

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: 766701

Luminaire Tested: **INGW-150xxxx**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 766701
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: INGW-150xxxx
Description: FAIL-SAFE WHITE 12 x 12
Light Source: #041, #042 - (2) 75W A-19 INSIDE FROSTED 2380 LUMENS
Ballast/Driver: -

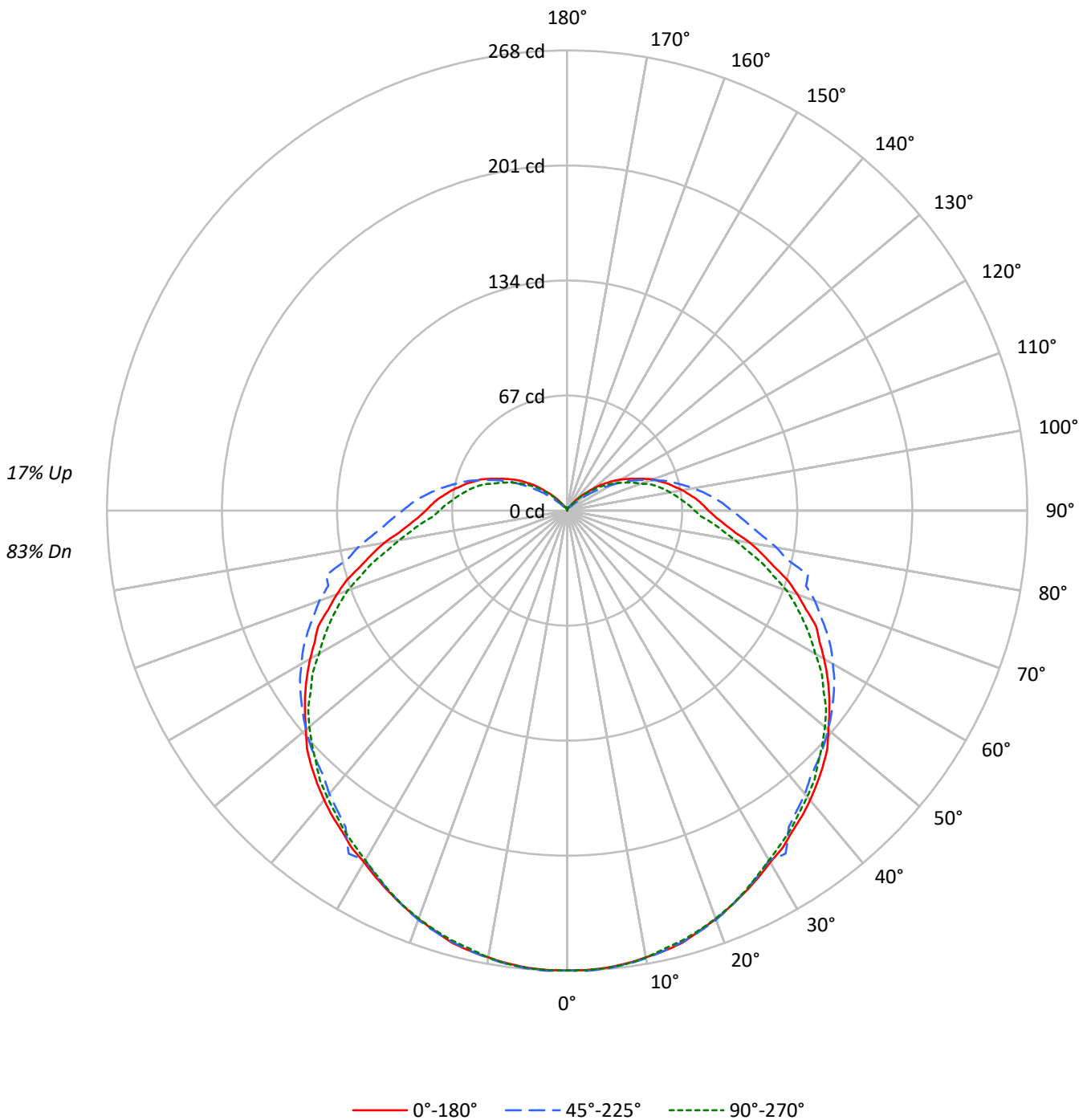
Summary

Lumens per Lamp: 1190 (2 lamps)
Luminaire Lumens: 1310.7 lumens
Efficiency: 55.1%
Efficacy: 8.7 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.32 / 1.49
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Semi-Direct

