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## 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-30 (6W, 25° OPTIC, 3000K)**

Order Number  
12250114  
Test Number  
12250114.130

Test Date

2018-05-04

Prepared By

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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 3000K LED with 25°, medium silicone optic  
**Mounting:** Pendant  
**Ballast/Driver:** Integrated

**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:

345.1 Lumens

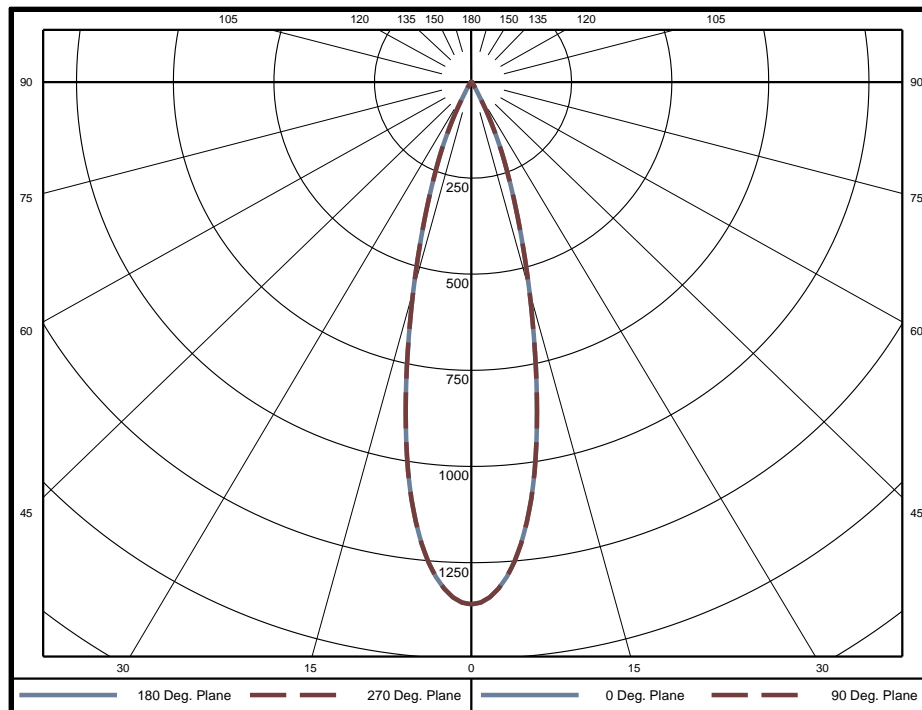
Luminaire Efficacy:

56.0 lm/w

Maximum Candela:

1358 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	31.20	9.0%	60-65	0.42	0.1%	120-125	0	0.0%
5-10	78.71	22.8%	65-70	0.28	0.1%	125-130	0	0.0%
10-15	88.39	25.6%	70-75	0.22	0.1%	130-135	0	0.0%
15-20	69.41	20.1%	75-80	0.16	0.0%	135-140	0	0.0%
20-25	43.96	12.7%	80-85	0.10	0.0%	140-145	0	0.0%
25-30	18.34	5.3%	85-90	0.05	0.0%	145-150	0	0.0%
30-35	6.04	1.8%	90-95	0.00	0.0%	150-155	0	0.0%
35-40	3.10	0.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.74	0.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.23	0.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.03	0.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.76	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	339	98.3%
0-60	344	99.7%
0-90	345	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	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358	1358
	5	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253	1253
	10	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951
	15	573	573	573	573	573	573	573	573	573	573	573	573	573	573	573
	20	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
	25	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
	30	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	35	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	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	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	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/m<sup>2</sup>)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	1191000	1191000
	45	4321	4321
	55	3174	3174
	65	1335	1335
	75	1191	1191
	85	1258	1258



### 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	411	411	411	411	401	401	401	401	383	383	383	367	367	367	352	352	352	345
1	397	389	382	376	388	382	376	370	368	363	359	355	352	348	344	341	338	333
2	383	370	360	351	376	365	355	347	354	346	339	344	338	332	335	330	326	320
3	370	354	341	331	364	349	338	328	341	331	323	333	325	318	326	319	314	309
4	359	339	326	315	353	336	323	313	329	318	310	323	313	306	317	309	303	299
5	347	327	312	301	343	324	310	300	318	306	297	313	303	295	308	299	293	289
6	337	315	300	289	333	312	299	288	308	296	287	304	293	285	300	290	283	279
7	327	304	289	279	323	302	288	278	298	286	277	295	284	276	291	282	274	271
8	318	294	280	270	314	293	279	269	289	277	268	286	275	267	284	274	266	263
9	309	285	271	261	306	284	270	261	281	269	260	278	267	259	276	266	258	255
10	300	277	263	253	298	276	262	253	273	261	252	271	260	252	269	259	251	248

