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Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
B-K LIGHTING INC

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United States

Catalog Number
HP2-LED-X63-FL-9

Order Number
11353040
Test Number
11353040.5

Test Date

2016-09-16

Prepared By

Khang Nguyen, Technician

Approved By

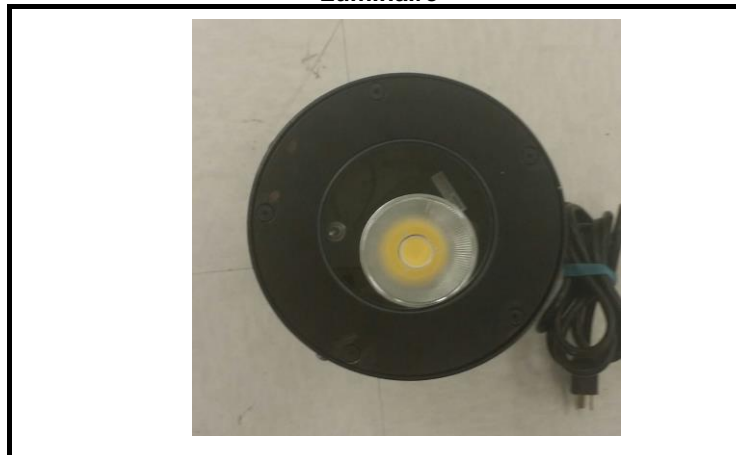
Eric Gaudreau, Senior Engineering Associate

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Luminaire Description: Circular black plastic housing, specular faceted reflector, and glass lens
Lamp: One (1) White LED
Mounting: Pole
Ballast/Driver: PowerSelect PS60U700C21T

Luminaire



Luminaire Characteristics
Luminous Diameter: 4.00 in.

Summary of Results

Total Luminaire Output:	1702 Lumens
Luminaire Efficacy:	74.6 lm/w
Maximum Candela:	3148 Candela

Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.1 VAC
Current:	0.1929 A
Power:	22.82 W
Power Factor:	0.985
Frequency:	60 Hz
Current THD:	12.7 %

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
24.4 °C	120.1 VAC	0.1929 A	22.82 W	0.985	60 Hz	12.7 %

Summary of Results

Spacing Criteria

0-180: 0.69

90-270: 0.69

Total Lumen Output:

1702 Lumens

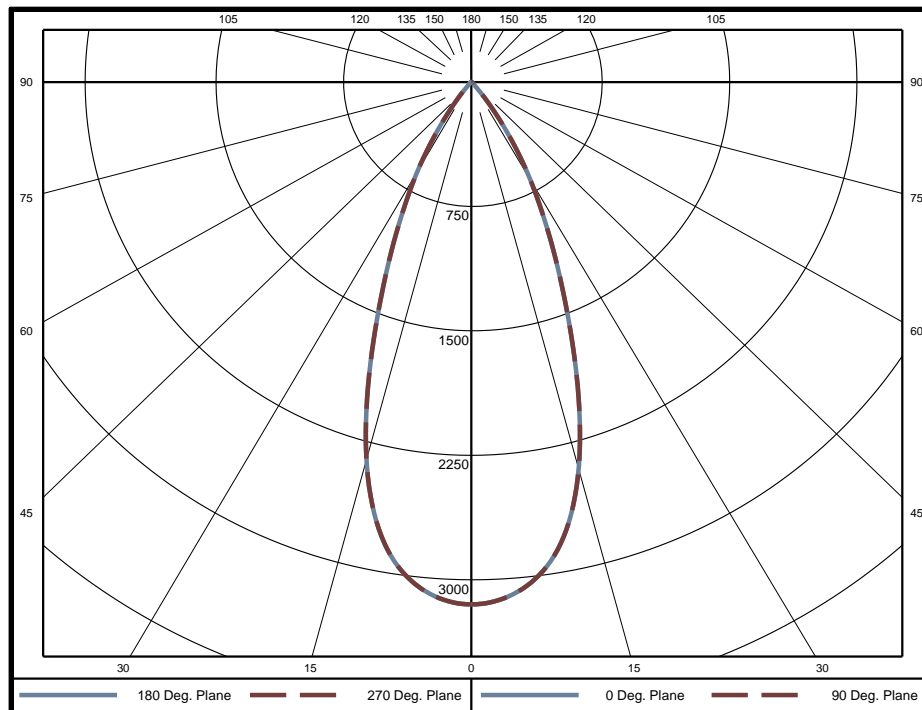
Luminaire Efficacy:

74.6 lm/w

Maximum Candela:

3148 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	74.5	4.4%	60-65	0.9	0.1%	120-125	0	0.0%
5-10	213.1	12.5%	65-70	0.6	0.0%	125-130	0	0.0%
10-15	313.0	18.4%	70-75	0.4	0.0%	130-135	0	0.0%
15-20	338.6	19.9%	75-80	0.2	0.0%	135-140	0	0.0%
20-25	293.1	17.2%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	223.8	13.1%	85-90	0.0	0.0%	145-150	0	0.0%
30-35	145.6	8.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	64.2	3.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	15.6	0.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	8.0	0.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	7.0	0.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	3.2	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1666	97.9%
0-60	1700	99.9%
0-90	1702	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	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147	3147
	5	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083
	10	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863	2863
	15	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397
	20	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725
	25	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122
	30	683	683	683	683	683	683	683	683	683	683	683	683	683	683	683
	35	324	324	324	324	324	324	324	324	324	324	324	324	324	324	324
	40	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
	45	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	50	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	55	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	60	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	65	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80	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
	90	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
	100	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
	110	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
	120	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
	130	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
	140	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
	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	388200	388200
	45	3573	3573
	55	2546	2546
	65	381	381
	75	274	274
	85	207	207



