



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  
**VSL-LED-e102-NSP-12-F**  
Order Number  
11804129  
Test Number  
11804129.05

Test Date

2017-07-27

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:** 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:	224.4 Lumens
Luminaire Efficacy:	33.7 lm/w
Maximum Candela:	2751 Candela

**Test Conditions**

Test Temperature:	25.2 °C
Voltage:	120.1 VAC
Current:	0.09587 A
Power:	6.655 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

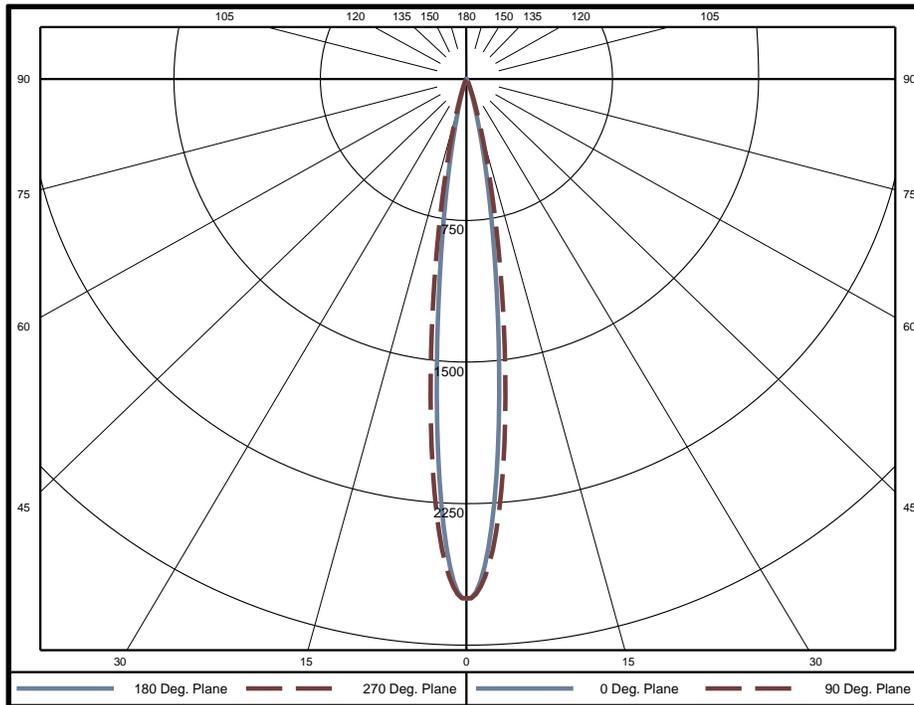
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.1 VAC	0.09587 A	6.655 W	0.578	60 Hz	140 %

### Summary of Results

**Spacing Criteria**  
 0-180: 0.23  
 90-270: 0.23

**Total Lumen Output:** 224.4 Lumens  
**Luminaire Efficacy:** 33.7 lm/w  
**Maximum Candela:** 2751 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	55.54	24.8%	60-65	0.00	0.0%	120-125	0	0.0%
5-10	89.16	39.7%	65-70	0.00	0.0%	125-130	0	0.0%
10-15	50.49	22.5%	70-75	0	0.0%	130-135	0	0.0%
15-20	18.67	8.3%	75-80	0	0.0%	135-140	0	0.0%
20-25	6.37	2.8%	80-85	0	0.0%	140-145	0	0.0%
25-30	2.41	1.1%	85-90	0	0.0%	145-150	0	0.0%
30-35	1.01	0.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.46	0.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.21	0.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	0.08	0.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.03	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	224	99.9%
0-60	224	100.0%
0-90	224	100.0%
90-180	0	0.0%



