



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
LMPL-3-30 (3000K)

Order Number

13001850

Test Number

13001850.04B

Revision of Test Number 13001850.04A on:

2021-09-28

Test Date

2019-08-26

Prepared By

Derek Smarr, Technician

Approved By

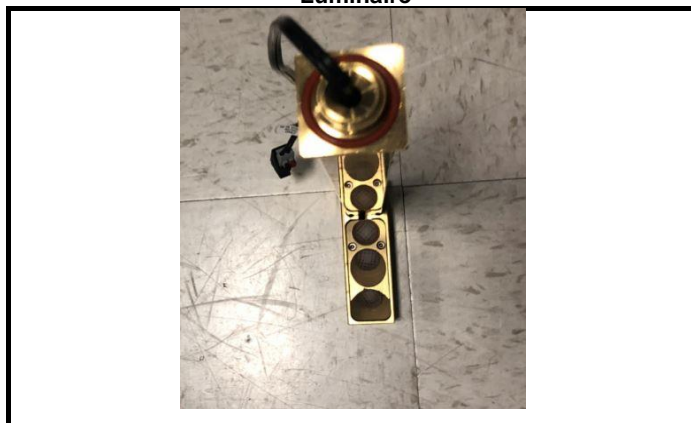
Alexa Lambert, Project Handler

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Luminaire Description: Square brass stem with "L" shaped rectangular arm
Lamp: Three (3) Cree XP-L 3000k LEDs With three (3) acrylic optics
Mounting: Ground recessed
Ballast/Driver: Proprietary

Luminaire



Luminaire Characteristics

Luminous Length: 3.25 in.
Luminous Width: 1.250 in.

Summary of Results

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

Test Conditions

Test Temperature: 25.3 °C
Voltage: 12.21 VAC
Current: 0.5049 A
Power: 6.089 W
Power Factor: 0.988
Frequency: 60 Hz
Current THD: 8.69 %

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
25.3 °C	12.21 VAC	0.5049 A	6.089 W	0.988	60 Hz	8.69 %

Summary of Results

Spacing Criteria

0-180: 1.98
90-270: 1.50

Total Lumen Output:

248.7 Lumens

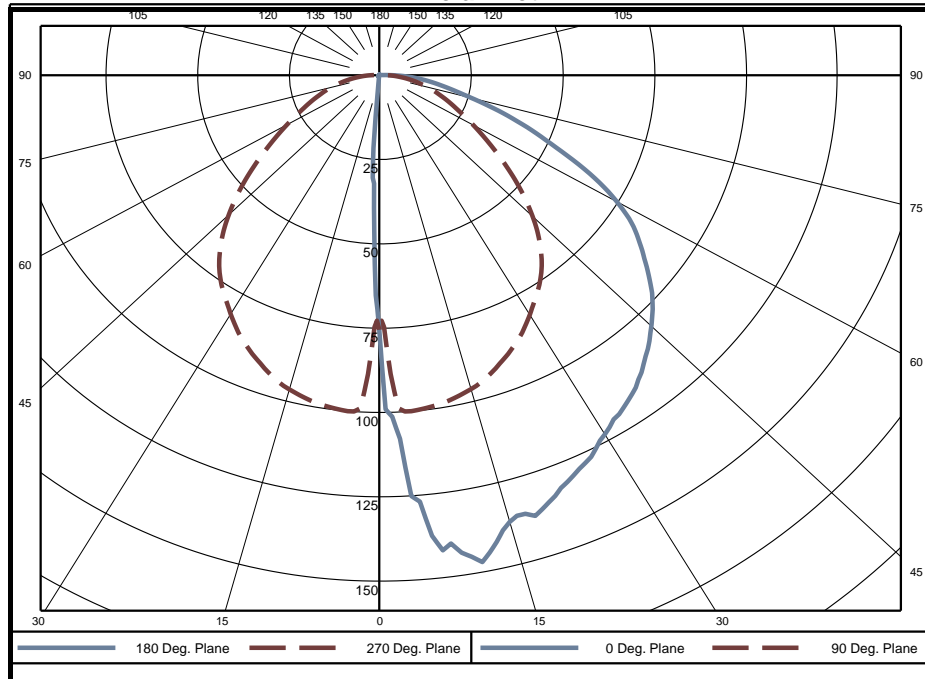
Luminaire Efficacy:

40.8 lm/w

Maximum Candela:

147 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.03	0.8%	60-65	15.64	6.3%	120-125	0.04	0.0%
5-10	6.30	2.5%	65-70	11.96	4.8%	125-130	0.04	0.0%
10-15	10.43	4.2%	70-75	8.61	3.5%	130-135	0.04	0.0%
15-20	14.09	5.7%	75-80	5.97	2.4%	135-140	0.04	0.0%
20-25	17.23	6.9%	80-85	3.85	1.5%	140-145	0.04	0.0%
25-30	19.78	8.0%	85-90	1.94	0.8%	145-150	0.03	0.0%
30-35	21.63	8.7%	90-95	0.46	0.2%	150-155	0.03	0.0%
35-40	22.88	9.2%	95-100	0.10	0.0%	155-160	0.03	0.0%
40-45	23.20	9.3%	100-105	0.07	0.0%	160-165	0.02	0.0%
45-50	22.48	9.0%	105-110	0.05	0.0%	165-170	0.02	0.0%
50-55	20.91	8.4%	110-115	0.04	0.0%	170-175	0.01	0.0%
55-60	18.70	7.5%	115-120	0.04	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	114	46.0%
0-60	200	80.3%
0-90	248	99.6%
90-180	1	0.4%



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	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4
	5	126.9	122.0	105.1	101.8	100.0	93.8	69.6	35.1	21.6	35.1	69.6	93.8	100.0	101.8	105.1
	10	145.0	123.8	108.8	102.2	98.8	94.1	72.6	37.7	0.6	37.7	72.6	94.1	98.8	102.2	108.8
	15	137.1	122.5	109.0	101.2	96.4	90.5	69.6	36.4	0.5	36.4	69.6	90.5	96.4	101.2	109.0
	20	134.8	122.3	107.9	98.9	92.6	85.3	64.8	33.0	0.4	33.0	64.8	85.3	92.6	98.9	107.9
	25	128.8	121.3	106.2	95.8	87.8	79.3	59.3	29.0	0.4	29.0	59.3	79.3	87.8	95.8	106.2
	30	122.9	118.1	102.9	91.9	82.0	72.4	53.1	24.9	0.3	24.9	53.1	72.4	82.0	91.9	102.9
	35	117.9	113.6	99.5	88.2	76.0	65.1	46.8	21.3	0.2	21.3	46.8	65.1	76.0	88.2	99.5
	40	111.9	108.0	95.1	83.3	68.5	57.1	40.2	18.3	0.2	18.3	40.2	57.1	68.5	83.3	95.1
	45	104.7	100.6	89.2	76.0	58.9	48.4	33.8	15.5	0.3	15.5	33.8	48.4	58.9	76.0	89.2
	50	96.3	91.6	81.9	65.4	48.3	39.6	27.8	12.3	0.2	12.3	27.8	39.6	48.3	65.4	81.9
	55	86.4	82.4	72.5	53.3	37.9	31.9	22.7	10.6	0.2	10.6	22.7	31.9	37.9	53.3	72.5
	60	74.4	71.2	60.3	40.5	29.5	25.6	18.4	9.4	0.2	9.4	18.4	25.6	29.5	40.5	60.3
	65	56.4	53.8	44.0	29.5	22.9	20.1	14.6	8.6	0.1	8.6	14.6	20.1	22.9	29.5	44.0
	70	39.9	35.9	28.8	21.8	17.9	15.6	11.4	6.6	0.1	6.6	11.4	15.6	17.9	21.8	28.8
	75	25.8	22.2	18.1	16.3	13.6	11.9	8.5	4.4	0.1	4.4	8.5	11.9	13.6	16.3	18.1
	80	16.9	14.5	11.5	11.4	9.4	8.8	5.6	2.5	0.1	2.5	5.6	8.8	9.4	11.4	11.5
	85	10.3	9.0	6.1	6.6	5.5	5.6	3.0	1.0	0.0	1.0	3.0	5.6	5.5	6.6	6.1
	90	3.5	3.3	2.0	2.5	2.2	2.6	1.0	0.1	0.0	0.1	1.0	2.6	2.2	2.5	2.0
	95	0.6	0.6	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.4
	100	0.3	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
	105	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
	110	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
	115	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
	120	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
	125	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
	130	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
	135	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
	140	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
	145	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
	150	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1
	155	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1
	160	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1
	165	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
	170	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
	175	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1
	180	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

