



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 Avenue W
Carlsbad, CA 92010
United States

Catalog Number
LBD-H-12-30-15 (3000K)

Order Number

13324020

Test Number

13324020.01A

Revision of Test Number 13324020.01 on:

2021-06-28

Test Date

2020-04-22

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 stem with cylindrical copper cap and frosted acrylic lens
Lamp: One White LED
Mounting: Path/Area Light
Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.50 in.
Luminous Height: 1.000 in.

Summary of Results

Roadway Classification:	Type I, Short
Cutoff Classification:	Noncutoff
BUG Rating:	B0 U3 G1

Test Conditions

Test Temperature:	24.0 °C
Voltage:	11.99 VAC
Current:	0.9732 A
Power:	11.66 W
Power Factor:	0.999
Frequency:	60 Hz
Current THD:	3.66 %

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
24.0 °C	11.99 VAC	0.9732 A	11.66 W	0.999	60 Hz	3.66 %

Summary of Results

Spacing Criteria

0-180: 9.32

90-270: 9.56

Total Lumen Output:

240.1 Lumens

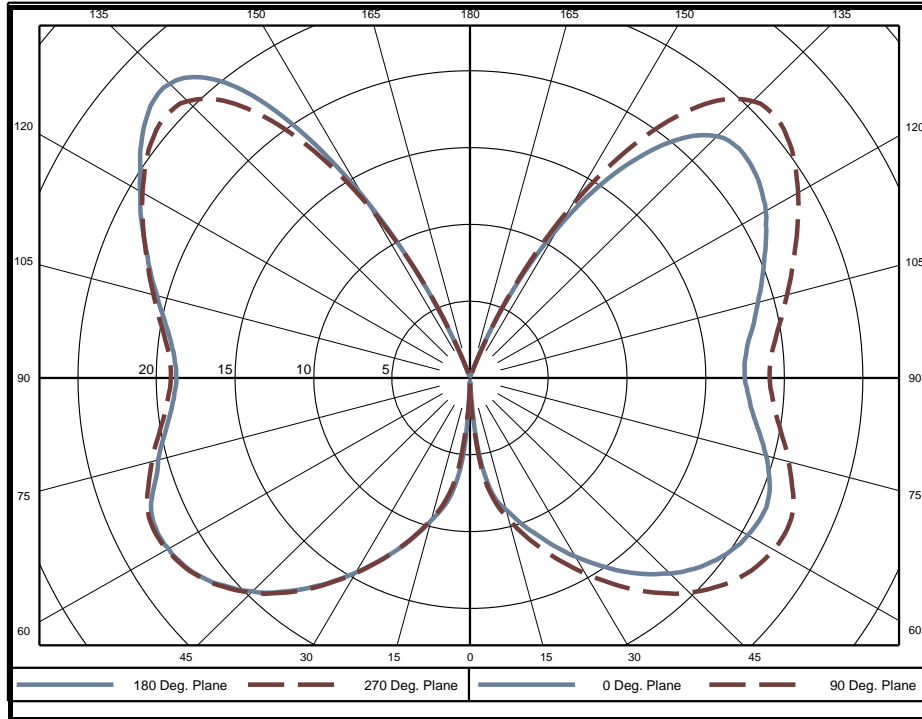
Luminaire Efficacy:

20.6 lm/w

Maximum Candela:

27 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.05	0.0%	60-65	10.74	4.5%	120-125	11.26	4.7%
5-10	0.45	0.2%	65-70	11.08	4.6%	125-130	10.99	4.6%
10-15	1.03	0.4%	70-75	11.02	4.6%	130-135	10.35	4.3%
15-20	1.69	0.7%	75-80	10.81	4.5%	135-140	9.09	3.8%
20-25	2.49	1.0%	80-85	10.53	4.4%	140-145	7.15	3.0%
25-30	3.44	1.4%	85-90	10.33	4.3%	145-150	4.75	2.0%
30-35	4.52	1.9%	90-95	10.29	4.3%	150-155	2.43	1.0%
35-40	5.70	2.4%	95-100	10.47	4.4%	155-160	0.71	0.3%
40-45	6.93	2.9%	100-105	10.75	4.5%	160-165	0.07	0.0%
45-50	8.11	3.4%	105-110	11.01	4.6%	165-170	0.02	0.0%
50-55	9.19	3.8%	110-115	11.21	4.7%	170-175	0.01	0.0%
55-60	10.07	4.2%	115-120	11.32	4.7%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	19	8.1%
0-60	54	22.4%
0-90	118	49.2%
90-180	122	50.8%



