



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
HDL11-P1-6-M-45 (6W, 25° OPTIC, 4500K)

Order Number
12250114
Test Number
12250114.138

Report Date

2018-05-09

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 metal housing with perforated metal tube, clear glass lens and internal LED module

Lamp: One (1) Cree XHP 4500K LED with 25°, medium silicone optic

Mounting: Pendant

Ballast/Driver: Integrated

Note: This report has been pro-rated using data from report numbers 12250114.136, 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: 1.25 in.

Luminous Height: 3.250 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: 12.02 VAC
Current: 0.5312 A
Power: 6.322 W
Power Factor: 0.990
Frequency: 60 Hz
Current THD: 7.52 %

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	12.02 VAC	0.5312 A	6.322 W	0.990	60 Hz	7.52 %

Summary of Results

Spacing Criteria

0-180: 0.36

90-270: 0.36

Total Lumen Output:

203.0 Lumens

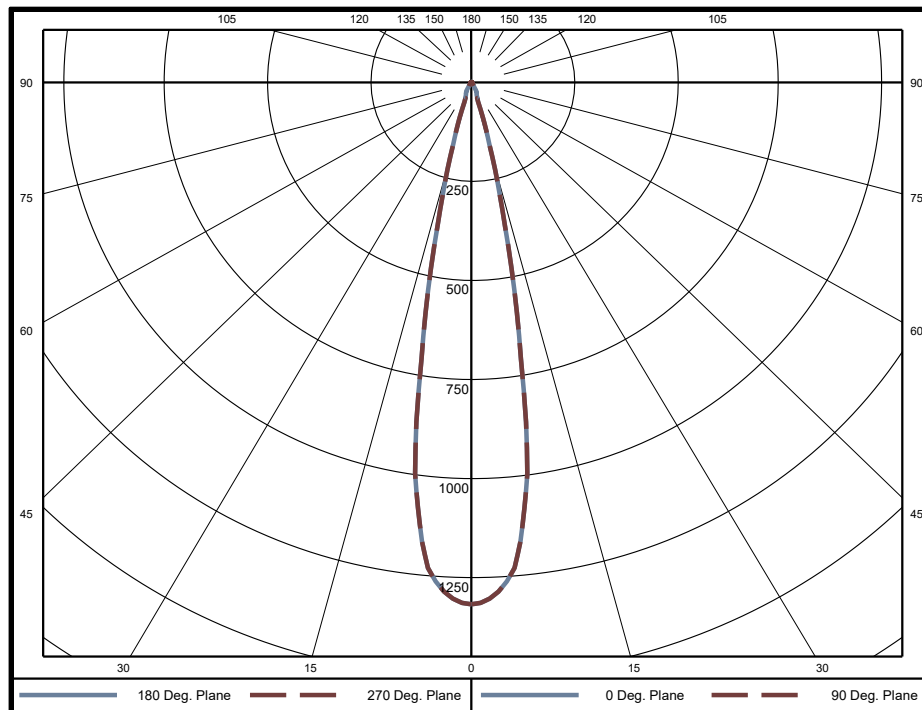
Luminaire Efficacy:

32.1 lm/w

Maximum Candela:

1317 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	30.47	15.0%	60-65	0.92	0.5%	120-125	0.24	0.1%
5-10	70.80	34.9%	65-70	0.70	0.3%	125-130	0.22	0.1%
10-15	50.34	24.8%	70-75	0.58	0.3%	130-135	0.20	0.1%
15-20	18.04	8.9%	75-80	0.58	0.3%	135-140	0.20	0.1%
20-25	7.59	3.7%	80-85	0.44	0.2%	140-145	0.19	0.1%
25-30	6.82	3.4%	85-90	0.28	0.1%	145-150	0.20	0.1%
30-35	3.78	1.9%	90-95	0.28	0.1%	150-155	0.20	0.1%
35-40	2.30	1.1%	95-100	0.35	0.2%	155-160	0.18	0.1%
40-45	1.86	0.9%	100-105	0.32	0.2%	160-165	0.13	0.1%
45-50	1.49	0.7%	105-110	0.27	0.1%	165-170	0.05	0.0%
50-55	1.30	0.6%	110-115	0.28	0.1%	170-175	0.00	0.0%
55-60	1.15	0.6%	115-120	0.27	0.1%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	190	93.7%
0-60	196	96.5%
0-90	199	98.2%
90-180	4	1.8%



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	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317	1317
	5	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230
	10	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709
	15	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228
	20	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	25	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	30	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	35	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	40	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	50	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	55	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	60	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	65	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	85	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	105	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	110	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	115	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	120	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	125	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	130	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	135	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	140	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	145	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	150	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	155	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	165	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	170	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
	180	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	1664000	1664000
	45	7795	7795
	55	6140	6140
	65	4758	4758
	75	5384	5384
	85	9379	9379



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	241	241	241	241	235	235	235	235	224	224	224	213	213	213	204	204	204	199
1	233	228	224	221	227	223	220	217	215	212	210	207	205	203	199	198	196	193
2	225	218	212	207	221	214	209	204	207	203	199	201	197	194	195	192	190	187
3	218	209	202	196	214	206	200	194	201	195	191	195	191	188	191	187	184	182
4	212	202	194	188	209	199	192	187	195	189	184	191	186	182	187	183	179	177
5	206	195	187	181	204	193	186	180	190	183	178	186	181	177	183	179	175	173
6	201	189	181	176	199	188	180	175	185	178	174	182	177	172	179	175	171	169
7	197	184	176	171	194	183	176	170	181	174	169	178	173	168	176	171	167	165
8	192	180	172	167	190	179	171	166	177	170	166	175	169	165	173	168	164	162
9	188	176	168	163	186	175	168	163	173	167	162	171	166	161	170	165	161	159
10	184	172	165	160	183	171	164	159	170	163	159	168	163	158	167	162	158	156

