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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-F
Order Number
11804129
Test Number
11804129.06

Test Date

2017-07-27

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:	196.4 Lumens
Luminaire Efficacy:	30.2 lm/w
Maximum Candela:	2042 Candela

Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.1 VAC
Current:	0.09372 A
Power:	6.493 W
Power Factor:	0.577
Frequency:	60 Hz
Current THD:	141 %

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



Distribution - Goniophotometer

Distribution Test Conditions

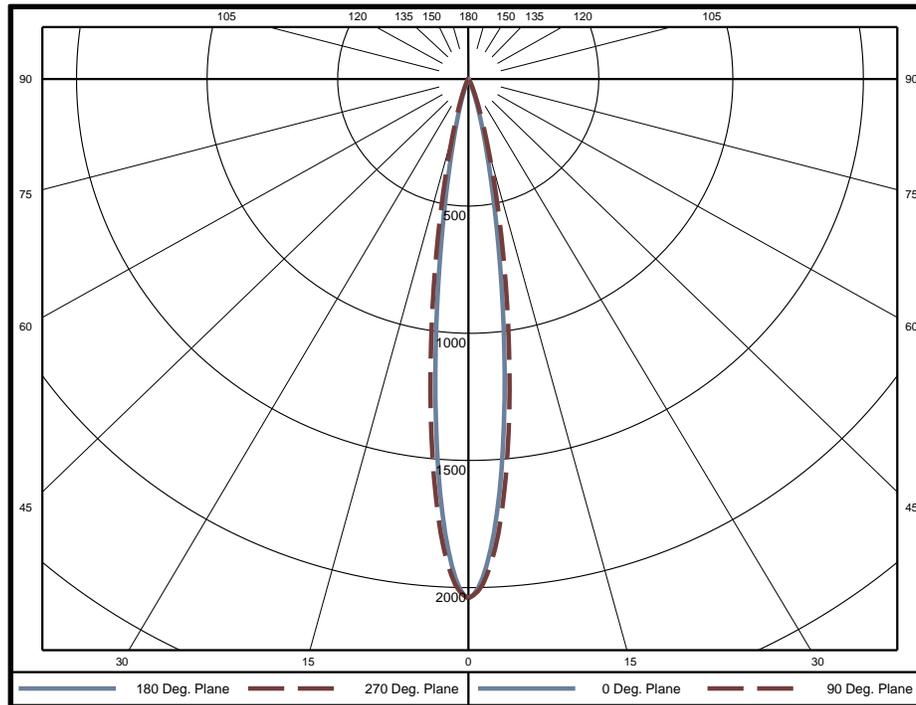
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.1 VAC	0.09372 A	6.493 W	0.577	60 Hz	141 %

Summary of Results

Spacing Criteria
 0-180: 0.25
 90-270: 0.25

Total Lumen Output: 196.4 Lumens
Luminaire Efficacy: 30.2 lm/w
Maximum Candela: 2042 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	41.99	21.4%	60-65	0.00	0.0%	120-125	0	0.0%
5-10	73.37	37.4%	65-70	0.00	0.0%	125-130	0	0.0%
10-15	47.02	23.9%	70-75	0	0.0%	130-135	0	0.0%
15-20	20.53	10.5%	75-80	0	0.0%	135-140	0	0.0%
20-25	7.91	4.0%	80-85	0	0.0%	140-145	0	0.0%
25-30	3.13	1.6%	85-90	0	0.0%	145-150	0	0.0%
30-35	1.36	0.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.64	0.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.30	0.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	0.13	0.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.04	0.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.01	0.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	196	99.8%
0-60	196	100.0%
0-90	196	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	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042	2042
5	1450	1465	1501	1541	1567	1541	1501	1465	1450	1465	1501	1541	1567	1541	1501	1465
10	599	619	664	726	759	726	664	619	599	619	664	726	759	726	664	619
15	191	194	209	248	269	248	209	194	191	194	209	248	269	248	209	194
20	54	56	61	76	87	76	61	56	54	56	61	76	87	76	61	56
25	17	16	18	25	31	25	18	16	17	16	18	25	31	25	18	16
30	5	5	6	10	13	10	6	5	5	5	6	10	13	10	6	5
35	2	2	2	4	6	4	2	2	2	2	2	4	6	4	2	2
40	1	1	0	2	3	2	0	1	1	1	0	2	3	2	0	1
45	0	0	0	1	2	1	0	0	0	0	0	1	2	1	0	0
50	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	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)

