



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**  
**LDM250-270-40 (270° OPENING, 4000K)**

Order Number

11263738

Test Number

1256646E2A

Revision of Test Number 1256646E2 on:

2021-06-29

Test Date

2019-03-22

Prepared By

Derek Smarr, Technician

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, brass domed top with three (3) 90° openings. This report has been pro-rated using data from test number 11263738-1256646 and data from Auroralight Inc to account for differences in color temperature.

**Lamp:** One (1) Cree XP-L 3000K LED

**Mounting:** Recessed In-Grade/Wall

#### Luminaire



#### Luminaire Characteristics

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

#### Summary of Results

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

#### Test Conditions

Test Temperature: 25.0 °C  
Voltage: 12.02 VAC  
Current: 0.4051 A  
Power: 2.993 W  
Power Factor: 0.615  
Frequency: 60 Hz  
Current THD: 97.3 %

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
25.0 °C	12.02 VAC	0.4051 A	2.993 W	0.615	60 Hz	97.3 %

### Summary of Results

#### Spacing Criteria

0-180: 7.12

90-270: 7.85

Total Lumen Output:

27.16 Lumens

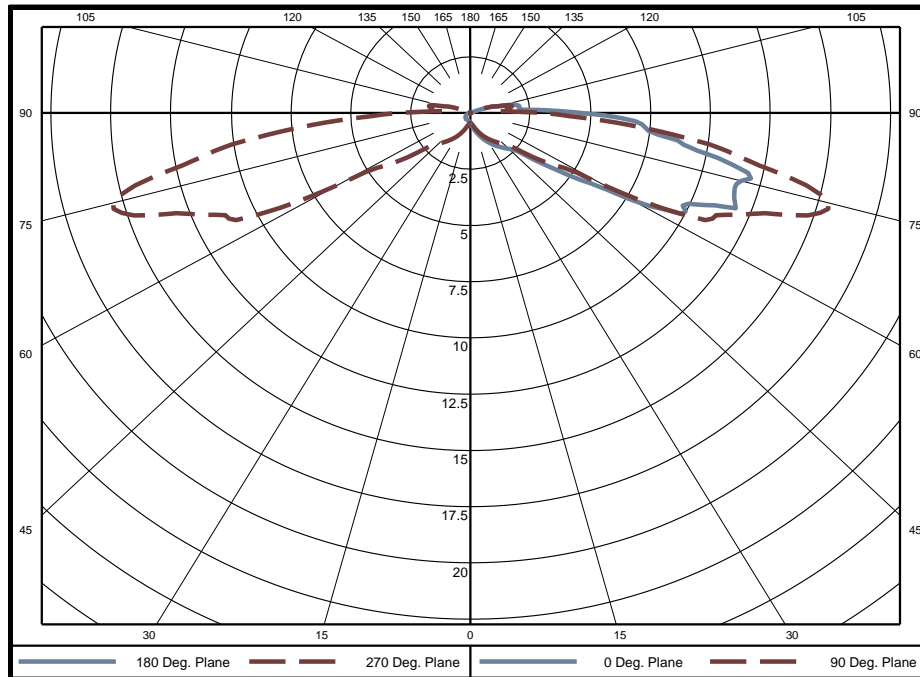
Luminaire Efficacy:

9.1 lm/w

Maximum Candela:

15 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.011	0.0%	60-65	2.844	10.5%	120-125	0.004	0.0%
5-10	0.036	0.1%	65-70	3.597	13.2%	125-130	0.003	0.0%
10-15	0.069	0.3%	70-75	4.253	15.7%	130-135	0.002	0.0%
15-20	0.115	0.4%	75-80	4.154	15.3%	135-140	0.002	0.0%
20-25	0.175	0.6%	80-85	3.030	11.2%	140-145	0.002	0.0%
25-30	0.249	0.9%	85-90	1.829	6.7%	145-150	0.001	0.0%
30-35	0.333	1.2%	90-95	0.800	2.9%	150-155	0.001	0.0%
35-40	0.423	1.6%	95-100	0.602	2.2%	155-160	0.001	0.0%
40-45	0.519	1.9%	100-105	0.532	2.0%	160-165	0.001	0.0%
45-50	0.642	2.4%	105-110	0.318	1.2%	165-170	0.000	0.0%
50-55	0.947	3.5%	110-115	0.135	0.5%	170-175	0.000	0.0%
55-60	1.512	5.6%	115-120	0.015	0.1%	175-180	0.000	0.0%

