



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
LDM250-90-40 (90° OPENING, 4000K)

Order Number
11263738
Test Number
1256648E2A

Revision of Test Number 1256648E2 on:

2021-06-28
Test Date

2019-03-21

Prepared By

Alexa Lambert, Project Handler

Approved By

Tiffany Hamm, Project Handler

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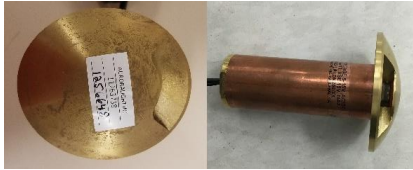
Luminaire Description: Cylindrical copper housing, brass domed top with one (1) 90° openings. This report has been pro-rated using data from test number 11263738-1256648 and data from Auroralight Inc to account for differences in color temperature.

Lamp: One (1) Cree XP-L 4500K LED

Mounting: Recessed In-Grade/Wall

Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Diameter: 3.00 in.
Luminous Height: 0.250 in.

Summary of Results

Roadway Classification: Type I, Long
Cutoff Classification: Noncutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 25.2 °C
Voltage: 11.97 VAC
Current: 0.4217 A
Power: 3.098 W
Power Factor: 0.614
Frequency: 60 Hz
Current THD: 95.6 %

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
25.2 °C	11.97 VAC	0.4217 A	3.098 W	0.614	60 Hz	95.6 %

Summary of Results

Spacing Criteria

0-180: 5.92

90-270: 0.86

Total Lumen Output:

20.95 Lumens

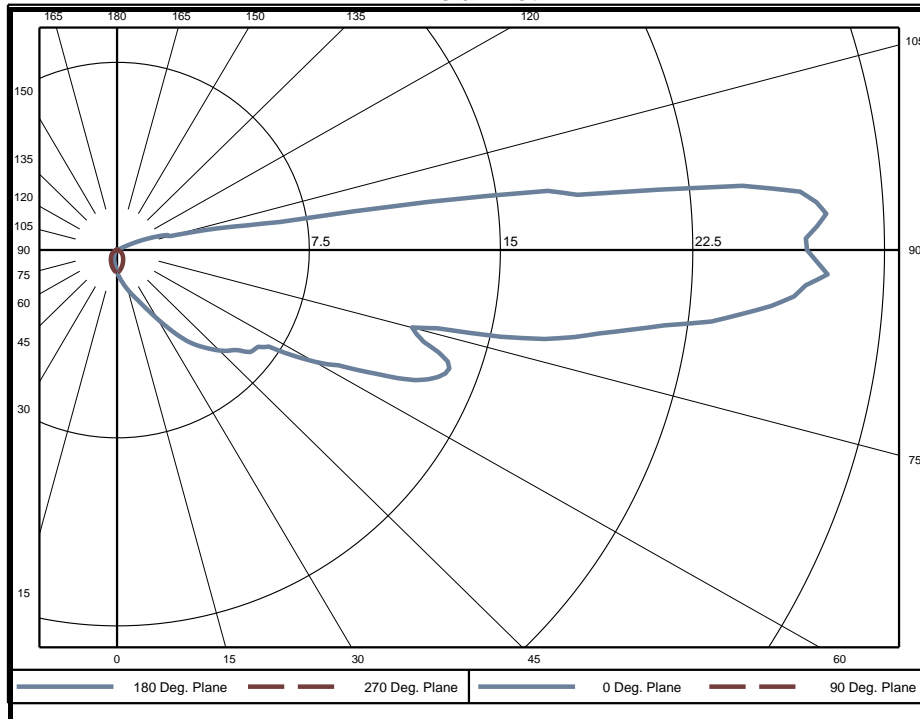
Luminaire Efficacy:

6.8 lm/w

Maximum Candela:

28 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.021	0.1%	60-65	1.098	5.2%	120-125	0.002	0.0%
5-10	0.062	0.3%	65-70	1.416	6.8%	125-130	0.001	0.0%
10-15	0.102	0.5%	70-75	1.452	6.9%	130-135	0.001	0.0%
15-20	0.143	0.7%	75-80	1.859	8.9%	135-140	0.000	0.0%
20-25	0.187	0.9%	80-85	2.494	11.9%	140-145	0.000	0.0%
25-30	0.242	1.2%	85-90	2.924	14.0%	145-150	0.000	0.0%
30-35	0.317	1.5%	90-95	2.978	14.2%	150-155	0.000	0.0%
35-40	0.411	2.0%	95-100	1.851	8.8%	155-160	0.000	0.0%
40-45	0.507	2.4%	100-105	0.442	2.1%	160-165	0.000	0.0%
45-50	0.593	2.8%	105-110	0.230	1.1%	165-170	0.000	0.0%
50-55	0.684	3.3%	110-115	0.106	0.5%	170-175	0.000	0.0%
55-60	0.815	3.9%	115-120	0.010	0.0%	175-180	0.000	0.0%