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	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
	5	3.16	4.47	4.28	4.04	3.70	3.38	3.27	3.37	5.13	3.37	3.27	3.38	3.70	4.04	4.47
	10	7.28	7.79	7.71	7.74	7.65	7.62	7.56	7.53	8.09	7.53	7.56	7.62	7.65	7.74	7.79
	15	8.86	9.24	9.52	9.55	9.52	9.56	9.43	9.36	9.62	9.36	9.43	9.56	9.52	9.55	9.52
	20	10.30	10.71	11.19	11.23	11.22	11.16	11.06	10.94	11.26	10.94	11.06	11.16	11.22	11.23	11.19
	25	11.79	12.24	12.84	12.97	12.94	12.82	12.72	12.60	12.91	12.60	12.72	12.82	12.94	12.97	12.84
	30	13.40	13.96	14.62	14.78	14.68	14.58	14.42	14.38	14.63	14.38	14.42	14.58	14.68	14.78	14.62
	35	15.00	15.66	16.40	16.60	16.49	16.37	16.23	16.14	16.41	16.14	16.23	16.37	16.49	16.60	16.40
	40	16.59	17.30	18.13	18.33	18.21	18.09	17.95	17.89	18.10	17.89	17.95	18.09	18.21	18.33	18.13
	45	17.98	18.72	19.63	19.85	19.73	19.64	19.53	19.45	19.62	19.45	19.53	19.64	19.73	19.85	19.63
	50	19.12	19.83	20.84	21.06	20.97	20.90	20.81	20.73	20.88	20.73	20.81	20.90	20.97	21.06	20.84
	55	19.94	20.60	21.66	21.90	21.85	21.81	21.76	21.69	21.79	21.69	21.76	21.81	21.85	21.90	21.66
	60	20.43	20.97	22.09	22.35	22.33	22.34	22.31	22.25	22.19	22.25	22.31	22.34	22.33	22.35	22.09
	65	20.64	20.99	22.12	22.44	22.43	22.49	22.47	22.41	22.26	22.41	22.47	22.49	22.43	22.44	22.12
	70	20.30	20.39	21.50	21.83	21.88	21.96	21.94	21.89	21.50	21.89	21.94	21.96	21.88	21.83	21.50
	75	19.52	19.52	20.58	20.94	20.99	21.07	21.05	20.99	20.58	20.99	21.05	21.07	20.99	20.94	20.58
	80	18.59	18.69	19.71	20.07	20.09	20.14	20.07	20.03	19.69	20.03	20.07	20.14	20.09	20.07	19.71
	85	17.88	18.10	19.08	19.42	19.42	19.40	19.32	19.25	19.03	19.25	19.32	19.40	19.42	19.42	19.08
	90	17.49	17.92	18.87	19.15	19.07	19.00	18.90	18.80	18.71	18.80	18.90	19.00	19.07	19.15	18.87
	95	17.63	18.29	19.18	19.43	19.30	19.16	19.01	18.91	18.96	18.91	19.01	19.16	19.30	19.43	19.18
	100	18.23	19.11	20.00	20.16	20.00	19.80	19.61	19.55	19.67	19.55	19.61	19.80	20.00	20.16	20.00
	105	18.98	20.09	20.97	21.10	20.89	20.67	20.47	20.43	20.64	20.43	20.47	20.67	20.89	21.10	20.97
	110	19.83	21.16	22.00	22.09	21.92	21.72	21.53	21.56	21.81	21.56	21.53	21.72	21.92	22.09	22.00
	115	20.77	22.25	23.12	23.15	22.99	22.82	22.64	22.74	23.03	22.74	22.64	22.82	22.99	23.15	23.12
	120	21.73	23.32	24.23	24.26	24.12	24.00	23.87	24.00	24.28	24.00	23.87	24.00	24.12	24.26	24.23
	125	22.42	24.17	25.14	25.20	25.13	25.07	25.00	25.20	25.66	25.20	25.00	25.07	25.13	25.20	25.14
	130	22.72	24.57	25.64	25.78	25.79	25.88	25.96	26.27	26.78	26.27	25.96	25.88	25.79	25.78	25.64
	135	22.26	23.94	25.11	25.34	25.47	25.81	26.13	26.63	27.06	26.63	26.13	25.81	25.47	25.34	25.11
	140	20.15	21.50	22.76	23.00	23.29	23.83	24.46	25.17	25.35	25.17	24.46	23.83	23.29	23.00	22.76
	145	16.49	17.11	18.32	18.58	18.97	19.63	20.40	21.20	20.74	21.20	20.40	19.63	18.97	18.58	18.32
	150	11.54	11.29	12.33	10.86	12.91	13.55	14.25	15.00	13.64	15.00	14.25	13.55	12.91	10.86	12.33
	155	5.77	5.09	5.63	5.30	6.13	6.60	7.20	7.59	5.87	7.59	7.20	6.60	6.13	5.30	5.63
	160	1.00	0.81	0.88	0.82	0.87	1.13	1.40	1.58	0.51	1.58	1.40	1.13	0.87	0.82	0.88
	165	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.20	0.22	0.21	0.21	0.21	0.21	0.21
	170	0.21	0.22	0.20	0.20	0.21	0.21	0.21	0.22	0.22	0.22	0.21	0.21	0.21	0.20	0.22
	175	0.17	0.15	0.15	0.15	0.15	0.16	0.17	0.16	0.13	0.16	0.17	0.16	0.15	0.15	0.15
	180	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	111	111
	45	8040	8777
	55	8862	9624
	65	9441	10120
	75	9480	9993
	85	9497	10130



