



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
HSL11-6-WF-45 (6W, 60° OPTIC, 4500K)

Order Number
12250114
Test Number
12250114.52

Report Date

2018-05-07

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 adjustable knuckle, clear glass lens and internal LED module
Lamp: One (1) Cree XHP 4500K LED with 60°, wide flood optic
Mounting: Flood
Ballast/Driver: Integrated
Note: This report has been pro-rated using data from report numbers 12250114.51, 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.
Luminous Height: 1.000 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Full Cutoff
BUG Rating: B0 U0 G0

Test Conditions

Test Temperature: 24.6 °C
Voltage: 12.00 VAC
Current: 0.5330 A
Power: 6.334 W
Power Factor: 0.990
Frequency: 60 Hz
Current THD: 7.20 %

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
24.6 °C	12.00 VAC	0.5330 A	6.334 W	0.990	60 Hz	7.20 %

Summary of Results

Spacing Criteria

0-180: 0.62

90-270: 0.62

Total Lumen Output:

183.7 Lumens

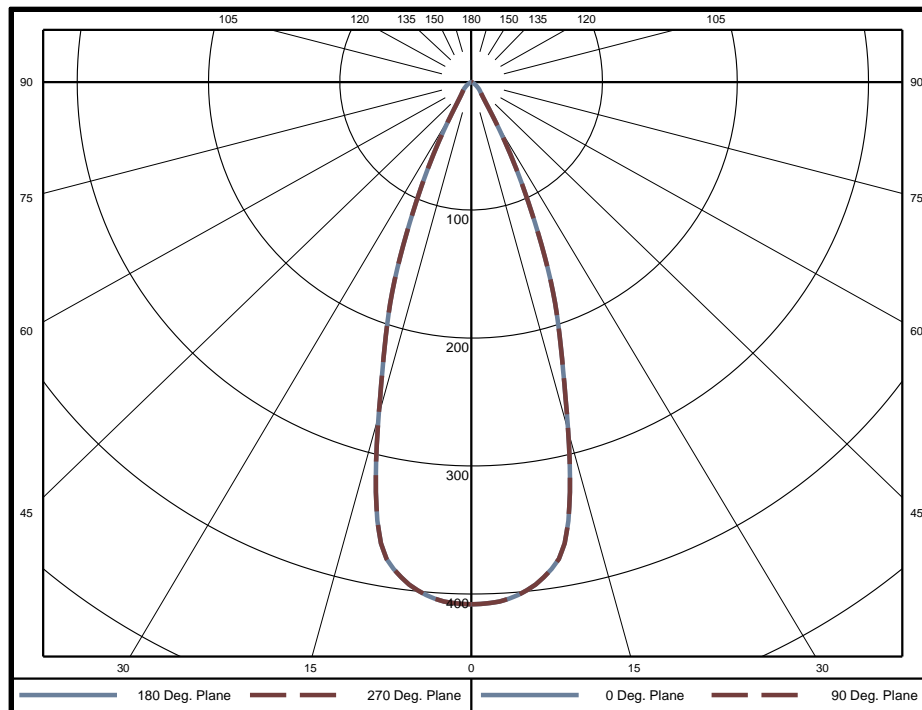
Luminaire Efficacy:

29.0 lm/w

Maximum Candela:

408 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	9.69	5.3%	60-65	1.03	0.6%	120-125	0	0.0%
5-10	27.97	15.2%	65-70	0.62	0.3%	125-130	0	0.0%
10-15	39.50	21.5%	70-75	0.29	0.2%	130-135	0	0.0%
15-20	37.28	20.3%	75-80	0.05	0.0%	135-140	0	0.0%
20-25	28.71	15.6%	80-85	0	0.0%	140-145	0	0.0%
25-30	16.14	8.8%	85-90	0	0.0%	145-150	0	0.0%
30-35	7.52	4.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	4.60	2.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	3.65	2.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	2.97	1.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.18	1.2%	110-115	0	0.0%	170-175	0.00	0.0%
55-60	1.52	0.8%	115-120	0	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	171	93.3%
0-60	182	98.9%
0-90	184	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	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0
	5	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3
	10	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
	15	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2	280.2
	20	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8
	25	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5
	30	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
	35	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
	40	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
	45	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
	50	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
	55	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
	60	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	65	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	70	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	75	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