Zone	Lumens	% of Luminaire
0-40	1	5.2%
0-60	5	18.5%
0-90	25	91.1%
90-180	2	8.9%



**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	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
	5	0.55	0.55	0.53	0.50	0.47	0.44	0.42	0.40	0.39	0.40	0.42	0.44	0.47	0.50	0.53
	10	0.68	0.68	0.65	0.60	0.55	0.48	0.41	0.37	0.36	0.37	0.41	0.48	0.55	0.60	0.65
	15	0.84	0.85	0.82	0.76	0.68	0.56	0.45	0.37	0.34	0.37	0.45	0.56	0.68	0.76	0.82
	20	1.04	1.05	1.01	0.95	0.85	0.67	0.50	0.37	0.33	0.37	0.50	0.67	0.85	0.95	1.01
	25	1.26	1.27	1.23	1.17	1.04	0.81	0.56	0.38	0.33	0.38	0.56	0.81	1.04	1.17	1.23
	30	1.49	1.49	1.44	1.38	1.25	0.96	0.63	0.39	0.32	0.39	0.63	0.96	1.25	1.38	1.44
	35	1.74	1.71	1.62	1.59	1.47	1.12	0.70	0.40	0.31	0.40	0.70	1.12	1.47	1.59	1.62
	40	1.98	1.89	1.75	1.76	1.69	1.28	0.75	0.40	0.29	0.40	0.75	1.28	1.69	1.76	1.75
	45	2.25	2.08	1.89	1.95	1.95	1.46	0.80	0.39	0.27	0.39	0.80	1.46	1.95	1.95	1.89
	50	2.77	2.59	2.12	2.49	2.48	1.91	0.87	0.36	0.25	0.36	0.87	1.91	2.48	2.49	2.12
	55	4.46	3.99	2.56	3.48	3.82	3.15	1.07	0.33	0.21	0.33	1.07	3.15	3.82	3.48	2.56
	60	7.68	7.39	2.95	6.65	6.49	7.23	1.33	0.29	0.18	0.29	1.33	7.23	6.49	6.65	2.95
	65	9.74	10.66	3.09	10.78	11.12	10.73	1.43	0.26	0.14	0.26	1.43	10.73	11.12	10.78	3.09
	70	11.71	12.16	3.12	12.40	13.04	13.17	1.50	0.24	0.11	0.24	1.50	13.17	13.04	12.40	3.12
	75	11.65	12.23	3.02	14.13	15.43	14.80	1.46	0.20	0.07	0.20	1.46	14.80	15.43	14.13	3.02
	80	9.57	10.01	3.21	11.55	11.45	10.94	1.55	0.16	0.04	0.16	1.55	10.94	11.45	11.55	3.21
	85	7.29	6.97	2.69	6.62	6.98	6.43	1.16	0.11	0.03	0.11	1.16	6.43	6.98	6.62	2.69
	90	4.67	4.12	1.71	3.41	3.00	3.41	0.63	0.07	0.02	0.07	0.63	3.41	3.00	3.41	1.71
	95	2.07	1.82	0.97	1.29	1.15	1.14	0.34	0.08	0.03	0.08	0.34	1.14	1.15	1.29	0.97
	100	2.00	1.82	1.03	1.68	1.75	1.58	0.47	0.07	0.02	0.07	0.47	1.58	1.75	1.68	1.03
	105	1.17	1.06	0.68	1.06	1.13	0.96	0.33	0.05	0.02	0.05	0.33	0.96	1.13	1.06	0.68
	110	0.66	0.70	0.36	0.71	0.60	0.59	0.18	0.03	0.02	0.03	0.18	0.59	0.60	0.71	0.36
	115	0.15	0.18	0.09	0.16	0.14	0.14	0.05	0.02	0.02	0.02	0.05	0.14	0.14	0.16	0.09
	120	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01
	125	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
	130	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	135	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	140	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	0.00	0.01
	145	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	150	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01
	155	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	160	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	165	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	170	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01
	175	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01
	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/m<sup>2</sup>)**

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	100	100	100
	45	697	586	604
	55	1706	978	1461
	65	5055	1602	5770
	75	9870	2560	13070
	85	18350	6773	17560



### 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	32	32	32	32	31	31	31	31	29	29	29	27	27	27	25	25	25	25
1	26	23	21	19	25	22	20	18	20	19	17	19	17	16	17	16	15	14
2	22	18	15	12	21	17	14	12	16	13	11	14	12	10	13	11	10	9
3	19	14	11	8	18	14	11	8	13	10	7	11	9	7	10	8	6	6
4	17	12	9	6	16	12	8	6	10	8	5	9	7	5	8	6	5	4
5	15	10	7	5	14	10	7	4	9	6	4	8	6	4	7	5	3	3
6	14	9	6	4	13	9	6	4	8	5	3	7	5	3	6	4	3	2
7	13	8	5	3	12	8	5	3	7	5	3	6	4	2	6	4	2	2
8	12	7	4	3	11	7	4	2	6	4	2	6	4	2	5	3	2	1
9	11	7	4	2	10	6	4	2	6	4	2	5	3	2	5	3	2	1
10	10	6	4	2	10	6	3	2	5	3	2	5	3	2	5	3	1	1

### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	0.46 Candela
Central Cone Intensity:	0 Candela
Beam Flux:	27.0 Lumens
Beam Angle (0-180):	167.0 Degrees
Beam Angle (90-270):	227.9 Degrees
Field Angle (0-180):	195.6 Degrees
Field Angle (90-270):	232.3 Degrees