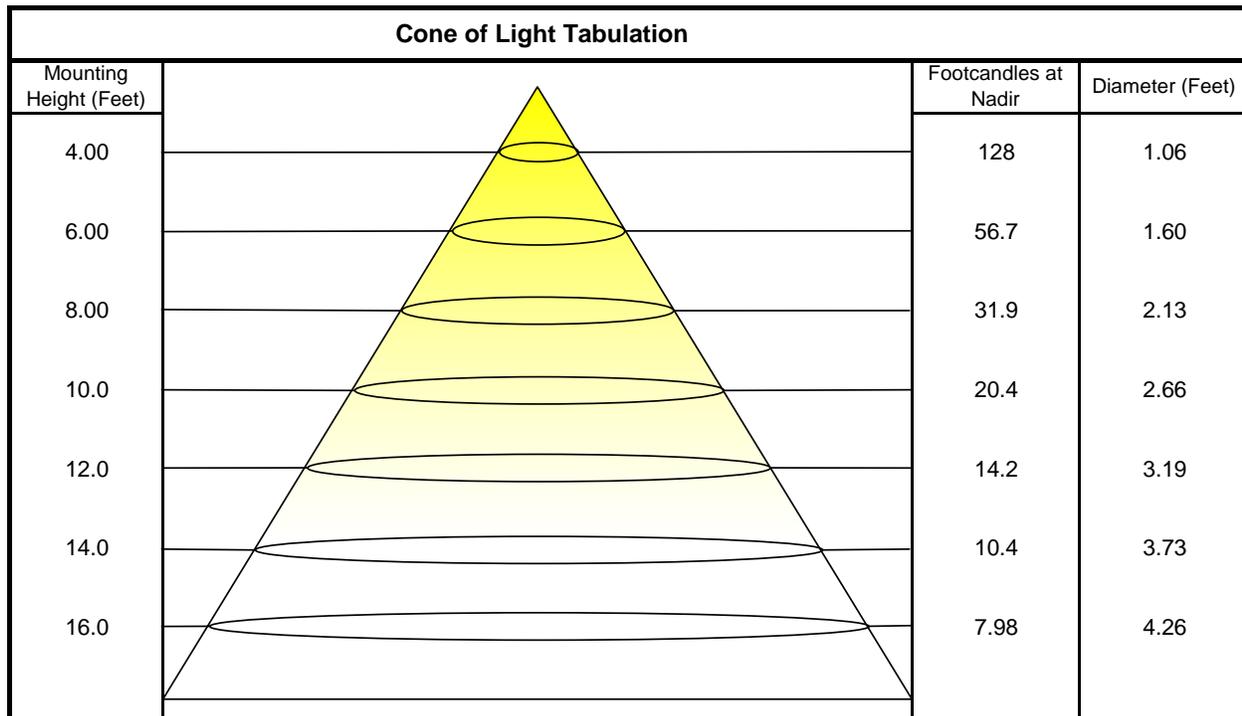
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	161200	161200	161200
45	51	2	201
55	0	0	51
65	0	0	4
75	0	0	0
85	0	0	0



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	234	234	234	234	228	228	228	228	218	218	218	209	209	209	200	200	200	196
1	227	224	221	218	223	220	217	214	212	210	208	205	203	202	198	197	196	193
2	222	216	211	207	218	212	208	204	206	203	200	201	198	196	196	194	192	189
3	216	209	203	198	213	206	201	197	202	197	194	197	194	191	193	190	188	186
4	212	203	197	192	209	201	195	191	197	192	189	194	190	187	191	187	185	183
5	207	198	191	187	205	196	190	186	193	188	184	191	186	183	188	184	181	180
6	203	193	187	182	201	192	186	182	190	184	181	187	183	179	185	181	178	177
7	199	189	183	178	197	188	182	178	186	181	177	184	180	176	183	179	176	174
8	196	186	179	175	194	185	179	175	183	178	174	182	177	174	180	176	173	171
9	192	182	176	172	191	182	176	172	180	175	171	179	174	171	178	174	170	169
10	189	179	173	169	188	179	173	169	178	172	169	176	172	168	175	171	168	167