Average Luminance (cd/m²)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	28780	28780	28780
	45	56520	48120	31790
	55	57500	48220	25240
	65	50910	39680	20690
	75	38050	26740	19990
	85	45070	26800	24020



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	296	296	296	296	289	289	289	289	276	276	276	264	264	264	253	253	253	248
1	270	259	248	239	264	253	243	235	242	234	227	232	226	220	223	218	213	208
2	246	226	209	195	240	221	206	193	212	199	188	204	193	184	196	187	179	174
3	225	199	179	163	219	195	176	161	187	172	158	180	167	156	174	163	153	147
4	206	177	155	138	200	173	153	137	167	149	135	161	146	133	155	142	132	126
5	190	158	136	119	184	155	134	119	150	131	117	145	129	116	140	126	115	109
6	175	142	120	104	170	140	119	104	135	117	103	131	114	102	127	112	101	96
7	163	129	107	92	158	127	106	92	123	105	91	119	103	90	116	101	90	85
8	151	118	97	82	147	116	96	82	113	94	81	109	93	81	106	91	80	76
9	141	108	88	74	138	107	87	74	104	86	73	101	85	73	98	83	72	68
10	133	100	80	67	129	98	80	67	96	79	67	93	78	66	91	77	66	62

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	75.4 Candela
Central Cone Intensity:	83 Candela
Beam Flux:	196.6 Lumens
Beam Angle (0-180):	73.4 Degrees
Beam Angle (90-270):	110.2 Degrees
Field Angle (0-180):	92.8 Degrees
Field Angle (90-270):	164.7 Degrees