**Candela Tabulation**  
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	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751	2751
5	1831	1860	1925	2013	2073	2013	1925	1860	1831	1860	1925	2013	2073	2013	1925	1860
10	662	682	757	845	904	845	757	682	662	682	757	845	904	845	757	682
15	179	187	206	245	274	245	206	187	179	187	206	245	274	245	206	187
20	50	47	49	61	72	61	49	47	50	47	49	61	72	61	49	47
25	16	13	14	18	23	18	14	13	16	13	14	18	23	18	14	13
30	5	4	4	7	9	7	4	4	5	4	4	7	9	7	4	4
35	2	1	1	3	5	3	1	1	2	1	1	3	5	3	1	1
40	1	0	0	1	2	1	0	0	1	0	0	1	2	1	0	0
45	0	0	0	0	1	0	0	0	0	0	0	0	1	0	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/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

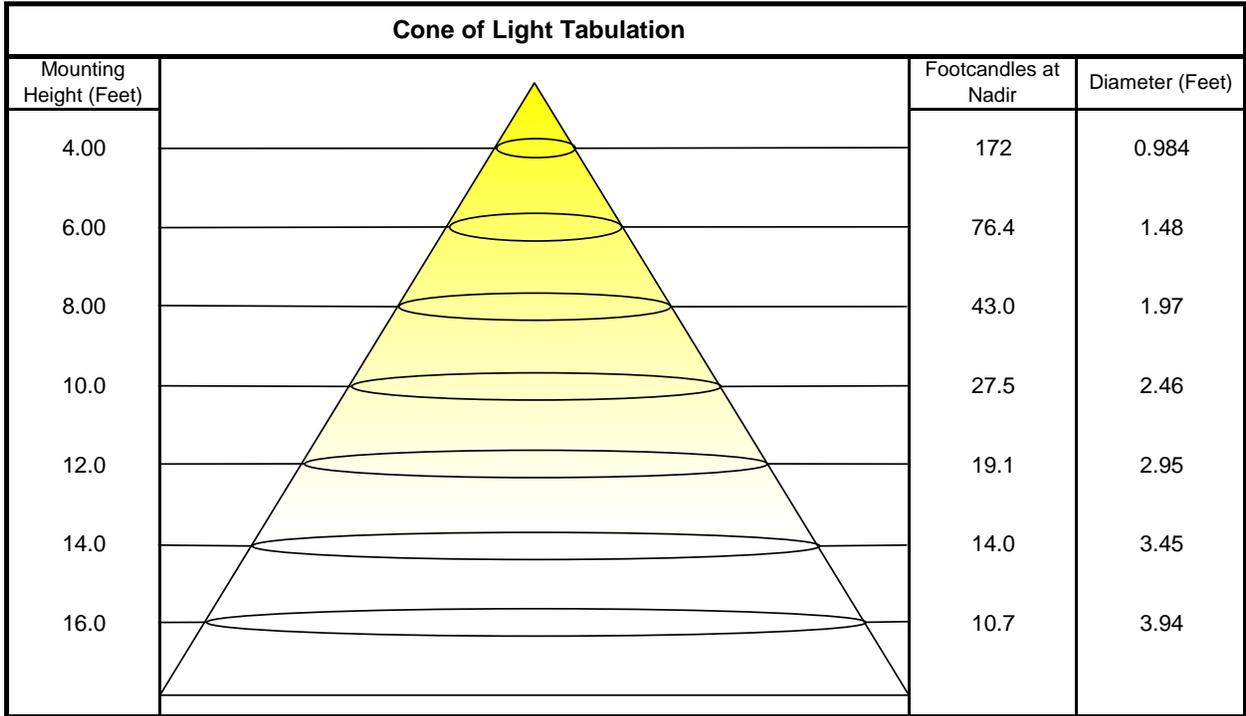
	0	45	90
0	217200	217200	217200
45	39	0	153
55	0	0	24
65	0	0	9
75	0	0	0
85	0	0	0



### 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	267	267	267	267	261	261	261	261	249	249	249	239	239	239	229	229	229	224
1	260	256	253	249	255	251	248	246	243	240	238	234	233	231	227	226	225	221
2	254	247	242	237	249	244	239	235	237	233	230	231	228	225	225	223	220	217
3	248	240	234	229	245	237	231	227	232	227	223	227	223	220	222	219	217	214
4	243	234	227	222	240	232	225	221	227	222	218	224	219	216	220	216	214	211
5	239	229	222	216	236	227	220	215	223	218	214	220	216	212	217	213	210	208
6	234	224	217	212	232	222	216	211	220	214	210	217	212	209	215	211	207	206
7	230	220	213	208	228	219	212	208	216	211	207	214	209	206	212	208	205	203
8	227	216	209	205	225	215	209	204	213	208	204	211	206	203	210	205	202	200
9	223	213	206	202	222	212	206	201	210	205	201	209	204	200	207	203	200	198
10	220	210	203	199	219	209	203	199	208	202	198	206	201	198	205	201	197	196

