



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
HSL11-2-M-27 (2W, 25° OPTIC, 2700K)

Order Number
12250114
Test Number
12250114.18

Report Date

2018-05-02

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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NVLAP, NIST, or any agency of the Federal Government.

**Luminaire Description:****Lamp:****Mounting:****Ballast/Driver:****Note:**

Cylindrical metal housing, with adjustable knuckle, clear glass lens and internal LED module

One (1) Cree XHP 2700K LED with 25°, medium optic

Flood

Integrated

This report has been pro-rated using data from report numbers 12250114.17, 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: 12.02 VAC
Current: 0.1593 A
Power: 1.793 W
Power Factor: 0.936
Frequency: 60 Hz
Current THD: 22.0 %

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	12.02 VAC	0.1593 A	1.793 W	0.936	60 Hz	22.0 %

Summary of Results

Spacing Criteria

0-180: 0.44

90-270: 0.44

Total Lumen Output:

102.6 Lumens

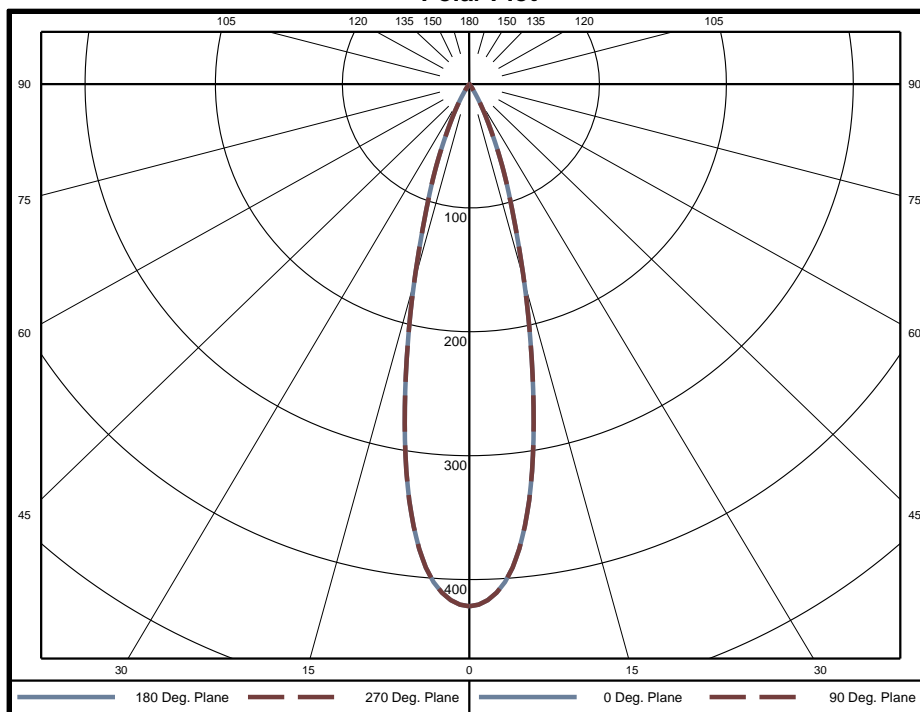
Luminaire Efficacy:

57.2 lm/w

Maximum Candela:

422 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	9.73	9.5%	60-65	0	0.0%	120-125	0	0.0%
5-10	24.43	23.8%	65-70	0	0.0%	125-130	0	0.0%
10-15	26.66	26.0%	70-75	0	0.0%	130-135	0	0.0%
15-20	20.07	19.6%	75-80	0	0.0%	135-140	0	0.0%
20-25	12.56	12.2%	80-85	0	0.0%	140-145	0	0.0%
25-30	6.05	5.9%	85-90	0	0.0%	145-150	0	0.0%
30-35	2.02	2.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.69	0.7%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.29	0.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	0.11	0.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.02	0.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	0	0.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	102	99.6%
0-60	103	100.0%
0-90	103	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	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5
	5	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8	391.8
	10	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6
	15	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3	169.3
	20	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
	25	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
	30	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
	35	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
	40	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
	45	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	50	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	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	369700	369700
	45	573	573
	55	0	0
	65	0	0
	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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	105	105	105	103
1	118	116	114	112	116	114	112	110	110	108	107	106	105	104	102	102	101	99
2	114	111	107	105	112	109	106	104	106	103	101	103	101	99	100	99	97	96
3	111	106	102	99	109	104	101	98	102	99	97	100	97	95	97	96	94	93
4	107	102	98	95	106	101	97	94	99	95	93	97	94	92	95	93	91	90
5	104	98	94	91	103	97	93	90	95	92	89	94	91	89	92	90	88	87
6	101	95	90	87	100	94	90	87	92	89	86	91	88	86	90	87	85	84
7	98	91	87	84	97	91	87	84	90	86	84	89	85	83	88	85	83	82
8	95	89	84	81	94	88	84	81	87	83	81	86	83	81	85	82	80	79
9	93	86	82	79	92	85	81	79	85	81	79	84	81	78	83	80	78	77
10	90	83	79	77	89	83	79	76	82	79	76	82	78	76	81	78	76	75

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	421.5 Candela
Central Cone Intensity:	411 Candela
Beam Flux:	51.4 Lumens
Beam Angle (0-180):	26.4 Degrees
Beam Angle (90-270):	26.4 Degrees
Field Angle (0-180):	48.9 Degrees
Field Angle (90-270):	48.9 Degrees

Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		11.7	2.67
10.0		4.22	4.45
14.0		2.15	6.23
18.0		1.30	8.01
22.0		0.871	9.79
26.0		0.624	11.6
30.0		0.468	13.3



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	49.8	48.5%
FM	(30-60)	1.5	1.5%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	49.8	48.5%
BM	(30-60)	1.5	1.5%
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		102.6	100.0%
BUG Rating	B0 U0 G0		