



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

John Andrews
20 Audrey Pl.
Fairfield, NJ 07004-3416

Catalog Number
LW4-4-4500-35K-HTA-1%-UNI

Order Number
10644857
Test Number
868176

Test Date

2015-01-15

Prepared By

Barry Mello Jr., 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: 3.000 in.
Luminous Height: 1.25 in.

Summary of Results

Total Luminaire Output: 4537 Lumens
Luminaire Efficacy: 95.7 lm/w
Maximum Candela: 1275 Candela

Electrical Data

Test Temperature: 24.5 °C
Voltage: 120.0 VAC
Current: 0.3968 A
Power: 47.43 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 8.13 %

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



Distribution - Goniophotometer

Distribution Test Conditions

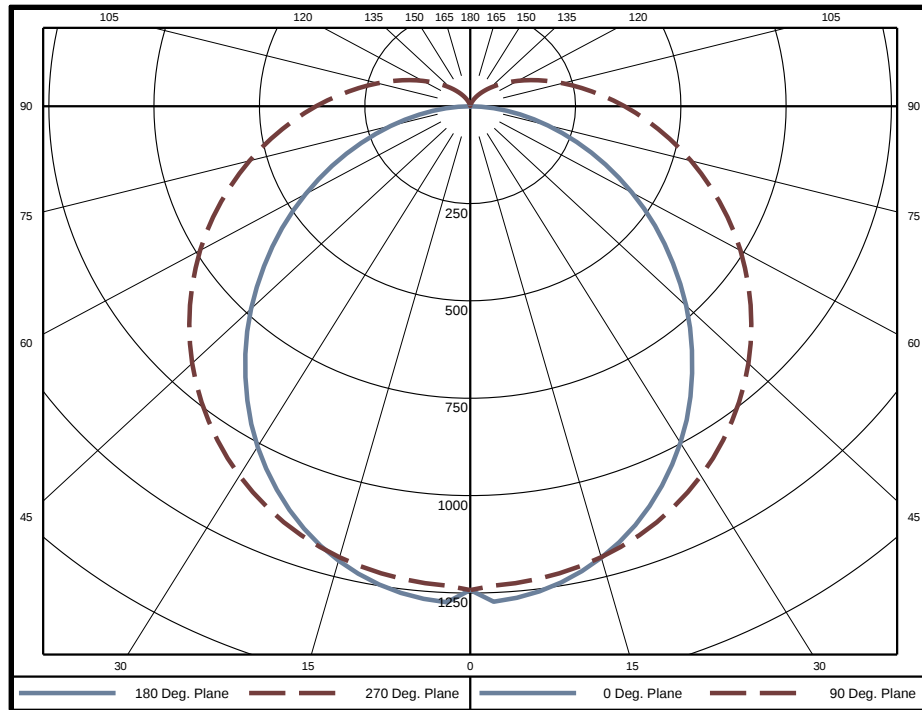
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.3968 A	47.43 W	0.996	60 Hz	8.13 %

