



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**

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Madera, CA 93636-9515  
United States

**Represented Catalog Numbers**

**LBW-LED-X45-BW-27**

**Catalog Number**  
**LBS-LED-X45-BW-27**

Order Number

12025619

Test Number

12025619.01A

Revised Date:

2017-11-15

Test Date

2017-11-07

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:** Decorative white metal housing, reflector, clear plastic lens, and white metal mounting base.  
**Lamp:** One (1) white LED with optic  
**Mounting:** Pendant  
**Ballast/Driver:** One (1) ECOdrive 561/S

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 27.00 in.  
Luminous Height: 11.50 in.

**Summary of Results**

Total Luminaire Output:	3354 Lumens
Luminaire Efficacy:	103.2 lm/w
Maximum Candela:	1077 Candela

**Test Conditions**

Test Temperature:	25.4 °C
Voltage:	120.1 VAC
Current:	0.2748 A
Power:	32.50 W
Power Factor:	0.985
Frequency:	60 Hz
Current THD:	8.80 %

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
25.4 °C	120.1 VAC	0.2748 A	32.50 W	0.985	60 Hz	8.80 %

### Summary of Results

#### Spacing Criteria

0-180: 2.33

90-270: 2.23

Total Lumen Output:

3354 Lumens

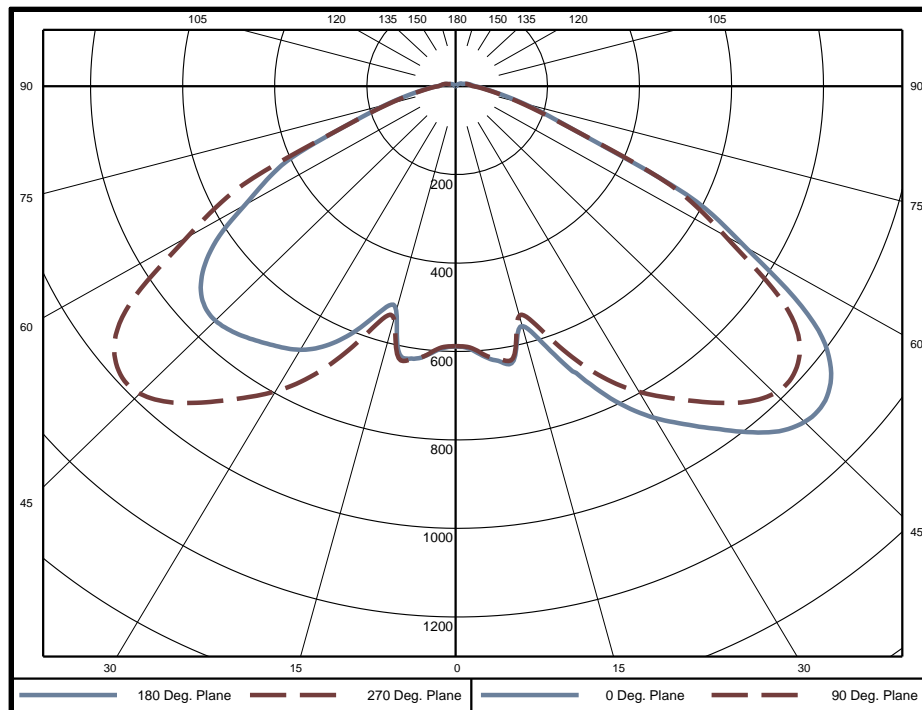
Luminaire Efficacy:

103.2 lm/w

Maximum Candela:

1077 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	14.2	0.4%	60-65	280.4	8.4%	120-125	4.4	0.1%
5-10	44.4	1.3%	65-70	176.4	5.3%	125-130	3.1	0.1%
10-15	70.0	2.1%	70-75	102.6	3.1%	130-135	2.0	0.1%
15-20	93.3	2.8%	75-80	64.6	1.9%	135-140	1.2	0.0%
20-25	139.0	4.1%	80-85	41.2	1.2%	140-145	0.7	0.0%
25-30	190.5	5.7%	85-90	27.4	0.8%	145-150	0.4	0.0%
30-35	241.7	7.2%	90-95	19.4	0.6%	150-155	0.3	0.0%
35-40	294.8	8.8%	95-100	16.1	0.5%	155-160	0.2	0.0%
40-45	348.5	10.4%	100-105	12.9	0.4%	160-165	0.1	0.0%
45-50	388.7	11.6%	105-110	8.8	0.3%	165-170	0.0	0.0%
50-55	398.9	11.9%	110-115	6.7	0.2%	170-175	0.0	0.0%
55-60	355.6	10.6%	115-120	5.8	0.2%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	1088	32.4%
0-60	2580	76.9%
0-90	3272	97.6%
90-180	82	2.4%