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																	
Ceiling Cavity Reflectance	80				70				50			30			10		
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																
0	2026	2026	2026	2026	1979	1979	1979	1979	1891	1891	1891	1811	1811	1811	1737	1737	1737
1	1944	1901	1864	1830	1902	1865	1831	1801	1797	1770	1745	1734	1713	1694	1676	1660	1645
2	1862	1789	1729	1678	1826	1760	1706	1659	1706	1662	1623	1657	1620	1589	1610	1582	1556
3	1784	1689	1615	1556	1752	1665	1598	1543	1622	1565	1519	1582	1535	1495	1545	1506	1473
4	1710	1598	1516	1453	1681	1579	1503	1445	1544	1479	1428	1511	1456	1412	1480	1434	1396
5	1639	1515	1429	1365	1613	1500	1419	1359	1471	1401	1348	1444	1383	1336	1419	1367	1325
6	1572	1440	1352	1288	1548	1427	1344	1284	1403	1330	1276	1380	1316	1267	1359	1303	1259
7	1508	1371	1282	1220	1487	1360	1276	1217	1340	1265	1211	1321	1254	1205	1303	1244	1199
8	1448	1308	1219	1159	1429	1299	1215	1156	1281	1206	1152	1265	1197	1147	1249	1188	1143
9	1392	1249	1162	1103	1375	1241	1158	1101	1227	1151	1098	1212	1144	1094	1199	1137	1091
10	1339	1195	1109	1052	1324	1189	1106	1051	1176	1100	1048	1164	1094	1045	1152	1089	1043

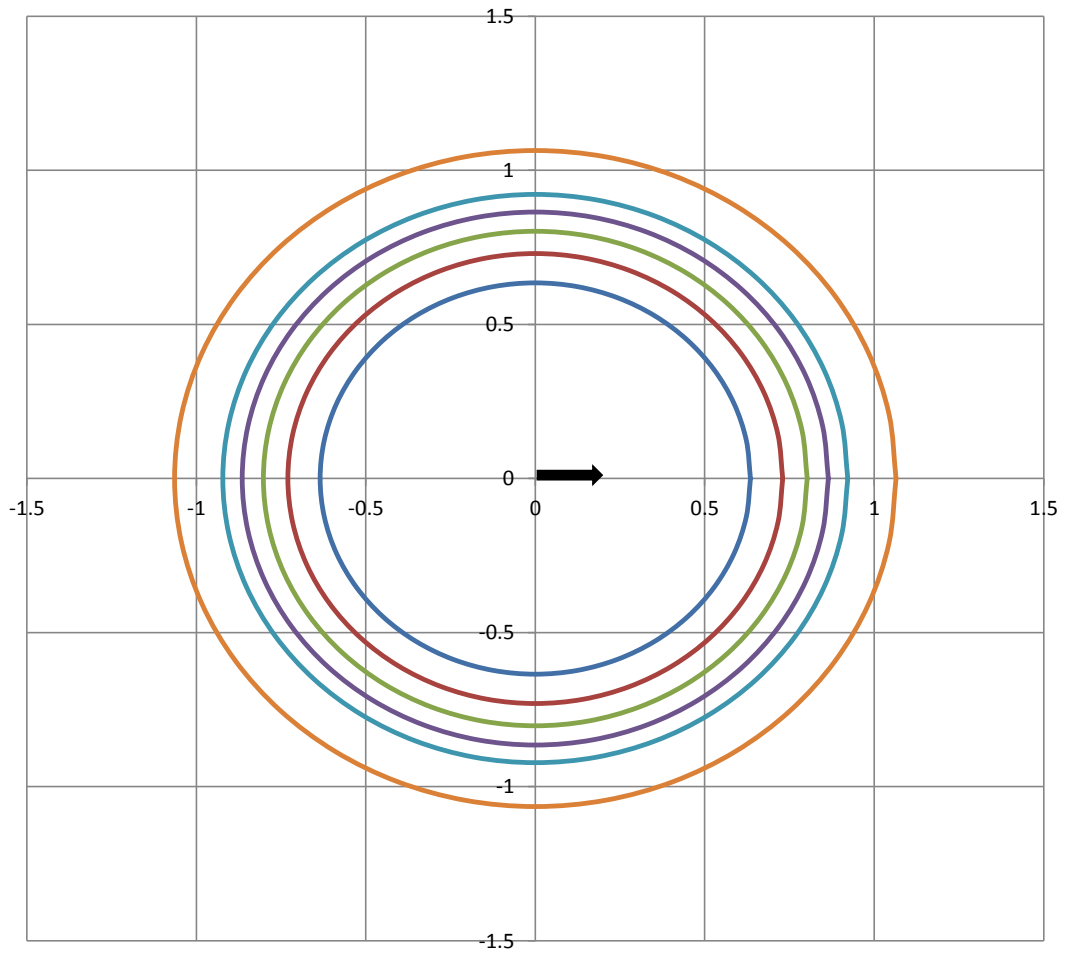
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3147 Candela
Central Cone Intensity:	3125 Candela
Beam Flux:	1011.8 Lumens
Beam Angle (0-180):	42.2 Degrees
Beam Angle (90-270):	42.2 Degrees
Field Angle (0-180):	70.3 Degrees
Field Angle (90-270):	70.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		197	2.76
6.00		87.4	4.14
8.00		49.2	5.52
10.0		31.5	6.89
12.0		21.9	8.27
14.0		16.1	9.65
16.0		12.3	11.0



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