

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: 4122.1

Luminaire Tested: **IBP-100**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 4122.1
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: IBP-100
Description: FAIL-SAFE INCAND.
prismatic lens
Light Source: 100A19 1750 LUMENS
Ballast/Driver: -

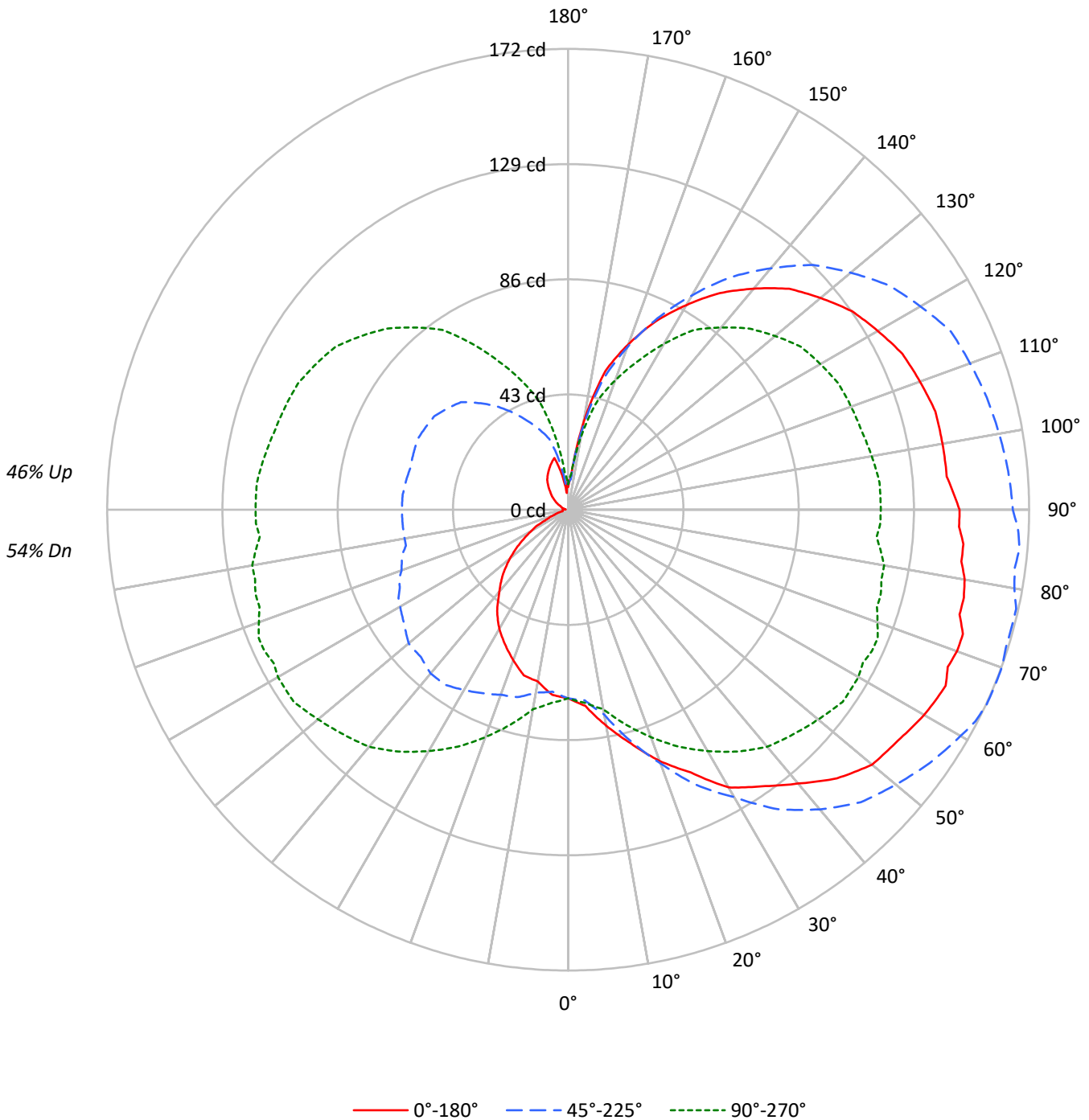
Summary

Lumens per Lamp: 1750 (1 lamp)
Luminaire Lumens: 1223.0 lumens
Efficiency: 69.9%
Efficacy: 12.2 lumens/watt
Spacing Criteria (0/90/45): 1.83 / 2.26 / 2.31
Luminous Opening: Rectangular w/ Sides (W: 0.75' x L: 0.5' x H: 0.25')
CIE Type: General Diffuse

Input Watts (W): 100
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	76	76	76	76	70	70	70	70	60	60	60	51	51	51	42	42	42	38
1	66	61	57	54	60	56	53	50	48	45	42	39	37	35	32	30	29	25
2	58	52	46	41	54	47	42	38	40	36	32	33	30	27	26	24	22	19
3	53	44	38	33	48	41	35	30	34	30	26	28	24	21	22	20	17	14
4	48	39	32	27	43	35	29	25	30	25	21	24	21	17	19	16	14	11
5	43	34	27	22	40	31	25	21	26	21	18	21	18	15	17	14	12	9
6	40	30	24	19	36	28	22	18	23	18	15	19	15	12	15	12	10	8
7	37	27	21	16	33	25	19	15	21	16	13	17	13	11	14	11	8	6
8	34	24	18	14	31	22	17	13	19	14	11	16	12	9	12	10	7	6
9	31	22	16	12	29	20	15	11	17	13	10	14	11	8	11	9	6	5
10	29	20	15	11	27	19	14	10	16	12	9	13	10	7	11	8	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2021	2021	2021
5°	2029	2027	1913
10°	2194	2081	1744
15°	2366	2264	1677
20°	2579	2460	1545
25°	2779	2675	1428
30°	3079	2891	1322
35°	3270	3131	1199
40°	3521	3382	1053
45°	3837	3611	936
50°	4141	3893	795
55°	4385	4238	642
60°	4716	4549	486
65°	5093	4951	311
70°	5459	5379	184
75°	5851	5970	81
80°	6473	6845	91
85°	7259	7908	103