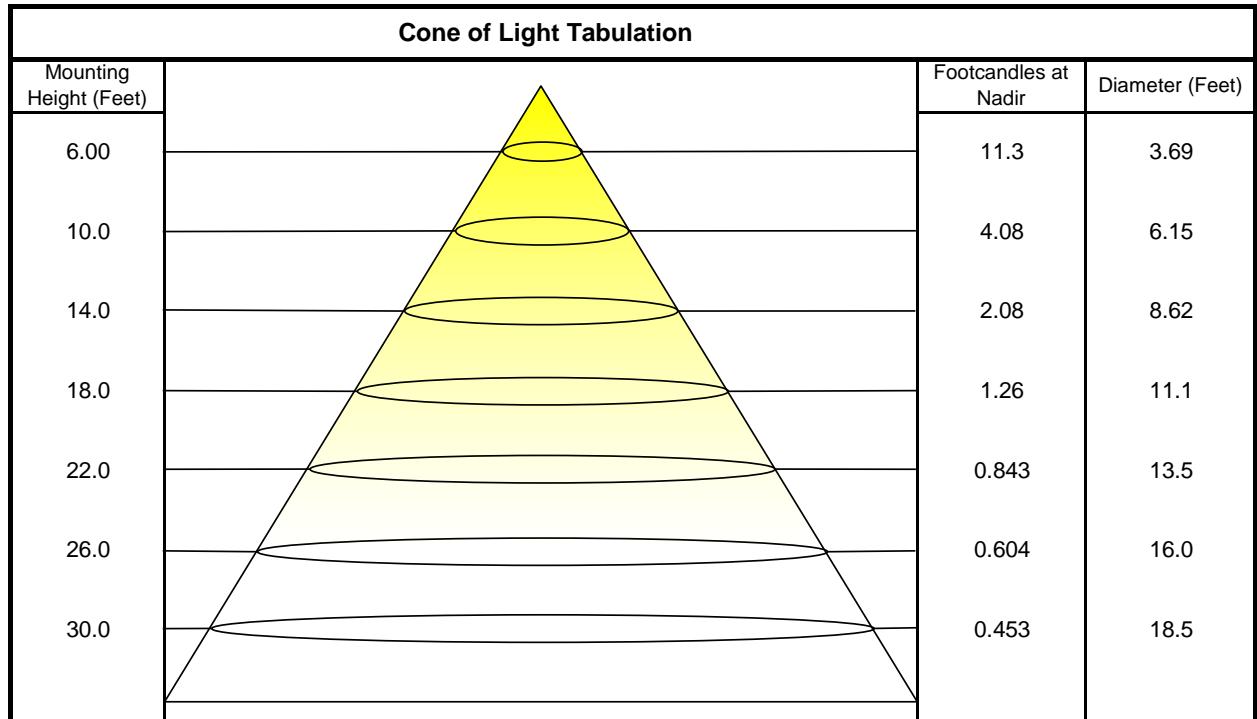
Vertical Angle (Degrees)	0	45	90
	0	357900	357900
	45	10700	10700
	55	6223	6223
	65	3407	3407
	75	979	979
	85	0	0



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	219	219	219	219	214	214	214	214	204	204	204	195	195	195	187	187	187	184
1	210	205	201	198	205	201	198	194	194	191	188	187	185	183	181	179	178	174
2	201	193	187	181	197	190	184	179	184	179	175	179	175	172	174	171	168	165
3	193	182	175	168	189	180	173	167	175	169	164	171	166	162	167	163	159	157
4	185	173	164	158	182	171	163	157	167	160	155	164	158	153	160	155	151	149
5	178	164	155	149	175	163	154	148	160	152	147	157	150	145	154	149	144	142
6	171	157	147	141	168	155	147	140	153	145	139	150	144	138	148	142	138	135
7	164	150	140	134	162	149	140	134	146	139	133	144	137	132	143	136	132	129
8	158	143	134	128	156	143	134	128	141	133	127	139	132	127	137	131	126	124
9	153	138	129	122	151	137	128	122	135	127	122	134	127	121	132	126	121	119
10	147	132	123	117	146	132	123	117	130	122	117	129	122	117	128	121	116	114

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	408.0 Candela
Central Cone Intensity:	406 Candela
Beam Flux:	105.6 Lumens
Beam Angle (0-180):	37.6 Degrees
Beam Angle (90-270):	37.6 Degrees
Field Angle (0-180):	59.6 Degrees
Field Angle (90-270):	59.6 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	79.7	43.7%
FM	(30-60)	11.1	6.1%
FH	(60-80)	0.5	0.3%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	79.7	43.7%
BM	(30-60)	11.1	6.1%
BH	(60-80)	0.5	0.3%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		182.5	100.0%
BUG Rating	B0 U0 G0		