



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
LDM350-90-45 (90° OPENING, 4500K)
Order Number
11263738
Test Number
1256652E2A

Revision of Test Number 1256652E2 on:

2021-06-29
Test Date

2019-04-30

Prepared By

Cordaryl Cousar, 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 one (1) 90° openings and clear acrylic lens. This report has been pro-rated using data from test number 11263738-1256652 and data from Auroralight Inc to account for differences in color temperature.

Lamp: One (1) Cree XHP 4500K LED
Mounting: Recessed In-Grade/Wall

Luminaire



Luminaire Characteristics

Luminous Diameter: 3.50 in.
Luminous Height: 0.410 in.

Summary of Results

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

Test Conditions

Test Temperature: 25.1 °C
Voltage: 11.89 VAC
Current: 0.3350 A
Power: 3.880 W
Power Factor: 0.974
Frequency: 60 Hz
Current THD: 13.6 %

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
25.1 °C	11.89 VAC	0.3350 A	3.880 W	0.974	60 Hz	13.6 %

Summary of Results

Spacing Criteria

0-180: 5.32

90-270: 0.81

Total Lumen Output:

18.13 Lumens

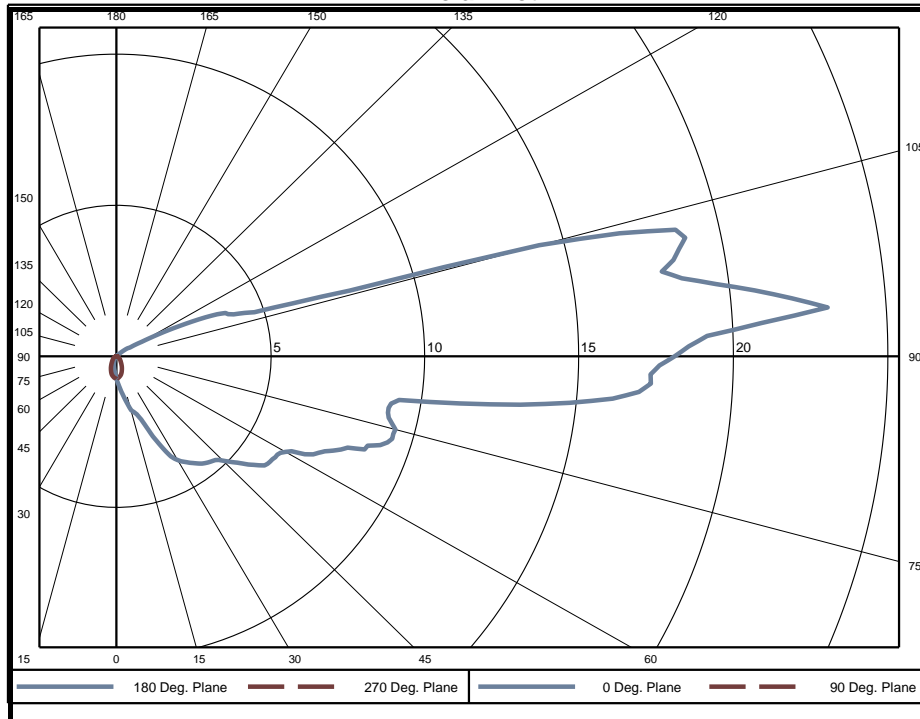
Luminaire Efficacy:

4.7 lm/w

Maximum Candela:

24 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.018	0.1%	60-65	0.693	3.8%	120-125	0.053	0.3%
5-10	0.054	0.3%	65-70	0.828	4.6%	125-130	0.025	0.1%
10-15	0.095	0.5%	70-75	0.973	5.4%	130-135	0.003	0.0%
15-20	0.135	0.7%	75-80	0.985	5.4%	135-140	0.001	0.0%
20-25	0.182	1.0%	80-85	1.570	8.7%	140-145	0.000	0.0%
25-30	0.250	1.4%	85-90	2.060	11.4%	145-150	0.000	0.0%
30-35	0.307	1.7%	90-95	2.345	12.9%	150-155	0.000	0.0%
35-40	0.356	2.0%	95-100	2.129	11.7%	155-160	0.000	0.0%
40-45	0.400	2.2%	100-105	1.918	10.6%	160-165	0.000	0.0%
45-50	0.460	2.5%	105-110	0.645	3.6%	165-170	0.000	0.0%
50-55	0.533	2.9%	110-115	0.365	2.0%	170-175	0.000	0.0%
55-60	0.587	3.2%	115-120	0.162	0.9%	175-180	0.000	0.0%

