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7036 Snowdrift Road
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-F-4-3800-(950 LM/FT)-35K-HTA-A401-U
Order Number
11654729
Test Number
11654729.23

Test Date

2017-03-08

Prepared By

Javier Caban, Technician

Approved By

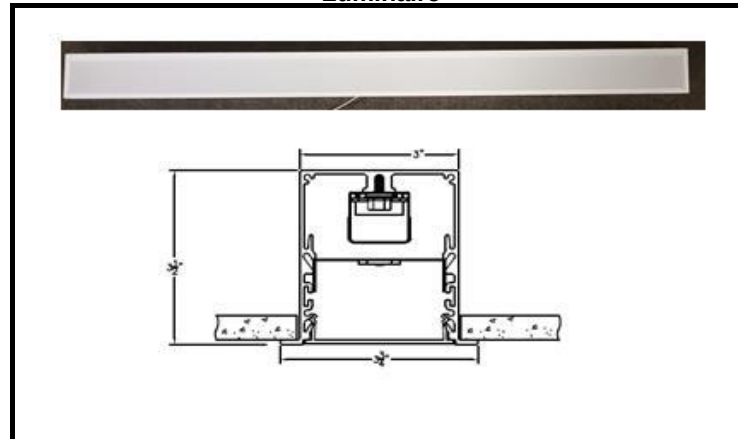
Tiffany Hamm, Project Handler

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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
Note: Tested as MLS3 G 4 4300 35k HTA A401 U

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 2.875 in.

Summary of Results

Total Luminaire Output:	3828 Lumens
Luminaire Efficacy:	103.3 lm/w
Maximum Candela:	1536 Candela

Test Conditions

Test Temperature:	25.3 °C
Voltage:	120.0 VAC
Current:	0.3095 A
Power:	37.04 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	5.59 %

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
25.3 °C	120.0 VAC	0.3095 A	37.04 W	0.997	60 Hz	5.59 %

Summary of Results

Spacing Criteria

0-180: 1.22
90-270: 1.22

Total Lumen Output:

3828 Lumens

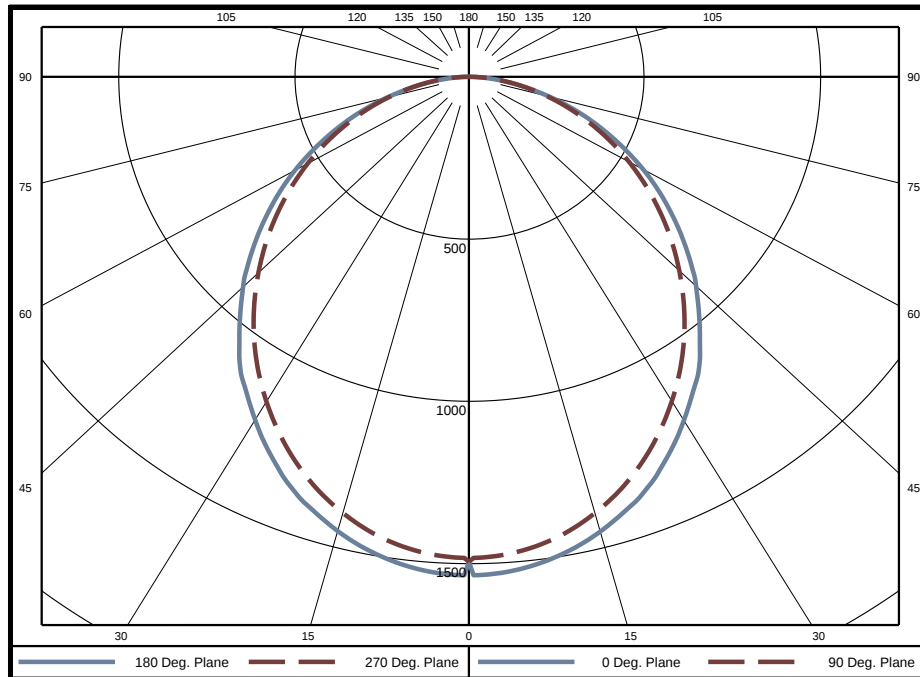
Luminaire Efficacy:

103.3 lm/w

Maximum Candela:

1536 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	35.6	0.9%	60-65	241.1	6.3%	120-125	0	0.0%
5-10	105.2	2.7%	65-70	196.6	5.1%	125-130	0	0.0%
10-15	169.9	4.4%	70-75	148.8	3.9%	130-135	0	0.0%
15-20	226.8	5.9%	75-80	100.3	2.6%	135-140	0	0.0%
20-25	274.3	7.2%	80-85	55.4	1.4%	140-145	0	0.0%
25-30	310.1	8.1%	85-90	17.1	0.4%	145-150	0	0.0%
30-35	333.9	8.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	345.5	9.0%	95-100	0	0.0%	155-160	0	0.0%
40-45	344.3	9.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	332.6	8.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	310.7	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	279.7	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1801	47.1%
0-60	3069	80.2%
0-90	3828	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	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495	1495
	5	1526	1492	1475	1475	1472	1475	1475	1492	1526	1492	1475	1475	1472	1475	1492
	10	1496	1464	1445	1445	1442	1445	1445	1464	1496	1464	1445	1445	1442	1445	1464
	15	1450	1417	1398	1396	1392	1396	1398	1417	1450	1417	1398	1396	1392	1396	1417
	20	1392	1356	1336	1331	1327	1331	1336	1356	1392	1356	1336	1331	1327	1331	1356
	25	1314	1284	1260	1253	1247	1253	1260	1284	1314	1284	1260	1253	1247	1253	1284
	30	1225	1194	1178	1165	1158	1165	1178	1194	1225	1194	1178	1165	1158	1165	1194
	35	1134	1099	1080	1069	1061	1069	1080	1099	1134	1099	1080	1069	1061	1069	1099
	40	1025	1000	979	966	958	966	979	1000	1025	1000	979	966	958	966	1000
	45	917	891	875	860	852	860	875	891	917	891	875	860	852	860	891
	50	804	784	767	754	745	754	767	784	804	784	767	754	745	754	784
	55	690	673	658	646	637	646	658	673	690	673	658	646	637	646	673
	60	576	562	549	538	532	538	549	562	576	562	549	538	532	538	562
	65	460	451	440	433	427	433	440	451	460	451	440	433	427	433	451
	70	348	342	334	330	327	330	334	342	348	342	334	330	327	330	342
	75	239	237	234	233	232	233	234	237	239	237	234	233	232	233	237
	80	141	141	143	144	144	144	143	141	141	143	144	144	144	143	141
	85	61	62	64	66	67	66	64	62	61	62	64	66	67	66	62
	90	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
	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	16790	16790	16790
	45	14560	13900	13530
	55	13510	12890	12480
	65	12220	11700	11350
	75	10370	10150	10040
	85	7829	8251	8593



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	4557	4557	4557	4557	4451	4451	4451	4451	4253	4253	4253	4072	4072	4072	3906	3906	3906	3828
1	4170	3990	3828	3683	4066	3903	3756	3623	3740	3619	3508	3591	3492	3401	3453	3374	3300	3220
2	3800	3489	3231	3015	3699	3416	3180	2979	3281	3081	2909	3156	2989	2843	3040	2902	2780	2697
3	3470	3073	2765	2519	3376	3012	2726	2496	2898	2653	2452	2793	2584	2409	2695	2519	2368	2285
4	3183	2730	2398	2144	3095	2679	2369	2129	2583	2313	2100	2494	2260	2071	2411	2210	2043	1961
5	2931	2445	2105	1854	2851	2402	2083	1844	2321	2039	1824	2246	1998	1804	2175	1958	1784	1704
6	2711	2206	1868	1625	2638	2170	1850	1617	2101	1816	1603	2037	1783	1589	1977	1751	1575	1497
7	2516	2004	1672	1440	2450	1973	1658	1435	1915	1631	1424	1859	1604	1413	1808	1578	1403	1328
8	2345	1832	1510	1288	2285	1806	1498	1284	1755	1476	1276	1708	1454	1269	1663	1433	1261	1188
9	2193	1685	1373	1163	2139	1662	1364	1160	1618	1345	1153	1577	1327	1147	1538	1309	1141	1072
10	2058	1557	1257	1057	2009	1537	1249	1055	1499	1233	1050	1463	1218	1045	1429	1203	1040	974

