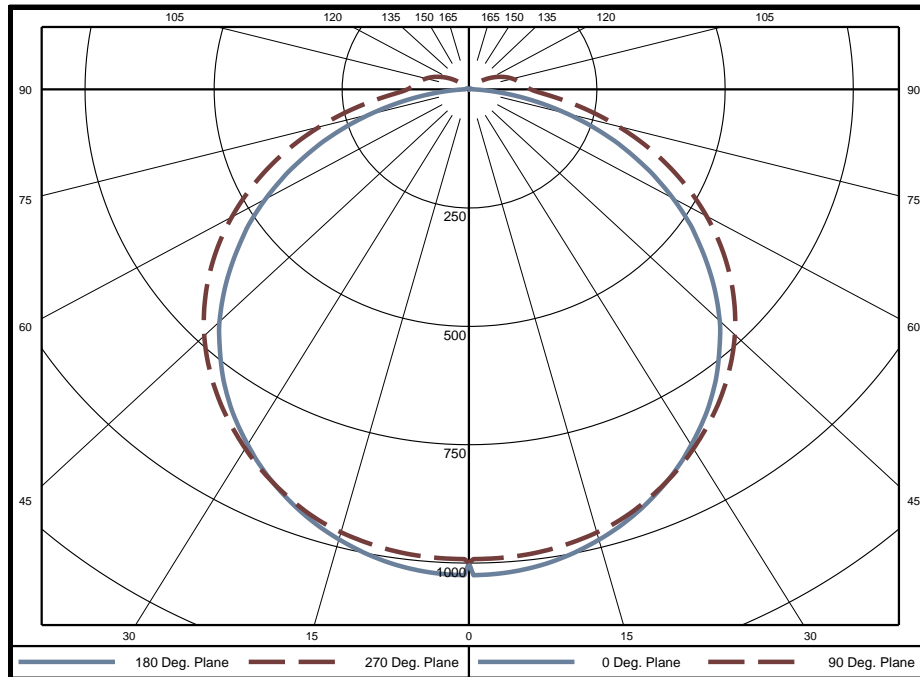
Luminaire Efficacy:

84.8 lm/w

Maximum Candela:

1026 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	23.9	0.7%	60-65	225.7	6.7%	120-125	8.4	0.2%
5-10	70.9	2.1%	65-70	194.7	5.8%	125-130	4.5	0.1%
10-15	115.9	3.4%	70-75	158.7	4.7%	130-135	1.8	0.1%
15-20	157.4	4.7%	75-80	119.5	3.5%	135-140	0.3	0.0%
20-25	193.8	5.8%	80-85	81.6	2.4%	140-145	0.0	0.0%
25-30	224.6	6.7%	85-90	51.8	1.5%	145-150	0.0	0.0%
30-35	248.6	7.4%	90-95	39.1	1.2%	150-155	0.0	0.0%
35-40	265.6	7.9%	95-100	34.1	1.0%	155-160	0.0	0.0%
40-45	274.4	8.1%	100-105	29.2	0.9%	160-165	0.0	0.0%
45-50	274.6	8.1%	105-110	23.6	0.7%	165-170	0.0	0.0%
50-55	266.3	7.9%	110-115	17.9	0.5%	170-175	0.0	0.0%
55-60	250.0	7.4%	115-120	12.9	0.4%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	1301	38.6%
0-60	2366	70.2%
0-90	3198	94.9%
90-180	172	5.1%



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	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	5	1021	1000	990	990	990	990	990	1000	1021	1000	990	990	990	990	1000
	10	1007	988	980	982	982	980	988	1007	988	980	982	982	982	980	988
	15	984	966	963	967	968	967	963	966	984	966	963	967	968	963	966
	20	953	937	936	943	945	943	936	937	953	937	936	943	945	943	937
	25	914	901	904	911	913	911	904	901	914	901	904	911	913	911	904
	30	868	859	865	873	876	873	865	859	868	859	865	873	876	873	865
	35	817	810	820	831	834	831	820	810	817	810	820	831	834	831	820
	40	757	755	770	783	787	783	770	755	757	755	770	783	787	783	770
	45	693	694	712	728	734	728	712	694	693	694	712	728	734	728	712
	50	619	625	647	669	674	669	647	625	619	625	647	669	674	669	647
	55	542	553	581	602	608	602	581	553	542	553	581	602	608	602	581
	60	460	476	508	531	536	531	508	476	460	476	508	531	536	531	508
	65	374	397	430	455	461	455	430	397	374	397	430	455	461	455	430
	70	287	316	351	376	382	376	351	316	287	316	351	376	382	376	351
	75	199	234	271	296	303	296	271	234	199	234	271	296	303	296	271
	80	116	154	194	220	228	220	194	154	116	154	194	220	228	220	194
	85	45	86	128	155	163	155	128	86	45	86	128	155	163	155	128
	90	8	46	87	113	122	113	87	46	8	46	87	113	122	113	87
	95	7	36	74	99	108	99	74	36	7	36	74	99	108	99	74
	100	6	28	65	90	98	90	65	28	6	28	65	90	98	90	65
	105	5	18	55	80	88	80	55	18	5	18	55	80	88	80	55
	110	4	9	44	68	77	68	44	9	4	9	44	68	77	68	44
	115	3	2	32	55	64	55	32	2	3	2	32	55	64	55	32
	120	2	2	20	42	50	42	20	2	2	2	20	42	50	42	20
	125	2	1	8	29	36	29	8	1	2	1	8	29	36	29	8
	130	1	0	0	15	22	15	0	0	1	0	0	15	22	15	0
	135	0	0	0	4	9	4	0	0	0	0	0	4	9	4	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	10990	10990	10990
	45	10660	9830	9780
	55	10230	9442	9409
	65	9515	8824	8828
	75	8120	7850	7941
	85	5077	6630	7066



