



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
LSW8-FL-WF-27 (60° OPTIC, 2700K)

Order Number
12250114
Test Number
12250114.98

Report Date

2018-05-09

Prepared By

Sean Gregory, Project Handler

Approved By

Alexa Lambert, Project Handler

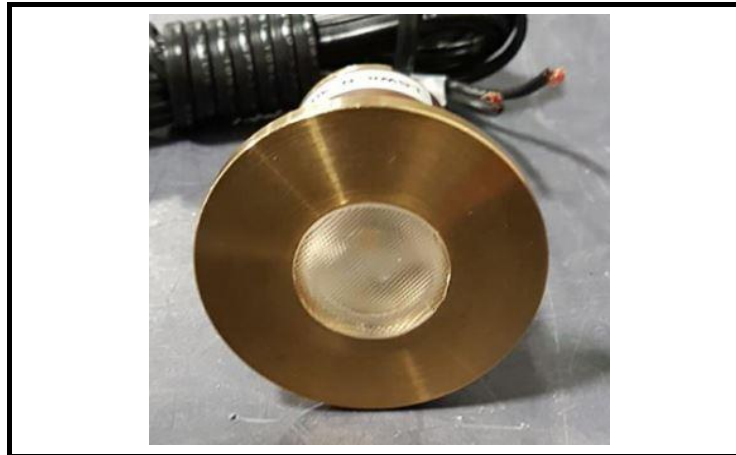
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Luminaire Description: Cylindrical copper housing with circular metal flush faceplate
Lamp: One (1) Cree XP-L 2700K LED with 60° wide flood optic
Mounting: Recessed Downlight
Ballast/Driver: Integrated

Note: This report has been pro-rated using data from report numbers 12250114.97, 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: 1.00 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Cutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 24.4 °C
Voltage: 12.01 VAC
Current: 0.1699 A
Power: 1.247 W
Power Factor: 0.612
Frequency: 60 Hz
Current THD: 80.6 %

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
24.4 °C	12.01 VAC	0.1699 A	1.247 W	0.612	60 Hz	80.6 %

Summary of Results

Spacing Criteria

0-180: 1.00
90-270: 1.00

Total Lumen Output:

113.0 Lumens

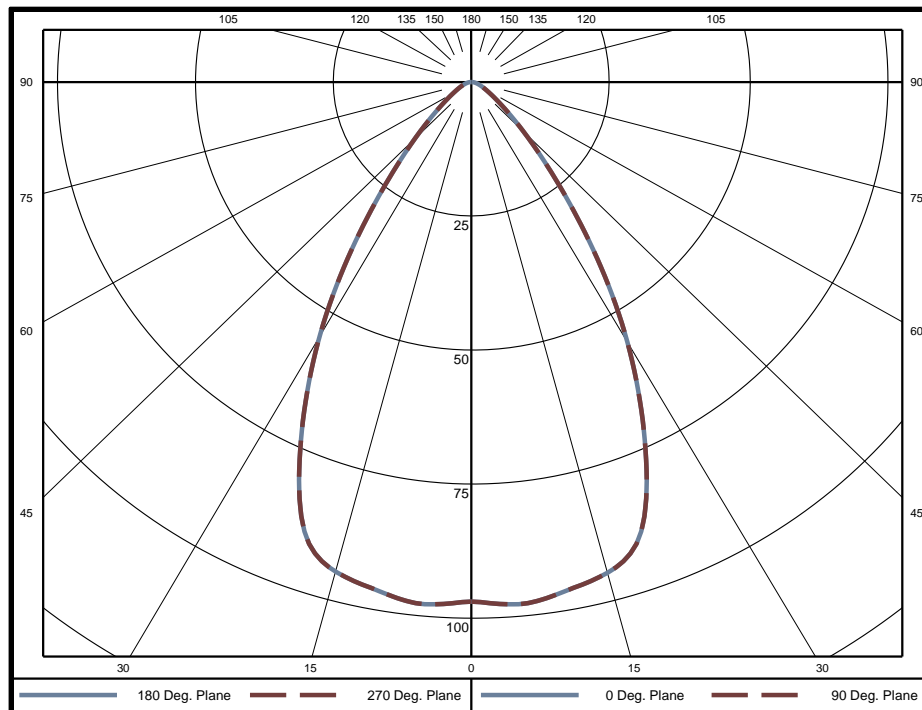
Luminaire Efficacy:

90.6 lm/w

Maximum Candela:

98 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.33	2.1%	60-65	1.35	1.2%	120-125	0	0.0%
5-10	6.96	6.2%	65-70	0.98	0.9%	125-130	0	0.0%
10-15	11.34	10.0%	70-75	0.70	0.6%	130-135	0	0.0%
15-20	15.25	13.5%	75-80	0.49	0.4%	135-140	0	0.0%
20-25	17.14	15.2%	80-85	0.32	0.3%	140-145	0	0.0%
25-30	16.37	14.5%	85-90	0.18	0.2%	145-150	0	0.0%
30-35	13.81	12.2%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	10.06	8.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	6.69	5.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	4.32	3.8%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.81	2.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.90	1.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	93	82.5%
0-60	109	96.4%
0-90	113	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	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92	96.92
	5	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78	97.78
	10	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48	96.48
	15	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73	94.73
	20	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21	89.21
	25	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70	73.70
	30	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08	56.08
	35	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14	38.14
	40	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27	23.27
	45	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77
	50	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17
	55	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06
	60	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32
	65	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
	70	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
	75	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
	80	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
	85	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	90	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
	95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Vertical Angle (Degrees)	0	45	90
	0	191300	191300
	45	38430	38430
	55	17410	17410
	65	10740	10740
	75	8438	8438
	85	10150	10150



