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Indoor Distribution Test Report

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

Prepared For
Mercury Lighting

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Catalog Number
LW5-4-2100-35K-HTA-S30-UNV

Order Number
10692188
Test Number
1000165

Test Date

2015-04-01

Prepared By

Javier Caban, Technician

Approved By

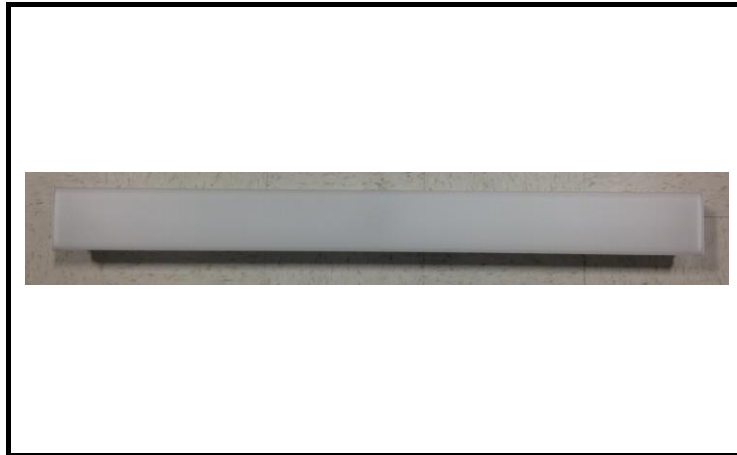
Kyle Spaziani, Project Handler

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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: 4.500 in.
Luminous Height: 2.00 in.

Summary of Results

Total Luminaire Output: 2227 Lumens
Luminaire Efficacy: 112.2 lm/w
Maximum Candela: 616 Candela

Electrical Data

Test Temperature: 24.5 °C
Voltage: 120.0 VAC
Current: 0.1665 A
Power: 19.86 W
Power Factor: 0.994
Frequency: 60 Hz
Current THD: 4.65 %

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



Distribution - Goniophotometer

Distribution Test Conditions

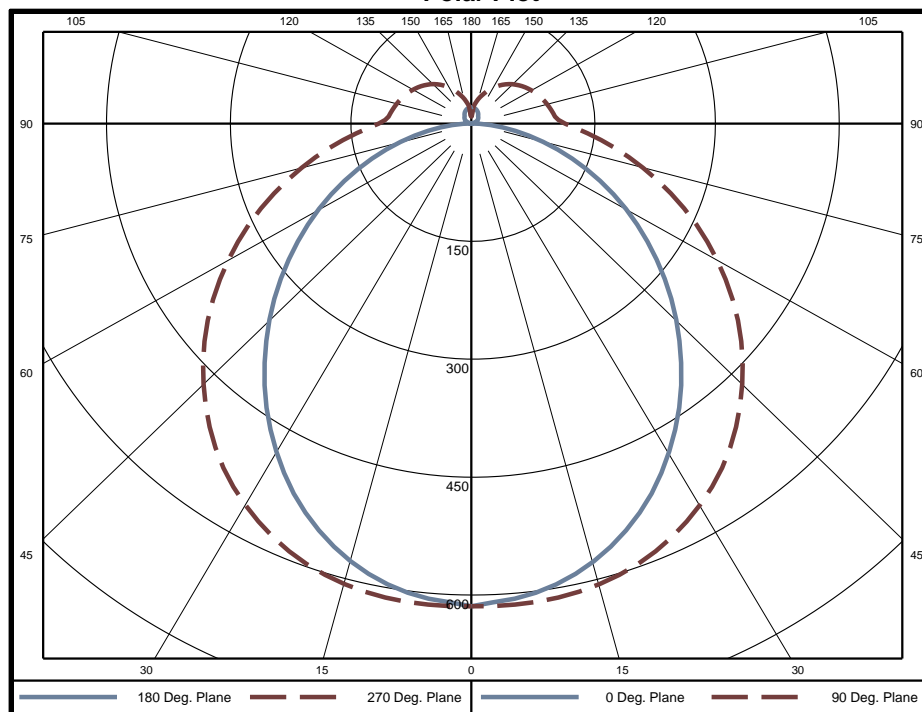
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1665 A	19.86 W	0.994	60 Hz	4.65 %

Summary of Results

Spacing Criteria
 0-180: 1.17
 90-270: 1.35

Total Lumen Output: 2227 Lumens
Luminaire Efficacy: 112.2 lm/w
Maximum Candela: 616 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	15.6	0.7%	60-65	129.6	5.8%	120-125	23.9	1.1%
5-10	43.5	2.0%	65-70	113.0	5.1%	125-130	21.5	1.0%
10-15	71.1	3.2%	70-75	94.7	4.3%	130-135	18.9	0.8%
15-20	96.3	4.3%	75-80	75.9	3.4%	135-140	16.0	0.7%
20-25	118.3	5.3%	80-85	58.0	2.6%	140-145	13.3	0.6%
25-30	136.3	6.1%	85-90	42.2	1.9%	145-150	10.7	0.5%
30-35	149.7	6.7%	90-95	33.6	1.5%	150-155	8.2	0.4%
35-40	158.2	7.1%	95-100	31.8	1.4%	155-160	6.0	0.3%
40-45	161.4	7.2%	100-105	30.8	1.4%	160-165	4.2	0.2%
45-50	159.8	7.2%	105-110	29.5	1.3%	165-170	2.6	0.1%
50-55	153.7	6.9%	110-115	27.9	1.3%	170-175	1.4	0.1%
55-60	143.4	6.4%	115-120	26.1	1.2%	175-180	0.5	0.0%

