



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-W-27 (40° OPTIC, 2700K)

Order Number
12250114
Test Number
12250114.95

Report Date

2018-05-08

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 copper housing with circular metal flush faceplate
Lamp: One (1) Cree XP-L 2700K LED with 40° wide optic
Mounting: Recessed Downlight
Ballast/Driver: Integrated

Note: This report has been pro-rated using data from report numbers 12250114.94, 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: 24.3 °C
Voltage: 12.01 VAC
Current: 0.1704 A
Power: 1.251 W
Power Factor: 0.611
Frequency: 60 Hz
Current THD: 80.4 %

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
24.3 °C	12.01 VAC	0.1704 A	1.251 W	0.611	60 Hz	80.4 %

Summary of Results

Spacing Criteria

0-180: 0.66

90-270: 0.66

Total Lumen Output:

118.2 Lumens

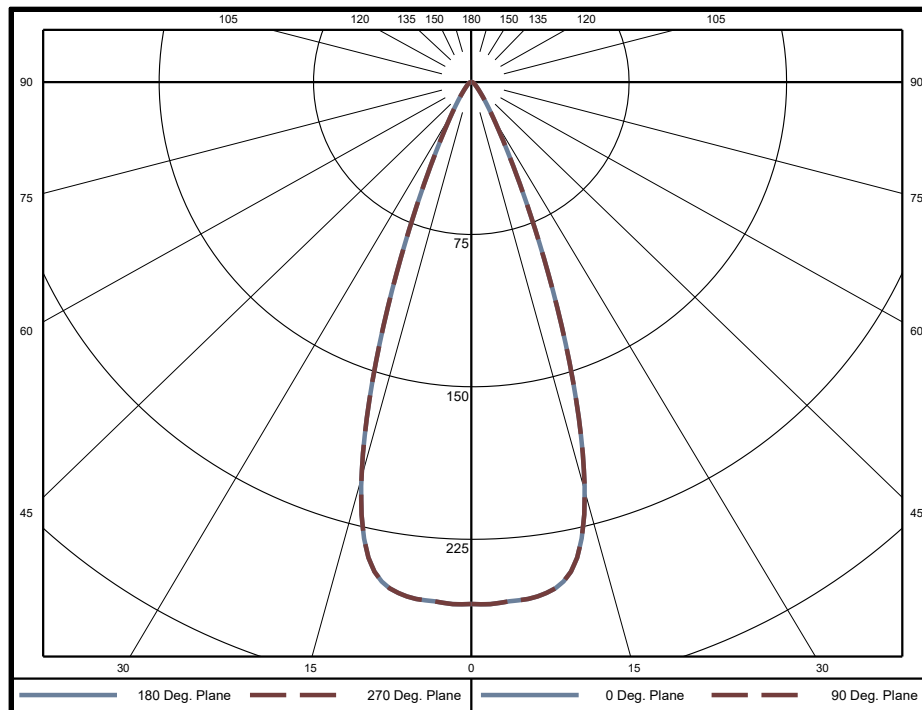
Luminaire Efficacy:

94.5 lm/w

Maximum Candela:

257 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	6.13	5.2%	60-65	0.74	0.6%	120-125	0	0.0%
5-10	18.14	15.3%	65-70	0.62	0.5%	125-130	0	0.0%
10-15	27.41	23.2%	70-75	0.49	0.4%	130-135	0	0.0%
15-20	26.56	22.5%	75-80	0.35	0.3%	135-140	0	0.0%
20-25	16.60	14.0%	80-85	0.22	0.2%	140-145	0	0.0%
25-30	8.35	7.1%	85-90	0.10	0.1%	145-150	0	0.0%
30-35	4.55	3.8%	90-95	0.00	0.0%	150-155	0	0.0%
35-40	2.78	2.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.85	1.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.35	1.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.07	0.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.88	0.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	111	93.5%
0-60	116	97.9%
0-90	118	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	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8
	5	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0	256.0
	10	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5	249.5
	15	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7
	20	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0
	25	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9
	30	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
	35	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	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	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	50	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
	55	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
	60	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
	65	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	1.4
	70	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	75	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
	80	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
	85	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
	90	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
	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	506800	506800
	45	11160	11160
	55	7375	7375
	65	6397	6397
	75	6021	6021
	85	6503	6503



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	141	141	141	141	137	137	137	137	131	131	131	126	126	126	121	121	121	118
1	135	132	129	127	132	129	127	125	125	123	121	120	119	117	116	115	114	112
2	129	124	120	116	127	122	118	115	118	115	112	115	112	110	112	110	108	106
3	124	117	112	108	122	116	111	107	113	109	106	110	107	104	107	105	102	101
4	119	111	106	101	117	110	105	101	108	103	100	105	102	99	103	100	97	96
5	114	106	100	96	113	105	100	95	103	98	95	101	97	94	99	96	93	92
6	110	101	95	91	109	100	95	91	99	94	90	97	93	90	96	92	89	88
7	106	97	91	87	105	96	91	87	95	90	86	94	89	86	92	88	85	84
8	102	93	87	83	101	92	87	83	91	86	83	90	86	82	89	85	82	81
9	99	89	84	80	98	89	83	80	88	83	79	87	82	79	86	82	79	77
10	96	86	80	77	94	86	80	76	85	80	76	84	79	76	83	79	76	75