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	6.9	0.6	0.4	0°	70	70	70	70	70	
10°-20°	22.8	1.9	1.3	5°	74	71	72	68	69	7
20°-30°	42.7	3.5	2.4	15°	90	89	83	72	64	26
30°-40°	64.6	5.3	3.7	25°	108	113	98	76	56	51
40°-50°	85.0	6.9	4.9	35°	126	136	110	80	46	79
50°-60°	101.0	8.3	5.8	45°	142	154	119	78	35	110
60°-70°	111.4	9.1	6.4	55°	150	165	125	75	22	135
70°-80°	115.1	9.4	6.6	65°	155	172	125	69	10	153
80°-90°	115.9	9.5	6.6	75°	151	171	121	64	2	161
90°-100°	113.5	9.3	6.5	85°	148	169	116	62	2	121
100°-110°	108.7	8.9	6.2	90°	146	166	117	62	2	80
110°-120°	99.4	8.1	5.7	95°	142	165	117	62	1	117
120°-130°	84.9	6.9	4.9	105°	142	162	113	61	2	149
130°-140°	66.1	5.4	3.8	115°	138	158	111	62	3	136
140°-150°	45.4	3.7	2.6	125°	129	146	106	61	6	115
150°-160°	26.1	2.1	1.5	135°	117	129	96	57	10	89
160°-170°	10.3	0.8	0.6	145°	99	106	82	47	14	62
170°-180°	1.6	0.1	0.1	155°	78	79	61	37	17	36
0°-30°	72.4	5.9	4.1	165°	54	50	42	27	20	14
0°-40°	137.0	11.2	7.8	175°	13	12	14	8	6	2
0°-60°	322.9	26.4	18.5	180°	8	10	10	10	12	
0°-90°	665.3	54.4	38.0							
90°-120°	321.6	26.3	18.4							
90°-150°	518.0	42.4	29.6							
90°-180°	556.0	45.5	31.8							
0°-180°	1223.0	100.0	69.9							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4
5°	73.5	74.6	73.5	72.4	72.4	71.4	71.4	70.4	72.4	70.4	72.4
10°	81.9	84.0	80.9	78.8	78.8	77.7	77.7	76.6	76.6	75.6	75.6
15°	90.3	93.4	90.3	89.2	91.4	89.2	87.2	85.0	84.0	81.9	83.0
20°	99.8	102.9	101.9	101.9	101.9	100.8	98.7	94.5	94.5	90.3	90.3
25°	108.2	112.4	112.4	114.4	114.4	113.4	109.2	106.0	100.8	97.6	97.6
30°	119.7	120.8	122.8	123.9	128.1	123.9	123.9	116.6	111.3	106.0	104.0
35°	126.0	130.2	132.3	137.6	137.6	136.5	133.4	126.0	120.8	112.4	110.2
40°	133.4	136.5	140.7	143.8	146.0	146.0	141.8	134.4	127.0	117.6	115.5
45°	141.8	143.8	148.0	154.4	155.4	154.4	149.1	140.7	133.4	123.9	118.6
50°	148.0	150.2	152.2	159.6	161.7	159.6	156.5	147.0	137.6	126.0	121.8
55°	150.2	151.2	156.5	164.8	167.0	164.8	159.6	153.3	141.8	129.2	125.0
60°	153.3	154.4	159.6	167.0	171.2	169.0	163.8	155.4	141.8	130.2	125.0
62.5°	154.4	155.4	159.6	168.0	173.2	171.2	167.0	157.5	141.8	131.2	123.9
65°	155.4	153.3	160.6	169.0	174.3	172.2	165.9	158.6	144.9	130.2	125.0
67.5°	153.3	155.4	160.6	171.2	174.3	172.2	168.0	158.6	144.9	130.2	125.0
70°	154.4	154.4	160.6	168.0	174.3	172.2	165.9	158.6	142.8	129.2	122.8
72.5°	154.4	153.3	162.8	170.1	174.3	171.2	167.0	157.5	141.8	129.2	120.8
75°	151.2	151.2	160.6	169.0	174.3	171.2	165.9	156.5	141.8	128.1	120.8
77.5°	151.2	153.3	158.6	167.0	174.3	171.2	167.0	157.5	140.7	126.0	119.7
80°	150.2	150.2	158.6	168.0	172.2	169.0	163.8	155.4	140.7	126.0	119.7
82.5°	148.0	150.2	158.6	167.0	174.3	168.0	163.8	153.3	140.7	123.9	117.6
85°	148.0	148.0	156.5	164.8	171.2	169.0	161.7	154.4	138.6	123.9	115.5