**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	588	588	588	588	588	588	588	588	588	588	588	588	588	588	588
	5	608	608	607	604	603	604	604	604	606	604	604	604	603	604	607
	10	638	634	629	627	631	630	628	628	626	628	628	630	631	627	629
	15	561	546	527	523	537	555	549	528	516	528	549	555	537	523	527
	20	657	634	598	582	608	636	622	586	568	586	622	636	608	582	598
	25	770	746	690	658	714	747	731	687	641	687	731	747	714	658	690
	30	866	835	764	713	798	836	819	768	689	768	819	836	798	713	764
	35	941	915	826	750	866	903	887	832	713	832	887	903	866	750	826
	40	1022	1000	898	788	935	967	953	900	736	900	953	967	935	788	898
	45	1073	1060	952	814	983	1006	999	955	750	955	999	1006	983	814	952
	50	1060	1054	949	799	974	995	993	959	733	959	993	995	974	799	949
	55	962	948	852	717	885	913	915	884	665	884	915	913	885	717	852
	60	726	701	638	561	680	714	717	692	536	692	717	714	680	561	638
	65	487	446	420	412	491	534	537	511	424	511	537	534	491	412	420
	70	249	228	226	229	247	274	277	270	251	270	277	274	247	229	226
	75	155	140	140	142	149	166	166	161	155	161	166	166	149	142	140
	80	95	87	87	89	92	102	101	100	97	100	101	102	92	89	87
	85	63	57	57	58	59	65	64	64	62	64	64	65	59	58	57
	90	42	39	38	37	38	42	41	42	40	42	41	42	38	37	38
	95	34	32	31	30	32	34	33	33	31	33	33	34	32	30	31
	100	28	27	26	25	27	28	28	28	26	28	28	28	27	25	26
	105	21	20	19	18	20	22	22	22	20	22	22	22	20	18	19
	110	15	14	13	12	14	15	15	14	12	14	15	15	14	12	13
	115	14	13	12	12	13	14	13	12	11	12	13	14	13	12	12
	120	12	11	10	10	11	12	12	10	10	10	12	12	11	10	10
	125	9	8	8	8	8	9	9	8	7	8	9	9	8	8	8
	130	7	6	6	6	6	7	6	6	5	6	6	7	6	6	6
	135	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	140	3	3	3	2	3	3	3	3	2	3	3	3	3	2	3
	145	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	150	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	155	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	165	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	170	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
	180	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)

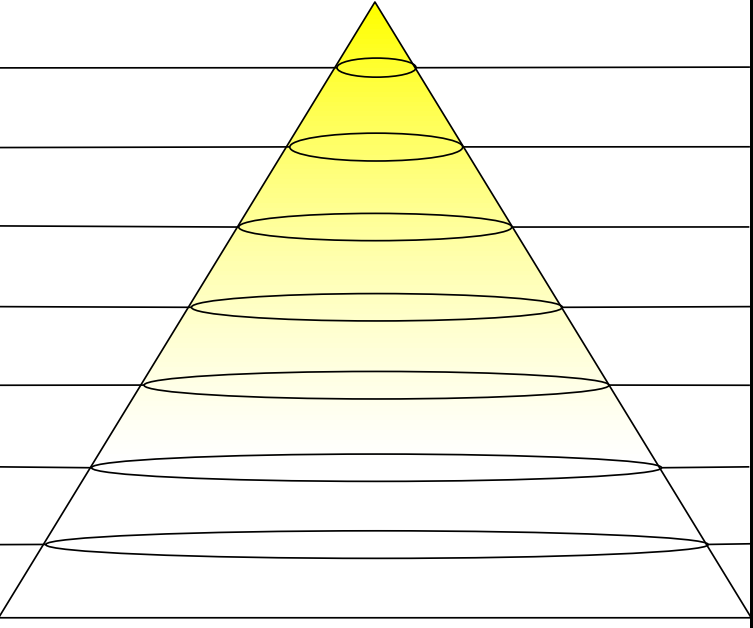
Vertical Angle (Degrees)	0	45	90
	0	1592	1592
	45	4005	3554
	55	3631	3213
	65	1915	1652
	75	656	591
	85	292	266



