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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
SM-APII-LED-C26-BW-12-4000K

Order Number
12498442

Test Number
12498442.05A

Revised:
2018-11-19
Test Date

2018-11-16

Prepared By

William Escobar, Technician

Approved By

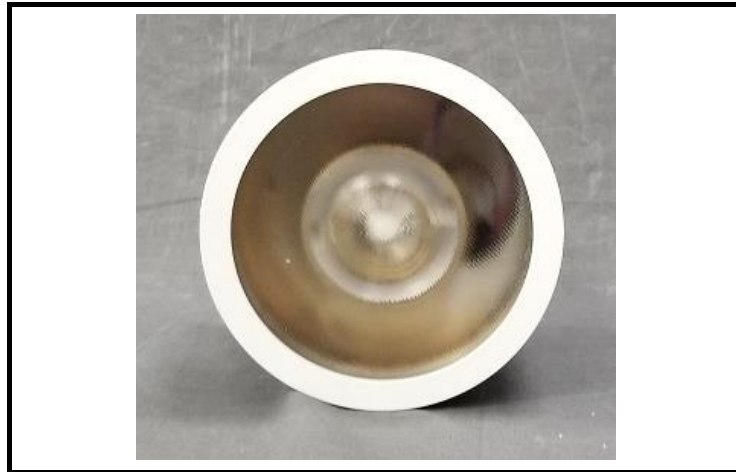
Eric Gaudreau, Engineering Leader

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White cylindrical metal housing with diffuse lens and plastic patterned optic
Lamp: One (1) Luminetix CTM1C19 16-80K 2000L 35W 24V module with diffuse lens and specular reflector
Mounting: Surface – Ceiling
Ballast/Driver: One (1) Efore Strato RSLP070-24

Luminaire



Luminaire Characteristics
Luminous Diameter: 4.50 in.

Summary of Results

Total Luminaire Output:	1604 Lumens
Luminaire Efficacy:	38.7 lm/w
Maximum Candela:	675 Candela

Test Conditions

Test Temperature:	25.0 °C
Voltage:	120.0 VAC
Current:	0.3530 A
Power:	41.46 W
Power Factor:	0.979
Frequency:	60 Hz
Current THD:	15.4 %

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



Distribution - Goniophotometer

Distribution Test Conditions

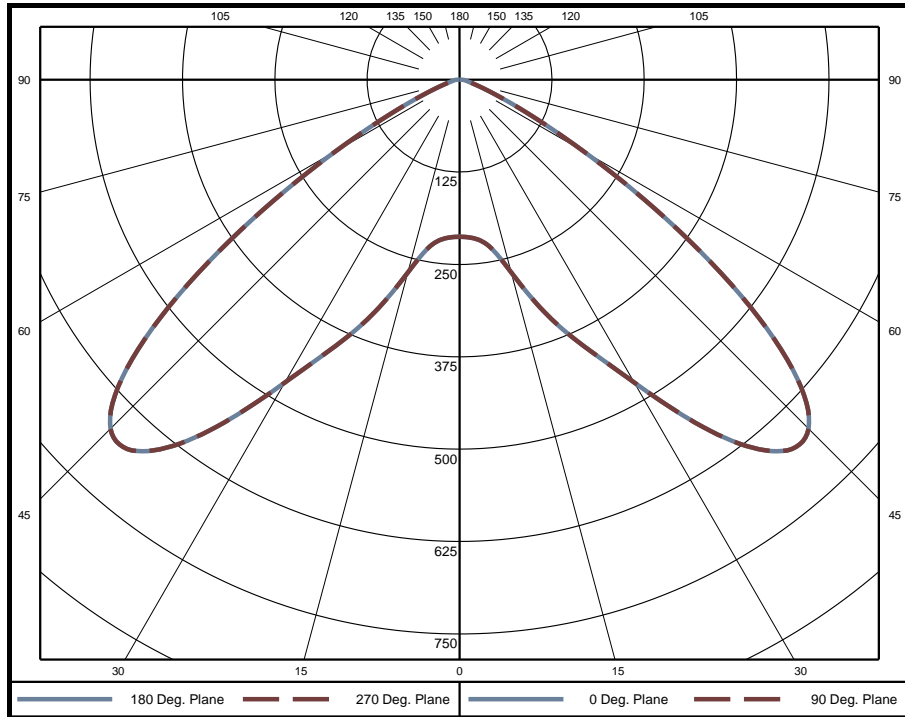
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.3530 A	41.46 W	0.979	60 Hz	15.4 %