87.5°	146.0	147.0	155.4	163.8	170.1	168.0	163.8	151.2	137.6	121.8	116.6
90°	146.0	144.9	153.3	162.8	168.0	165.9	160.6	150.2	136.5	121.8	116.6
95°	141.8	147.0	150.2	160.6	165.9	164.8	159.6	151.2	138.6	120.8	116.6
105°	141.8	143.8	150.2	159.6	163.8	161.7	158.6	149.1	134.4	120.8	113.4
115°	137.6	139.6	144.9	155.4	157.5	157.5	153.3	144.9	133.4	117.6	111.3
125°	129.2	130.2	136.5	144.9	148.0	146.0	140.7	133.4	120.8	110.2	106.0
135°	116.6	117.6	121.8	128.1	130.2	129.2	126.0	119.7	109.2	100.8	95.6
145°	98.7	99.8	101.9	106.0	107.1	106.0	100.8	98.7	91.4	84.0	81.9
155°	77.7	77.7	78.8	80.9	100.8	78.8	76.6	71.4	67.2	62.0	60.9
165°	53.6	53.6	53.6	53.6	53.6	50.4	47.2	47.2	45.2	43.1	42.0
175°	12.6	9.5	13.6	11.6	13.6	11.6	10.5	11.6	12.6	12.6	13.6
180°	8.4	8.4	8.4	9.5	9.5	9.5	8.4	7.4	9.5	8.4	9.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4
5°	69.3	70.4	69.3	69.3	68.2	69.3	69.3	68.2	69.3	69.3
10°	73.5	74.6	72.4	70.4	69.3	69.3	67.2	65.1	66.2	65.1
15°	80.9	80.9	77.7	74.6	72.4	69.3	65.1	64.0	63.0	64.0
20°	89.2	87.2	83.0	78.8	73.5	68.2	63.0	60.9	60.9	59.8
25°	95.6	93.4	86.1	80.9	75.6	68.2	60.9	56.7	55.6	55.6
30°	101.9	98.7	91.4	85.0	77.7	68.2	59.8	52.5	50.4	51.4
35°	108.2	102.9	95.6	88.2	79.8	67.2	55.6	47.2	46.2	46.2
40°	111.3	106.0	98.7	90.3	79.8	65.1	52.5	42.0	39.9	39.9
45°	115.5	109.2	100.8	90.3	77.7	63.0	48.3	37.8	33.6	34.6
50°	120.8	112.4	102.9	90.3	77.7	60.9	44.1	31.5	28.4	28.4
55°	118.6	111.3	101.9	88.2	74.6	57.8	38.8	25.2	22.0	22.0
60°	120.8	112.4	100.8	88.2	72.4	54.6	34.6	18.9	16.8	15.8
62.5°	120.8	112.4	100.8	87.2	71.4	52.5	33.6	16.8	13.6	13.6
65°	120.8	112.4	100.8	86.1	69.3	50.4	30.4	13.6	10.5	9.5
67.5°	120.8	111.3	99.8	85.0	68.2	48.3	28.4	11.6	7.4	7.4
70°	118.6	109.2	97.6	83.0	66.2	46.2	25.2	8.4	5.2	5.2
72.5°	117.6	109.2	97.6	81.9	65.1	45.2	24.2	7.4	4.2	4.2
75°	116.6	108.2	96.6	80.9	64.0	43.1	22.0	5.2	2.1	2.1
77.5°	114.4	106.0	95.6	79.8	62.0	43.1	22.0	5.2	2.1	2.1
80°	112.4	106.0	93.4	78.8	62.0	43.1	22.0	5.2	2.1	2.1
82.5°	112.4	104.0	94.5	80.9	62.0	43.1	22.0	5.2	2.1	2.1
85°	111.3	104.0	94.5	80.9	62.0	43.1	22.0	5.2	2.1	2.1
87.5°	112.4	104.0	92.4	79.8	62.0	43.1	22.0	5.2	2.1	2.1
90°	110.2	102.9	93.4	79.8	62.0	43.1	22.0	5.2	2.1	2.1
95°	111.3	102.9	91.4	77.7	62.0	42.0	22.0	4.2	1.0	1.0
105°	110.2	102.9	91.4	77.7	60.9	42.0	21.0	5.2	2.1	2.1
115°	108.2	100.8	90.3	77.7	62.0	43.1	23.1	7.4	3.2	3.2
125°	101.9	96.6	87.2	74.6	60.9	44.1	26.2	10.5	5.2	6.3
135°	92.4	88.2	79.8	69.3	56.7	42.0	25.2	12.6	9.5	9.5
145°	80.9	74.6	67.2	57.8	47.2	35.7	23.1	13.6	13.6	13.6
155°	60.9	55.6	49.4	43.1	36.8	29.4	22.0	17.8	16.8	16.8
165°	39.9	36.8	33.6	30.4	27.3	24.2	22.0	20.0	18.9	20.0
175°	13.6	8.4	8.4	8.4	8.4	7.4	7.4	5.2	6.3	6.3
180°	7.4	9.5	9.5	8.4	10.5	9.5	10.5	9.5	9.5	11.6

(END OF REPORT)