Zone	Lumens	% of Luminaire
0-40	1	7.7%
0-60	3	18.6%
0-90	10	57.8%
90-180	8	42.2%



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	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	5	0.99	0.99	0.91	0.81	0.72	0.64	0.58	0.56	0.53	0.56	0.58	0.64	0.72	0.81	0.91
	10	1.35	1.31	1.09	0.85	0.67	0.53	0.45	0.41	0.38	0.41	0.45	0.53	0.67	0.85	1.09
	15	1.85	1.69	1.27	0.87	0.60	0.44	0.34	0.30	0.28	0.30	0.34	0.44	0.60	0.87	1.27
	20	2.14	1.96	1.30	0.81	0.51	0.34	0.25	0.21	0.19	0.21	0.25	0.34	0.51	0.81	1.30
	25	3.11	2.71	1.37	0.72	0.42	0.26	0.18	0.15	0.13	0.15	0.18	0.26	0.42	0.72	1.37
	30	3.97	3.33	1.47	0.65	0.33	0.19	0.13	0.10	0.08	0.10	0.13	0.19	0.33	0.65	1.47
	35	4.32	3.62	1.51	0.59	0.26	0.14	0.09	0.06	0.05	0.06	0.09	0.14	0.26	0.59	1.51
	40	4.60	3.83	1.50	0.54	0.21	0.10	0.06	0.03	0.02	0.03	0.06	0.10	0.21	0.54	1.50
	45	4.89	4.08	1.46	0.51	0.17	0.07	0.04	0.01	0.00	0.01	0.04	0.07	0.17	0.51	1.46
	50	5.58	4.52	1.44	0.48	0.14	0.05	0.02	0.00	0.00	0.00	0.02	0.05	0.14	0.48	1.44
	55	6.08	4.86	1.47	0.47	0.12	0.04	0.01	0.00	0.00	0.00	0.01	0.04	0.12	0.47	1.47
	60	6.34	5.16	1.49	0.47	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.47	1.49
	65	7.45	6.34	1.57	0.46	0.08	0.02	0.00	0.00	0.01	0.00	0.00	0.02	0.08	0.46	1.57
	70	8.67	7.43	1.61	0.44	0.06	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.06	0.44	1.61
	75	9.36	8.20	1.62	0.41	0.04	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.04	0.41	1.62
	80	9.04	8.32	1.64	0.37	0.02	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.02	0.37	1.64
	85	16.15	19.03	1.69	0.34	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.01	0.34	1.69
	90	18.10	19.86	1.69	0.29	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.29	1.69
	95	21.97	22.48	1.54	0.23	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.01	0.23	1.54
	100	18.33	19.50	1.29	0.19	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.01	0.19	1.29
	105	14.18	11.32	1.01	0.14	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.14	1.01
	110	4.04	3.84	0.77	0.09	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.09	0.77
	115	2.71	2.33	0.48	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.48
	120	0.95	0.66	0.18	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.18
	125	0.47	0.34	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09
	130	0.14	0.10	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
	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)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
		0	45	90
	0	121	121	121
	45	2696	803	95
	55	1942	471	38
	65	2138	449	24
	75	2436	421	10
	85	3992	418	3



