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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
MLS2-M-4-3300-(825 LM/FT)-35K-HTA-A401-U
Order Number
11654729
Test Number
11654729.05

Test Date

2017-03-24

Prepared By

Javier Caban, Technician

Approved By

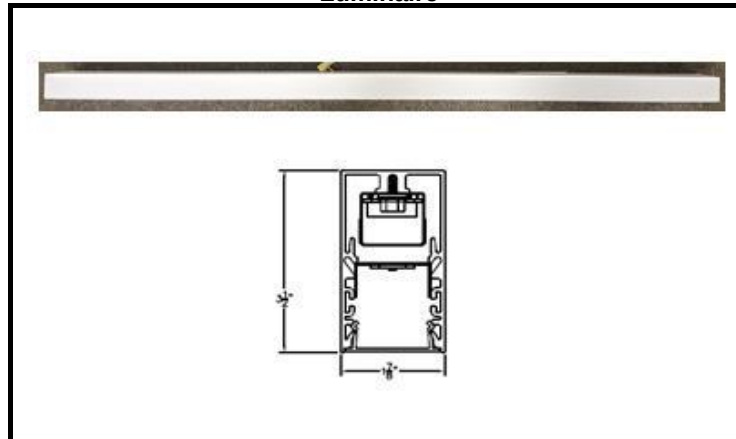
Tiffany Hamm, Project Handler

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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: 1.750 in.

Summary of Results

Total Luminaire Output:	3346 Lumens
Luminaire Efficacy:	89.9 lm/w
Maximum Candela:	1729 Candela

Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.3108 A
Power:	37.20 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	5.66 %

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
24.4 °C	120.0 VAC	0.3108 A	37.20 W	0.997	60 Hz	5.66 %

Summary of Results

Spacing Criteria

0-180: 1.19
90-270: 1.19

Total Lumen Output:

3346 Lumens

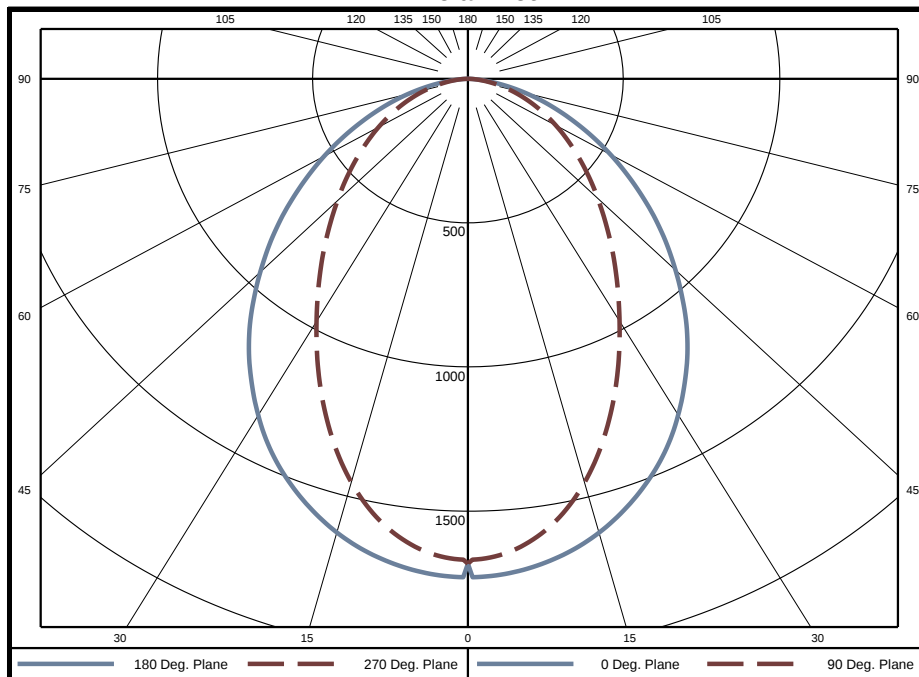
Luminaire Efficacy:

89.9 lm/w

Maximum Candela:

1729 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	40.0	1.2%	60-65	176.3	5.3%	120-125	0	0.0%
5-10	117.2	3.5%	65-70	139.0	4.2%	125-130	0	0.0%
10-15	185.9	5.6%	70-75	101.2	3.0%	130-135	0	0.0%
15-20	241.7	7.2%	75-80	64.6	1.9%	135-140	0	0.0%
20-25	282.0	8.4%	80-85	32.0	1.0%	140-145	0	0.0%
25-30	305.9	9.1%	85-90	8.1	0.2%	145-150	0	0.0%
30-35	314.8	9.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	310.7	9.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	296.0	8.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	273.4	8.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	245.0	7.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	212.1	6.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1798	53.7%
0-60	2825	84.4%
0-90	3346	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	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
	5	1717	1678	1652	1647	1643	1647	1652	1678	1717	1678	1652	1647	1643	1647	1652
	10	1684	1639	1599	1579	1569	1579	1599	1639	1684	1639	1599	1579	1569	1579	1599
	15	1630	1574	1512	1469	1450	1469	1512	1574	1630	1574	1512	1469	1450	1469	1512
	20	1554	1488	1398	1329	1300	1329	1398	1488	1554	1488	1398	1329	1300	1329	1398
	25	1463	1383	1265	1172	1137	1172	1265	1383	1463	1383	1265	1172	1137	1172	1265
	30	1350	1262	1121	1015	976	1015	1121	1262	1350	1262	1121	1015	976	1015	1121
	35	1225	1128	976	869	833	869	976	1128	1225	1128	976	869	833	869	976
	40	1090	989	837	738	705	738	837	989	1090	989	837	738	705	738	837
	45	946	849	708	622	593	622	708	849	946	849	708	622	593	622	708
	50	805	716	592	520	496	520	592	716	805	716	592	520	496	520	592
	55	664	590	487	428	408	428	487	590	664	590	487	428	408	428	487
	60	533	472	391	345	330	345	391	472	533	472	391	345	330	345	391
	65	408	365	303	269	258	269	303	365	408	365	303	269	258	269	303
	70	296	267	223	199	191	199	223	267	296	267	223	199	191	199	223
	75	195	177	149	135	130	135	149	177	195	177	149	135	130	135	149
	80	105	98	84	78	76	78	84	98	105	98	84	78	76	78	84
	85	37	35	32	31	31	31	32	35	37	35	32	31	31	31	32
	90	0	1	1	2	2	2	1	1	0	1	1	2	2	2	1
	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)

Horizontal Angle (Degrees)

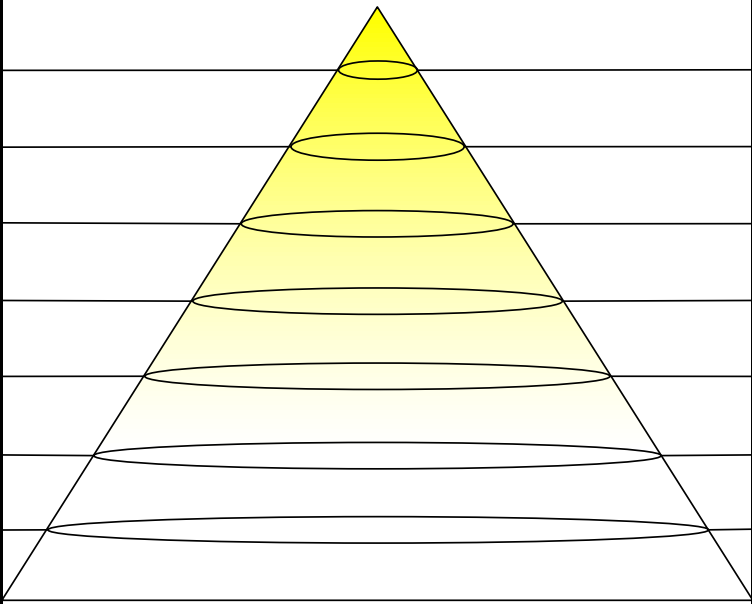
Vertical Angle (Degrees)	0	45	90
	0	31040	31040
	45	24670	18490
	55	21370	15670
	65	17830	13230
	75	13870	10640
	85	7779	6869



