



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-X51-BW-27**

**Catalog Number**  
**LBS-LED-X51-BW-27**

Order Number

12025619

Test Number

12025619.03A

Revised Date:

2017-11-15

Test Date

2017-11-06

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) Thomas research PLED75W-054-C1400

**Luminaire**



**Luminaire Characteristics**

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

**Summary of Results**

Total Luminaire Output:	4385 Lumens
Luminaire Efficacy:	77.8 lm/w
Maximum Candela:	1269 Candela

**Test Conditions**

Test Temperature:	25.3 °C
Voltage:	120.1 VAC
Current:	0.4725 A
Power:	56.39 W
Power Factor:	0.994
Frequency:	60 Hz
Current THD:	6.38 %

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
25.3 °C	120.1 VAC	0.4725 A	56.39 W	0.994	60 Hz	6.38 %

### Summary of Results

#### Spacing Criteria

0-180: 1.54

90-270: 1.43

#### Total Lumen Output:

4385 Lumens

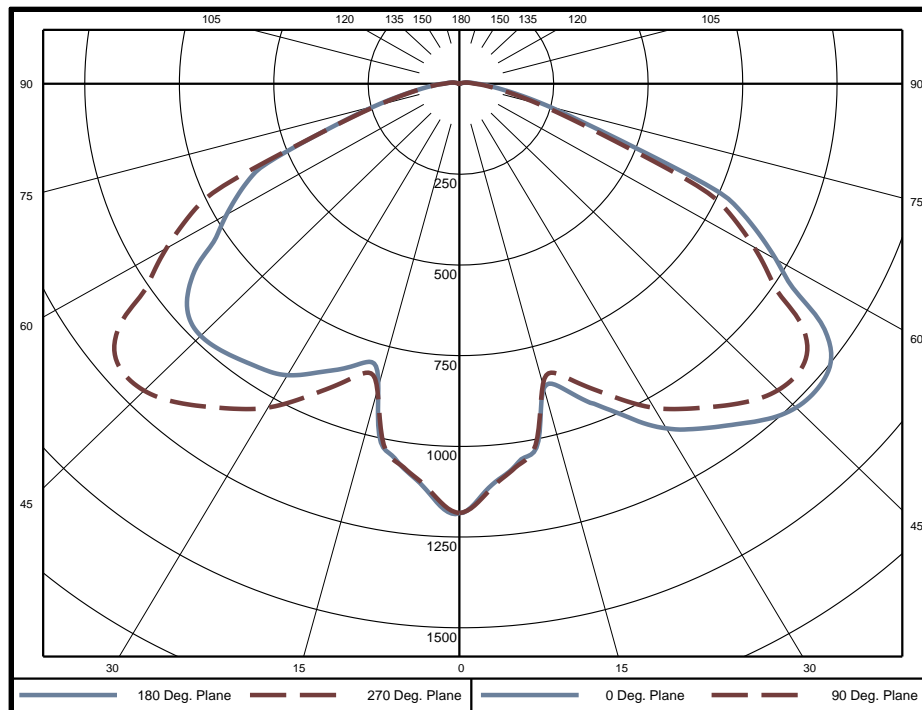
#### Luminaire Efficacy:

77.8 lm/w

#### Maximum Candela:

1269 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	27.3	0.6%	60-65	392.6	9.0%	120-125	1.0	0.0%
5-10	76.7	1.7%	65-70	297.6	6.8%	125-130	0.9	0.0%
10-15	114.0	2.6%	70-75	165.4	3.8%	130-135	0.6	0.0%
15-20	139.4	3.2%	75-80	97.0	2.2%	135-140	0.4	0.0%
20-25	190.3	4.3%	80-85	56.9	1.3%	140-145	0.2	0.0%
25-30	249.0	5.7%	85-90	33.8	0.8%	145-150	0.1	0.0%
30-35	308.7	7.0%	90-95	19.9	0.5%	150-155	0.1	0.0%
35-40	366.3	8.4%	95-100	13.7	0.3%	155-160	0.0	0.0%
40-45	423.4	9.7%	100-105	8.7	0.2%	160-165	0.0	0.0%
45-50	468.9	10.7%	105-110	3.2	0.1%	165-170	0.0	0.0%
50-55	485.4	11.1%	110-115	1.2	0.0%	170-175	0.0	0.0%
55-60	441.3	10.1%	115-120	1.1	0.0%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	1472	33.6%
0-60	3291	75.0%
0-90	4334	98.8%
90-180	51	1.2%



