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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
MLS3-M-4-3800-(950 LM/FT)-35K-HTA-A401-U
Order Number
11654729
Test Number
11654729.13

Test Date

2017-03-15

Prepared By

Javier Caban, Technician

Approved By

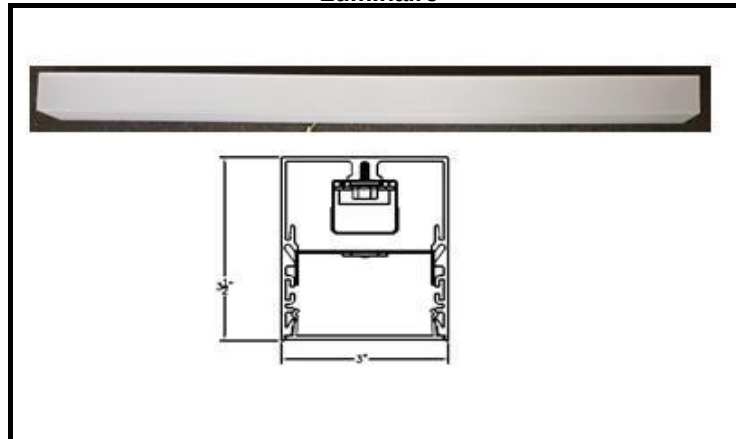
Tiffany Hamm, Project Handler

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

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 2.880 in.

Summary of Results

Total Luminaire Output:	3848 Lumens
Luminaire Efficacy:	103.4 lm/w
Maximum Candela:	1548 Candela

Test Conditions

Test Temperature:	24.5 °C
Voltage:	120.0 VAC
Current:	0.3110 A
Power:	37.22 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	5.70 %

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
24.5 °C	120.0 VAC	0.3110 A	37.22 W	0.997	60 Hz	5.70 %

Summary of Results

Spacing Criteria

0-180: 1.22

90-270: 1.22

Total Lumen Output:

3848 Lumens

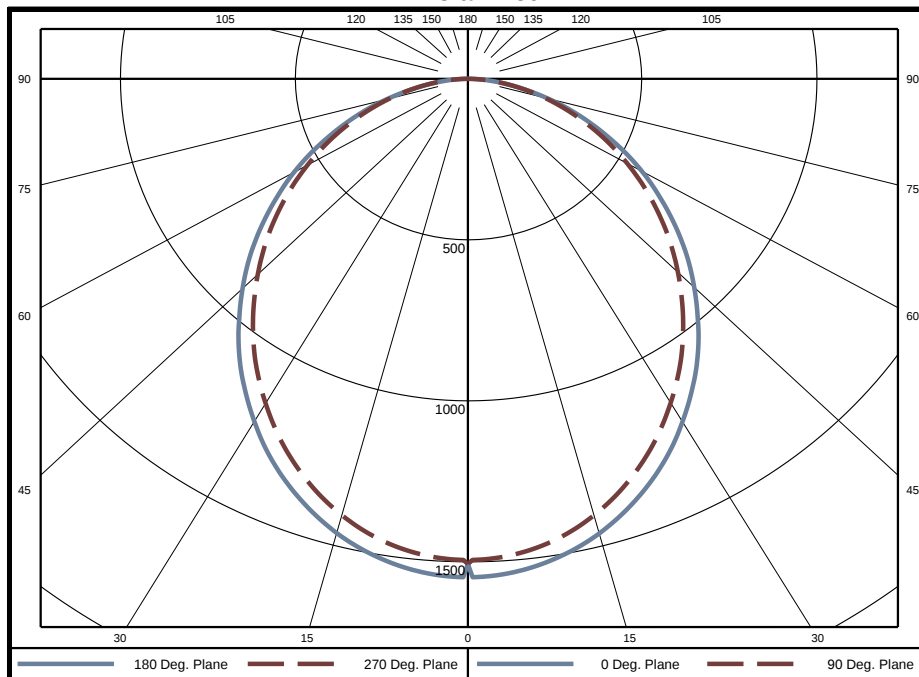
Luminaire Efficacy:

