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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

John Andrews
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Fairfield, NJ 07004-3416

Catalog Number
LW4-4-2100-35K-HTA-1%-UNI (190mA)

Order Number
10644857
Test Number
868177

Test Date

2015-01-14

Prepared By

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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 OT30W/PRG1050C/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:	2035 Lumens
Luminaire Efficacy:	109 lm/w
Maximum Candela:	581.3 Candela

Electrical Data

Test Temperature:	24.8 °C
Voltage:	120.0 VAC
Current:	0.1572 A
Power:	18.73 W
Power Factor:	0.993
Frequency:	60 Hz
Current THD:	5.08 %

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
24.8 °C	120.0 VAC	0.1572 A	18.73 W	0.993	60 Hz	5.08 %

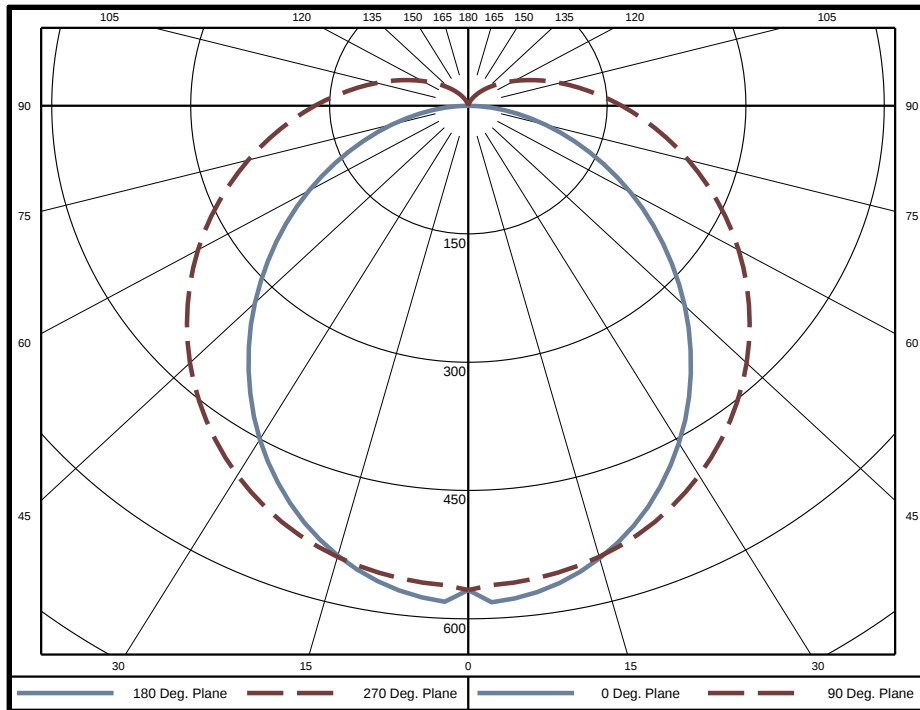
Summary of Results

Spacing Criteria
 0-180: 1.19
 90-270: 1.31

Total Lumen Output:
Luminaire Efficacy:
Maximum Candela:

2035 Lumens
 108.7 lm/w
 581 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	14.3	0.7%	60-65	122.5	6.0%	120-125	11.9	0.6%
5-10	40.0	2.0%	65-70	110.4	5.4%	125-130	8.9	0.4%
10-15	65.0	3.2%	70-75	97.4	4.8%	130-135	6.4	0.3%
15-20	87.7	4.3%	75-80	83.8	4.1%	135-140	4.5	0.2%
20-25	107.3	5.3%	80-85	70.4	3.5%	140-145	3.0	0.1%
25-30	123.1	6.0%	85-90	57.8	2.8%	145-150	1.8	0.1%
30-35	134.8	6.6%	90-95	47.3	2.3%	150-155	1.0	0.0%
35-40	142.2	7.0%	95-100	38.7	1.9%	155-160	0.5	0.0%
40-45	145.3	7.1%	100-105	31.4	1.5%	160-165	0.2	0.0%
45-50	144.4	7.1%	105-110	25.2	1.2%	165-170	0.0	0.0%
50-55	140.0	6.9%	110-115	19.9	1.0%	170-175	0.0	0.0%
55-60	132.5	6.5%	115-120	15.5	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	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566	566
	5	578	566	560	561	560	560	558	564	577	564	558	560	560	561	560	566
	10	567	557	553	555	555	553	549	553	565	553	549	553	555	555	553	557
	15	548	541	541	546	546	543	535	535	545	535	535	543	546	546	541	541
	20	523	520	524	532	534	529	517	511	518	511	517	529	534	532	524	520
	25	491	492	502	515	518	511	494	482	486	482	494	511	518	515	502	492
	30	455	460	476	494	499	489	467	449	450	449	467	489	499	494	476	460
	35	416	423	446	470	477	464	437	413	410	413	437	464	477	470	446	423
	40	374	385	414	443	452	437	404	374	369	374	404	437	452	443	414	385
	45	331	344	380	415	425	408	370	334	326	334	370	408	425	415	380	344
	50	287	304	344	384	397	378	334	294	282	294	334	378	397	384	344	304
	55	244	263	309	353	368	347	299	255	240	255	299	347	368	353	309	263
	60	202	224	274	322	337	316	266	216	199	216	266	316	337	322	274	224
	65	161	186	240	290	307	285	232	180	158	180	232	285	307	290	240	186
	70	123	150	208	259	276	254	201	145	121	145	201	254	276	259	208	150
	75	87	118	178	230	246	225	172	114	86	114	172	225	246	230	178	118
	80	54	89	150	202	218	196	145	87	53	87	145	196	218	202	150	89
	85	25	65	126	175	191	171	121	63	25	63	121	171	191	175	126	65
	90	0	46	104	150	166	147	100	45	0	45	100	147	166	150	104	46
	95	0	32	85	128	142	125	82	31	0	31	82	125	142	128	85	32
	100	0	23	69	108	121	106	67	22	0	22	67	106	121	108	69	23
	105	0	16	56	91	103	89	54	16	0	16	54	89	103	91	56	16
	110	0	12	45	75	86	74	44	12	0	12	44	74	86	75	45	12
	115	0	9	36	62	71	61	35	9	0	9	35	61	71	62	36	9
	120	0	7	29	50	58	49	28	7	0	7	28	49	58	50	29	7
	125	0	5	23	40	47	40	22	5	0	5	22	40	47	40	23	5
	130	0	4	18	32	37	32	17	4	0	4	17	32	37	32	18	4
	135	0	3	14	25	29	25	12	2	0	2	12	25	29	25	14	3
	140	0	2	10	19	22	19	8	2	0	2	8	19	22	19	10	2
	145	0	1	7	14	17	13	6	1	0	1	6	13	17	14	7	1
	150	0	0	5	10	12	8	4	0	0	0	4	8	12	10	5	0
	155	0	0	3	6	8	4	2	0	0	0	2	4	8	6	3	0
	160	0	0	1	4	4	2	1	0	0	0	1	2	4	4	1	0
	165	0	0	0	1	2	1	0	0	0	0	0	1	2	1	0	0
	170	0	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	0
	180	0	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
	45	5225	4691	4876
	55	4701	4265	4612
	65	4138	3894	4400
	75	3493	3631	4278
	85	2513	3602	4362



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	2372	2372	2372	2372	2292	2292	2292	2292	2142	2142	2142	2005	2005	2005	1879	1879	1879	1820
1	2119	2003	1899	1806	2039	1935	1841	1756	1807	1730	1660	1689	1628	1571	1581	1532	1487	1427
2	1911	1724	1570	1440	1835	1667	1525	1406	1558	1441	1340	1458	1361	1277	1365	1287	1217	1158
3	1735	1503	1324	1182	1664	1454	1290	1157	1361	1223	1109	1276	1159	1062	1196	1100	1017	961
4	1584	1326	1137	993	1519	1284	1109	974	1204	1055	937	1131	1004	901	1062	955	866	813
5	1454	1181	990	849	1394	1145	967	834	1076	923	805	1013	881	777	954	840	749	698
6	1341	1060	872	737	1287	1029	853	725	970	816	702	915	781	679	864	747	656	608
7	1242	960	777	648	1193	933	761	638	881	729	619	833	699	600	788	670	581	536
8	1155	874	697	576	1111	851	684	568	806	657	551	763	631	535	724	607	519	477
9	1078	801	631	516	1038	780	619	509	741	597	495	703	574	482	668	553	468	428
10	1010	738	575	467	974	720	565	461	685	545	449	652	526	437	620	507	425	387

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	35.4	4.97
6.00	15.7	7.46
8.00	8.85	9.95
10.0	5.66	12.4
12.0	3.93	14.9
14.0	2.89	17.4
16.0	2.21	19.9

Cone of Light Plot

