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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
MLD2-N5/F-48-950-35K-A05-A401-U

Order Number
12182822
Test Number
12182822.01

Test Date

2018-02-21

Revised 2018-02-23

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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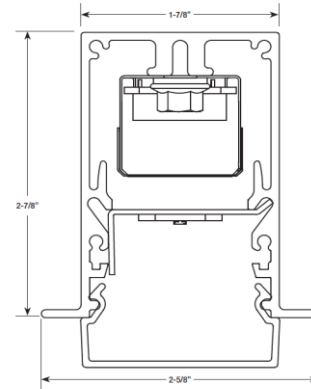


Luminaire Description: Extruded aluminum housing, frosted lens enclosure
Lamp: 96 white LEDs
Mounting: Recessed
Ballast/Driver: Philips XI040C110V054BST1

Luminaire Photo



Luminaire Cross-Section



Luminaire Characteristics

Luminous Length: 47.00 in.
Luminous Width: 1.875 in.
Luminous Height: 0.50 in.

Summary of Results

Total Luminaire Output: 3821 Lumens
Luminaire Efficacy: 85.8 lm/w
Maximum Candela: 1116 Candela

Test Conditions

Test Temperature: 25.0 °C
Voltage: 119.9 VAC
Current: 0.3724 A
Power: 44.55 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.64 %

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	0.3724 A	44.55 W	0.998	60 Hz	5.64 %

Summary of Results

Spacing Criteria

0-180: 1.28
90-270: 1.31

Total Lumen Output:

3821 Lumens

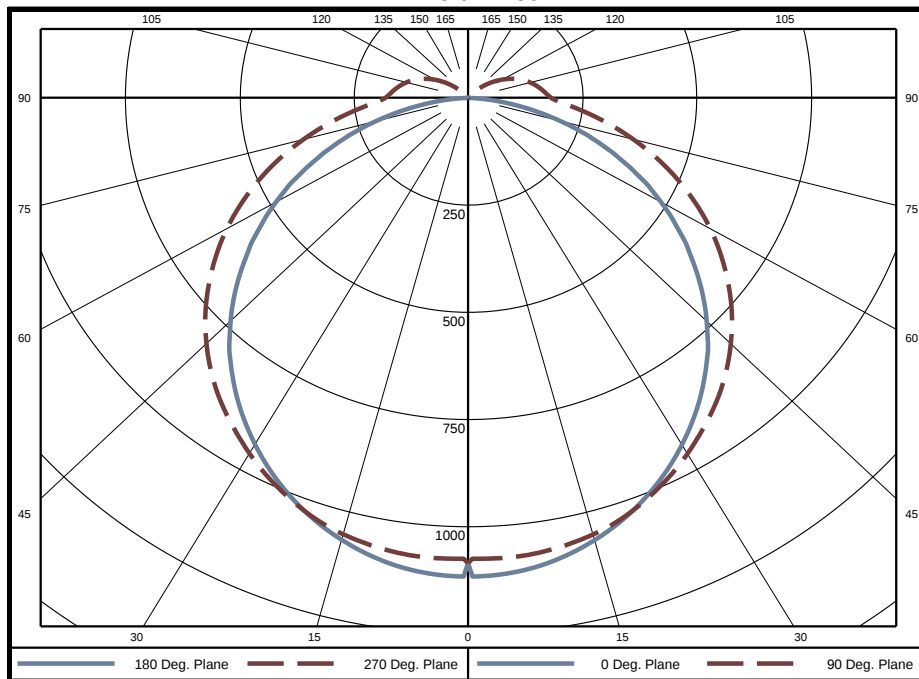
Luminaire Efficacy:

85.8 lm/w

Maximum Candela:

1116 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	25.9	0.7%	60-65	251.2	6.6%	120-125	14.6	0.4%
5-10	77.1	2.0%	65-70	219.8	5.8%	125-130	8.6	0.2%
10-15	126.0	3.3%	70-75	183.0	4.8%	130-135	3.9	0.1%
15-20	171.1	4.5%	75-80	142.7	3.7%	135-140	1.1	0.0%
20-25	210.6	5.5%	80-85	103.1	2.7%	140-145	0.0	0.0%
25-30	243.9	6.4%	85-90	71.2	1.9%	145-150	0	0.0%
30-35	270.0	7.1%	90-95	58.0	1.5%	150-155	0	0.0%
35-40	288.5	7.6%	95-100	51.9	1.4%	155-160	0	0.0%
40-45	298.6	7.8%	100-105	45.1	1.2%	160-165	0	0.0%
45-50	299.5	7.8%	105-110	37.4	1.0%	165-170	0	0.0%
50-55	291.6	7.6%	110-115	29.2	0.8%	170-175	0	0.0%
55-60	275.5	7.2%	115-120	21.3	0.6%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1413	37.0%
0-60	2578	67.5%
0-90	3549	92.9%
90-180	271	7.1%



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	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085	1085
	5	1111	1087	1075	1076	1075	1076	1075	1087	1111	1087	1075	1076	1075	1076	1087
	10	1095	1073	1065	1069	1068	1069	1065	1073	1095	1073	1065	1069	1068	1069	1073
	15	1068	1049	1047	1053	1054	1053	1047	1049	1068	1049	1047	1053	1054	1053	1049
	20	1032	1016	1017	1027	1030	1027	1017	1016	1032	1016	1017	1027	1030	1027	1016
	25	987	975	982	994	997	994	982	975	987	975	982	994	997	994	982
	30	934	928	940	953	958	953	940	928	934	928	940	953	958	953	940
	35	876	874	892	909	914	909	892	874	876	874	892	909	914	909	874
	40	810	813	838	858	866	858	838	813	810	813	838	858	866	858	838
	45	737	749	777	802	810	802	777	749	737	749	777	802	810	802	777
	50	658	674	710	741	749	741	710	674	658	674	710	741	749	741	710
	55	576	597	639	673	682	673	639	597	576	597	639	673	682	673	639
	60	488	517	564	600	610	600	564	517	488	517	564	600	610	600	564
	65	397	433	484	522	533	522	484	433	397	433	484	522	533	522	484
	70	303	348	402	442	454	442	402	348	303	348	402	442	454	442	402
	75	209	261	319	361	373	361	319	261	209	261	319	361	373	361	319
	80	120	177	240	282	296	282	240	177	120	177	240	282	296	282	240
	85	45	105	170	213	227	213	170	105	45	105	170	213	227	213	170
Vertical Angle (Degrees)	90	5	63	125	167	181	167	125	63	5	63	125	167	181	167	125
	95	4	52	112	153	167	153	112	52	4	52	112	153	167	153	112
	100	3	41	101	140	154	140	101	41	3	41	101	140	154	140	101
	105	2	28	87	126	140	126	87	28	2	28	87	126	140	126	87
	110	1	14	72	111	124	111	72	14	1	14	72	111	124	111	72
	115	1	2	54	92	106	92	54	2	1	2	54	92	106	92	54
	120	0	0	36	72	85	72	36	0	0	0	36	72	85	72	36
	125	0	0	19	52	64	52	19	0	0	0	19	52	64	52	19
	130	0	0	3	32	43	32	3	0	0	0	3	32	43	32	3
	135	0	0	0	13	22	13	0	0	0	0	13	22	13	0	0
	140	0	0	0	0	4	0	0	0	0	0	0	4	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	19080	19080	19080
	45	18140	16150	15910
	55	17400	15310	15140
	65	16140	14180	14110
	75	13670	12530	12700
	85	8034	10560	11300



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	4484	4484	4484	4484	4348	4348	4348	4348	4094	4094	4094	3863	3863	3863	3650	3650	3650	3549
1	4033	3826	3641	3474	3898	3712	3543	3391	3497	3360	3234	3300	3189	3086	3118	3030	2947	2845
2	3642	3300	3016	2778	3513	3203	2944	2723	3021	2805	2618	2853	2674	2517	2698	2552	2421	2320
3	3305	2876	2545	2281	3184	2794	2488	2242	2639	2380	2167	2496	2278	2094	2363	2181	2024	1926
4	3016	2535	2183	1913	2904	2465	2138	1885	2333	2052	1829	2210	1969	1775	2096	1891	1722	1626
5	2767	2255	1898	1634	2665	2196	1862	1613	2082	1792	1569	1977	1725	1527	1879	1661	1486	1395
6	2550	2024	1671	1417	2457	1972	1641	1400	1875	1583	1366	1784	1528	1332	1699	1474	1299	1212
7	2360	1830	1486	1244	2276	1785	1461	1230	1701	1412	1202	1622	1366	1175	1547	1321	1148	1065
8	2194	1665	1333	1104	2118	1627	1312	1093	1553	1271	1069	1484	1231	1047	1419	1193	1024	946
9	2048	1525	1205	989	1979	1492	1187	979	1427	1152	960	1366	1118	941	1309	1085	921	848
10	1918	1405	1098	893	1855	1375	1082	885	1318	1052	868	1265	1022	852	1214	994	835	765