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	3971	3971	3971	3971	3858	3858	3858	3858	3649	3649	3649	3457	3457	3457	3281	3281	3281	3198
1	3583	3405	3245	3101	3471	3310	3165	3034	3134	3015	2906	2972	2875	2786	2822	2745	2673	2588
2	3239	2941	2695	2488	3132	2862	2636	2444	2713	2524	2360	2575	2418	2281	2448	2319	2204	2119
3	2941	2567	2277	2046	2841	2500	2232	2016	2373	2145	1958	2256	2063	1901	2147	1985	1847	1763
4	2685	2263	1955	1719	2592	2206	1919	1697	2099	1851	1655	1998	1786	1613	1905	1723	1573	1491
5	2464	2015	1701	1470	2379	1966	1673	1453	1874	1618	1421	1788	1565	1390	1708	1514	1359	1280
6	2271	1809	1498	1275	2194	1767	1475	1263	1688	1430	1237	1614	1386	1213	1545	1345	1188	1113
7	2103	1636	1333	1121	2033	1600	1314	1111	1531	1276	1090	1467	1240	1070	1407	1205	1051	979
8	1955	1489	1196	995	1892	1458	1180	987	1399	1149	970	1343	1118	954	1291	1089	938	870
9	1825	1364	1082	892	1767	1337	1069	885	1285	1042	871	1237	1016	857	1190	991	844	779
10	1709	1257	986	806	1657	1233	974	800	1188	951	788	1144	929	777	1104	907	765	704

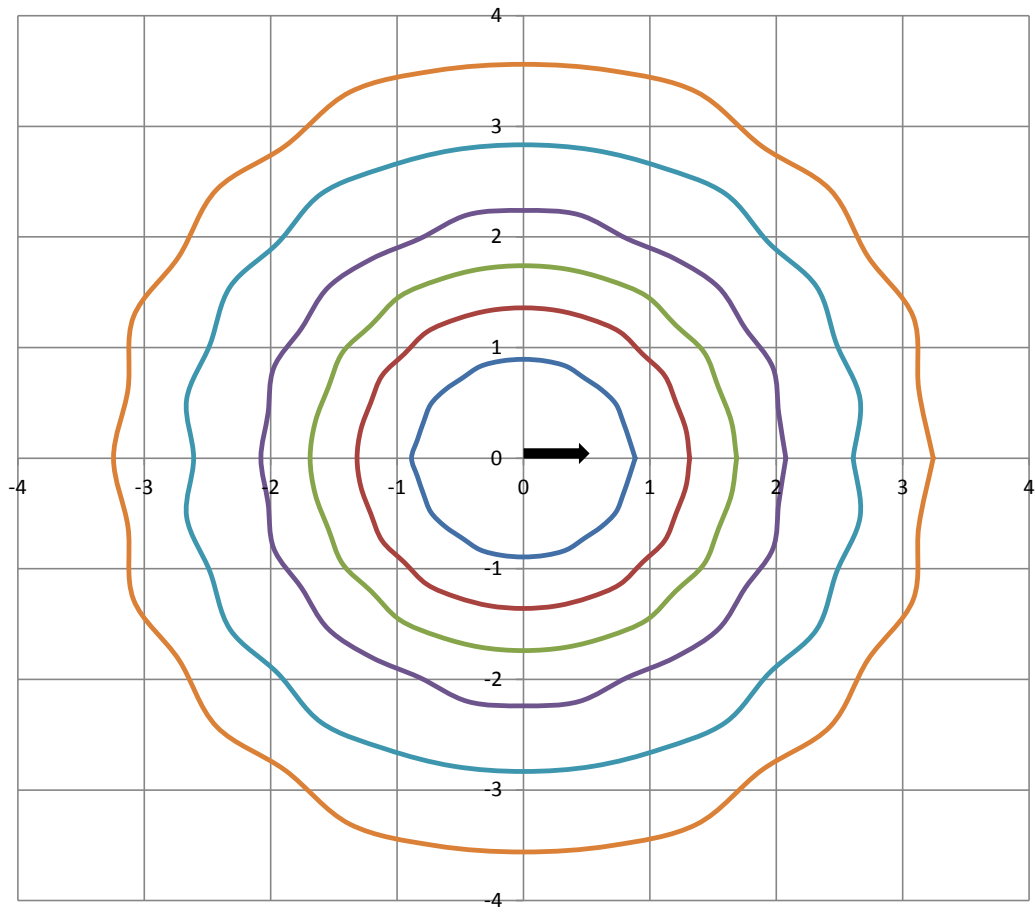
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1000 Candela
Central Cone Intensity:	999 Candela
Beam Flux:	2383.1 Lumens
Beam Angle (0-180):	115.3 Degrees
Beam Angle (90-270):	124.9 Degrees
Field Angle (0-180):	162.0 Degrees
Field Angle (90-270):	197.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		62.5	5.16
6.00		27.8	7.74
8.00		15.6	10.3
10.0		10.00	12.9
12.0		6.94	15.5
14.0		5.10	18.1
16.0		3.90	20.6



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

