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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-4-32000HL-40K-R-U80TW-4D-UNI-347WATT

Order Number
11185132
Test Number
1223870

Test Date

2016-03-16

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 housomg, white steel reflectors, frosted patterned plastic lens enclosure
Lamp: 320 white LEDs, four boards with 80 LEDs each
Mounting: Recessed
Ballast/Driver: Two Everline D21CC800UNVTW-D
Reflectivity: 88.0

Luminaire



Luminaire Characteristics

Luminous Length: 23.13 in.
Luminous Width: 21.50 in.
Luminous Height: 0.75 in.

Summary of Results

Total Luminaire Output: 30620 Lumens
Luminaire Efficacy: 91.1 lm/w
Maximum Candela: 11219 Candela

Test Conditions

Test Temperature: 25.4 °C
Voltage: 120.0 VAC
Current: 2.806 A
Power: 336.2 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.35 %

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



Distribution - Goniophotometer

Distribution Test Conditions

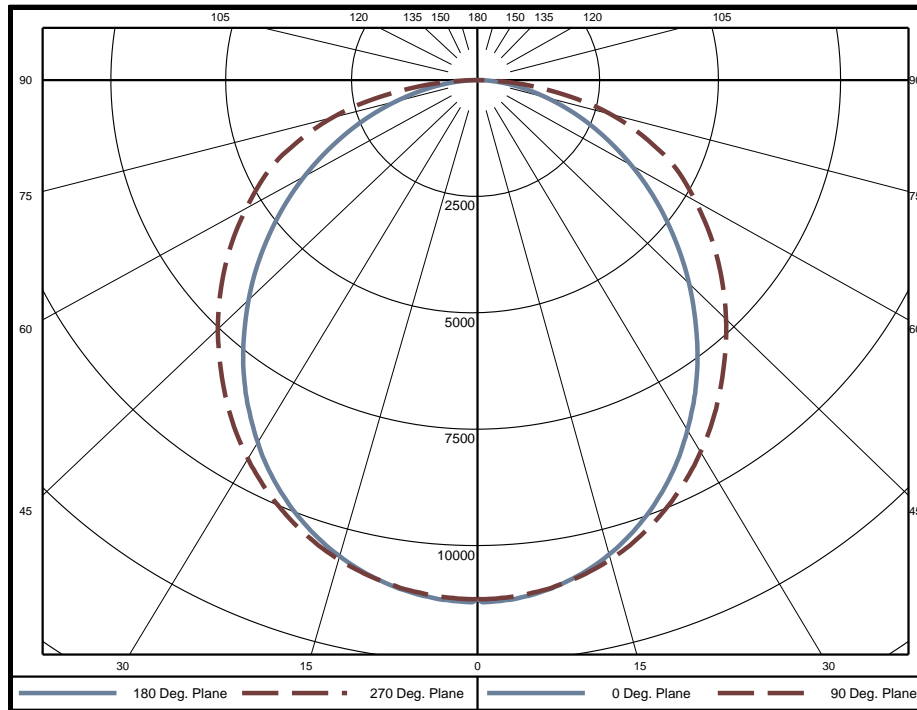
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.4 °C	120.0 VAC	2.806 A	336.2 W	0.998	60 Hz	5.35 %

