



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
CK-LED-X60-WFL-9

Order Number
11353040
Test Number
11353040.38

Test Date

2016-09-13

Prepared By

Khang Nguyen, Technician

Approved By

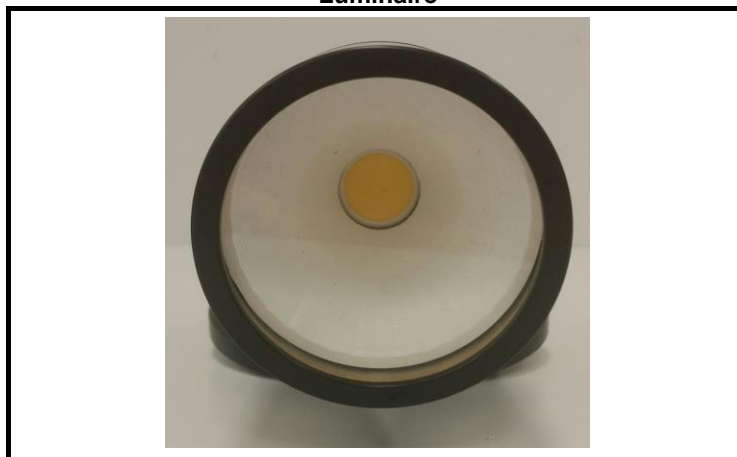
Eric Gaudreau, Senior Engineering Associate

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: Circular black aluminum housing, white stepped reflector, and glass lens
Lamp: One (1) White LED
Mounting: Surface
Ballast/Driver: PowerSelect PS0U70014T

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.75 in.

Summary of Results

Total Luminaire Output:	783.8 Lumens
Luminaire Efficacy:	61 lm/w
Maximum Candela:	754 Candela

Test Conditions

Test Temperature:	25.0 °C
Voltage:	120.1 VAC
Current:	0.1098 A
Power:	12.84 W
Power Factor:	0.974
Frequency:	60 Hz
Current THD:	14.2 %

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
25.0 °C	120.1 VAC	0.1098 A	12.84 W	0.974	60 Hz	14.2 %

Summary of Results

Spacing Criteria

0-180: 0.95

90-270: 0.95

Total Lumen Output:

783.8 Lumens

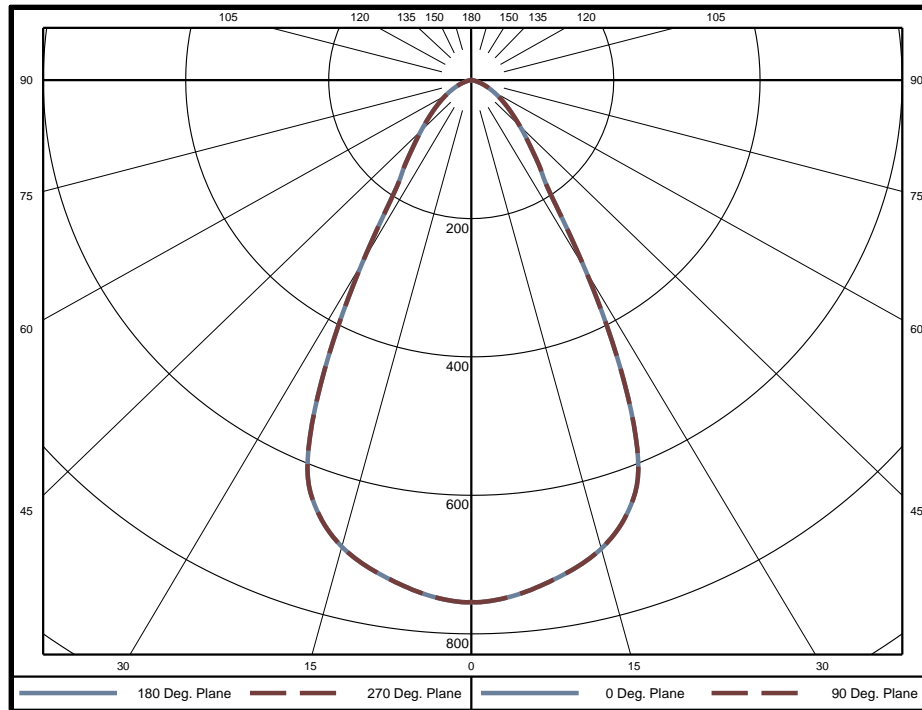
Luminaire Efficacy:

61.0 lm/w

Maximum Candela:

754 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	17.9	2.3%	60-65	15.8	2.0%	120-125	0	0.0%
5-10	52.6	6.7%	65-70	10.7	1.4%	125-130	0	0.0%
10-15	84.7	10.8%	70-75	6.4	0.8%	130-135	0	0.0%
15-20	111.7	14.3%	75-80	3.2	0.4%	135-140	0	0.0%
20-25	125.8	16.1%	80-85	1.4	0.2%	140-145	0	0.0%
25-30	106.8	13.6%	85-90	0.3	0.0%	145-150	0	0.0%
30-35	69.9	8.9%	90-95	0	0.0%	150-155	0	0.0%
35-40	51.6	6.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	42.1	5.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	34.2	4.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	27.4	3.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	21.3	2.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	621	79.2%
0-60	746	95.2%
0-90	784	100.0%
90-180	0	0.0%