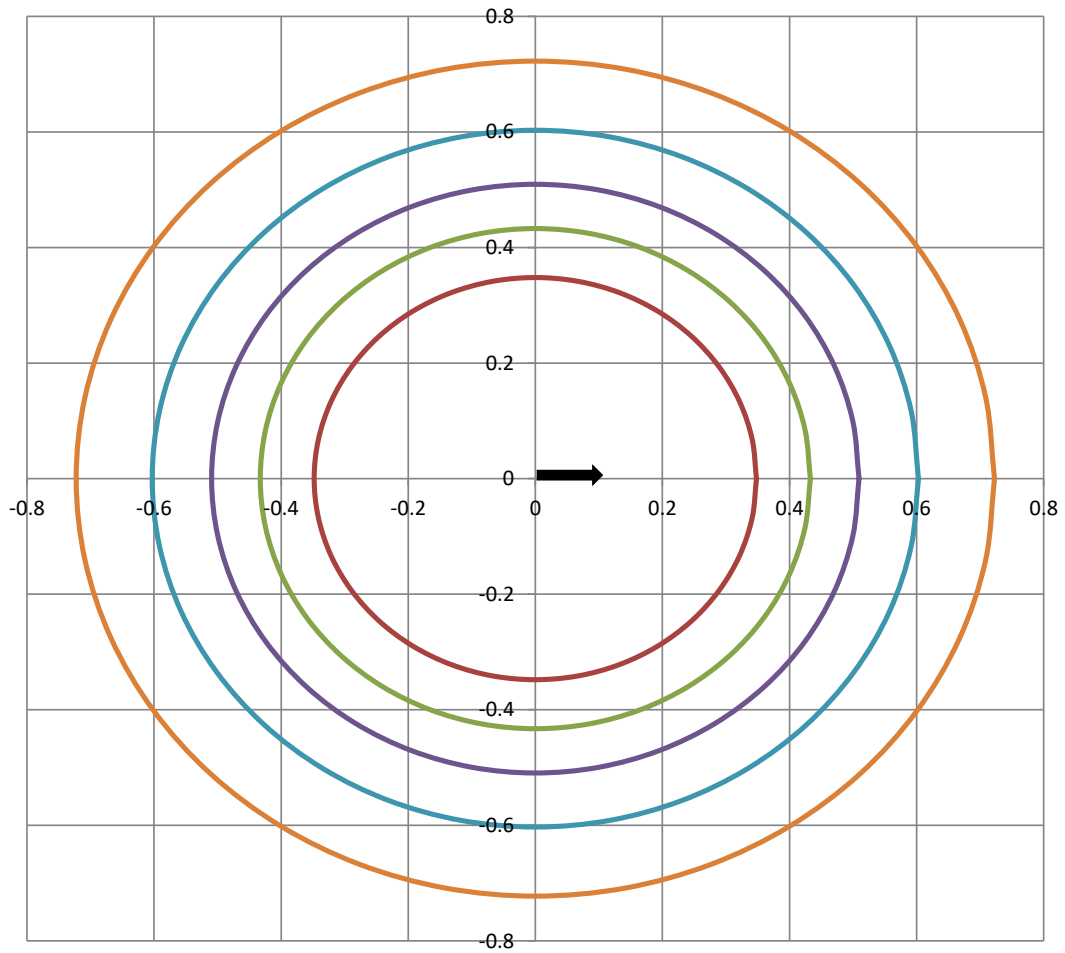
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	256.8 Candela
Central Cone Intensity:	257 Candela
Beam Flux:	75.7 Lumens
Beam Angle (0-180):	38.9 Degrees
Beam Angle (90-270):	38.9 Degrees
Field Angle (0-180):	57.7 Degrees
Field Angle (90-270):	57.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		16.1	2.64
6.00		7.13	3.96
8.00		4.01	5.28
10.0		2.57	6.60
12.0		1.78	7.92
14.0		1.31	9.24
16.0		1.00	10.6



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

— 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)	51.7	43.6%
FM	(30-60)	6.3	5.3%
FH	(60-80)	1.1	0.9%
FVH	(80-90)	0.2	0.1%
BL	(0-30)	51.7	43.6%
BM	(30-60)	6.3	5.3%
BH	(60-80)	1.1	0.9%
BVH	(80-90)	0.2	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		118.4	100.0%
BUG Rating	B0 U1 G0		