Summary of Results

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

Total Lumen Output: 30620 Lumens
Luminaire Efficacy: 91.1 lm/w
Maximum Candela: 11219 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	266	0.9%	60-65	2024	6.6%	120-125	0	0.0%
5-10	786	2.6%	65-70	1753	5.7%	125-130	0	0.0%
10-15	1274	4.2%	70-75	1426	4.7%	130-135	0	0.0%
15-20	1708	5.6%	75-80	1051	3.4%	135-140	0	0.0%
20-25	2071	6.8%	80-85	623	2.0%	140-145	0	0.0%
25-30	2350	7.7%	85-90	193	0.6%	145-150	0	0.0%
30-35	2537	8.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	2633	8.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	2642	8.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	2577	8.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	2446	8.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	2257	7.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	13625	44.5%
0-60	23547	76.9%
0-90	30617	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	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150	11150
5	11140	11070	11070	11090	11100	11090	11070	11070	11140	11070	11070	11090	11100	11090	11070	11070
10	10920	10860	10880	10910	10930	10910	10880	10860	10920	10860	10880	10910	10930	10910	10880	10860
15	10560	10510	10570	10630	10660	10630	10570	10510	10560	10510	10570	10630	10660	10630	10570	10510
20	10060	10040	10130	10230	10280	10230	10130	10040	10060	10040	10130	10230	10280	10230	10130	10040
25	9454	9453	9596	9737	9797	9737	9596	9453	9454	9453	9596	9737	9797	9737	9596	9453
30	8729	8769	8962	9156	9238	9156	8962	8769	8729	8769	8962	9156	9238	9156	8962	8769
35	7944	8009	8263	8513	8626	8513	8263	8009	7944	8009	8263	8513	8626	8513	8263	8009
40	7101	7205	7519	7831	7954	7831	7519	7205	7101	7205	7519	7831	7954	7831	7519	7205
45	6252	6382	6759	7137	7289	7137	6759	6382	6252	6382	6759	7137	7289	7137	6759	6382
50	5395	5563	6012	6442	6605	6442	6012	5563	5395	5563	6012	6442	6605	6442	6012	5563
55	4559	4759	5275	5746	5919	5746	5275	4759	4559	4759	5275	5746	5919	5746	5275	4759
60	3739	3990	4566	5048	5225	5048	4566	3990	3739	3990	4566	5048	5225	5048	4566	3990
65	2953	3259	3872	4379	4567	4379	3872	3259	2953	3259	3872	4379	4567	4379	3872	3259
70	2220	2577	3199	3632	3754	3632	3199	2577	2220	2577	3199	3632	3754	3632	3199	2577
75	1529	1923	2479	2803	2879	2803	2479	1923	1529	1923	2479	2803	2879	2803	2479	1923
80	929	1308	1704	1849	1852	1849	1704	1308	929	1308	1704	1849	1852	1849	1704	1308
85	415	659	807	856	859	856	807	659	415	659	807	856	859	856	807	659
90	4	47	67	78	78	78	67	47	4	47	67	78	78	78	67	47
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	34750	34750	34750
45	27560	29800	32140
55	24780	28670	32170
65	21780	28560	33690
75	18420	29860	34680
85	14830	28860	30720



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	36451	36451	36451	36451	35603	35603	35603	35603	34021	34021	34021	32573	32573	32573	31244	31244	31244	30619
1	33145	31614	30243	29007	32300	30914	29664	28532	29603	28571	27625	28399	27556	26775	27289	26610	25976	25323
2	30082	27476	25320	23507	29264	26892	24908	23223	25795	24122	22676	24783	23384	22155	23848	22690	21656	20979
3	27401	24097	21540	19502	26630	23608	21235	19323	22686	20651	18975	21834	20098	18639	21043	19573	18315	17632
4	25085	21346	18609	16518	24372	20936	18378	16400	20159	17932	16168	19439	17508	15943	18769	17103	15725	15049
5	23077	19083	16292	14232	22425	18737	16113	14151	18081	15766	13992	17470	15434	13836	16900	15116	13683	13023
6	21322	17195	14426	12438	20730	16902	14284	12380	16344	14008	12267	15824	13744	12155	15337	13490	12045	11406
7	19782	15605	12898	11001	19246	15355	12784	10958	14879	12562	10874	14433	12348	10792	14015	12141	10711	10096
8	18427	14255	11630	9828	17943	14040	11537	9796	13631	11356	9733	13248	11181	9671	12887	11011	9609	9020
9	17228	13096	10566	8857	16790	12912	10489	8833	12559	10339	8784	12226	10194	8736	11913	10053	8689	8125
10	16163	12096	9663	8043	15768	11936	9599	8024	11630	9474	7986	11341	9352	7948	11068	9234	7911	7373

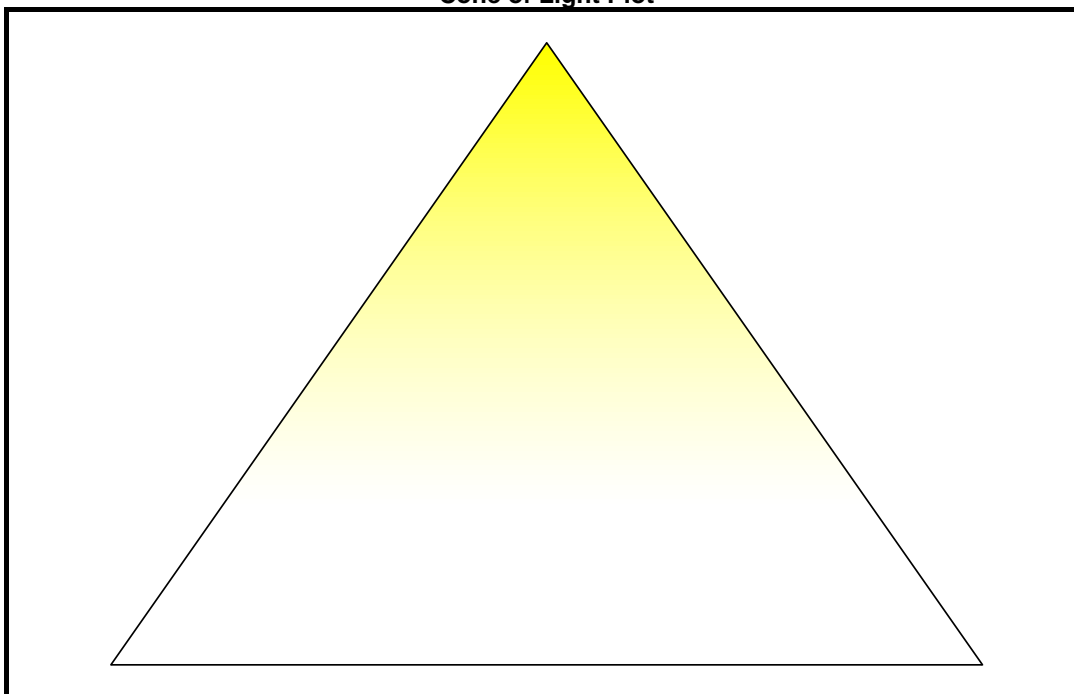
Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	697	4.80
6.00	310	7.20
8.00	174	9.60
10.0	111	12.0
12.0	77.4	14.4
14.0	56.9	16.8
16.0	43.5	19.2

