



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300

Photometric Test Report

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

Prepared For
Auroralight Inc

2742 Loker Ave W
#100
Carlsbad, CA 92010-6619
United States

Catalog Number
HDL11-6-M-45 (6W, 25° OPTIC, 4500K)

Order Number
12250114
Test Number
12250114.132

Report Date

2018-05-09

Prepared By

Sean Gregory, Project Handler

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Cylindrical metal housing with clear glass lens and internal LED module
Lamp: One (1) Cree XHP 4500K LED with 25°, medium silicone optic
Mounting: Pendant
Ballast/Driver: Integrated

Note: This report has been pro-rated using data from report numbers 12250114.130, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

Luminaire



Luminaire Characteristics

Luminous Diameter: 1.50 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Cutoff
BUG Rating: B1 U1 G0

Test Conditions

Test Temperature: 24.5 °C
Voltage: 12.03 VAC
Current: 0.5183 A
Power: 6.167 W
Power Factor: 0.989
Frequency: 60 Hz
Current THD: 8.15 %

Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees
Test distance exceeds five times the greatest luminous opening of luminaire

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	12.03 VAC	0.5183 A	6.167 W	0.989	60 Hz	8.15 %

Summary of Results

Spacing Criteria

0-180: 0.45

90-270: 0.45

Total Lumen Output:

320.2 Lumens

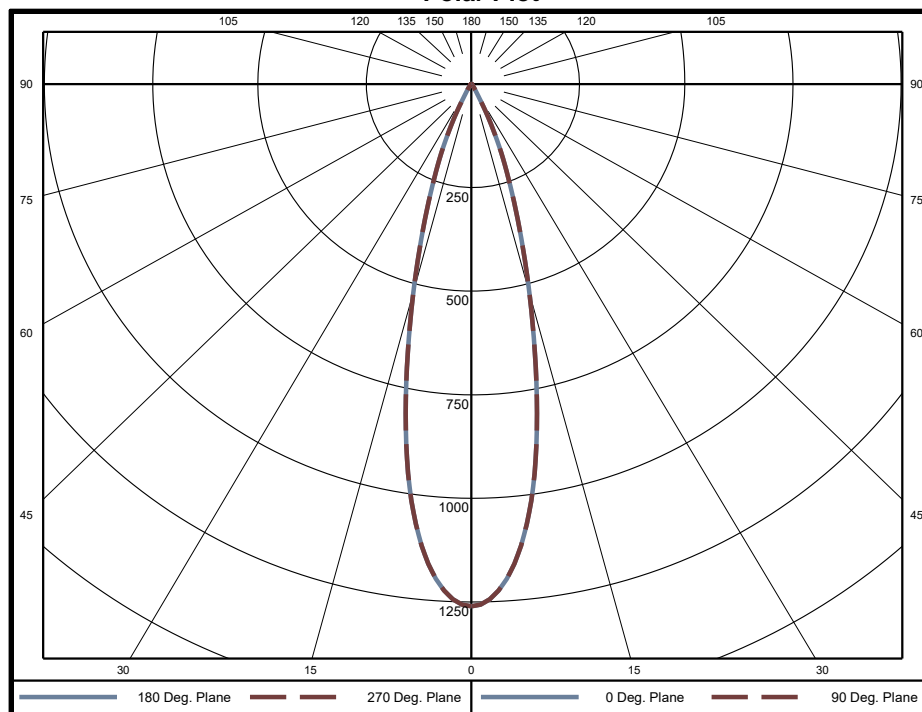
Luminaire Efficacy:

51.9 lm/w

Maximum Candela:

1260 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	28.95	9.0%	60-65	0.39	0.1%	120-125	0	0.0%
5-10	73.04	22.8%	65-70	0.26	0.1%	125-130	0	0.0%
10-15	82.01	25.6%	70-75	0.21	0.1%	130-135	0	0.0%
15-20	64.41	20.1%	75-80	0.14	0.0%	135-140	0	0.0%
20-25	40.79	12.7%	80-85	0.09	0.0%	140-145	0	0.0%
25-30	17.02	5.3%	85-90	0.04	0.0%	145-150	0	0.0%
30-35	5.60	1.7%	90-95	0.00	0.0%	150-155	0	0.0%
35-40	2.87	0.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.61	0.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.14	0.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.96	0.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.70	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	315	98.3%
0-60	319	99.7%
0-90	320	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical 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	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260
	5	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162
	10	882	882	882	882	882	882	882	882	882	882	882	882	882	882	882
	15	532	532	532	532	532	532	532	532	532	532	532	532	532	532	532
	20	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
	25	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	35	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	40	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	50	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	55	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	60	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	65	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	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
	105	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
	115	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
	125	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
	135	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
	145	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
	155	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
	165	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
	175	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

