



UL LLC
1075 W Lambert Rd Suite B
Brea, CA 92821

Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002

Prepared For
B-K Lighting Inc

Chris McCarthy
40429 Brickyard Dr
Madera, CA 93636-9515
United States

Catalog Number
LHS-LED-L12-SD2

Order Number
11609588
Test Number
11609588.08

Test Date

2017-04-07

Prepared By

Tony Rubio, Technician

Approved By

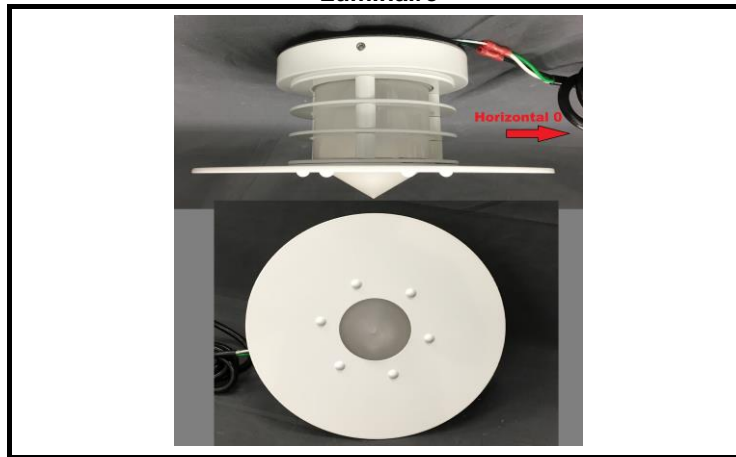
Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



Luminaire Description: Decorative white metal housing with baffles, reflector and diffuse lens.
Lamp: White LED array
Mounting: Pendant

Luminaire



Luminaire Characteristics

Luminous Diameter: 10.00 in.
Luminous Height: 3.00 in.

Summary of Results

Total Luminaire Output:	421.0 Lumens
Luminaire Efficacy:	42.4 lm/w
Maximum Candela:	73 Candela

Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.08458 A
Power:	9.922 W
Power Factor:	0.977
Frequency:	60 Hz
Current THD:	19.6 %

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
24.4 °C	120.0 VAC	0.08458 A	9.922 W	0.977	60 Hz	19.6 %

Summary of Results

Spacing Criteria

0-180: 1.09

90-270: 1.09

Total Lumen Output:

421.0 Lumens

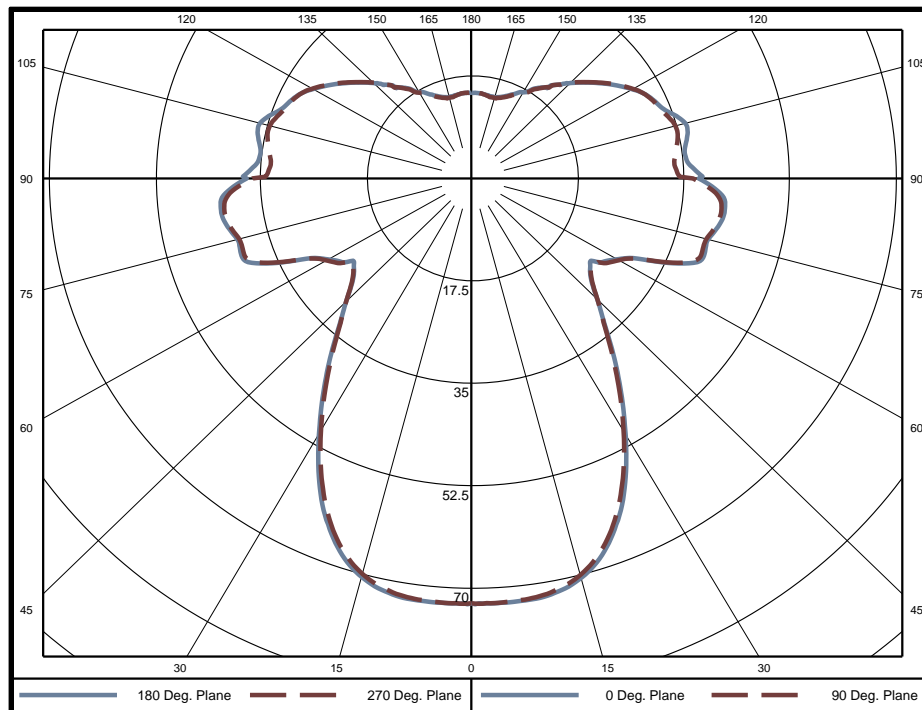
Luminaire Efficacy:

