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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
United States

Catalog Number
LHBT-2-16000HL-40K-R-U80TW-2D-UNI-172WATT

Order Number
11185132
Test Number
1223872

Test Date

2016-03-17

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing, white steel reflectors, frosted patterned plastic lens enclosure
Lamp: 160 white LEDs, two boards with 80 LEDs each
Mounting: Recessed
Ballast/Driver: Two Everline D21CC80UNVTW-D

Luminaire



Luminaire Characteristics

Luminous Length: 23.13 in.
Luminous Width: 20.75 in.
Luminous Height: 0.75 in.

Summary of Results

Total Luminaire Output: 15390 Lumens
Luminaire Efficacy: 91.4 lm/w
Maximum Candela: 5644 Candela

Test Conditions

Test Temperature: 25.0 °C
Voltage: 120.0 VAC
Current: 1.405 A
Power: 168.3 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.40 %

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



Distribution - Goniophotometer

Distribution Test Conditions

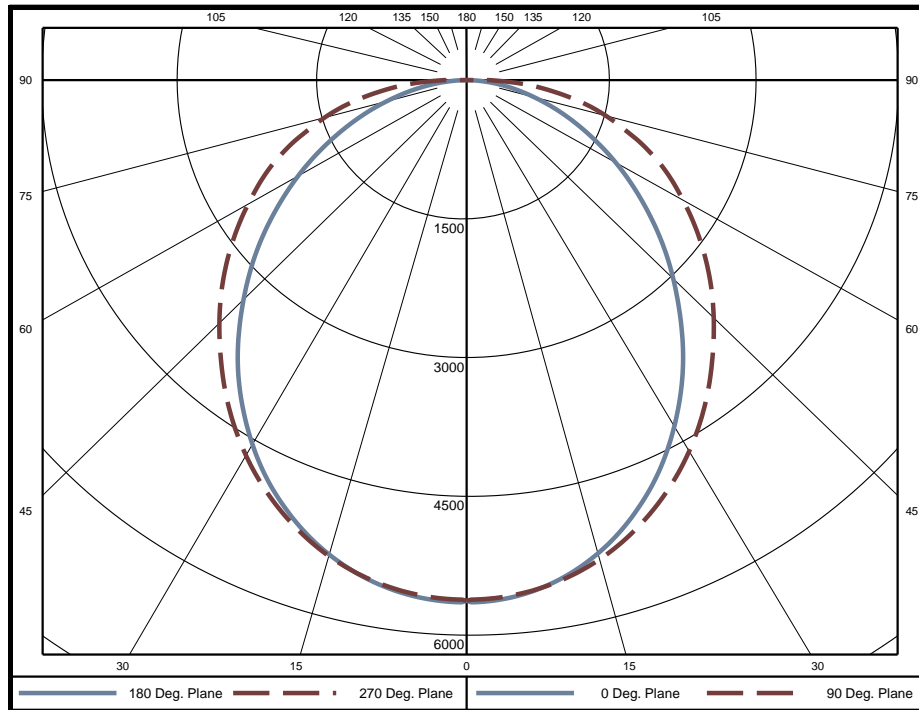
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	1.405 A	168.3 W	0.998	60 Hz	5.40 %

Summary of Results

Spacing Criteria
 0-180: 1.16
 90-270: 1.16

Total Lumen Output: 15390 Lumens
Luminaire Efficacy: 91.4 lm/w
Maximum Candela: 5644 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	134	0.9%	60-65	999	6.5%	120-125	0	0.0%
5-10	397	2.6%	65-70	863	5.6%	125-130	0	0.0%
10-15	642	4.2%	70-75	706	4.6%	130-135	0	0.0%
15-20	860	5.6%	75-80	538	3.5%	135-140	0	0.0%
20-25	1041	6.8%	80-85	356	2.3%	140-145	0	0.0%
25-30	1179	7.7%	85-90	162	1.1%	145-150	0	0.0%
30-35	1270	8.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	1314	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	1315	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	1280	8.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	1213	7.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	1117	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	6837	44.4%
0-60	11762	76.4%
0-90	15386	100.0%
90-180	0	0.0%