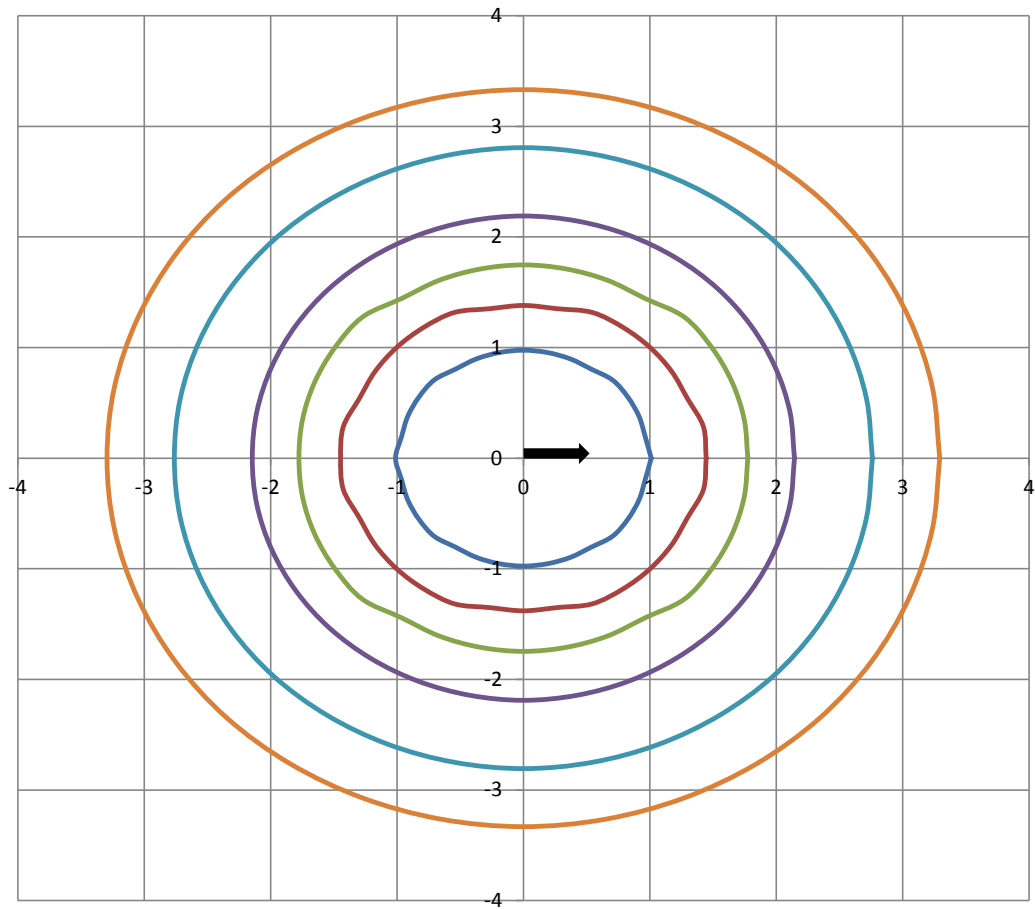
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1495 Candela
Central Cone Intensity:	1492 Candela
Beam Flux:	2541.7 Lumens
Beam Angle (0-180):	105.0 Degrees
Beam Angle (90-270):	99.7 Degrees
Field Angle (0-180):	159.1 Degrees
Field Angle (90-270):	159.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		93.4	4.73
6.00		41.5	7.09
8.00		23.4	9.45
10.0		15.0	11.8
12.0		10.4	14.2
14.0		7.63	16.5
16.0		5.84	18.9



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