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	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1	754.1
	5	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9	745.9
	10	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7	726.7
	15	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6	700.6
	20	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0	652.0
	25	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2
	30	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4	321.4
	35	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5	179.5
	40	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9	131.9
	45	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9
	50	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9
	55	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
	60	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9
	65	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
	70	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
	75	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
	80	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	85	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Vertical Angle (Degrees)	0	45	90
	0	196800	196800
	45	36120	36120
	55	24560	24560
	65	16330	16330
	75	8767	8767
	85	4190	4190



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	933	933	933	933	911	911	911	911	871	871	871	834	834	834	800	800	800	784
1	882	857	835	815	862	840	820	802	808	792	777	779	766	754	751	741	732	717
2	831	787	750	720	813	773	740	712	747	720	696	723	701	681	701	683	666	653
3	782	724	680	645	765	713	672	639	692	657	629	672	643	619	654	630	609	596
4	737	670	621	583	722	661	615	580	643	604	573	627	593	566	612	583	559	546
5	695	622	571	533	681	614	566	530	599	557	525	586	549	520	573	541	516	503
6	657	579	527	490	645	573	524	488	561	517	485	549	511	481	538	504	478	465
7	622	542	490	453	611	536	487	452	526	482	450	516	476	447	507	471	444	432
8	589	508	457	422	579	503	455	421	494	450	419	486	446	417	478	442	415	403
9	560	478	428	394	551	474	426	393	466	422	392	459	419	390	452	415	389	377
10	533	451	402	369	524	447	400	369	441	397	368	434	394	366	428	392	365	354

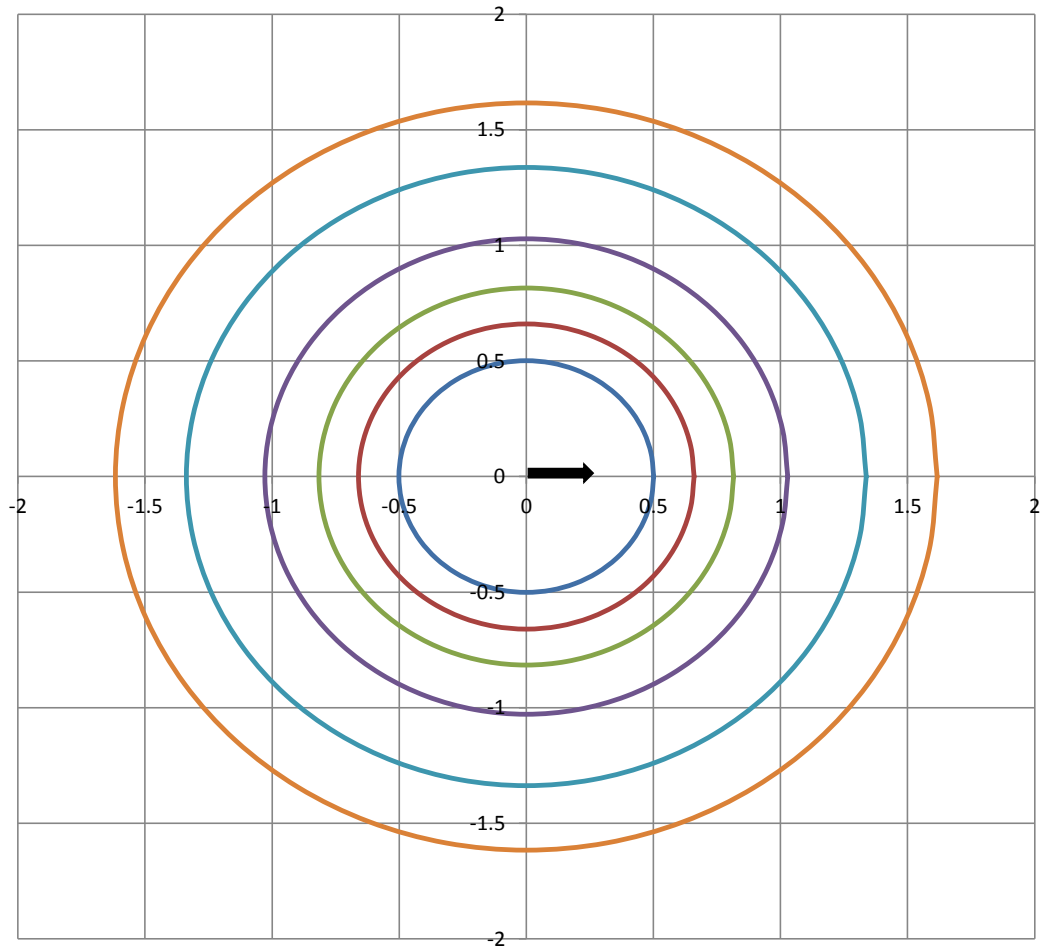
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	754.1 Candela
Central Cone Intensity:	751 Candela
Beam Flux:	474.2 Lumens
Beam Angle (0-180):	57.3 Degrees
Beam Angle (90-270):	57.3 Degrees
Field Angle (0-180):	98.8 Degrees
Field Angle (90-270):	98.8 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		47.1	3.80
6.00		20.9	5.70
8.00		11.8	7.60
10.0		7.54	9.50
12.0		5.24	11.4
14.0		3.85	13.3
16.0		2.95	15.2



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

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