### 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	3974	3974	3974	3974	3872	3872	3872	3872	3681	3681	3681	3507	3507	3507	3347	3347	3347	3272
1	3613	3446	3296	3161	3512	3361	3225	3102	3203	3091	2988	3057	2966	2882	2923	2850	2782	2705
2	3260	2968	2727	2524	3162	2897	2675	2487	2763	2577	2416	2640	2485	2348	2525	2398	2284	2204
3	2942	2567	2276	2045	2849	2506	2237	2020	2393	2163	1973	2287	2092	1928	2190	2025	1884	1803
4	2665	2236	1922	1682	2578	2184	1891	1665	2087	1833	1632	1998	1778	1600	1914	1725	1569	1489
5	2424	1963	1641	1404	2344	1920	1617	1391	1837	1571	1367	1760	1527	1344	1688	1484	1321	1243
6	2216	1738	1418	1188	2143	1701	1398	1178	1630	1361	1160	1563	1325	1143	1501	1290	1125	1050
7	2035	1551	1237	1018	1968	1519	1221	1010	1457	1191	996	1400	1161	982	1346	1132	969	897
8	1878	1394	1091	882	1818	1367	1077	876	1314	1052	865	1264	1027	854	1217	1003	843	774
9	1741	1263	970	772	1686	1239	959	768	1192	937	758	1149	916	749	1108	896	740	675
10	1621	1151	870	683	1571	1130	860	679	1089	842	671	1051	824	664	1015	807	656	593

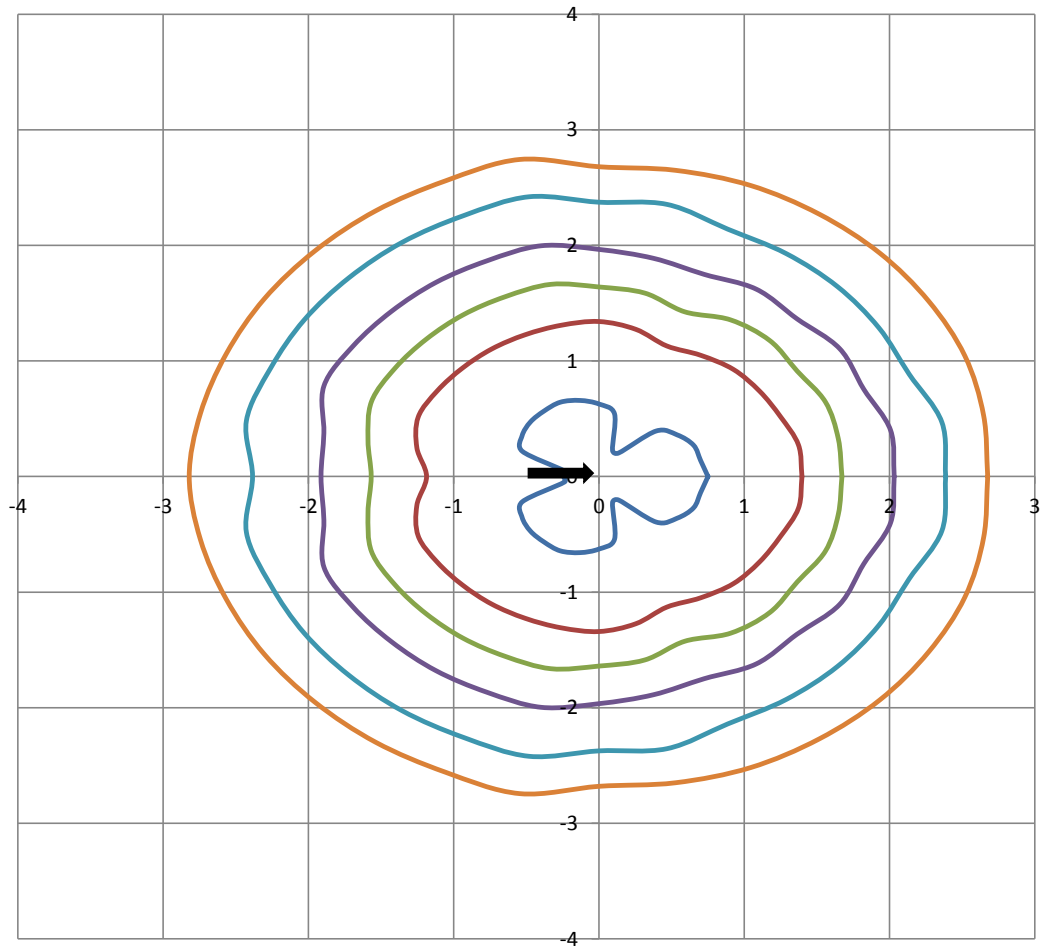
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	588 Candela
Central Cone Intensity:	593 Candela
Beam Flux:	2997.1 Lumens
Beam Angle (0-180):	137.0 Degrees
Beam Angle (90-270):	137.1 Degrees
Field Angle (0-180):	171.5 Degrees
Field Angle (90-270):	170.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		36.7	8.79
6.00		16.3	13.2
8.00		9.19	17.6
10.0		5.88	22.0
12.0		4.08	26.4
14.0		3.00	30.8
16.0		2.30	35.2



## ISOFootcandle Plot

Mounting Height - 10 Feet



Grid Lines in Units of Mounting Height

5 fc    2 fc    1 fc    0.5 fc    0.2 fc    0.1 fc