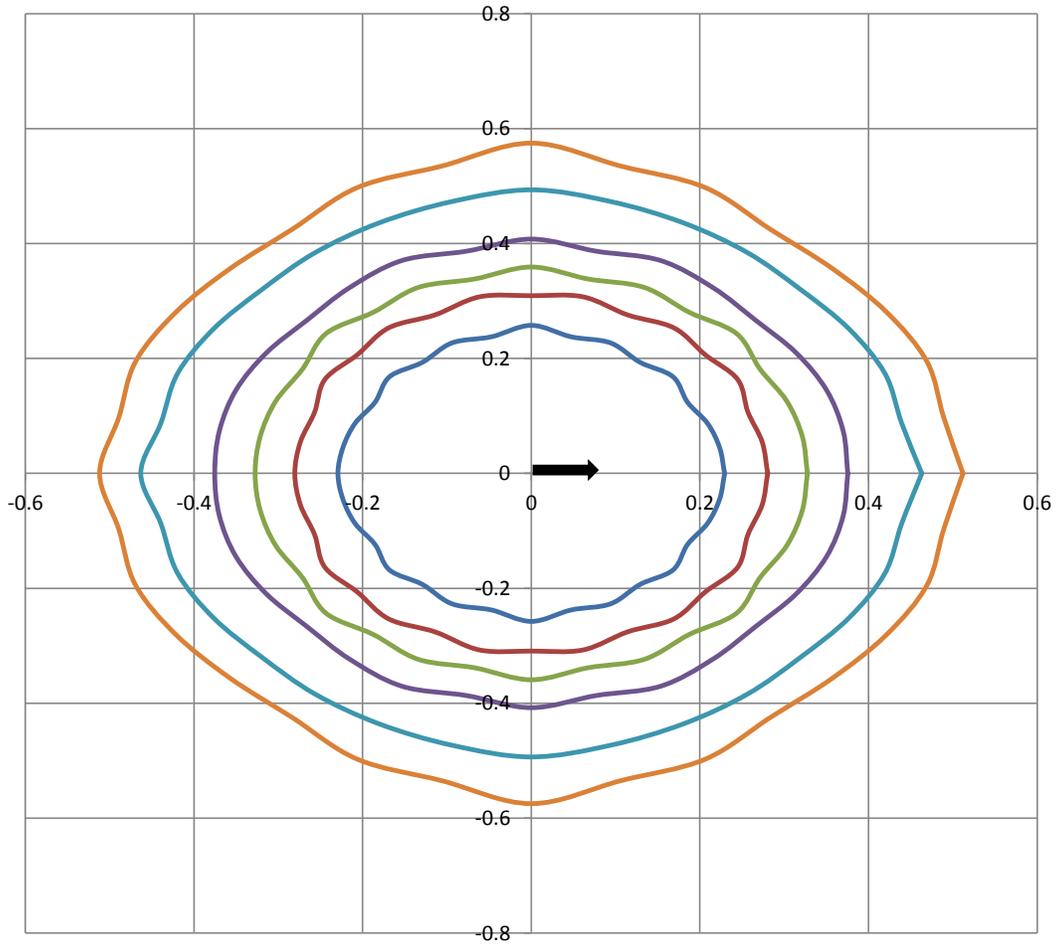
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2751 Candela
Central Cone Intensity:	2446 Candela
Beam Flux:	97.2 Lumens
Beam Angle (0-180):	13.2 Degrees
Beam Angle (90-270):	15.6 Degrees
Field Angle (0-180):	26.8 Degrees
Field Angle (90-270):	30.0 Degrees





### ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