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

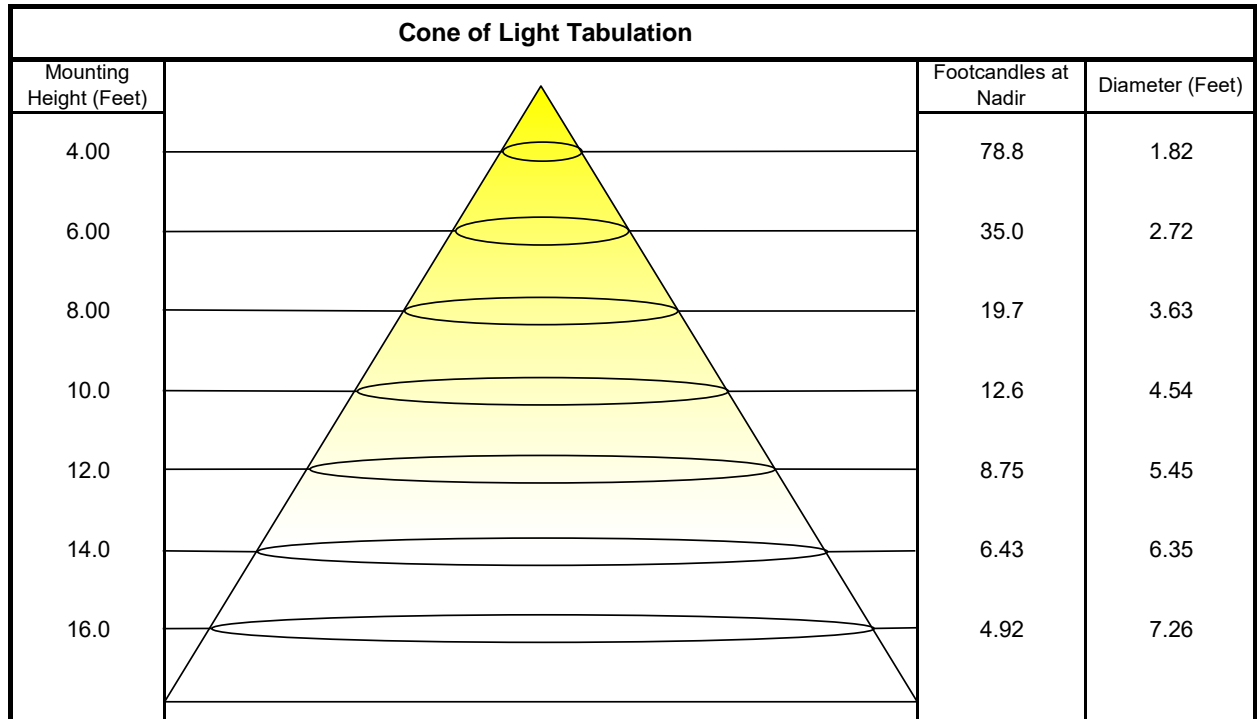
Vertical Angle (Degrees)	0	45	90
	0	1106000	1106000
	45	4010	4010
	55	2945	2945
	65	1239	1239
	75	1105	1105
	85	1167	1167



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	381	381	381	381	372	372	372	372	356	356	356	341	341	341	327	327	327	320
1	368	361	355	349	360	354	349	344	341	337	333	330	326	323	319	316	314	309
2	355	344	334	325	349	338	329	322	328	321	315	319	313	308	311	306	302	297
3	344	328	317	307	338	324	313	305	316	307	300	309	302	295	302	296	291	287
4	333	315	302	292	328	312	300	290	305	295	287	299	291	284	294	287	281	277
5	322	303	289	279	318	300	288	278	295	284	276	290	281	274	286	278	271	268
6	313	292	278	269	309	290	277	268	286	274	266	282	272	264	278	269	263	259
7	303	282	268	259	300	280	267	258	277	265	257	273	263	256	270	261	255	251
8	295	273	259	250	292	272	259	250	269	257	249	266	255	248	263	254	247	244
9	287	265	251	242	284	263	251	242	261	249	241	258	248	240	256	247	240	237
10	279	257	244	235	276	256	243	235	254	242	234	251	241	234	249	240	233	230

