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Indoor Distribution Test Report

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

Prepared For
B-K Lighting Inc
Chris McCarthy
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Madera, CA 93636-9515
United States

Catalog Number
VSL-LED-e102-SP-12-C
Order Number
11804129
Test Number
11804129.02

Test Date

2017-07-26

Prepared By

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Approved By

Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Gray metal circular housing with glass prismatic lens and louver opening
Lamp: Three (3) white LEDs with optic below
Mounting: Base up
Ballast/Driver: Power Select PS20U16K

Luminaire



Luminaire Characteristics

Luminous Diameter: 5.00 in.

Summary of Results

Total Luminaire Output:	149.5 Lumens
Luminaire Efficacy:	22.7 lm/w
Maximum Candela:	1253 Candela

Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.1 VAC
Current:	0.09507 A
Power:	6.596 W
Power Factor:	0.578
Frequency:	60 Hz
Current THD:	140 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

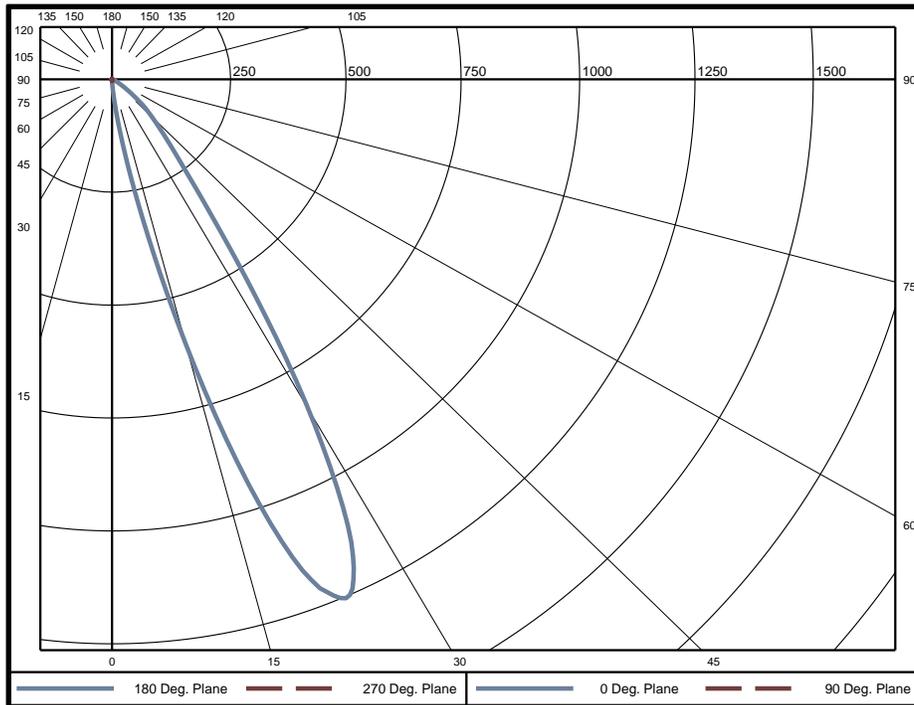
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.1 VAC	0.09507 A	6.596 W	0.578	60 Hz	140 %

Summary of Results

Spacing Criteria
 0-180: 3.53
 90-270: 0.14

Total Lumen Output: 149.5 Lumens
Luminaire Efficacy: 22.7 lm/w
Maximum Candela: 1253 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.17	0.1%	60-65	0.46	0.3%	120-125	0	0.0%
5-10	1.79	1.2%	65-70	0.18	0.1%	125-130	0	0.0%
10-15	8.35	5.6%	70-75	0.05	0.0%	130-135	0	0.0%
15-20	22.45	15.0%	75-80	0.01	0.0%	135-140	0	0.0%
20-25	35.21	23.6%	80-85	0.00	0.0%	140-145	0	0.0%
25-30	34.28	22.9%	85-90	0	0.0%	145-150	0	0.0%
30-35	21.84	14.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	11.14	7.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	6.39	4.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	3.96	2.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.18	1.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.05	0.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	135	90.5%
0-60	149	99.5%
0-90	150	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5	33	35	19	8	3	2	2	2	1	2	2	2	3	8	19	35
10	192	154	59	14	2	2	1	1	1	1	1	2	2	14	59	154
15	603	387	100	17	2	1	0	0	0	0	0	1	2	17	100	387
20	1125	605	114	15	1	1	0	0	0	0	0	1	1	15	114	605
25	1220	574	96	11	1	0	0	0	0	0	0	1	1	11	96	574
30	827	366	60	7	0	0	0	0	0	0	0	0	0	7	60	366
35	378	161	32	5	0	0	0	0	0	0	0	0	0	5	32	161
40	201	66	16	3	0	0	0	0	0	0	0	0	0	3	16	66
45	126	30	7	2	0	0	0	0	0	0	0	0	0	2	7	30
50	75	15	3	2	0	0	0	0	0	0	0	0	0	2	3	15
55	36	7	1	1	0	0	0	0	0	0	0	0	0	1	1	7
60	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
65	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
70	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	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	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