Zone	Lumens	% of Luminaire
0-40	789.0	35.4%
0-60	1407.3	63.2%
0-90	1920.7	86.2%
90-180	306.7	13.8%



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	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614
5	607	613	611	613	615	613	611	613	607	613	611	613	615	613	611	613
10	596	602	604	610	613	610	604	602	596	602	604	610	613	610	604	602
15	577	586	593	603	607	603	593	586	577	586	593	603	607	603	593	586
20	551	564	576	590	596	590	576	564	551	564	576	590	596	590	576	564
25	520	535	554	573	581	573	554	535	520	535	554	573	581	573	554	535
30	482	502	527	550	560	550	527	502	482	502	527	550	560	550	527	502
35	442	464	495	524	535	524	495	464	442	464	495	524	535	524	495	464
40	398	423	459	491	504	491	459	423	398	423	459	491	504	491	459	423
45	353	380	420	455	469	455	420	380	353	380	420	455	469	455	420	380
50	307	336	379	417	431	417	379	336	307	336	379	417	431	417	379	336
55	262	292	336	375	390	375	336	292	262	292	336	375	390	375	336	292
60	218	247	293	332	347	332	293	247	218	247	293	332	347	332	293	247
65	173	203	249	289	304	289	249	203	173	203	249	289	304	289	249	203
70	131	161	206	246	260	246	206	161	131	161	206	246	260	246	206	161
75	91	121	165	203	218	203	165	121	91	121	165	203	218	203	165	121
80	55	85	128	165	179	165	128	85	55	85	128	165	179	165	128	85
85	24	54	95	130	143	130	95	54	24	54	95	130	143	130	95	54
90	0	31	70	102	115	102	70	31	0	31	70	102	115	102	70	31
95	0	28	64	92	103	92	64	28	0	28	64	92	103	92	64	28
100	1	29	63	90	99	90	63	29	1	29	63	90	99	90	63	29
105	3	29	62	87	96	87	62	29	3	29	62	87	96	87	62	29
110	5	29	61	84	92	84	61	29	5	29	61	84	92	84	61	29
115	7	29	59	81	89	81	59	29	7	29	59	81	89	81	59	29
120	9	29	57	78	85	78	57	29	9	29	57	78	85	78	57	29
125	10	29	55	74	81	74	55	29	10	29	55	74	81	74	55	29
130	11	27	52	70	76	70	52	27	11	27	52	70	76	70	52	27
135	12	26	47	65	71	65	47	26	12	26	47	65	71	65	47	26
140	13	25	42	60	65	60	42	25	13	25	42	60	65	60	42	25
145	15	23	38	54	59	54	38	23	15	23	38	54	59	54	38	23
150	16	23	33	46	53	46	33	23	16	23	33	46	53	46	33	23
155	17	21	30	38	46	38	30	21	17	21	30	38	46	38	30	21
160	18	20	26	32	38	32	26	20	18	20	26	32	38	32	26	20
165	19	20	23	25	32	25	23	20	19	20	23	25	32	25	23	20
170	20	20	20	19	25	19	20	20	20	20	20	19	25	19	20	20
175	20	20	19	17	13	17	19	20	20	20	19	17	13	17	19	20
180	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

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

	0	45	90
0	4703	4703	4703
45	3821	4547	5075
55	3495	4486	5210
65	3138	4509	5505
75	2679	4892	6435
85	2092	8364	12570



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	2579	2579	2579	2579	2484	2484	2484	2484	2305	2305	2305	2142	2142	2142	1992	1992	1992	1922
1	2323	2205	2099	2004	2229	2124	2028	1942	1972	1895	1825	1833	1771	1714	1704	1656	1611	1542
2	2101	1906	1745	1610	2013	1837	1691	1567	1708	1588	1484	1589	1491	1405	1479	1400	1329	1263
3	1909	1666	1477	1327	1827	1607	1434	1295	1496	1352	1233	1394	1274	1173	1299	1200	1116	1053
4	1744	1470	1270	1117	1669	1420	1235	1092	1325	1168	1044	1237	1105	998	1155	1044	952	893
5	1601	1310	1106	956	1532	1267	1078	937	1185	1023	898	1108	970	861	1037	919	824	768
6	1477	1176	975	830	1413	1139	951	814	1068	905	783	1001	860	753	939	817	722	670
7	1367	1064	868	730	1310	1031	847	717	969	808	691	911	770	665	856	733	640	590
8	1271	969	779	648	1219	940	761	637	886	728	615	834	695	593	786	663	572	525
9	1186	887	704	581	1139	862	689	571	814	660	552	768	632	534	725	604	515	472
10	1111	817	641	524	1068	795	628	516	752	603	500	711	578	484	673	554	468	427

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	38.4	5.07
6.00	17.1	7.61
8.00	9.60	10.1
10.0	6.14	12.7
12.0	4.27	15.2
14.0	3.13	17.8
16.0	2.40	20.3

Cone of Light Plot