42.4 lm/w

Maximum Candela:

73 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.74	0.4%	60-65	14.63	3.5%	120-125	13.51	3.2%
5-10	5.18	1.2%	65-70	19.00	4.5%	125-130	11.61	2.8%
10-15	8.46	2.0%	70-75	21.06	5.0%	130-135	9.78	2.3%
15-20	11.23	2.7%	75-80	21.95	5.2%	135-140	8.06	1.9%
20-25	13.08	3.1%	80-85	22.72	5.4%	140-145	6.53	1.6%
25-30	13.80	3.3%	85-90	21.70	5.2%	145-150	5.23	1.2%
30-35	13.58	3.2%	90-95	19.06	4.5%	150-155	4.15	1.0%
35-40	12.78	3.0%	95-100	18.70	4.4%	155-160	3.19	0.8%
40-45	11.81	2.8%	100-105	18.90	4.5%	160-165	2.39	0.6%
45-50	11.03	2.6%	105-110	18.08	4.3%	165-170	1.70	0.4%
50-55	10.79	2.6%	110-115	16.65	4.0%	170-175	1.04	0.2%
55-60	12.20	2.9%	115-120	15.30	3.6%	175-180	0.35	0.1%

Zone	Lumens	% of Luminaire
0-40	80	19.0%
0-60	126	29.9%
0-90	247	58.6%
90-180	174	41.4%