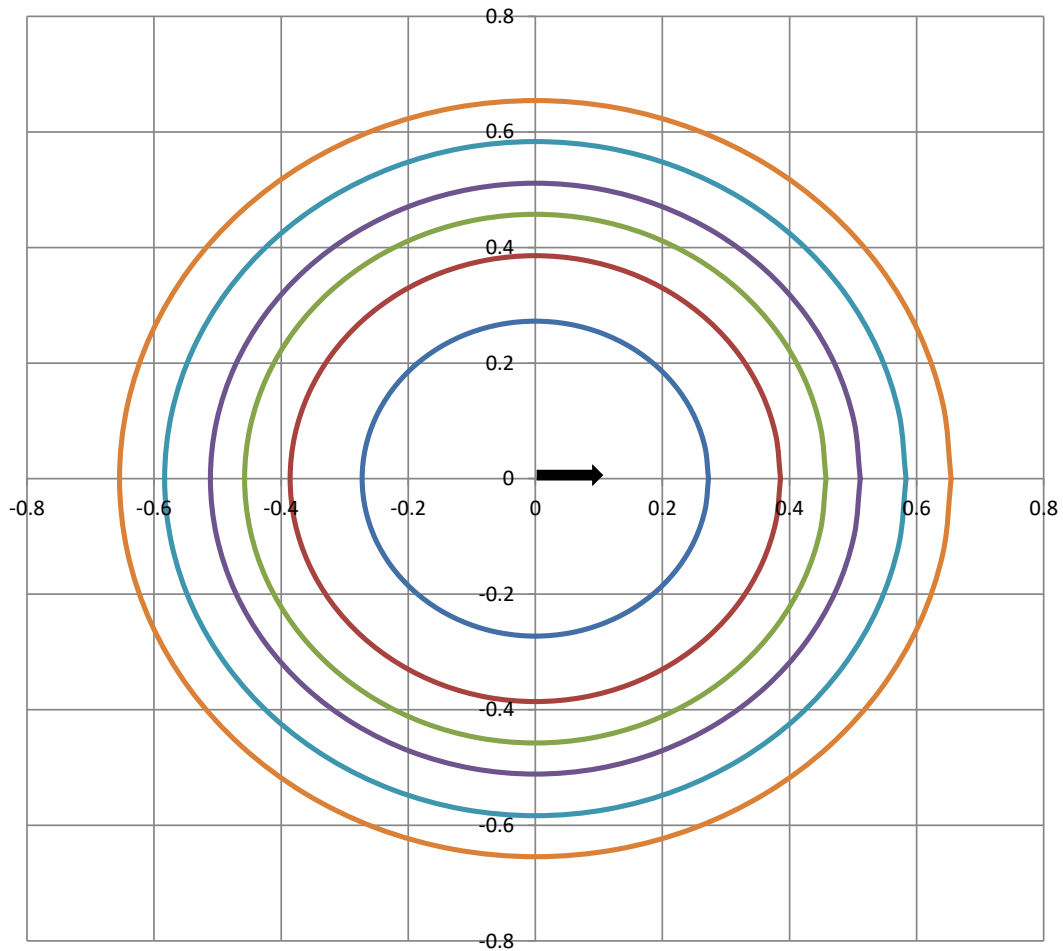
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1260 Candela
Central Cone Intensity:	1225 Candela
Beam Flux:	159.6 Lumens
Beam Angle (0-180):	27.0 Degrees
Beam Angle (90-270):	27.0 Degrees
Field Angle (0-180):	49.7 Degrees
Field Angle (90-270):	49.7 Degrees





ISOFootcandle Plot

Mounting Height - 10 Feet



Grid Lines in Units of Mounting Height

5 fc 2 fc 1 fc 0.5 fc 0.2 fc 0.1 fc



IES "BUG" Rating
(Back Light, Uplight, Glare)
Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	153.3	47.8%
FM	(30-60)	6.5	2.0%
FH	(60-80)	0.5	0.2%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	153.3	47.8%
BM	(30-60)	6.5	2.0%
BH	(60-80)	0.5	0.2%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		320.8	100.0%
BUG Rating	B1 U1 G0		