**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	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184	1184
	5	1102	1100	1103	1106	1108	1112	1117	1121	1115	1121	1117	1112	1108	1106	1100
	10	1043	1040	1035	1037	1047	1051	1054	1051	1041	1051	1054	1051	1047	1037	1040
	15	868	844	829	834	858	890	890	864	841	864	890	890	858	834	829
	20	919	887	846	839	869	903	891	847	828	847	891	903	869	839	846
	25	1004	967	907	892	949	991	977	922	877	922	977	991	949	892	907
	30	1098	1047	970	947	1032	1082	1067	1004	928	1004	1067	1082	1032	947	970
	35	1158	1104	1010	977	1093	1146	1132	1062	951	1062	1132	1146	1093	977	1010
	40	1217	1162	1052	1007	1151	1203	1191	1118	971	1118	1191	1203	1151	1007	1052
	45	1262	1204	1083	1029	1196	1245	1233	1159	982	1159	1233	1245	1196	1029	1083
	50	1264	1202	1077	1007	1196	1245	1232	1156	953	1156	1232	1245	1196	1007	1077
	55	1181	1107	983	891	1068	1159	1146	1063	846	1063	1146	1159	1068	891	983
	60	969	909	821	761	905	954	942	880	720	880	942	954	905	761	821
	65	816	758	689	636	752	800	787	736	621	736	787	800	752	636	689
	70	448	414	397	376	391	462	474	438	394	438	474	462	391	376	397
	75	251	229	226	218	222	255	258	243	230	243	258	255	222	218	226
	80	145	131	130	127	128	146	146	139	132	139	146	146	128	127	130
	85	85	77	77	76	76	86	85	81	78	81	85	86	76	76	77
	90	47	42	43	43	43	48	47	46	43	46	47	48	43	43	42
	95	32	29	29	29	28	32	32	30	29	30	32	32	28	29	29
	100	22	20	20	20	20	22	22	21	21	21	22	22	20	20	20
	105	11	11	11	10	10	12	13	12	11	12	13	12	10	10	11
	110	2	2	2	2	2	2	3	3	2	3	3	2	2	2	2
	115	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2
	120	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2
	125	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	130	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	135	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	140	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	145	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
	155	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
	165	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
	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	3205	3205
	45	4713	4465
	55	4456	4031
	65	3211	2958
	75	1060	936
	85	396	352



### 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	5208	5208	5208	5208	5081	5081	5081	5081	4844	4844	4844	4627	4627	4627	4428	4428	4428	4334
1	4727	4504	4305	4125	4600	4399	4217	4053	4201	4052	3915	4020	3898	3785	3853	3755	3663	3566
2	4259	3872	3552	3283	4135	3783	3489	3239	3617	3369	3154	3463	3256	3074	3321	3150	2997	2895
3	3843	3347	2963	2657	3726	3272	2916	2629	3131	2825	2574	3000	2740	2521	2879	2659	2470	2367
4	3483	2918	2505	2189	3374	2855	2468	2170	2735	2399	2132	2623	2332	2096	2520	2269	2061	1958
5	3173	2568	2145	1833	3073	2514	2117	1820	2412	2062	1794	2317	2009	1768	2228	1959	1743	1642
6	2906	2280	1861	1559	2814	2234	1838	1550	2147	1794	1530	2065	1751	1511	1989	1710	1493	1395
7	2674	2042	1632	1345	2591	2002	1613	1337	1927	1577	1322	1857	1543	1308	1791	1509	1294	1200
8	2473	1843	1446	1174	2398	1809	1431	1168	1744	1401	1156	1683	1372	1145	1626	1344	1134	1044
9	2298	1675	1293	1036	2230	1646	1281	1031	1590	1256	1022	1537	1232	1013	1487	1208	1004	918
10	2144	1532	1166	923	2083	1507	1156	919	1458	1135	911	1412	1114	904	1369	1094	897	815