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	135	135	135	135	131	131	131	131	126	126	126	120	120	120	115	115	115	113
1	127	124	120	118	124	121	118	116	117	114	112	112	110	109	108	107	106	104
2	120	114	109	104	117	112	107	103	108	104	101	105	101	99	101	99	96	94
3	113	105	99	93	111	103	97	93	100	95	91	97	93	90	95	91	88	86
4	107	97	90	85	104	96	89	84	93	88	83	91	86	82	89	85	81	79
5	100	90	83	77	99	89	82	77	87	81	76	85	80	75	83	78	75	73
6	95	84	76	71	93	83	76	71	81	75	70	79	74	70	78	73	69	67
7	90	78	71	65	88	77	70	65	76	70	65	74	69	65	73	68	64	62
8	85	73	66	61	83	72	65	61	71	65	60	70	64	60	69	64	60	58
9	81	69	61	57	79	68	61	56	67	61	56	66	60	56	65	60	56	54
10	76	65	58	53	75	64	57	53	63	57	53	62	56	52	61	56	52	51

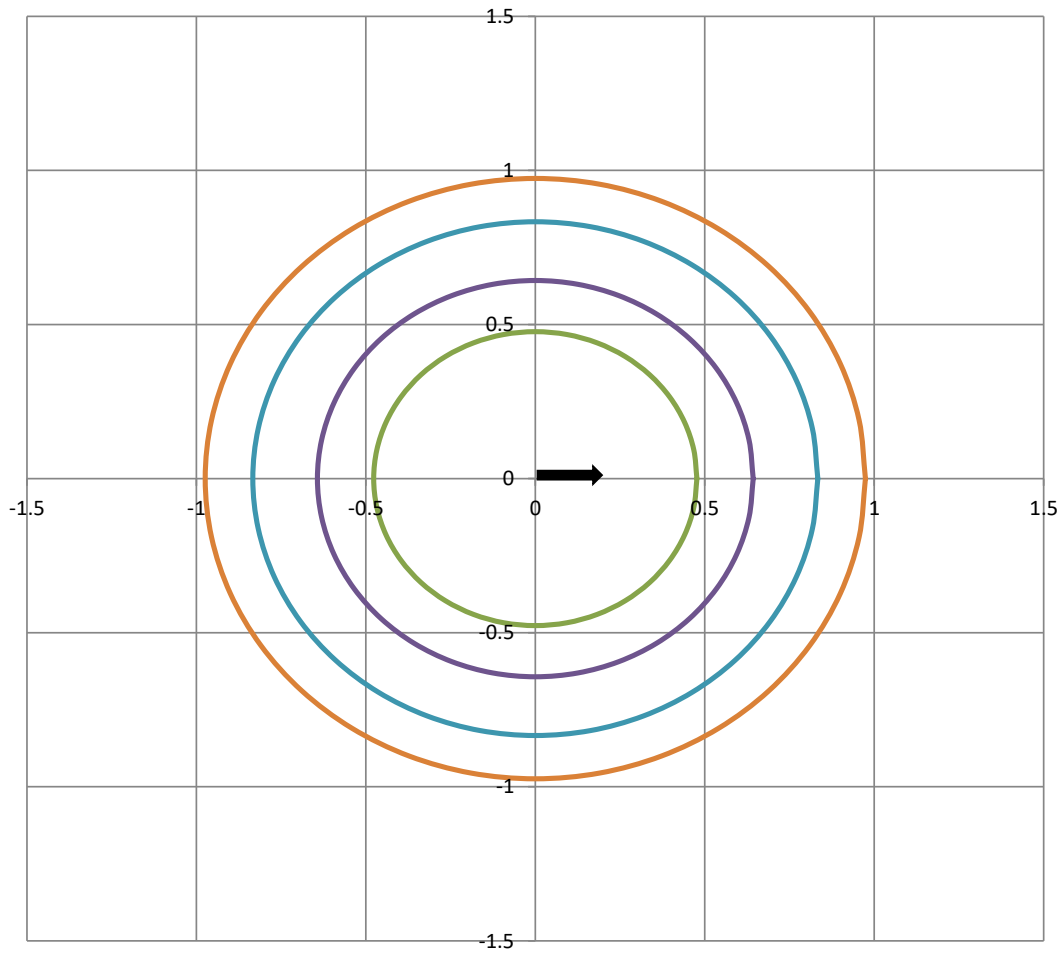
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	96.92 Candela
Central Cone Intensity:	97 Candela
Beam Flux:	75.7 Lumens
Beam Angle (0-180):	64.2 Degrees
Beam Angle (90-270):	64.2 Degrees
Field Angle (0-180):	96.7 Degrees
Field Angle (90-270):	96.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		6.06	4.02
6.00		2.69	6.02
8.00		1.51	8.03
10.0		0.969	10.0
12.0		0.673	12.0
14.0		0.494	14.1
16.0		0.379	16.1



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	34.7	30.7%
FM	(30-60)	19.8	17.5%
FH	(60-80)	1.8	1.6%
FVH	(80-90)	0.2	0.2%
BL	(0-30)	34.7	30.7%
BM	(30-60)	19.8	17.5%
BH	(60-80)	1.8	1.6%
BVH	(80-90)	0.2	0.2%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		113.1	100.0%
BUG Rating	B0 U1 G0		