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	3983	3983	3983	3983	3891	3891	3891	3891	3718	3718	3718	3560	3560	3560	3414	3414	3414	3346
1	3677	3533	3403	3287	3587	3457	3340	3234	3316	3220	3132	3187	3109	3037	3068	3005	2947	2879
2	3375	3124	2916	2741	3290	3062	2871	2708	2945	2785	2646	2838	2704	2587	2738	2628	2530	2461
3	3103	2779	2528	2328	3023	2727	2494	2307	2630	2431	2267	2539	2370	2228	2456	2313	2191	2122
4	2862	2490	2218	2010	2788	2447	2193	1996	2365	2144	1969	2289	2098	1943	2218	2054	1918	1850
5	2649	2247	1967	1760	2581	2211	1947	1750	2142	1910	1732	2077	1874	1714	2017	1839	1696	1629
6	2460	2041	1761	1559	2398	2010	1745	1553	1952	1716	1539	1897	1687	1527	1846	1660	1514	1449
7	2292	1865	1589	1396	2236	1839	1577	1391	1789	1553	1381	1742	1530	1372	1698	1508	1362	1299
8	2142	1714	1445	1260	2092	1692	1435	1256	1649	1415	1249	1608	1396	1242	1570	1378	1235	1174
9	2009	1583	1322	1146	1964	1564	1314	1143	1526	1298	1138	1491	1282	1132	1458	1267	1127	1068
10	1890	1469	1217	1049	1849	1452	1210	1047	1420	1197	1043	1389	1184	1038	1360	1171	1034	978

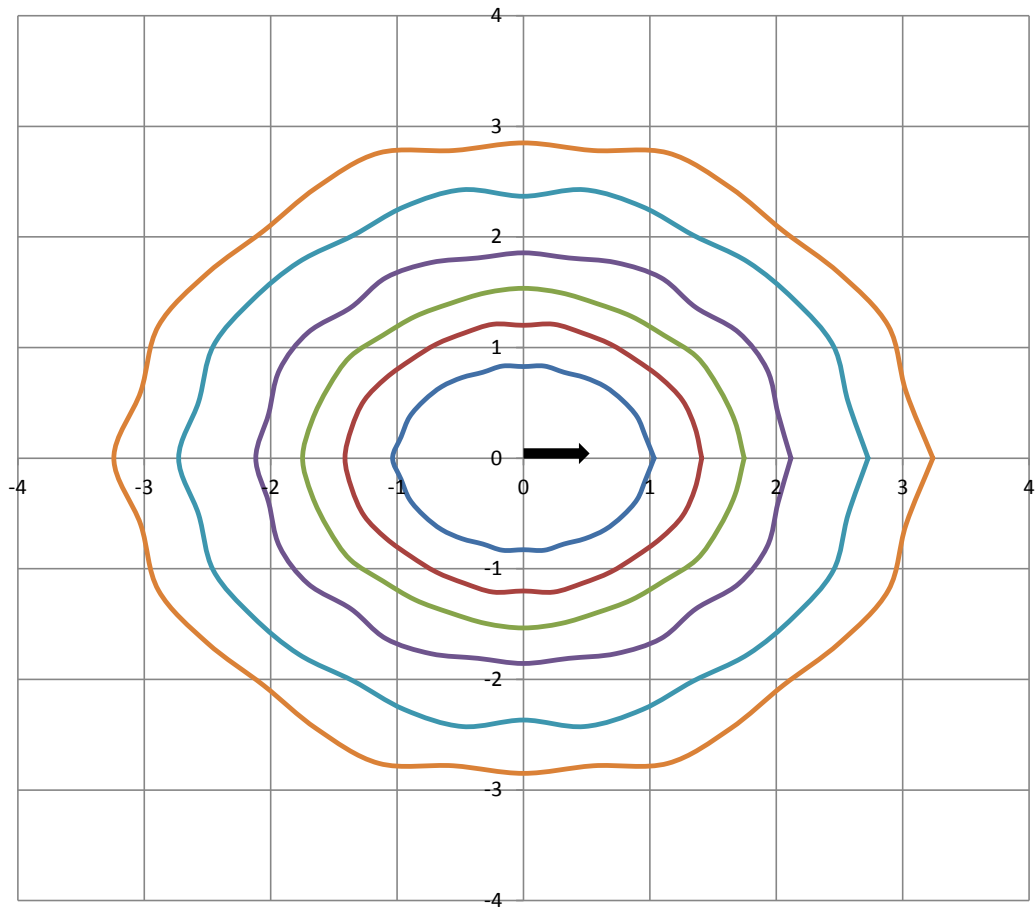
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1682 Candela
Central Cone Intensity:	1676 Candela
Beam Flux:	1878.6 Lumens
Beam Angle (0-180):	97.4 Degrees
Beam Angle (90-270):	69.4 Degrees
Field Angle (0-180):	152.7 Degrees
Field Angle (90-270):	143.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		105	4.18
6.00		46.7	6.27
8.00		26.3	8.36
10.0		16.8	10.5
12.0		11.7	12.5
14.0		8.58	14.6
16.0		6.57	16.7



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

5 fc 2 fc 1 fc 0.5 fc 0.2 fc 0.1 fc