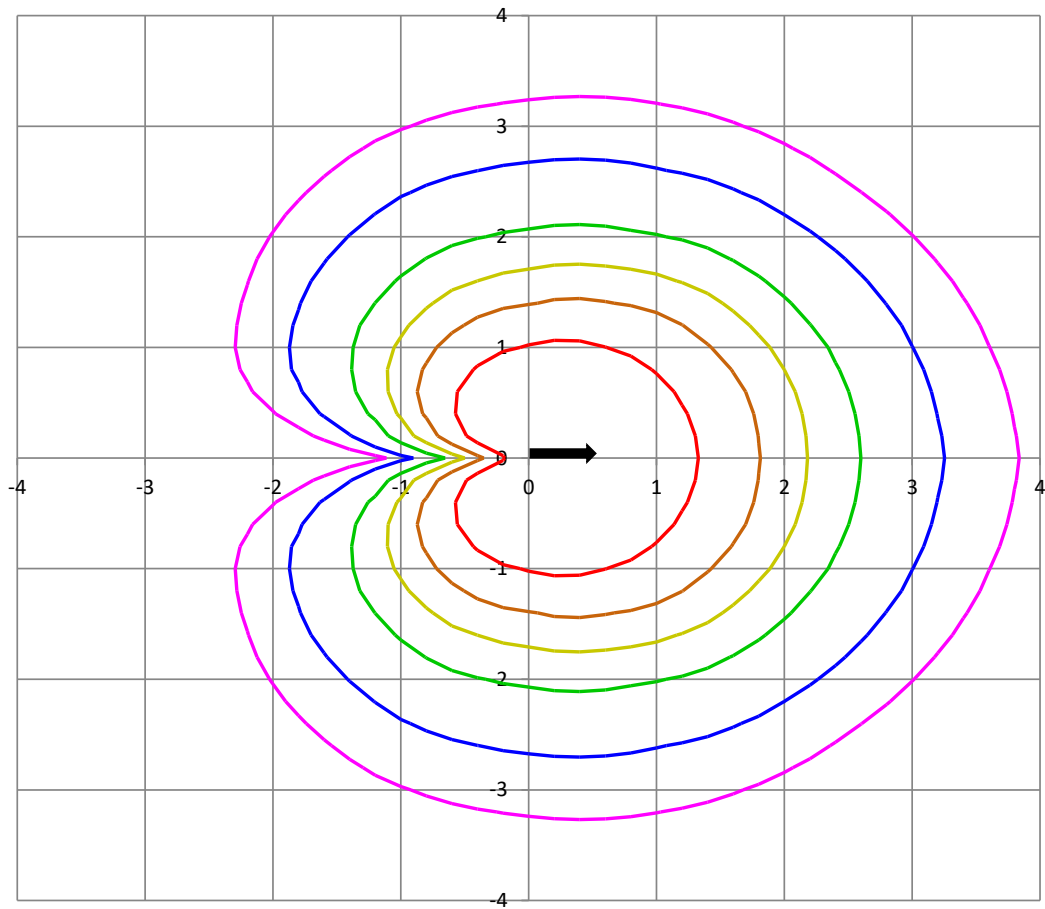
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		4.71	5.75
6.00		2.10	8.63
8.00		1.18	11.5
10.0		0.754	14.4
12.0		0.524	17.3
14.0		0.385	20.1
16.0		0.295	23.0

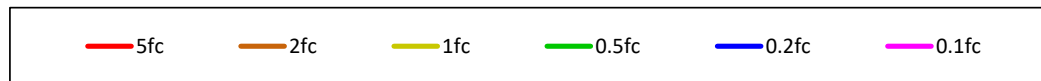


ISOFootcandle Plot

Mounting Height - 2 Feet

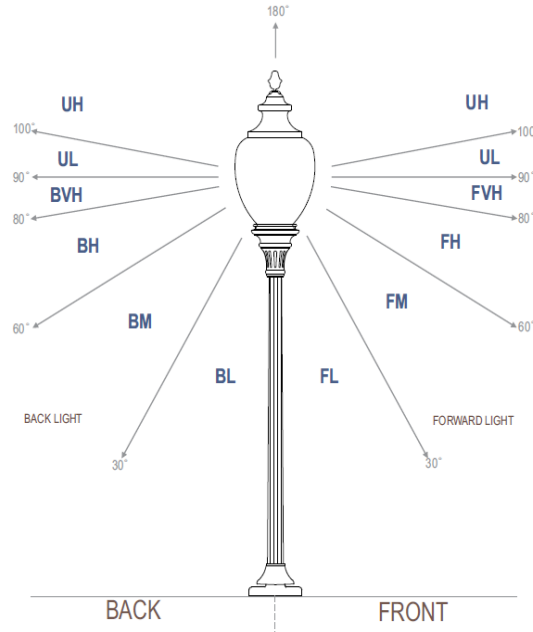


Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	46.3	18.6%
FM	(30-60)	95.0	38.2%
FH	(60-80)	31.1	12.5%
FVH	(80-90)	4.1	1.7%
BL	(0-30)	23.7	9.5%
BM	(30-60)	34.6	13.9%
BH	(60-80)	11.0	4.4%
BVH	(80-90)	1.7	0.7%
UL	(90-100)	0.6	0.2%
UH	(100-180)	0.5	0.2%
Total		248.7	100.0%
BUG Rating	B0 U1 G0		



Attachment A

Amended Report Documentation

[illegible]