Summary of Results

Spacing Criteria
 0-180: 1.20
 90-270: 1.31

Total Lumen Output: 4537 Lumens
Luminaire Efficacy: 95.7 lm/w
Maximum Candela: 1275 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	31.5	0.7%	60-65	272.5	6.0%	120-125	28.3	0.6%
5-10	87.7	1.9%	65-70	246.4	5.4%	125-130	21.3	0.5%
10-15	142.7	3.1%	70-75	218.0	4.8%	130-135	15.6	0.3%
15-20	192.7	4.2%	75-80	188.5	4.2%	135-140	11.0	0.2%
20-25	235.8	5.2%	80-85	159.1	3.5%	140-145	7.5	0.2%
25-30	270.8	6.0%	85-90	131.6	2.9%	145-150	4.7	0.1%
30-35	296.8	6.5%	90-95	108.2	2.4%	150-155	2.7	0.1%
35-40	313.2	6.9%	95-100	89.3	2.0%	155-160	1.4	0.0%
40-45	320.6	7.1%	100-105	72.9	1.6%	160-165	0.6	0.0%
45-50	319.2	7.0%	105-110	58.9	1.3%	165-170	0.2	0.0%
50-55	309.9	6.8%	110-115	46.8	1.0%	170-175	0.1	0.0%
55-60	294.0	6.5%	115-120	36.7	0.8%	175-180	0.0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	113	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242	1242
	5	1267	1240	1227	1230	1229	1230	1227	1240	1270	1240	1227	1230	1229	1230	1227
	10	1242	1217	1210	1216	1218	1216	1210	1217	1247	1217	1210	1216	1218	1216	1210
	15	1200	1180	1183	1195	1199	1195	1183	1180	1208	1180	1183	1195	1199	1195	1183
	20	1144	1130	1146	1164	1172	1164	1146	1130	1154	1130	1146	1164	1172	1164	1146
	25	1075	1068	1098	1125	1137	1125	1098	1068	1086	1068	1098	1125	1137	1125	1098
	30	997	996	1043	1078	1095	1078	1043	996	1009	996	1043	1078	1095	1078	1043
	35	910	917	980	1024	1046	1024	980	917	922	917	980	1024	1046	1024	980
	40	818	832	911	965	992	965	911	832	831	832	911	965	992	965	911
	45	724	744	840	902	933	902	840	744	736	744	840	902	933	902	840
	50	628	656	765	835	870	835	765	656	639	656	765	835	870	835	765
	55	535	569	690	768	806	768	690	569	545	569	690	768	806	768	690
	60	442	484	617	700	740	700	617	484	452	484	617	700	740	700	617
	65	354	402	545	631	673	631	545	402	362	402	545	631	673	631	545
	70	269	326	476	564	607	564	476	326	275	326	476	564	607	564	476
	75	191	256	412	500	543	500	412	256	196	256	412	500	543	500	412
	80	120	194	352	438	480	438	352	194	123	194	352	438	480	438	352
	85	56	143	299	381	421	381	299	143	58	143	299	381	421	381	299
	90	1	102	251	329	366	329	251	102	1	102	251	329	366	329	251
	95	1	72	209	280	315	280	209	72	1	72	209	280	315	280	209
	100	1	52	173	238	269	238	173	52	1	52	173	238	269	238	173
	105	1	38	143	200	228	200	143	38	1	38	143	200	228	200	143
	110	1	29	116	167	191	167	116	29	1	29	116	167	191	167	116
	115	1	22	95	137	159	137	95	22	1	22	95	137	159	137	95
	120	1	17	76	112	130	112	76	17	1	17	76	112	130	112	76
	125	1	13	61	90	106	90	61	13	1	13	61	90	106	90	61
	130	1	10	48	72	85	72	48	10	0	10	48	72	85	72	48
	135	1	8	37	57	67	57	37	8	0	8	37	57	67	57	37
	140	1	6	28	44	52	44	28	6	0	6	28	44	52	44	28
	145	1	4	20	32	39	32	20	4	1	4	20	32	39	32	20
	150	1	3	14	21	28	21	14	3	1	3	14	21	28	21	14
	155	1	1	9	14	19	14	9	1	1	1	9	14	19	14	9
	160	1	1	5	8	11	8	5	1	1	1	5	8	11	8	5
	165	1	1	2	4	5	4	2	1	1	1	2	4	5	4	2
	170	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	175	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	45	11440	10370
	55	10300	9537
	65	9070	8846
	75	7676	8410
	85	5594	8569



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	5282	5282	5282	5282	5101	5101	5101	5101	4762	4762	4762	4452	4452	4452	4167	4167	4167	4033
1	4715	4456	4223	4014	4534	4301	4091	3900	4012	3840	3683	3746	3608	3480	3501	3391	3289	3154
2	4252	3834	3488	3198	4080	3703	3388	3120	3457	3195	2969	3229	3015	2826	3019	2845	2689	2557
3	3858	3342	2942	2623	3698	3230	2862	2566	3019	2710	2455	2825	2566	2349	2644	2429	2246	2120
4	3522	2946	2524	2202	3375	2851	2460	2159	2670	2337	2074	2503	2220	1991	2347	2109	1911	1791
5	3233	2623	2197	1883	3098	2541	2145	1848	2386	2044	1781	2242	1947	1716	2107	1854	1652	1538
6	2981	2355	1935	1634	2859	2285	1892	1606	2150	1808	1552	2025	1727	1499	1908	1649	1446	1339
7	2761	2131	1722	1436	2650	2069	1686	1413	1952	1614	1368	1843	1546	1324	1740	1479	1280	1180
8	2568	1941	1546	1276	2467	1887	1515	1256	1785	1454	1218	1689	1395	1181	1598	1338	1144	1049
9	2397	1778	1399	1143	2305	1731	1372	1127	1641	1320	1095	1556	1269	1063	1476	1219	1031	942
10	2246	1638	1275	1033	2162	1596	1251	1019	1517	1206	991	1441	1161	963	1370	1118	936	852

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	77.6	4.99
6.00	34.5	7.49
8.00	19.4	9.98
10.0	12.4	12.5
12.0	8.63	15.0
14.0	6.34	17.5
16.0	4.85	20.0

Cone of Light Plot

