



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
HSL11-4-W-27 (4W, 40° OPTIC, 2700K)

Order Number
12250114
Test Number
12250114.36

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 2700K LED with 40°, wide optic

Mounting: Flood

Ballast/Driver: Integrated

Note: This report has been pro-rated using data from report numbers 12250114.35, 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: 24.7 °C
Voltage: 12.02 VAC
Current: 0.3498 A
Power: 4.125 W
Power Factor: 0.981
Frequency: 60 Hz
Current THD: 10.4 %

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
24.7 °C	12.02 VAC	0.3498 A	4.125 W	0.981	60 Hz	10.4 %

Summary of Results

Spacing Criteria

0-180: 0.51
90-270: 0.51

Total Lumen Output:

213.1 Lumens

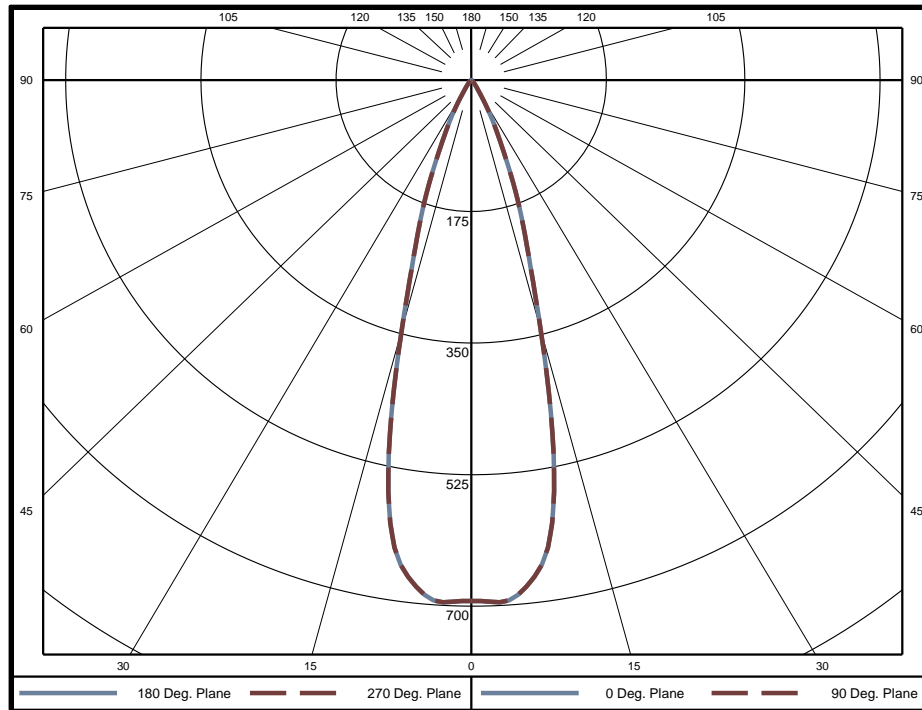
Luminaire Efficacy:

51.7 lm/w

Maximum Candela:

696 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	16.57	7.8%	60-65	0.19	0.1%	120-125	0	0.0%
5-10	46.43	21.8%	65-70	0.07	0.0%	125-130	0	0.0%
10-15	55.80	26.2%	70-75	0.00	0.0%	130-135	0	0.0%
15-20	40.88	19.2%	75-80	0	0.0%	135-140	0	0.0%
20-25	26.32	12.4%	80-85	0	0.0%	140-145	0	0.0%
25-30	13.94	6.5%	85-90	0	0.0%	145-150	0	0.0%
30-35	5.88	2.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	2.98	1.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.80	0.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.15	0.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.71	0.3%	110-115	0	0.0%	170-175	0.00	0.0%
55-60	0.39	0.2%	115-120	0	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	209	98.0%
0-60	213	99.9%
0-90	213	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	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1	693.1
	5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5	687.5
	10	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5	598.5
	15	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1	345.1
	20	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6
	25	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
	30	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8
	35	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	40	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	45	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	50	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	55	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
	60	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	65	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	70	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
	75	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
	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)