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	257	257	257	257	237	237	237	237	199	199	199	165	165	165	133	133	133	118
1	223	208	195	183	204	191	179	168	158	149	141	128	121	115	100	95	90	77
2	199	175	156	140	181	160	143	129	132	119	107	106	96	87	81	74	67	55
3	178	150	128	111	162	137	118	102	112	97	85	89	78	68	68	60	52	41
4	161	130	108	90	146	119	99	83	97	81	69	77	65	55	59	49	42	32
5	147	114	91	75	133	104	84	69	85	69	57	68	55	45	51	42	34	26
6	134	101	79	63	122	92	72	58	76	60	48	60	48	38	46	36	28	21
7	123	90	69	54	112	82	63	49	68	52	41	54	42	32	41	31	24	17
8	114	81	60	46	103	74	56	43	61	46	35	49	37	28	37	28	21	14
9	106	73	54	40	96	67	49	37	55	41	31	44	33	24	34	25	18	12
10	98	67	48	35	89	61	44	32	51	37	27	41	29	21	31	22	16	11

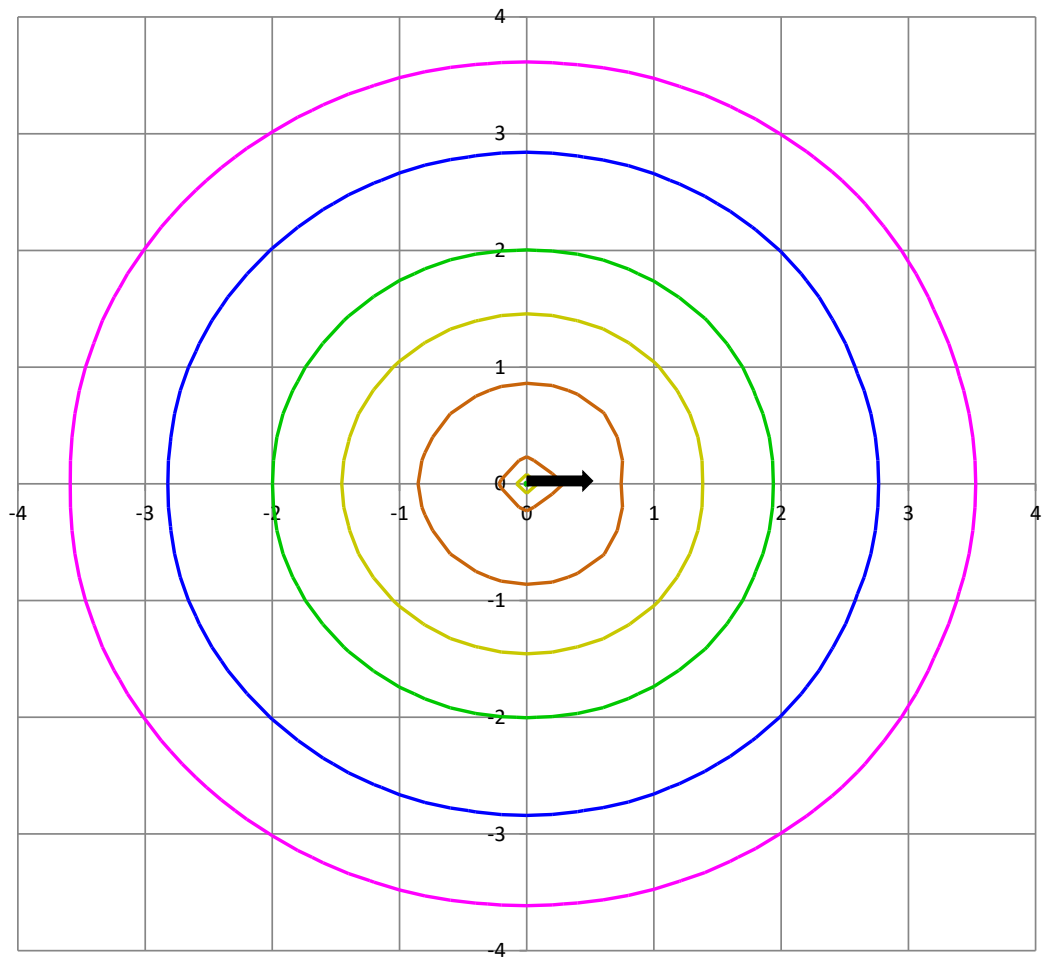
Beam and Field Information	
CIE Type:	Direct/Indirect
Center Beam Intensity:	0.35 Candela
