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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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MADERA, CA 93636-9515
UNITED STATES

Catalog Number
HP2-LED-TR-C27-FL-9-4000K, CO2-LED-TR-C27-FL-9-4000K

Order Number

12531784

Test Number

12531784.06A

Revised:

2019-02-01

Test Date

2019-01-18

Prepared By

Khang Nguyen, Technician

Approved By

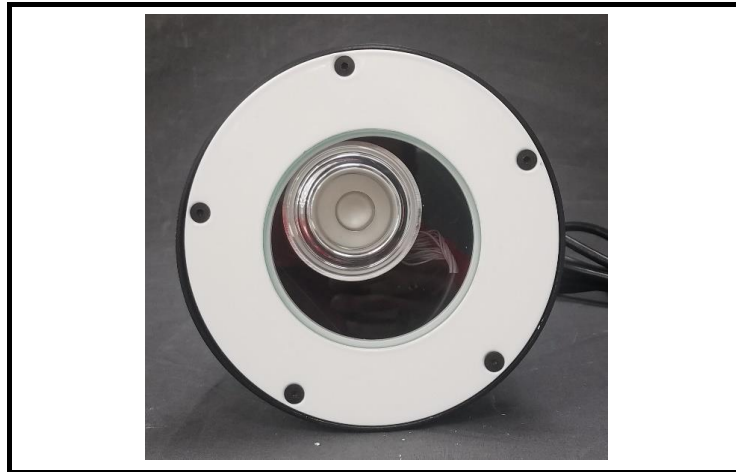
Eric Gaudreau, Engineering Leader

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Luminaire Description: Black plastic housing and glass lens
Lamp: One (1) LED with specular reflector attached
Mounting: Pendant
Ballast/Driver: One (1) Efore Strato RSLP070-24

Luminaire



Luminaire Characteristics
Luminous Diameter: 4.00 in.

Summary of Results

Total Luminaire Output:	1271 Lumens
Luminaire Efficacy:	39.3 lm/w
Maximum Candela:	1782 Candela

Test Conditions

Test Temperature:	24.7 °C
Voltage:	120.1 VAC
Current:	0.2769 A
Power:	32.36 W
Power Factor:	0.973
Frequency:	60 Hz
Current THD:	17.7 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

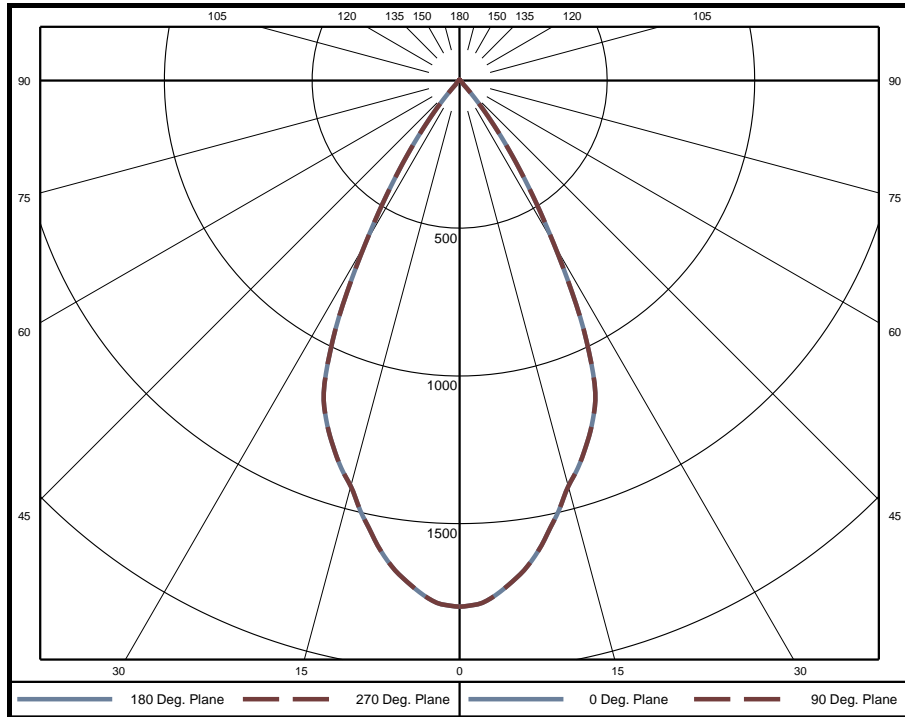
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.1 VAC	0.2769 A	32.36 W	0.973	60 Hz	17.7 %

Summary of Results

Spacing Criteria
 0-180: 0.87
 90-270: 0.87

Total Lumen Output: 1271 Lumens
Luminaire Efficacy: 39.3 lm/w
Maximum Candela: 1782 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	42.0	3.3%	60-65	4.1	0.3%	120-125	0	0.0%
5-10	118.9	9.4%	65-70	3.0	0.2%	125-130	0	0.0%
10-15	178.5	14.0%	70-75	2.0	0.2%	130-135	0	0.0%
15-20	222.9	17.5%	75-80	1.2	0.1%	135-140	0	0.0%
20-25	248.4	19.5%	80-85	0.7	0.1%	140-145	0	0.0%
25-30	214.2	16.9%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	135.6	10.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	65.4	5.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	18.4	1.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	6.3	0.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	5.2	0.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	4.5	0.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1226	96.5%
0-60	1260	99.2%
0-90	1271	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	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782	1782
5	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728
10	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599
15	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423	1423
20	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282	1282
25	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055
30	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638	638
35	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312
40	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
45	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
50	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
55	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
60	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
65	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
70	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
75	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
80	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
85	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)