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	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627	5627
5	5608	5594	5598	5593	5588	5593	5598	5594	5608	5594	5598	5593	5588	5593	5598	5594
10	5492	5483	5498	5505	5503	5505	5498	5483	5492	5483	5498	5505	5503	5505	5498	5483
15	5301	5300	5333	5358	5362	5358	5333	5300	5301	5300	5333	5358	5362	5358	5333	5300
20	5040	5050	5106	5152	5164	5152	5106	5050	5040	5050	5106	5152	5164	5152	5106	5050
25	4721	4743	4822	4897	4920	4897	4822	4743	4721	4743	4822	4897	4920	4897	4822	4743
30	4346	4387	4499	4603	4638	4603	4499	4387	4346	4387	4499	4603	4638	4603	4499	4387
35	3943	3993	4134	4273	4322	4273	4134	3993	3943	3993	4134	4273	4322	4273	4134	3993
40	3509	3576	3751	3920	3982	3920	3751	3576	3509	3576	3751	3920	3982	3920	3751	3576
45	3074	3154	3363	3567	3646	3567	3363	3154	3074	3154	3363	3567	3646	3567	3363	3154
50	2649	2743	2983	3220	3307	3220	2983	2743	2649	2743	2983	3220	3307	3220	2983	2743
55	2226	2338	2613	2867	2960	2867	2613	2338	2226	2338	2613	2867	2960	2867	2613	2338
60	1826	1952	2252	2514	2612	2514	2252	1952	1826	1952	2252	2514	2612	2514	2252	1952
65	1441	1589	1902	2171	2274	2171	1902	1589	1441	1589	1902	2171	2274	2171	1902	1589
70	1086	1253	1560	1809	1899	1809	1560	1253	1086	1253	1560	1809	1899	1809	1560	1253
75	757	927	1216	1430	1514	1430	1216	927	757	927	1216	1430	1514	1430	1216	927
80	466	622	873	1050	1110	1050	873	622	466	622	873	1050	1110	1050	873	622
85	208	325	514	637	680	637	514	325	208	325	514	637	680	637	514	325
90	4	59	152	215	237	215	152	59	4	59	152	215	237	215	152	59
95	0	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	0
105	0	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	0
115	0	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	0
125	0	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	0
135	0	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	0
145	0	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	0
155	0	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	0
165	0	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	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)

	0	45	90
0	18180	18180	18180
45	14040	15360	16650
55	12540	14710	16670
65	11010	14540	17380
75	9443	15180	18900
85	7717	19060	25220



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	18315	18315	18315	18315	17890	17890	17890	17890	17094	17094	17094	16367	16367	16367	15699	15699	15699	15385
1	16618	15834	15131	14498	16192	15481	14841	14260	14821	14292	13806	14214	13782	13381	13655	13307	12981	12650
2	15082	13760	12667	11747	14670	13466	12460	11605	12914	12065	11331	12404	11694	11070	11933	11345	10821	10478
3	13741	12072	10780	9751	13353	11826	10627	9661	11362	10333	9487	10933	10055	9318	10535	9792	9156	8811
4	12584	10699	9318	8264	12224	10492	9202	8205	10101	8978	8089	9739	8765	7976	9402	8561	7866	7526
5	11579	9568	8163	7125	11251	9394	8072	7084	9064	7898	7004	8757	7731	6926	8470	7571	6850	6517
6	10701	8625	7231	6231	10403	8477	7160	6202	8197	7021	6145	7935	6888	6089	7690	6761	6034	5712
7	9931	7830	6468	5514	9661	7704	6411	5492	7465	6299	5450	7240	6191	5409	7030	6088	5368	5059
8	9252	7154	5835	4928	9009	7046	5788	4912	6841	5697	4881	6648	5609	4849	6466	5524	4819	4522
9	8652	6575	5303	4444	8432	6482	5264	4431	6304	5189	4407	6137	5116	4383	5980	5045	4359	4076
10	8118	6074	4851	4037	7919	5994	4819	4027	5840	4756	4008	5694	4695	3989	5557	4635	3970	3700

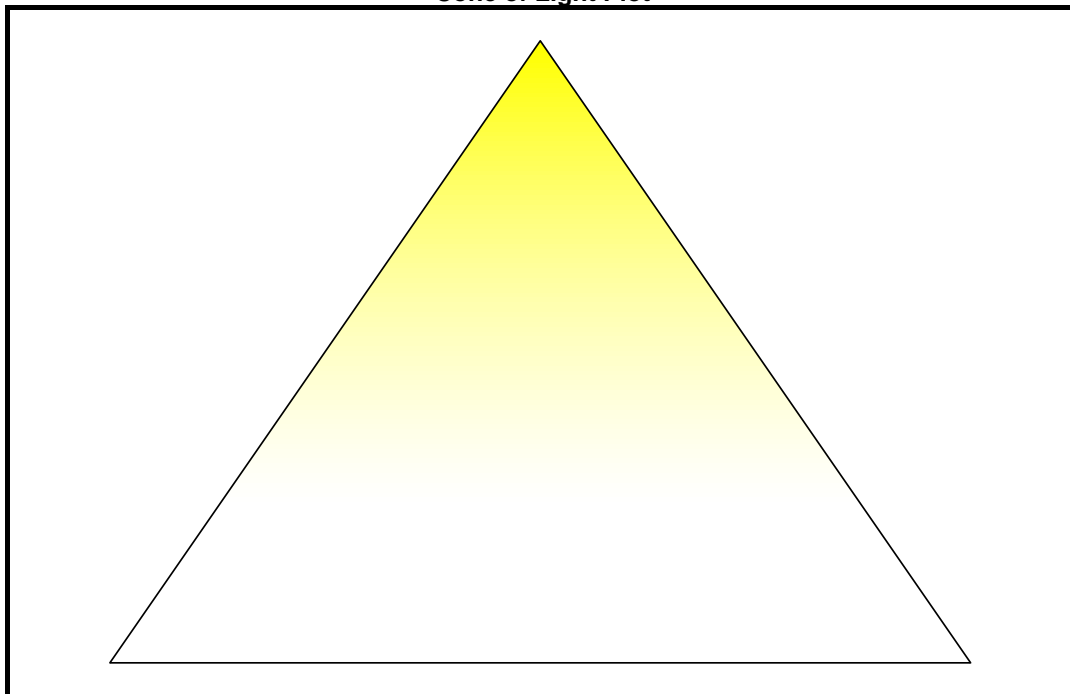
Cone of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	352	4.77
6.00	156	7.15
8.00	87.9	9.54
10.0	56.3	11.9
12.0	39.1	14.3
14.0	28.7	16.7
16.0	22.0	19.1