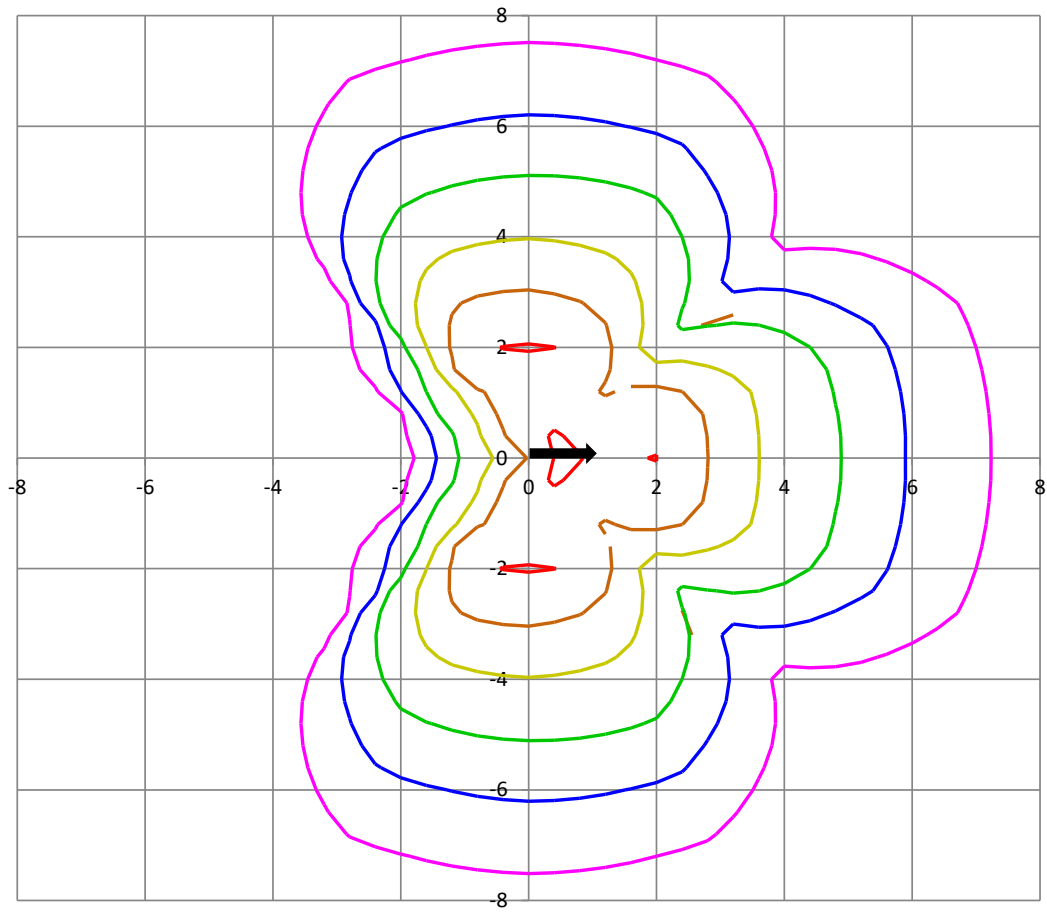
### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.0285	25.1
6.00		0.0127	37.6
8.00		0.00713	50.2
10.0		0.00457	62.7
12.0		0.00317	75.3
14.0		0.00233	87.8
16.0		0.00178	100



## ISOFootcandle Plot

Mounting Height - 2 Feet

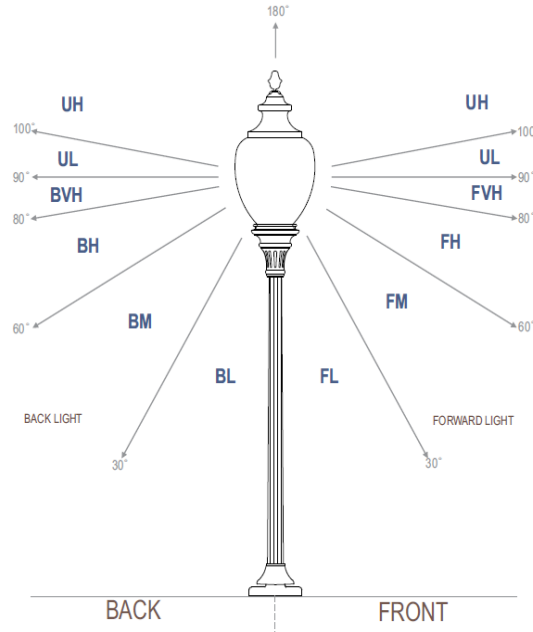


Grid Lines in Units of Mounting Height

0.2fc    0.1fc    0.05fc    0.02fc    0.01fc    0.005fc



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	0.4	1.5%
FM	(30-60)	3.0	10.8%
FH	(60-80)	10.0	35.7%
FVH	(80-90)	3.3	11.9%
BL	(0-30)	0.2	0.8%
BM	(30-60)	1.4	5.1%
BH	(60-80)	5.4	19.2%
BVH	(80-90)	1.6	5.9%
UL	(90-100)	1.5	5.4%
UH	(100-180)	1.0	3.7%
Total		28.0	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		



## Attachment A

## Amended Report Documentation

[illegible]