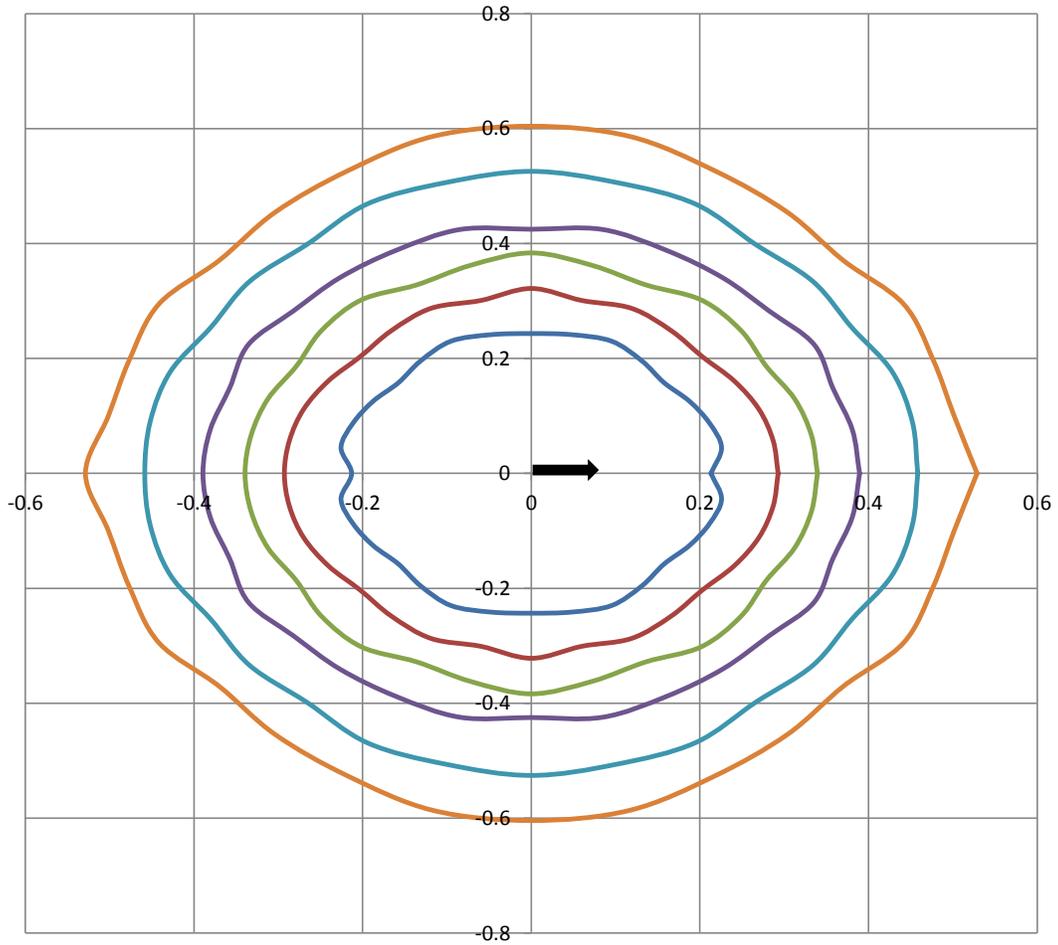
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2042 Candela
Central Cone Intensity:	1837 Candela
Beam Flux:	83.9 Lumens
Beam Angle (0-180):	14.6 Degrees
Beam Angle (90-270):	16.5 Degrees
Field Angle (0-180):	29.5 Degrees
Field Angle (90-270):	32.5 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