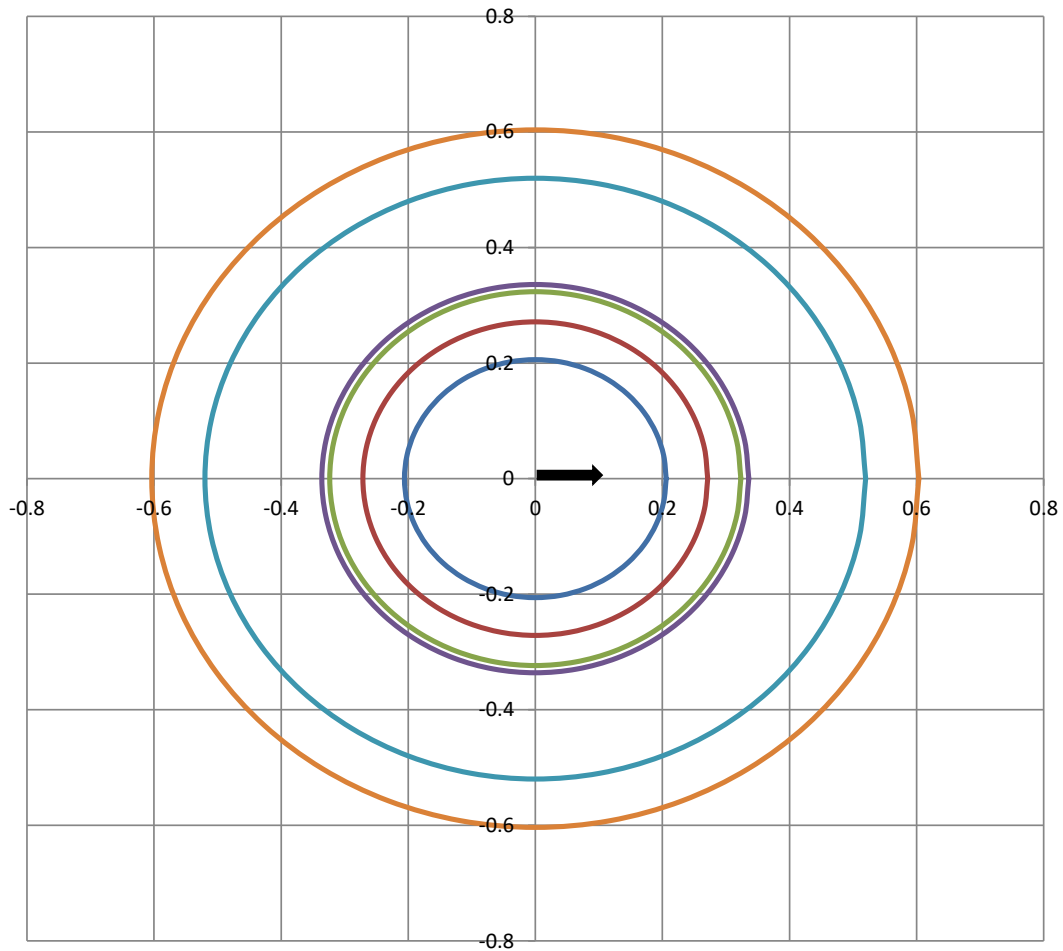
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1317 Candela
Central Cone Intensity:	1287 Candela
Beam Flux:	107.2 Lumens
Beam Angle (0-180):	20.9 Degrees
Beam Angle (90-270):	20.9 Degrees
Field Angle (0-180):	33.7 Degrees
Field Angle (90-270):	33.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		82.3	1.43
6.00		36.6	2.15
8.00		20.6	2.87
10.0		13.2	3.58
12.0		9.15	4.30
14.0		6.72	5.01
16.0		5.15	5.73



ISOFootcandle Plot

Mounting Height - 10 Feet

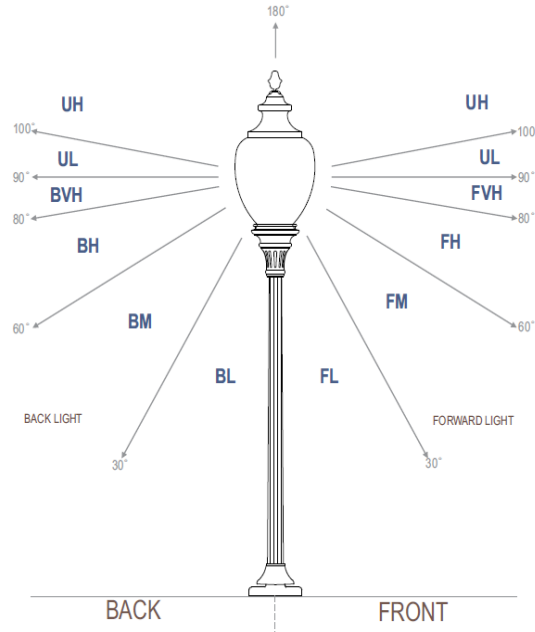


Grid Lines in Units of Mounting Height

5 fc 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)	92.1	45.5%
FM	(30-60)	5.9	2.9%
FH	(60-80)	1.3	0.7%
FVH	(80-90)	0.3	0.2%
BL	(0-30)	92.1	45.5%
BM	(30-60)	5.9	2.9%
BH	(60-80)	1.3	0.7%
BVH	(80-90)	0.3	0.2%
UL	(90-100)	0.5	0.3%
UH	(100-180)	2.7	1.3%
Total		202.6	100.0%
BUG Rating	B0 U1 G0		