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

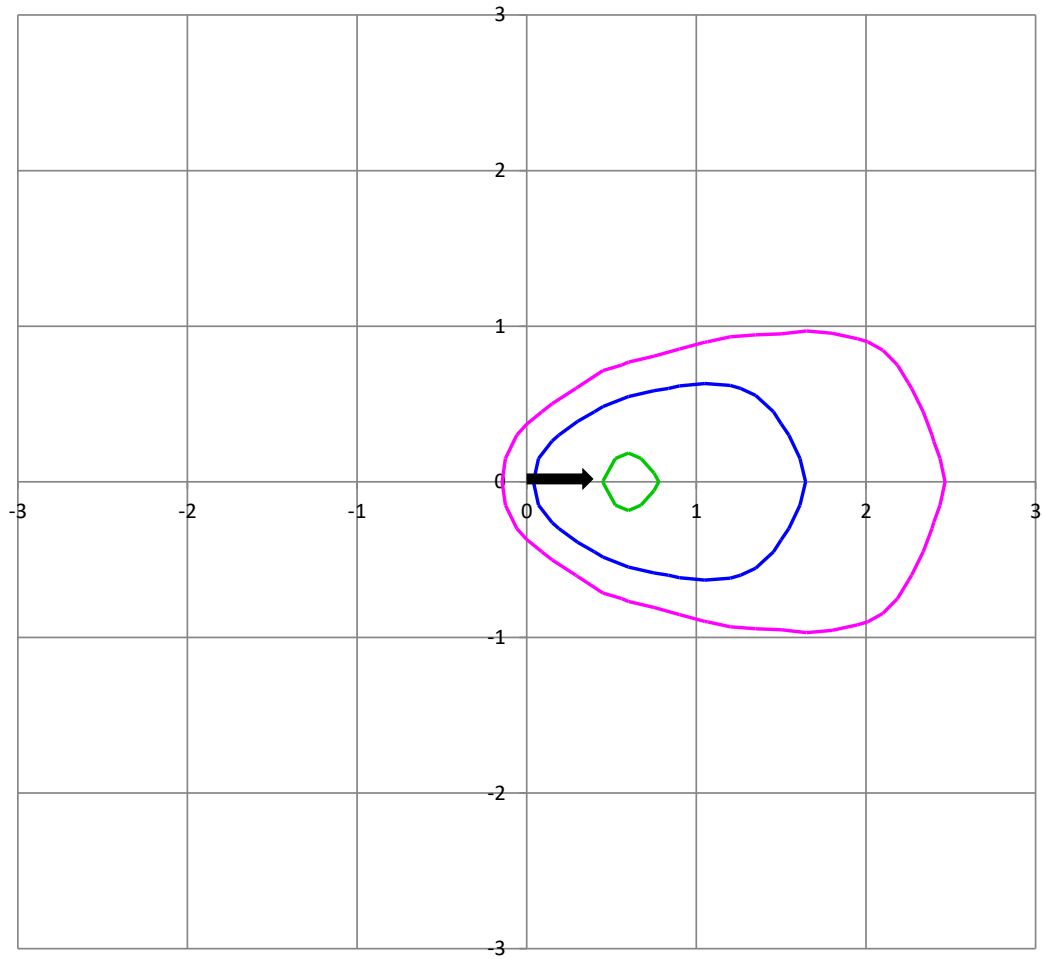
Beam and Field Information	
CIE Type:	Direct/Indirect
Center Beam Intensity:	0.75 Candela
Central Cone Intensity:	1 Candela
Beam Flux:	17.8 Lumens
Beam Angle (0-180):	137.2 Degrees
Beam Angle (90-270):	54.7 Degrees
Field Angle (0-180):	162.0 Degrees
Field Angle (90-270):	134.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.0471	8.21
6.00		0.0209	12.3
8.00		0.0118	16.4
10.0		0.00753	20.5
12.0		0.00523	24.6
14.0		0.00384	28.8
16.0		0.00294	32.9

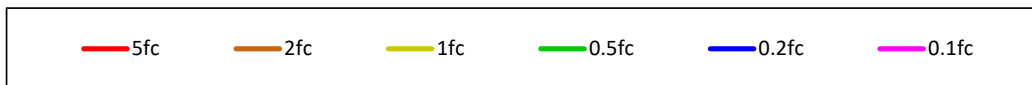


ISOFootcandle Plot

Mounting Height - 2 Feet

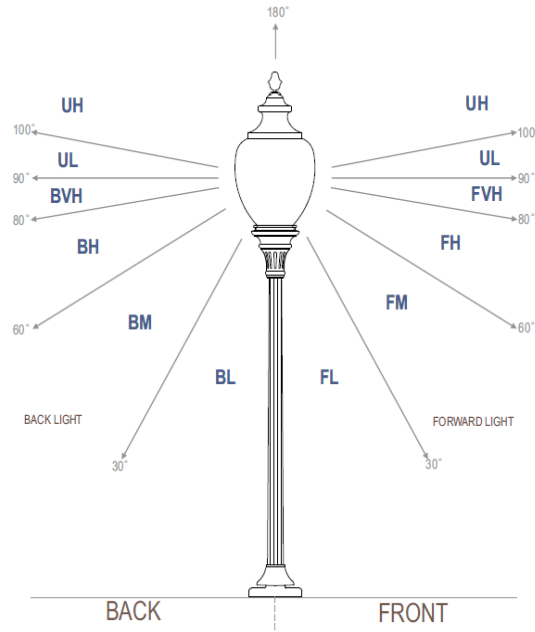


Grid Lines in Units of Mounting Height





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	3.2%
FM	(30-60)	2.6	13.4%
FH	(60-80)	3.5	18.4%
FVH	(80-90)	3.8	20.1%
BL	(0-30)	0.1	0.7%
BM	(30-60)	0.1	0.3%
BH	(60-80)	0.0	0.1%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	5.0	26.0%
UH	(100-180)	3.4	17.7%
Total		19.1	100.0%
BUG Rating	B0 U1 G0		



Attachment A

Amended Report Documentation

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