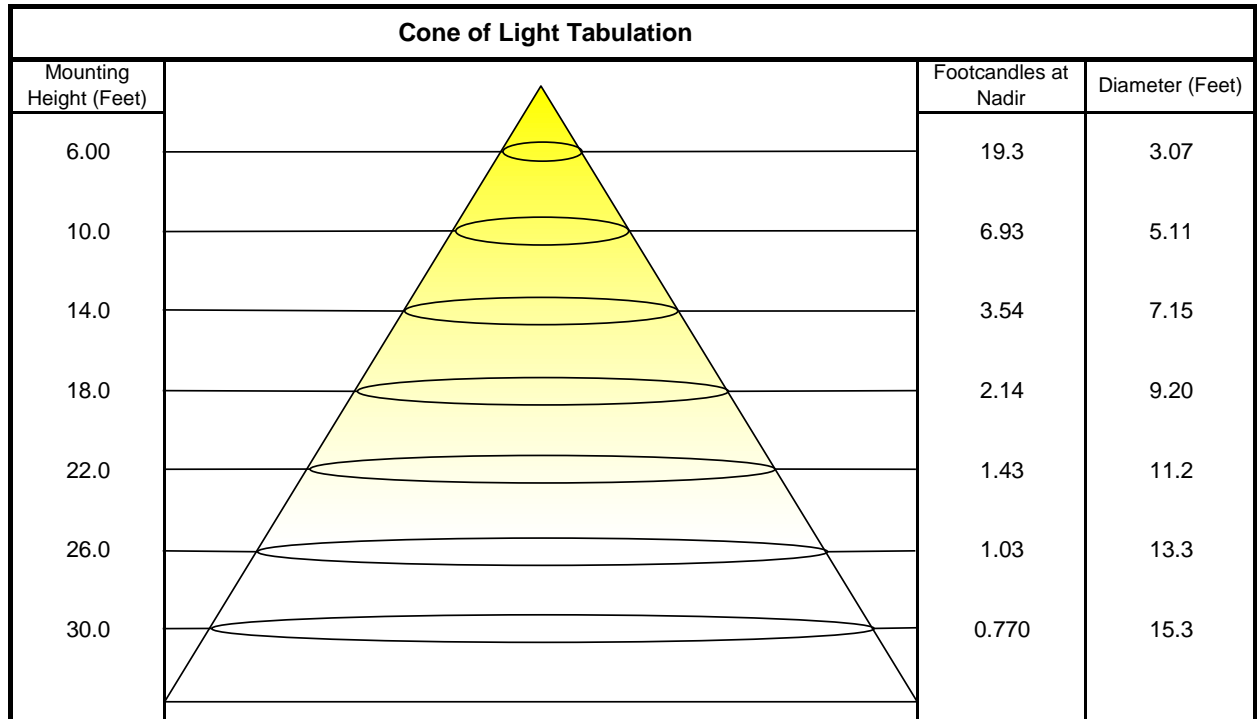
Vertical Angle (Degrees)	0	45	90
	0	607900	607900
	45	4592	4592
	55	1794	1794
	65	514	514
	75	0	0
	85	0	0



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	254	254	254	254	248	248	248	248	237	237	237	227	227	227	217	217	217	213
1	245	240	236	232	240	235	232	228	227	224	221	219	217	215	212	210	209	205
2	236	228	221	216	232	225	219	213	218	213	209	212	208	204	206	203	200	197
3	228	218	210	203	224	215	207	202	210	203	198	205	200	195	200	196	193	190
4	220	208	200	193	217	206	198	192	202	195	189	198	192	187	194	189	185	183
5	213	200	191	184	210	198	190	183	195	187	182	191	185	180	188	183	179	176
6	206	192	183	176	204	191	182	176	188	180	175	185	179	174	183	177	172	170
7	200	186	176	170	198	184	175	169	182	174	168	180	173	167	178	171	167	164
8	194	179	170	163	192	178	169	163	176	168	163	174	167	162	172	166	161	159
9	188	173	164	158	186	172	164	158	171	163	157	169	162	157	168	161	156	154
10	183	168	159	153	181	167	158	153	166	158	152	164	157	152	163	156	152	150

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	693.1 Candela
Central Cone Intensity:	693 Candela
Beam Flux:	118.3 Lumens
Beam Angle (0-180):	29.9 Degrees
Beam Angle (90-270):	29.9 Degrees
Field Angle (0-180):	52.2 Degrees
Field Angle (90-270):	52.2 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	100.1	47.0%
FM	(30-60)	6.3	3.0%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	100.1	47.0%
BM	(30-60)	6.3	3.0%
BH	(60-80)	0.0	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		212.7	100.0%
BUG Rating	B0 U0 G0		