Summary of Results

Spacing Criteria
 0-180: 2.62
 90-270: 2.62

Total Lumen Output: 1604 Lumens
Luminaire Efficacy: 38.7 lm/w
Maximum Candela: 675 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	5.1	0.3%	60-65	63.5	4.0%	120-125	0	0.0%
5-10	15.8	1.0%	65-70	27.5	1.7%	125-130	0	0.0%
10-15	29.4	1.8%	70-75	12.4	0.8%	130-135	0	0.0%
15-20	49.9	3.1%	75-80	6.7	0.4%	135-140	0	0.0%
20-25	77.0	4.8%	80-85	4.4	0.3%	140-145	0	0.0%
25-30	110.0	6.9%	85-90	2.5	0.2%	145-150	0	0.0%
30-35	154.3	9.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	206.7	12.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	248.3	15.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	253.4	15.8%	105-110	0	0.0%	165-170	0	0.0%
50-55	207.3	12.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	129.9	8.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	648	40.4%
0-60	1487	92.7%
0-90	1604	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	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7
	5	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4
	10	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7	228.7
	15	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1	270.1
	20	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0
	25	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0
	30	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8	473.8
	35	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6	573.6
	40	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4
	45	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9	667.9
	50	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8	567.8
	55	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1
	60	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5	193.5
	65	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
	70	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
	75	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
	80	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
	85	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
	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	20730	20730
	45	65090	65090
	55	36950	36950
	65	8014	8014
	75	1594	1594
	85	675	675



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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	70	56	47	41	68	56	47	41	54	46	40	52	45	40	50	44	40	38
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	32	27	53	40	32	26	39	32	26	38	31	26	37	31	26	24
10	51	37	29	23	49	36	29	23	35	28	23	34	28	23	34	27	23	21

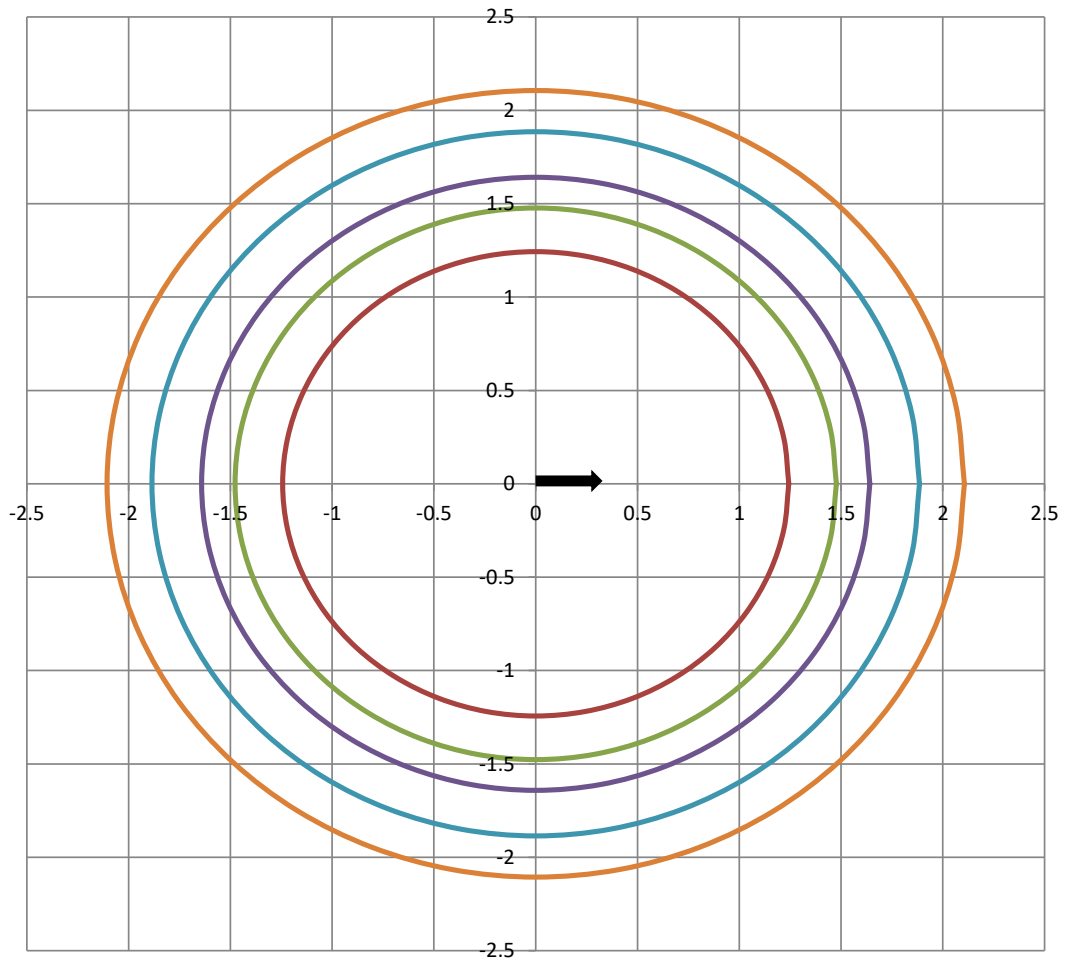
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	212.7 Candela
Central Cone Intensity:	214 Candela
Beam Flux:	1537.1 Lumens
Beam Angle (0-180):	127.1 Degrees
Beam Angle (90-270):	127.1 Degrees
Field Angle (0-180):	146.1 Degrees
Field Angle (90-270):	146.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		13.3	10.5
6.00		5.91	15.7
8.00		3.32	20.9
10.0		2.13	26.2
12.0		1.48	31.4
14.0		1.09	36.6
16.0		0.831	41.9



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