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	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58	72.58
	5	72.68	72.65	72.58	72.57	72.57	72.57	72.58	72.65	72.68	72.65	72.58	72.57	72.57	72.57	72.65
	10	72.38	72.24	72.09	72.07	72.07	72.07	72.09	72.24	72.38	72.24	72.09	72.07	72.07	72.07	72.24
	15	70.52	70.29	70.09	69.96	70.00	69.96	70.09	70.29	70.52	70.29	70.09	69.96	70.00	69.96	70.29
	20	66.27	65.95	65.67	65.49	65.55	65.49	65.67	65.95	66.27	65.95	65.67	65.49	65.55	65.49	65.95
	25	59.46	59.03	58.64	58.50	58.54	58.50	58.64	59.03	59.46	59.03	58.64	58.50	58.54	58.50	59.03
	30	50.88	50.61	50.22	50.15	50.22	50.15	50.22	50.61	50.88	50.61	50.22	50.15	50.22	50.15	50.61
	35	42.54	42.27	41.99	41.92	42.00	41.92	41.99	42.27	42.54	42.27	41.99	41.92	42.00	41.92	42.27
	40	35.07	34.94	34.74	34.74	34.80	34.74	34.74	34.94	35.07	34.94	34.74	34.74	34.80	34.74	34.94
	45	29.42	29.41	29.32	29.38	29.46	29.38	29.32	29.41	29.42	29.41	29.32	29.38	29.46	29.38	29.41
	50	25.58	25.67	25.65	25.73	25.76	25.73	25.65	25.67	25.58	25.67	25.65	25.73	25.76	25.73	25.65
	55	24.64	24.47	24.71	24.89	25.15	24.89	24.71	24.47	24.64	24.47	24.71	24.89	25.15	24.89	24.71
	60	27.64	27.64	27.80	28.06	27.99	28.06	27.80	27.64	27.64	27.80	28.06	27.99	28.06	27.80	27.64
	65	33.56	32.97	33.62	34.28	33.36	34.28	33.62	32.97	33.56	32.97	33.62	34.28	33.36	34.28	33.56
	70	40.43	39.20	40.04	41.09	39.92	41.09	40.04	39.20	40.43	39.20	40.04	41.09	39.92	41.09	39.20
	75	40.36	39.53	40.42	41.14	40.08	41.14	40.42	39.53	40.36	39.53	40.42	41.14	40.08	41.14	40.42
	80	41.85	40.94	41.80	42.33	41.38	42.33	41.80	40.94	41.85	40.94	41.80	42.33	41.38	42.33	41.80
	85	41.89	40.88	41.69	42.05	41.15	42.05	41.69	40.88	41.89	40.88	41.69	42.05	41.15	42.05	41.69
	90	37.46	36.47	37.18	37.54	36.54	37.54	37.18	36.47	37.46	36.47	37.18	37.54	36.54	37.54	37.18
	95	35.62	33.27	34.22	34.39	33.57	34.39	34.22	33.27	35.62	33.27	34.22	34.39	33.57	34.39	34.22
	100	35.94	34.37	34.87	35.13	34.44	35.13	34.87	34.37	35.94	34.37	34.87	35.13	34.44	35.13	34.87
	105	36.49	35.06	35.38	35.50	34.80	35.50	35.38	35.06	36.49	35.06	35.38	35.50	34.80	35.50	35.38
	110	34.05	33.09	33.44	34.00	33.55	34.00	33.44	33.09	34.05	33.09	33.44	34.00	33.55	34.00	33.44
	115	32.60	31.77	32.15	32.70	32.49	32.70	32.15	31.77	32.60	31.77	32.15	32.70	32.49	32.70	32.15
	120	30.53	29.97	30.28	30.81	30.66	30.81	30.28	29.97	30.53	29.97	30.28	30.81	30.66	30.81	30.28
	125	28.02	27.58	27.87	28.32	28.20	28.32	27.87	27.58	28.02	27.58	27.87	28.32	28.20	28.32	27.87
	130	25.47	25.12	25.29	25.66	25.59	25.66	25.29	25.12	25.47	25.12	25.29	25.66	25.59	25.66	25.29
	135	23.06	22.79	22.82	23.15	23.16	23.15	22.82	22.79	23.06	22.79	22.82	23.15	23.16	23.15	22.82
	140	20.81	20.63	20.64	20.82	20.78	20.82	20.64	20.63	20.81	20.63	20.64	20.82	20.78	20.82	20.64
	145	18.85	18.67	18.65	18.71	18.68	18.71	18.65	18.67	18.85	18.67	18.65	18.71	18.68	18.71	18.65
	150	16.98	16.89	16.93	16.91	16.93	16.91	16.93	16.89	16.98	16.89	16.93	16.91	16.93	16.91	16.89
	155	15.83	15.70	15.70	15.67	15.66	15.67	15.70	15.70	15.83	15.70	15.70	15.67	15.66	15.67	15.70
	160	14.86	14.80	14.77	14.72	14.71	14.72	14.77	14.80	14.86	14.80	14.77	14.72	14.71	14.72	14.80
	165	14.41	14.40	14.33	14.28	14.28	14.28	14.33	14.40	14.41	14.40	14.33	14.28	14.28	14.28	14.33
	170	14.46	14.44	14.43	14.41	14.40	14.41	14.43	14.44	14.46	14.44	14.43	14.41	14.40	14.41	14.43
	175	14.63	14.62	14.63	14.64	14.66	14.64	14.63	14.62	14.63	14.62	14.63	14.64	14.66	14.64	14.63
	180	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	1432	1432
	45	934	931
	55	732	734
	65	973	975
	75	1185	1187
	85	1291	1285



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	460	460	460	460	429	429	429	429	371	371	371	318	318	318	270	270	270	247
1	400	373	348	326	370	346	324	305	295	279	263	249	236	224	207	197	188	166
2	358	317	283	254	330	294	264	238	250	227	206	210	192	176	173	159	147	127
3	324	275	237	207	298	255	221	194	217	190	168	183	161	144	150	134	120	103
4	296	242	203	173	272	225	190	162	192	164	142	162	139	121	133	116	102	86
5	271	216	177	148	250	200	165	139	172	143	122	145	123	105	120	102	88	74
6	250	194	156	128	231	180	146	121	155	127	106	132	109	92	110	92	78	65
7	232	175	138	113	214	164	130	106	141	114	94	120	98	81	101	83	69	58
8	216	160	124	100	199	149	117	94	129	103	84	111	89	73	93	76	63	52
9	201	146	112	89	186	137	106	85	119	93	75	103	81	66	87	70	57	48
10	189	135	102	81	175	126	96	76	110	85	68	95	75	60	81	64	52	44