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	5627 Candela
Central Cone Intensity:	5616 Candela
Beam Flux:	10085.9 Lumens
Beam Angle (0-180):	96.2 Degrees
Beam Angle (90-270):	114.2 Degrees
Field Angle (0-180):	156.5 Degrees
Field Angle (90-270):	172.6 Degrees

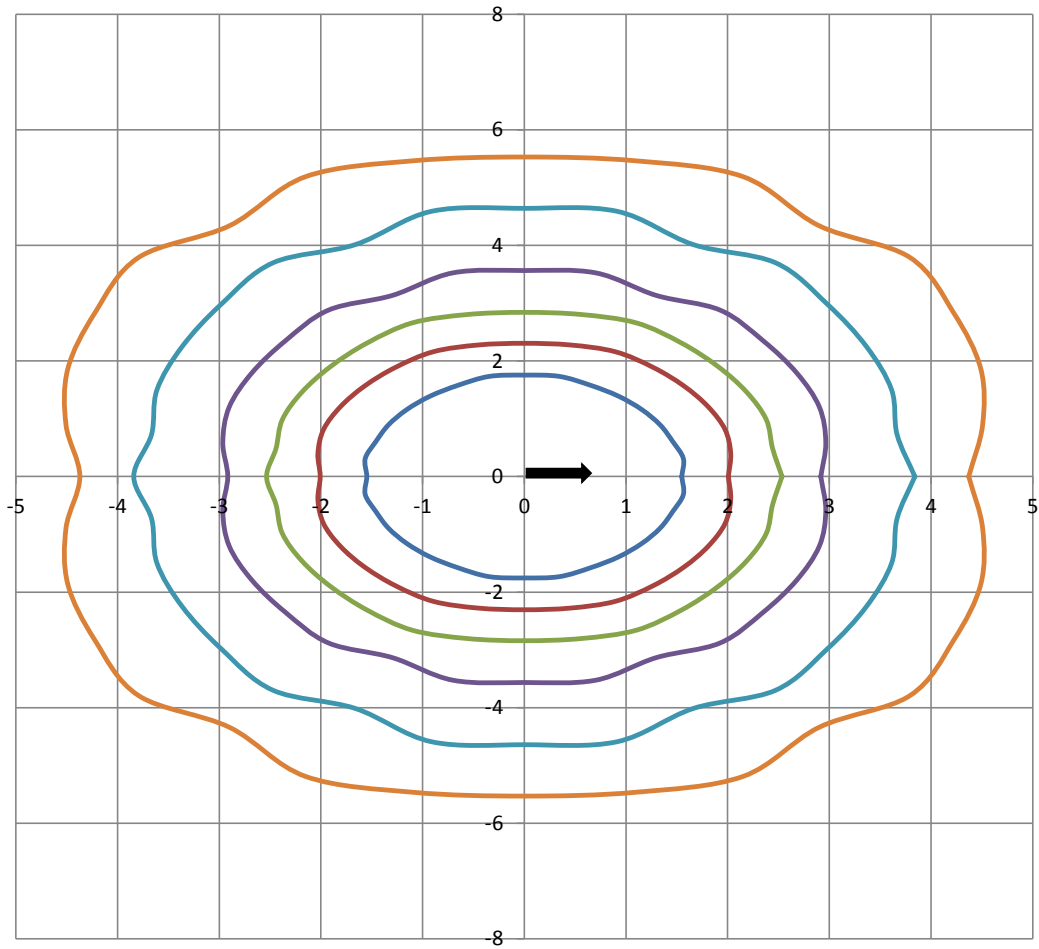
Cone of Light Plot





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