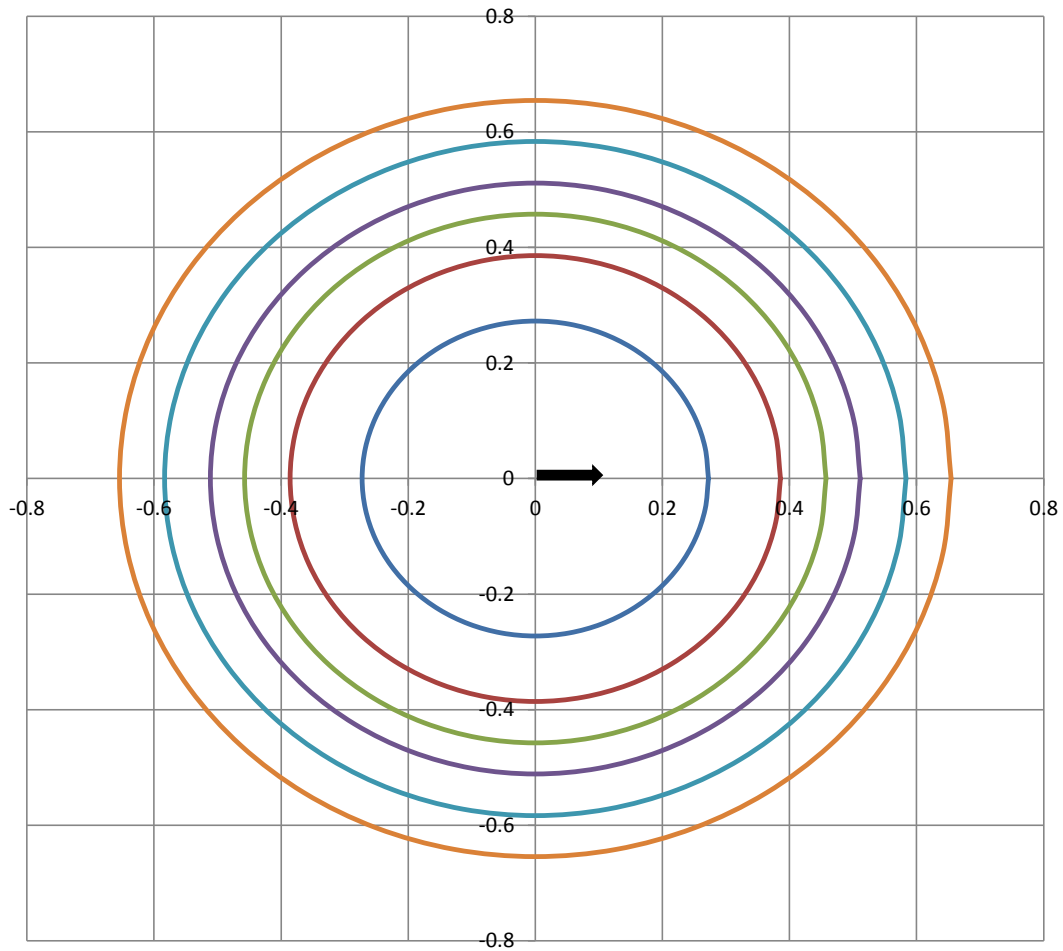
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1358 Candela
Central Cone Intensity:	1320 Candela
Beam Flux:	172.0 Lumens
Beam Angle (0-180):	27.0 Degrees
Beam Angle (90-270):	27.0 Degrees
Field Angle (0-180):	49.7 Degrees
Field Angle (90-270):	49.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		84.9	1.82
6.00		37.7	2.72
8.00		21.2	3.63
10.0		13.6	4.54
12.0		9.43	5.45
14.0		6.93	6.35
16.0		5.31	7.26



## 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)	165.2	47.8%
FM	(30-60)	7.0	2.0%
FH	(60-80)	0.5	0.2%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	165.2	47.8%
BM	(30-60)	7.0	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		345.7	100.0%
<b>BUG Rating</b>	<b>B1 U1 G0</b>		