	0	45	90
0	219800	219800	219800
45	3238	3238	3238
55	2283	2283	2283
65	2192	2192	2192
75	1339	1339	1339
85	968	968	968



Coefficients of Utilization - 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 percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88
3	104	97	93	89	102	96	92	88	94	90	87	91	88	86	89	86	84	83
4	99	92	86	82	97	91	86	82	88	84	81	86	83	80	85	82	79	78
5	94	86	81	77	93	85	80	76	84	79	76	82	78	75	81	77	75	73
6	90	82	76	72	88	81	75	72	79	75	71	78	74	71	77	73	70	69
7	86	77	71	68	85	76	71	67	75	70	67	74	70	67	73	69	66	65
8	82	73	67	64	81	73	67	63	71	67	63	70	66	63	70	66	63	61
9	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	59	58
10	75	66	61	57	74	66	60	57	65	60	57	64	60	56	63	59	56	55

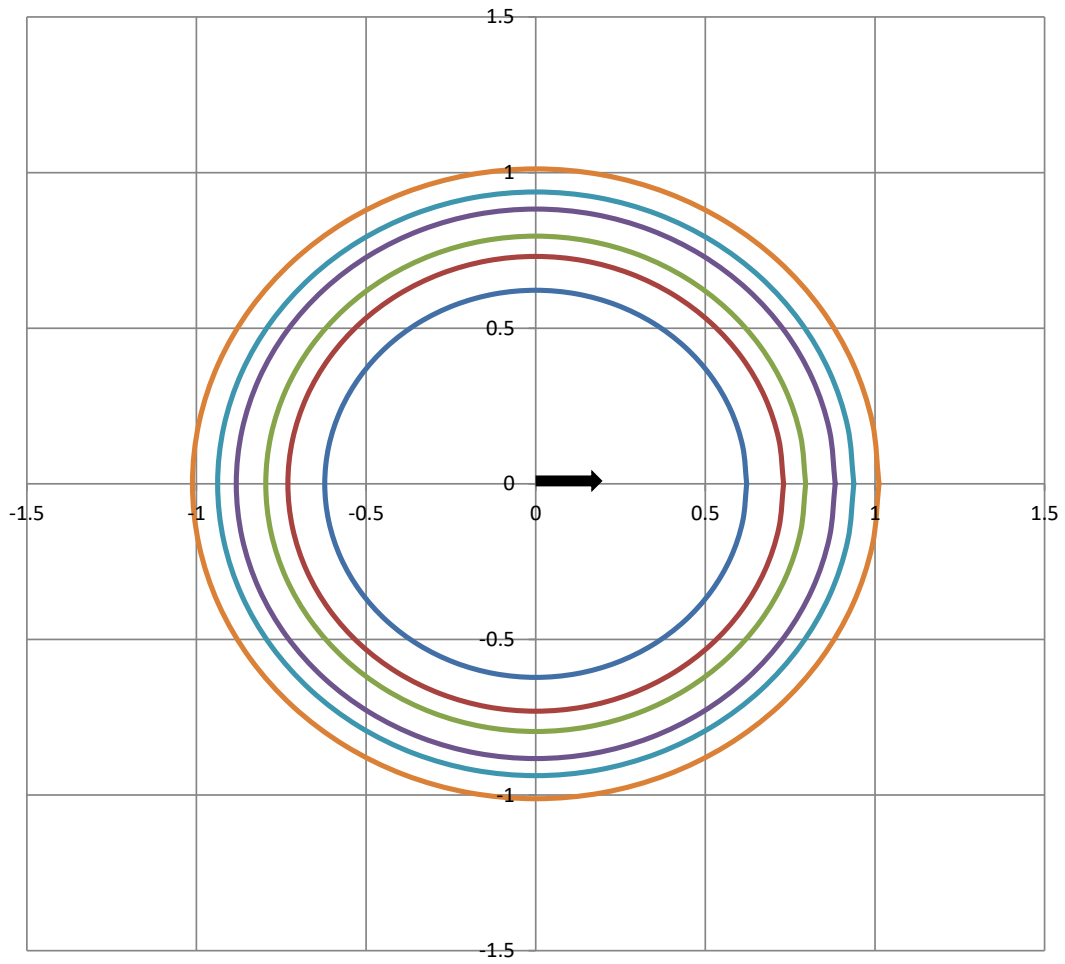
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1782 Candela
Central Cone Intensity:	1763 Candela
Beam Flux:	911.2 Lumens
Beam Angle (0-180):	54.2 Degrees
Beam Angle (90-270):	54.2 Degrees
Field Angle (0-180):	75.7 Degrees
Field Angle (90-270):	75.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		111	3.47
6.00		49.5	5.21
8.00		27.8	6.95
10.0		17.8	8.68
12.0		12.4	10.4
14.0		9.09	12.2
16.0		6.96	13.9



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