Central Cone Intensity:	2 Candela
Beam Flux:	240.1 Lumens
Beam Angle (0-180):	348.5 Degrees
Beam Angle (90-270):	346.9 Degrees
Field Angle (0-180):	#REF! Degrees
Field Angle (90-270):	#REF! Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.0219	38.0
6.00		0.00975	57.0
8.00		0.00549	76.0
10.0		0.00351	95.1
12.0		0.00244	114
14.0		0.00179	133
16.0		0.00137	152

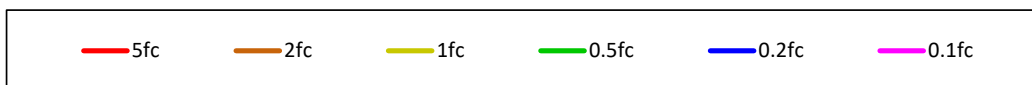


ISOFootcandle Plot

Mounting Height - 2 Feet

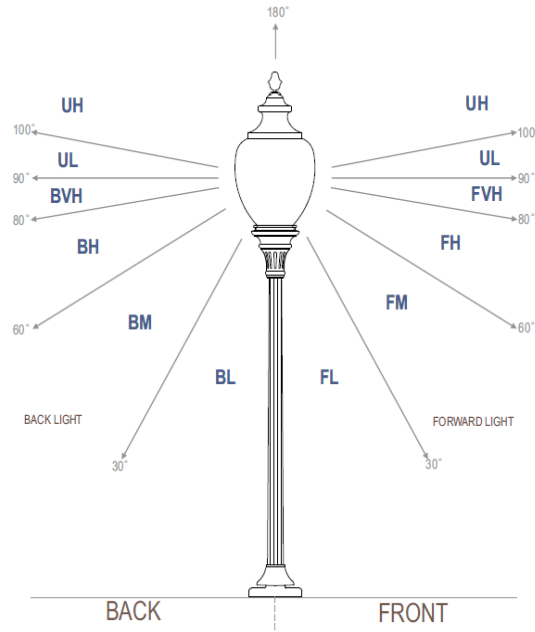


Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	4.6	1.9%
FM	(30-60)	22.0	9.2%
FH	(60-80)	21.4	8.9%
FVH	(80-90)	10.3	4.3%
BL	(0-30)	4.6	1.9%
BM	(30-60)	22.4	9.3%
BH	(60-80)	22.2	9.2%
BVH	(80-90)	10.6	4.4%
UL	(90-100)	20.7	8.6%
UH	(100-180)	101.1	42.1%
Total		239.9	100.0%
BUG Rating	B0 U3 G1		



Attachment A

Amended Report Documentation

[illegible]