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	11150 Candela
Central Cone Intensity:	11127 Candela
Beam Flux:	20467.2 Lumens
Beam Angle (0-180):	97.9 Degrees
Beam Angle (90-270):	114.9 Degrees
Field Angle (0-180):	156.7 Degrees
Field Angle (90-270):	167.4 Degrees

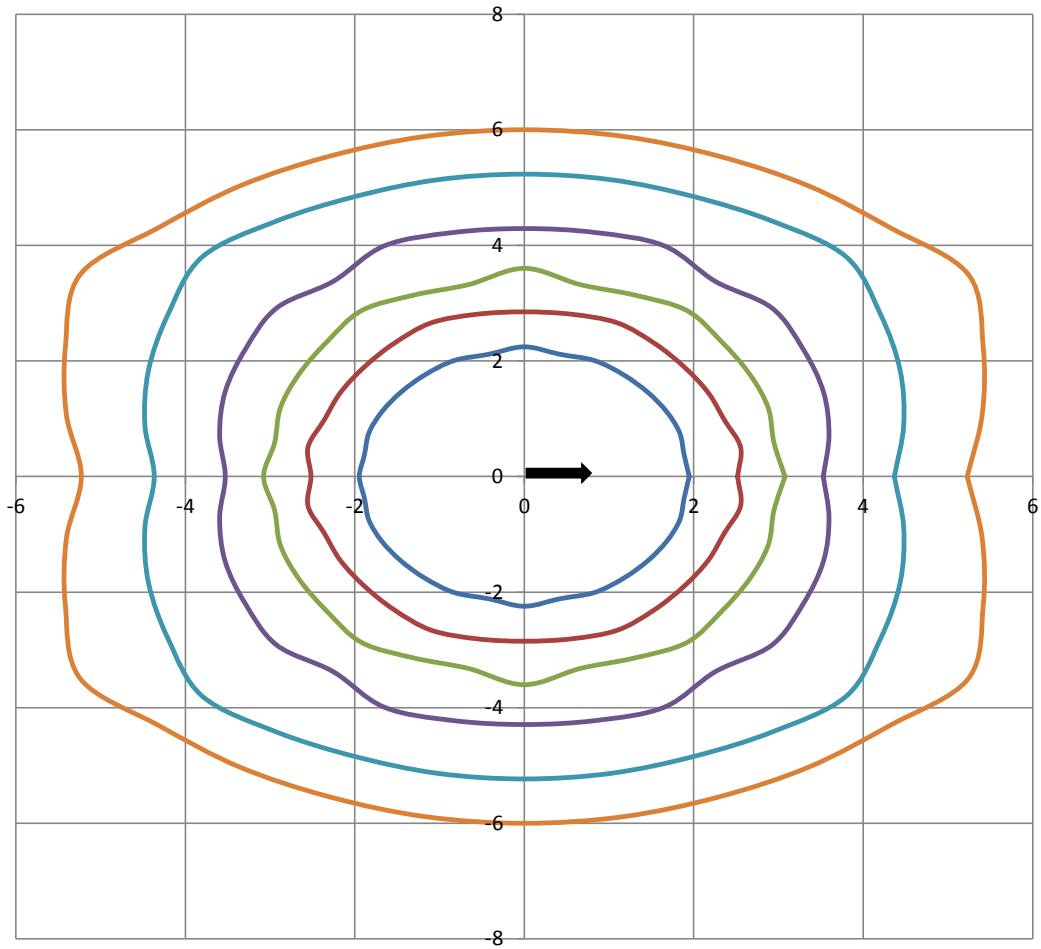
Cone of Light Plot





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