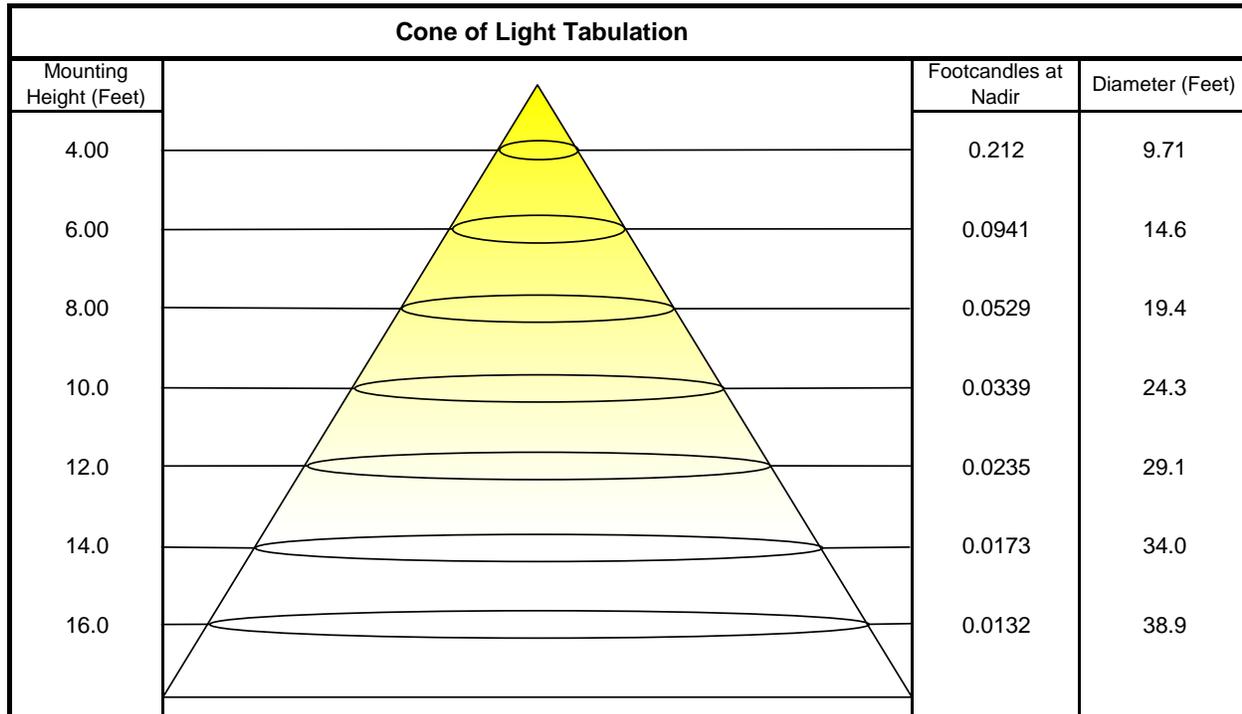
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	268	268	268
45	14040	795	0
55	4909	205	0
65	1144	30	0
75	175	0	0
85	0	0	0