Zone	Lumens	% of Luminaire
0-40	1	7.1%
0-60	4	19.5%
0-90	15	73.2%
90-180	6	26.8%



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	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
	5	1.09	1.10	1.03	0.94	0.85	0.78	0.74	0.71	0.67	0.71	0.74	0.78	0.85	0.94	1.03
	10	1.35	1.31	1.15	0.95	0.78	0.66	0.58	0.55	0.51	0.55	0.58	0.66	0.78	0.95	1.15
	15	1.65	1.55	1.26	0.95	0.70	0.55	0.46	0.42	0.39	0.42	0.46	0.55	0.70	0.95	1.26
	20	1.99	1.82	1.37	0.93	0.62	0.44	0.36	0.32	0.30	0.32	0.36	0.44	0.62	0.93	1.37
	25	2.47	2.15	1.49	0.91	0.55	0.36	0.27	0.24	0.23	0.24	0.27	0.36	0.55	0.91	1.49
	30	3.19	2.66	1.66	0.89	0.48	0.29	0.20	0.18	0.17	0.18	0.20	0.29	0.48	0.89	1.66
	35	4.15	3.36	1.91	0.89	0.42	0.23	0.15	0.13	0.12	0.13	0.15	0.23	0.42	0.89	1.91
	40	5.00	4.08	2.18	0.89	0.36	0.18	0.11	0.09	0.08	0.09	0.11	0.18	0.36	0.89	2.18
	45	5.67	4.71	2.34	0.88	0.32	0.14	0.08	0.06	0.05	0.06	0.08	0.14	0.32	0.88	2.34
	50	6.23	5.28	2.39	0.84	0.27	0.11	0.06	0.04	0.03	0.04	0.06	0.11	0.27	0.84	2.39
	55	6.73	5.93	2.38	0.77	0.23	0.08	0.04	0.02	0.02	0.02	0.04	0.08	0.23	0.77	2.38
	60	8.91	8.18	2.37	0.70	0.18	0.06	0.02	0.01	0.00	0.01	0.02	0.06	0.18	0.70	2.37
	65	12.10	11.40	2.52	0.62	0.14	0.04	0.01	0.00	0.01	0.00	0.01	0.04	0.14	0.62	2.52
	70	13.82	12.88	2.71	0.55	0.11	0.02	0.00	0.01	0.01	0.01	0.00	0.02	0.11	0.55	2.71
	75	11.94	12.37	2.48	0.44	0.06	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.06	0.44	2.48
	80	19.15	20.13	2.47	0.33	0.03	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.03	0.33	2.47
	85	25.66	24.73	2.50	0.21	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.01	0.21	2.50
	90	26.97	27.35	2.44	0.10	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.10	2.44	27.35
	95	26.80	26.76	2.10	0.11	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.11	2.10	26.76
	100	6.46	5.52	1.27	0.12	0.00	0.00	0.00	0.02	0.03	0.02	0.00	0.00	0.12	1.27	5.52
	105	2.19	2.16	0.59	0.06	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.06	0.59	2.16
	110	1.48	1.59	0.35	0.02	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.02	0.35	1.59
	115	0.38	0.37	0.08	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.08	0.37
	120	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	125	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	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	0.01	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	195	195
	45	1759	98
	55	2575	86
	65	6279	74
	75	10110	54
	85	64550	33



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	24	24	24	24	22	22	22	22	20	20	20	18	18	18	16	16	16	15
1	19	17	15	14	18	16	14	13	14	13	11	12	11	10	10	10	9	8
2	17	14	12	10	15	13	11	9	11	10	8	10	8	7	8	7	6	5
3	15	12	9	7	14	11	9	7	9	8	6	8	6	5	7	5	4	4
4	13	10	8	6	12	9	7	5	8	6	5	7	5	4	6	4	3	3
5	12	9	6	5	11	8	6	4	7	5	4	6	5	3	5	4	3	2
6	11	8	6	4	10	7	5	4	6	5	3	5	4	3	5	3	2	2
7	10	7	5	3	10	7	5	3	6	4	3	5	3	2	4	3	2	1
8	10	6	4	3	9	6	4	3	5	4	2	4	3	2	4	3	2	1
9	9	6	4	3	8	5	4	2	5	3	2	4	3	2	3	2	1	1
10	8	5	3	2	8	5	3	2	4	3	2	4	2	2	3	2	1	1

