



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Mercury Lighting
Stephen Bambush
20 Audrey Pl.
Fairfield, NJ 07004-3416

Catalog Number
LW15-4-4500-35K-HTA-S50-UNV
Order Number
10692188
Test Number
1000168

Test Date

2015-04-03

Prepared By

Javier Caban, Technician

Approved By

Kyle Spaziani, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed white enamel steel housing, white enamel steel reflector, frosted plastic lens enclosure
Lamp: 120 white LEDs
Mounting: Surface
Ballast/Driver: One Osram OT50W/PRG1400C/UNV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 45.00 in.
Luminous Width: 6.250 in.
Luminous Height: 2.00 in.

Summary of Results

Total Luminaire Output: 4595 Lumens
Luminaire Efficacy: 96.6 lm/w
Maximum Candela: 1292 Candela

Electrical Data

Test Temperature: 24.4 °C
Voltage: 120.0 VAC
Current: 0.3979 A
Power: 47.56 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 8.01 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

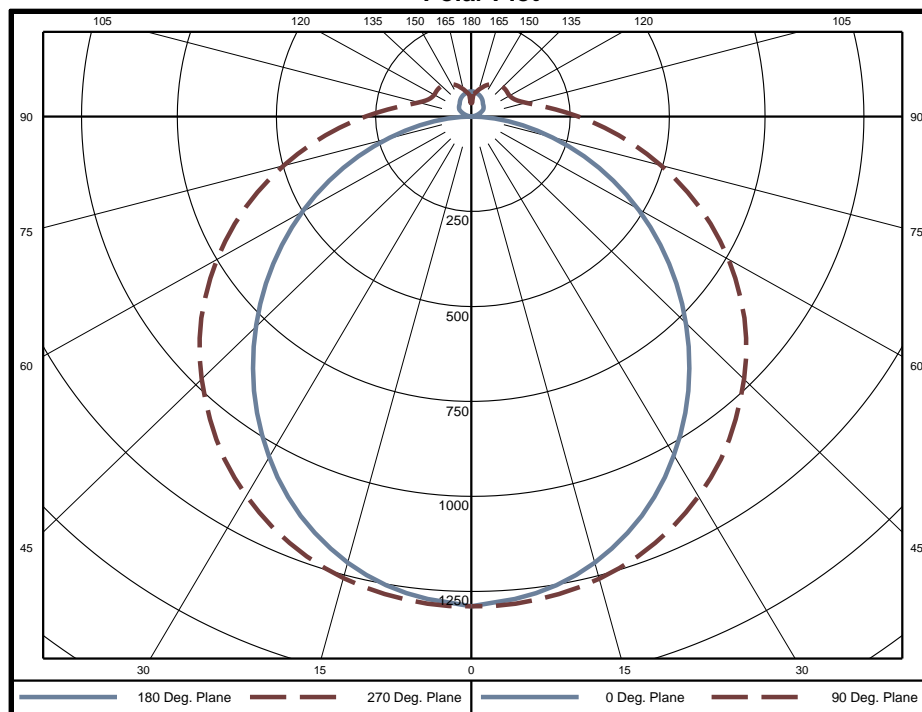
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.3979 A	47.56 W	0.996	60 Hz	8.01 %

Summary of Results

Spacing Criteria
 0-180: 1.19
 90-270: 1.33

Total Lumen Output: 4595 Lumens
Luminaire Efficacy: 96.6 lm/w
Maximum Candela: 1292 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	32.7	0.7%	60-65	279.2	6.1%	120-125	35.6	0.8%
5-10	91.2	2.0%	65-70	245.8	5.3%	125-130	34.3	0.7%
10-15	148.6	3.2%	70-75	207.8	4.5%	130-135	32.1	0.7%
15-20	201.0	4.4%	75-80	168.0	3.7%	135-140	29.0	0.6%
20-25	246.7	5.4%	80-85	129.4	2.8%	140-145	25.5	0.6%
25-30	284.3	6.2%	85-90	94.9	2.1%	145-150	21.8	0.5%
30-35	312.5	6.8%	90-95	69.3	1.5%	150-155	17.8	0.4%
35-40	330.7	7.2%	95-100	53.6	1.2%	155-160	14.0	0.3%
40-45	338.5	7.4%	100-105	44.4	1.0%	160-165	10.4	0.2%
45-50	337.0	7.3%	105-110	39.6	0.9%	165-170	7.2	0.2%
50-55	326.3	7.1%	110-115	37.3	0.8%	170-175	4.2	0.1%
55-60	306.6	6.7%	115-120	36.3	0.8%	175-180	1.5	0.0%

Zone	Lumens	% of Luminaire
0-40	1647.6	35.9%
0-60	2955.9	64.3%
0-90	4081.1	88.8%
90-180	513.8	11.2%