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	178	178	178	178	174	174	174	174	166	166	166	159	159	159	153	153	153	150
1	169	165	161	157	165	161	158	155	155	152	150	150	147	145	145	143	141	138
2	160	152	145	140	156	149	143	138	144	140	135	140	136	132	136	132	130	127
3	151	140	132	126	148	138	131	125	134	128	123	130	125	121	127	123	119	116
4	142	130	121	114	139	128	120	113	125	117	112	122	115	110	119	113	109	107
5	134	120	111	104	131	119	110	103	116	108	102	113	107	101	111	105	100	98
6	126	111	102	95	124	110	101	94	108	100	94	106	98	93	104	97	92	90
7	119	103	94	87	117	102	93	86	100	92	86	99	91	85	97	90	85	83
8	112	96	86	80	110	95	86	79	94	85	79	92	84	79	90	84	78	76
9	106	90	80	73	104	89	80	73	87	79	73	86	78	73	85	78	72	70
10	100	84	74	68	98	83	74	68	82	73	67	80	73	67	79	72	67	65

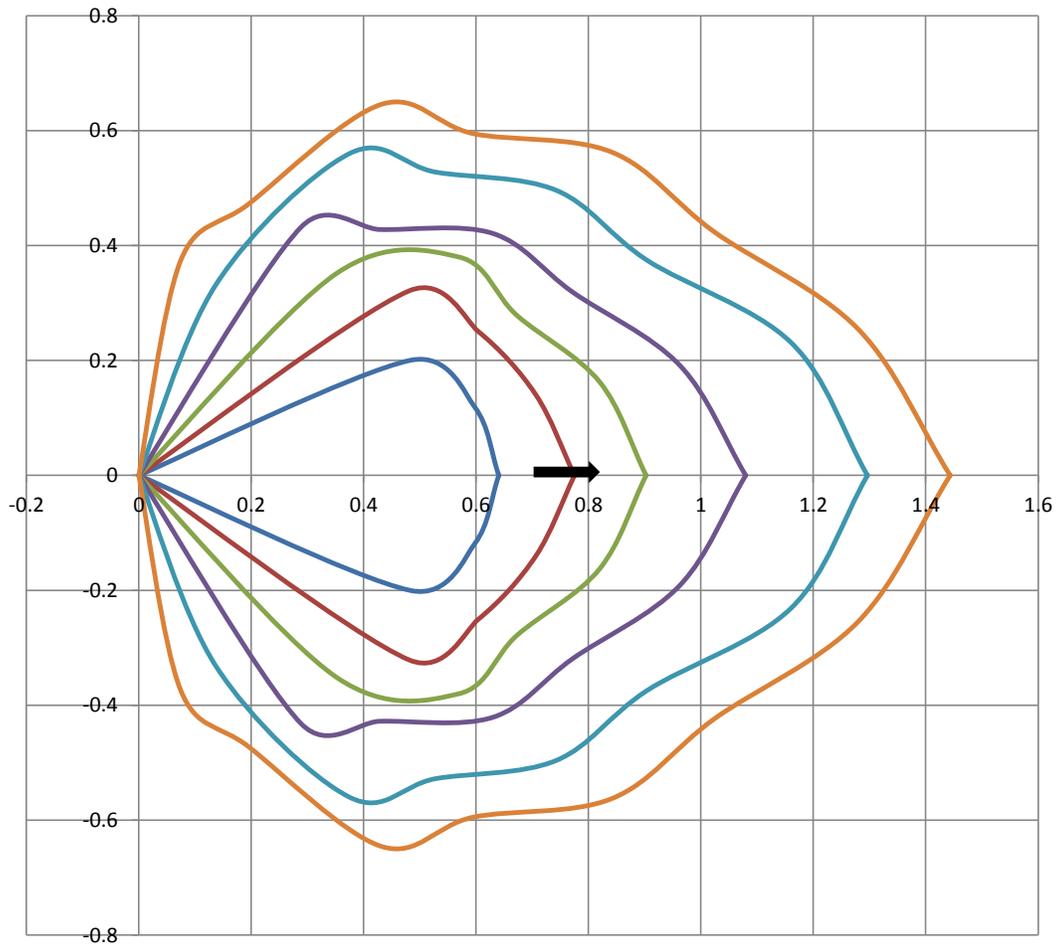
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3 Candela
Central Cone Intensity:	6 Candela
Beam Flux:	148.9 Lumens
Beam Angle (0-180):	75.7 Degrees
Beam Angle (90-270):	25.8 Degrees
Field Angle (0-180):	89.6 Degrees
Field Angle (90-270):	59.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