103.4 lm/w

Maximum Candela:

1548 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	35.9	0.9%	60-65	242.1	6.3%	120-125	0	0.0%
5-10	106.0	2.8%	65-70	197.1	5.1%	125-130	0	0.0%
10-15	171.2	4.4%	70-75	149.1	3.9%	130-135	0	0.0%
15-20	228.6	5.9%	75-80	100.2	2.6%	135-140	0	0.0%
20-25	276.1	7.2%	80-85	54.8	1.4%	140-145	0	0.0%
25-30	312.1	8.1%	85-90	16.3	0.4%	145-150	0	0.0%
30-35	336.1	8.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	347.5	9.0%	95-100	0	0.0%	155-160	0	0.0%
40-45	346.6	9.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	334.6	8.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	312.5	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	281.1	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1814	47.1%
0-60	3088	80.3%
0-90	3848	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	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507	1507
	5	1538	1504	1486	1487	1484	1487	1486	1504	1538	1504	1486	1487	1484	1487	1486
	10	1508	1475	1457	1456	1454	1456	1457	1475	1508	1475	1457	1456	1454	1456	1457
	15	1461	1428	1409	1407	1404	1407	1409	1428	1461	1428	1409	1407	1404	1407	1409
	20	1398	1365	1346	1341	1337	1341	1346	1365	1398	1365	1346	1341	1337	1341	1346
	25	1322	1289	1269	1262	1257	1262	1269	1289	1322	1289	1269	1262	1257	1262	1269
	30	1233	1203	1183	1173	1166	1173	1183	1203	1233	1203	1183	1173	1166	1173	1183
	35	1137	1107	1088	1077	1069	1077	1088	1107	1137	1107	1088	1077	1069	1077	1088
	40	1033	1004	986	973	964	973	986	1004	1033	1004	986	973	964	973	986
	45	922	897	879	866	857	866	879	897	922	897	879	866	857	866	879
	50	811	787	771	758	750	758	771	787	811	787	771	758	750	758	771
	55	695	677	661	649	641	649	661	677	695	677	661	649	641	649	661
	60	581	565	551	541	533	541	551	565	581	565	551	541	533	541	551
	65	463	453	441	434	428	434	441	453	463	453	441	434	428	434	441
	70	350	343	335	331	326	331	335	343	350	343	335	331	326	331	335
	75	240	238	235	232	230	232	235	238	240	238	235	232	230	232	235
	80	141	141	143	143	141	143	143	141	141	143	143	141	143	143	141
	85	61	62	63	64	64	64	63	62	61	62	63	64	64	64	63
	90	0	2	3	3	4	3	3	2	0	2	3	3	4	3	3
	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	16900	16900	16900
	45	14620	13940	13590
	55	13590	12930	12540
	65	12290	11710	11370
	75	10420	10160	9967
	85	7873	8115	8193



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	4581	4581	4581	4581	4474	4474	4474	4474	4275	4275	4275	4094	4094	4094	3926	3926	3926	3848
1	4193	4012	3850	3704	4088	3925	3777	3644	3761	3640	3529	3611	3512	3421	3473	3393	3319	3239
2	3821	3509	3250	3033	3720	3436	3199	2997	3300	3100	2927	3174	3007	2860	3058	2920	2797	2714
3	3490	3090	2781	2535	3395	3030	2743	2512	2915	2670	2467	2809	2600	2424	2711	2534	2383	2299
4	3201	2746	2412	2158	3113	2695	2383	2143	2598	2328	2113	2509	2274	2084	2426	2224	2056	1973
5	2948	2460	2118	1866	2868	2417	2096	1856	2335	2052	1835	2259	2011	1815	2189	1971	1796	1715
6	2726	2220	1879	1635	2653	2183	1862	1628	2114	1827	1613	2049	1794	1599	1989	1762	1585	1507
7	2531	2017	1683	1449	2465	1985	1669	1444	1926	1641	1433	1871	1614	1423	1819	1588	1412	1337
8	2359	1844	1520	1297	2299	1817	1508	1293	1766	1485	1285	1718	1463	1277	1673	1442	1269	1196
9	2206	1695	1382	1171	2152	1672	1372	1167	1628	1354	1161	1587	1335	1155	1548	1318	1149	1079
10	2070	1566	1265	1064	2021	1546	1257	1062	1508	1241	1057	1472	1226	1052	1438	1211	1047	981