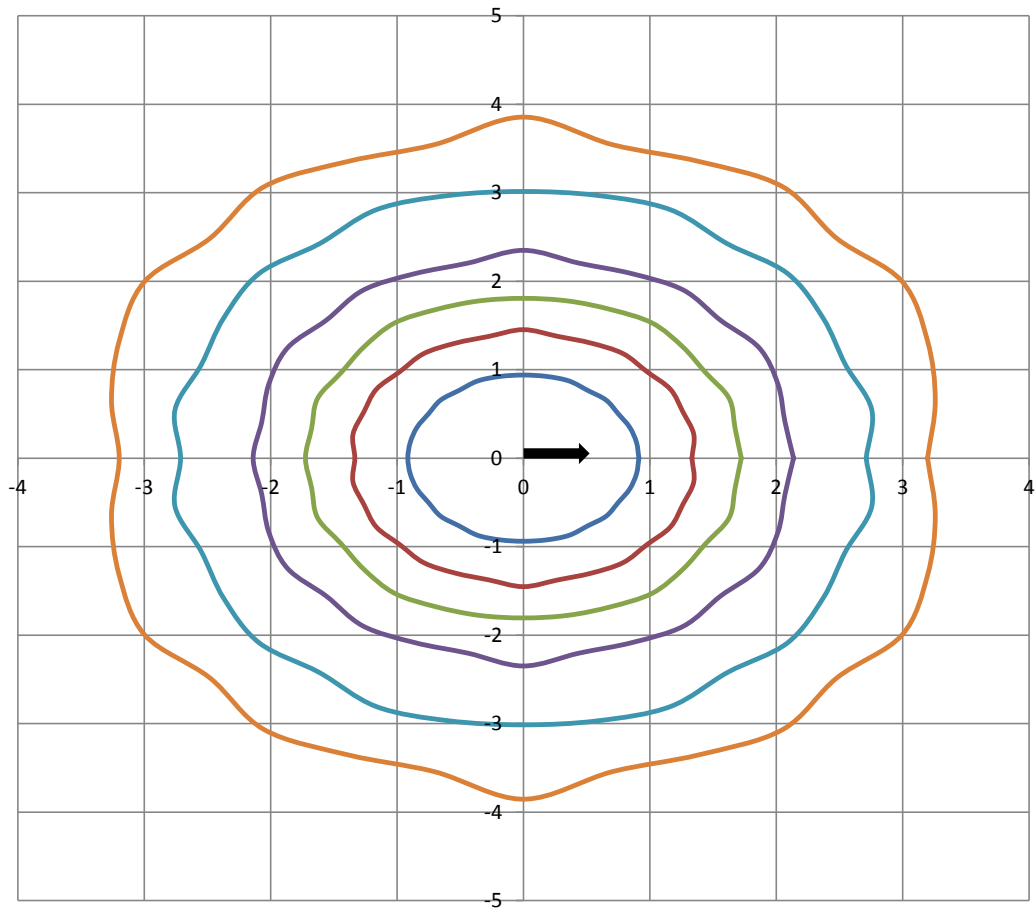
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1085 Candela
Central Cone Intensity:	1084 Candela
Beam Flux:	2641.3 Lumens
Beam Angle (0-180):	113.7 Degrees
Beam Angle (90-270):	128.8 Degrees
Field Angle (0-180):	161.4 Degrees
Field Angle (90-270):	228.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		67.8	5.16
6.00		30.1	7.74
8.00		16.9	10.3
10.0		10.8	12.9
12.0		7.53	15.5
14.0		5.53	18.1
16.0		4.24	20.6



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