Candela Tabulation

Horizontal 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	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289	1289
5	1275	1287	1281	1284	1287	1284	1281	1287	1275	1287	1281	1284	1287	1284	1281	1287
10	1253	1266	1265	1272	1276	1272	1265	1266	1253	1266	1265	1272	1276	1272	1265	1266
15	1216	1232	1238	1252	1259	1252	1238	1232	1216	1232	1238	1252	1259	1252	1238	1232
20	1166	1185	1199	1222	1232	1222	1199	1185	1166	1185	1199	1222	1232	1222	1199	1185
25	1105	1127	1151	1183	1197	1183	1151	1127	1105	1127	1151	1183	1197	1183	1151	1127
30	1032	1059	1094	1135	1152	1135	1094	1059	1032	1059	1094	1135	1152	1135	1094	1059
35	953	982	1027	1079	1101	1079	1027	982	953	982	1027	1079	1101	1079	1027	982
40	866	898	953	1015	1040	1015	953	898	866	898	953	1015	1040	1015	953	898
45	776	809	872	945	976	945	872	809	776	809	872	945	976	945	872	809
50	684	718	789	873	908	873	789	718	684	718	789	873	908	873	789	718
55	589	624	703	795	831	795	703	624	589	624	703	795	831	795	703	624
60	495	529	615	712	752	712	615	529	495	529	615	712	752	712	615	529
65	400	434	526	627	668	627	526	434	400	434	526	627	668	627	526	434
70	307	343	438	541	583	541	438	343	307	343	438	541	583	541	438	343
75	216	255	352	455	497	455	352	255	216	255	352	455	497	455	352	255
80	133	176	275	374	415	374	275	176	133	176	275	374	415	374	275	176
85	60	108	206	300	339	300	206	108	60	108	206	300	339	300	206	108
90	0	60	150	236	271	236	150	60	0	60	150	236	271	236	150	60
95	2	38	110	183	214	183	110	38	2	38	110	183	214	183	110	38
100	8	33	87	146	171	146	87	33	8	33	87	146	171	146	87	33
105	14	36	77	122	142	122	77	36	14	36	77	122	142	122	77	36
110	21	41	74	109	124	109	74	41	21	41	74	109	124	109	74	41
115	28	45	76	103	115	103	76	45	28	45	76	103	115	103	76	45
120	35	49	79	102	111	102	79	49	35	49	79	102	111	102	79	49
125	38	52	82	104	111	104	82	52	38	52	82	104	111	104	82	52
130	41	53	84	105	112	105	84	53	41	53	84	105	112	105	84	53
135	43	54	81	104	111	104	81	54	43	54	81	104	111	104	81	54
140	46	54	77	102	108	102	77	54	46	54	77	102	108	102	77	54
145	50	54	73	98	104	98	73	54	50	54	73	98	104	98	73	54
150	54	55	69	89	98	89	69	55	54	55	69	89	98	89	69	55
155	57	56	64	79	91	79	64	56	57	56	64	79	91	79	64	56
160	60	58	61	69	82	69	61	58	60	58	61	69	82	69	61	58
165	62	60	59	60	73	60	59	60	62	60	59	60	73	60	59	60
170	64	62	58	53	65	53	58	62	64	62	58	53	65	53	58	62
175	66	64	60	52	58	52	60	64	66	64	60	52	58	52	60	64
180	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

	0	45	90
0	7105	7105	7105
45	6044	6797	7607
55	5662	6752	7987
65	5216	6856	8712
75	4590	7505	10580
85	3797	13010	21420



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	5349	5349	5349	5349	5165	5165	5165	5165	4822	4822	4822	4508	4508	4508	4219	4219	4219	4084
1	4807	4559	4336	4135	4626	4403	4202	4019	4111	3948	3798	3843	3712	3590	3596	3492	3395	3261
2	4345	3936	3597	3313	4172	3803	3495	3233	3555	3300	3080	3326	3117	2933	3114	2945	2793	2663
3	3946	3435	3040	2725	3785	3323	2960	2667	3110	2806	2554	2914	2660	2446	2732	2521	2340	2215
4	3603	3031	2611	2291	3455	2934	2547	2247	2752	2422	2160	2584	2303	2076	2427	2190	1995	1875
5	3307	2699	2274	1960	3172	2616	2221	1925	2460	2119	1857	2314	2021	1790	2178	1927	1725	1612
6	3049	2423	2003	1702	2926	2352	1959	1674	2216	1874	1618	2090	1792	1564	1972	1713	1511	1403
7	2824	2192	1783	1496	2712	2130	1745	1472	2012	1673	1427	1901	1604	1382	1798	1537	1337	1236
8	2625	1996	1600	1328	2524	1942	1568	1309	1838	1507	1270	1741	1447	1232	1650	1390	1195	1100
9	2450	1828	1448	1190	2358	1781	1420	1174	1690	1367	1141	1604	1315	1108	1523	1265	1076	987
10	2295	1684	1318	1075	2211	1642	1295	1061	1561	1248	1032	1485	1203	1004	1413	1160	977	892

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	80.6	5.05
6.00	35.8	7.57
8.00	20.1	10.1
10.0	12.9	12.6
12.0	8.95	15.1
14.0	6.58	17.7
16.0	5.04	20.2

Cone of Light Plot