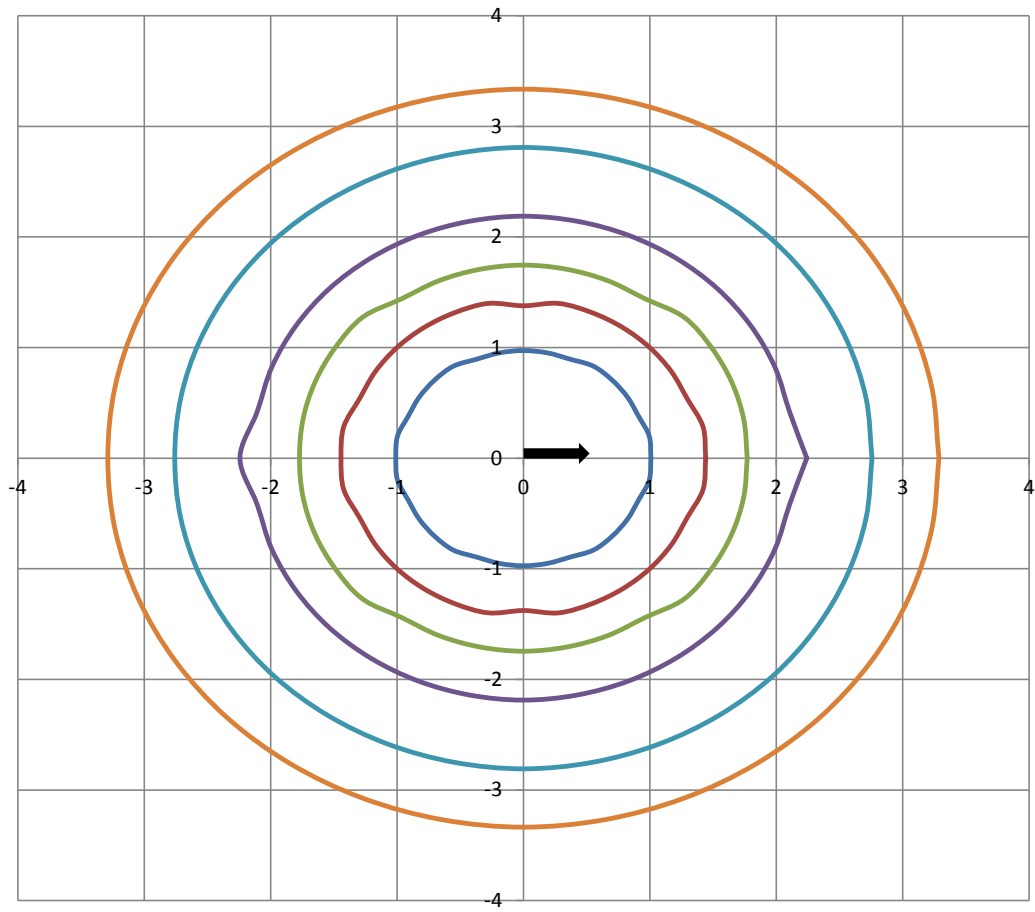
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1507 Candela
Central Cone Intensity:	1503 Candela
Beam Flux:	2556.8 Lumens
Beam Angle (0-180):	105.0 Degrees
Beam Angle (90-270):	99.7 Degrees
Field Angle (0-180):	158.9 Degrees
Field Angle (90-270):	158.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		94.2	4.72
6.00		41.9	7.08
8.00		23.5	9.44
10.0		15.1	11.8
12.0		10.5	14.2
14.0		7.69	16.5
16.0		5.89	18.9



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