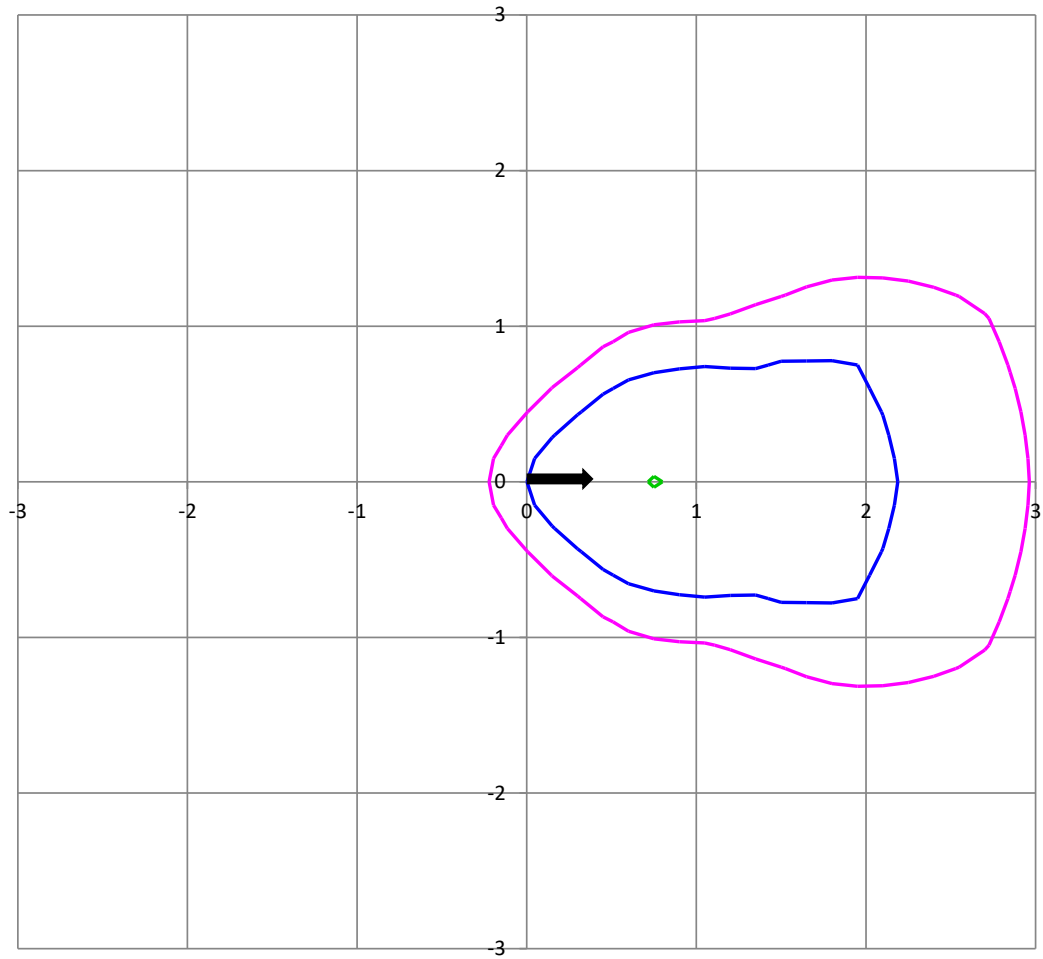
Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	0.89 Candela
Central Cone Intensity:	1 Candela
Beam Flux:	20.5 Lumens
Beam Angle (0-180):	127.5 Degrees
Beam Angle (90-270):	65.4 Degrees
Field Angle (0-180):	155.6 Degrees
Field Angle (90-270):	144.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.0555	8.85
6.00		0.0247	13.3
8.00		0.0139	17.7
10.0		0.00889	22.1
12.0		0.00617	26.6
14.0		0.00453	31.0
16.0		0.00347	35.4

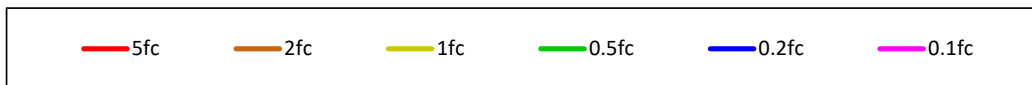


ISOFootcandle Plot

Mounting Height - 2 Feet

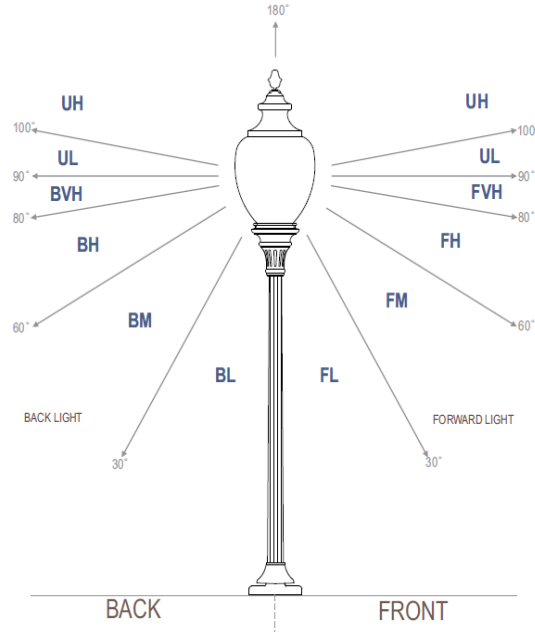


Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	0.6	2.8%
FM	(30-60)	3.2	15.4%
FH	(60-80)	5.8	27.8%
FVH	(80-90)	5.3	25.7%
BL	(0-30)	0.2	0.8%
BM	(30-60)	0.1	0.6%
BH	(60-80)	0.0	0.1%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	4.8	22.9%
UH	(100-180)	0.8	3.8%
Total		20.8	100.0%
BUG Rating	B0 U1 G0		



Attachment A

Amended Report Documentation

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