Beam and Field Information

CIE Type:	Direct/Indirect
Center Beam Intensity:	72.58 Candela
Central Cone Intensity:	73 Candela
Beam Flux:	182.6 Lumens
Beam Angle (0-180):	186.5 Degrees
Beam Angle (90-270):	180.1 Degrees
Field Angle (0-180):	N/A Degrees
Field Angle (90-270):	N/A Degrees

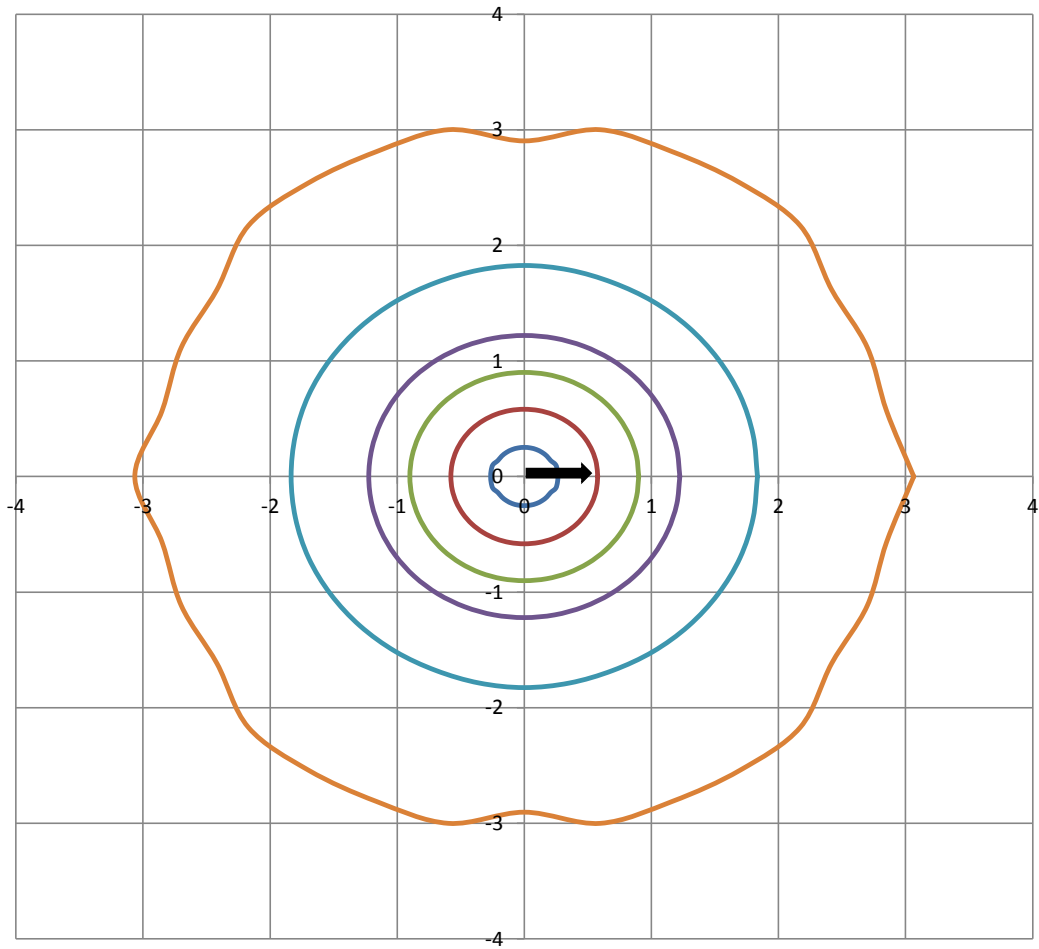
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		4.54	4.32
6.00		2.02	6.47
8.00		1.13	8.63
10.0		0.726	10.8
12.0		0.504	12.9
14.0		0.370	15.1
16.0		0.284	17.3



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

1 fc 0.5 fc 0.2 fc 0.1 fc 0.05 fc 0.02 fc