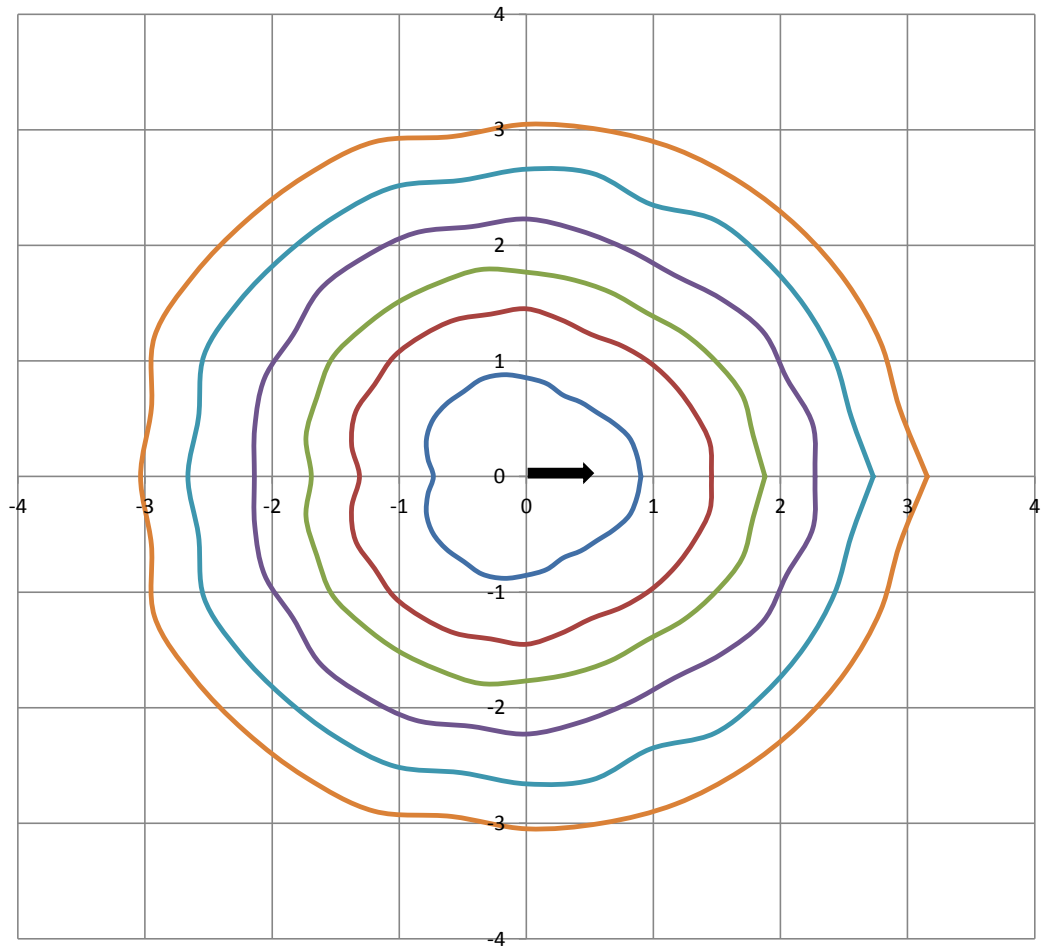
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1184 Candela
Central Cone Intensity:	1152 Candela
Beam Flux:	3849.1 Lumens
Beam Angle (0-180):	134.3 Degrees
Beam Angle (90-270):	134.3 Degrees
Field Angle (0-180):	162.8 Degrees
Field Angle (90-270):	161.4 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		74.0	5.57
6.00		32.9	8.35
8.00		18.5	11.1
10.0		11.8	13.9
12.0		8.22	16.7
14.0		6.04	19.5
16.0		4.63	22.3



# 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