Input Watts (W): 150
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	63	63	63	63	61	61	61	61	56	56	56	52	52	52	48	48	48	46
1	56	52	49	46	53	50	47	45	46	44	42	42	40	39	39	37	36	34
2	50	44	40	36	47	43	39	35	39	36	33	36	33	31	33	31	29	27
3	45	38	33	29	43	37	32	28	34	30	27	31	28	25	28	26	23	22
4	41	34	28	24	39	32	27	24	30	26	22	27	24	21	25	22	20	18
5	37	30	24	21	36	29	24	20	26	22	19	24	21	18	22	19	17	15
6	34	27	21	18	33	26	21	17	24	19	16	22	18	15	20	17	15	13
7	32	24	19	15	30	23	18	15	21	17	14	20	16	13	18	15	13	11
8	30	22	17	14	28	21	16	13	19	15	13	18	15	12	17	14	11	10
9	28	20	15	12	26	19	15	12	18	14	11	17	13	11	15	12	10	9
10	26	18	14	11	25	18	13	11	16	13	10	15	12	10	14	11	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	25.4	1.9	1.1	0°	268	268	268	268	268	
10°-20°	73.3	5.6	3.1	5°	267	266	268	267	267	25
20°-30°	112.9	8.6	4.7	15°	260	259	260	260	259	73
30°-40°	142.3	10.9	6.0	25°	245	244	245	244	245	113
40°-50°	160.5	12.2	6.7	35°	228	226	225	232	227	143
50°-60°	166.8	12.7	7.0	45°	211	208	206	206	207	163
60°-70°	159.4	12.2	6.7	55°	186	187	189	184	182	167
70°-80°	138.7	10.6	5.8	65°	160	163	167	159	152	157
80°-90°	109.6	8.4	4.6	75°	124	134	145	129	117	132
90°-100°	86.6	6.6	3.6	85°	92	104	108	100	85	78
100°-110°	63.6	4.9	2.7	90°	82	91	96	87	74	45
110°-120°	39.9	3.0	1.7	95°	76	82	86	77	67	60
120°-130°	20.8	1.6	0.9	105°	61	62	64	63	54	64
130°-140°	7.5	0.6	0.3	115°	44	41	41	37	39	44
140°-150°	2.1	0.2	0.1	125°	28	24	20	21	25	25
150°-160°	1.0	0.1	0.0	135°	13	10	5	9	12	10
160°-170°	0.3	0.0	0.0	145°	4	3	3	3	3	3
170°-180°	0.0	0.0	0.0	155°	2	2	2	2	2	1
0°-30°	211.6	16.1	8.9	165°	2	2	2	2	2	0
0°-40°	353.9	27.0	14.9	175°	0	0	0	0	0	0
0°-60°	681.2	52.0	28.6	180°	0	0	0	0	0	
0°-90°	1088.9	83.1	45.8							
90°-120°	190.1	14.5	8.0							
90°-150°	220.5	16.8	9.3							
90°-180°	222.0	16.9	9.3							
0°-180°	1310.7	100.0	55.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	267.8	267.8	267.8	267.8	267.8
2.5°	267.8	266.8	268.3	268.0	267.9
5°	267.2	266.1	267.6	267.2	267.3
7.5°	266.0	265.1	266.5	266.0	266.3
10°	264.3	263.4	264.7	264.4	264.3
12.5°	262.6	261.1	262.5	262.1	261.4
15°	260.4	258.8	259.9	259.6	259.1
17.5°	256.5	255.7	256.9	256.6	256.1
20°	253.1	252.4	253.6	253.3	252.8
22.5°	249.3	248.8	249.4	248.6	249.1
25°	245.2	244.0	244.7	243.9	244.7
27.5°	241.0	239.3	240.2	239.6	239.7
30°	236.5	235.2	235.2	235.1	235.2
32.5°	233.2	230.8	236.9	230.4	230.9
35°	228.3	225.8	225.0	232.4	226.8
37.5°	224.5	221.9	220.0	220.5	221.9
40°	220.1	218.0	215.4	215.8	217.5
42.5°	215.5	212.7	209.9	211.4	213.1
45°	210.6	208.1	206.4	206.1	206.9
47.5°	205.5	202.7	202.7	201.3	201.6
50°	198.6	197.9	198.5	202.7	196.0
52.5°	192.5	192.1	194.0	190.1	190.1
55°	186.3	186.6	189.3	184.5	182.2
57.5°	179.7	181.0	184.5	178.1	175.7
60°	172.8	174.8	178.7	171.1	166.9
62.5°	165.8	168.5	173.2	165.2	159.7
65°	160.1	162.7	166.6	159.1	151.9
67.5°	150.6	156.4	159.7	152.7	144.0
70°	142.7	149.9	153.5	145.2	136.0
72.5°	134.5	142.2	145.9	137.4	125.8
75°	124.3	134.2	145.2	129.4	117.3
77.5°	116.1	126.9	130.9	121.2	107.2
80°	108.2	118.8	123.8	114.0	99.3
82.5°	98.8	110.6	114.9	106.9	91.7
85°	92.1	104.1	107.6	99.5	85.0
87.5°	86.5	97.9	101.6	92.7	78.1
90°	82.3	91.4	95.8	87.0	74.2
92.5°	79.0	86.6	91.0	89.0	71.1
95°	75.7	81.6	85.8	77.2	67.3
97.5°	71.7	76.3	80.3	72.5	64.2
100°	68.2	71.5	74.6	67.0	60.9
102.5°	64.0	66.8	69.0	61.7	57.8
105°	60.6	62.0	63.7	63.4	54.4
107.5°	56.5	55.5	58.1	51.0	50.8
110°	53.2	49.9	51.7	46.0	45.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	48.3	45.2	46.5	41.4	42.3
115°	43.7	40.6	41.2	37.1	38.7
117.5°	39.9	36.3	35.8	32.5	35.1
120°	36.1	31.9	29.5	28.9	31.7
122.5°	32.4	28.1	24.6	25.0	28.3
125°	27.9	24.5	19.9	21.3	24.9
127.5°	24.3	19.7	15.5	18.1	21.6
130°	20.0	16.3	10.7	14.7	17.6
132.5°	16.0	13.1	7.6	11.9	14.5
135°	12.9	10.2	5.2	9.3	11.7
137.5°	10.1	7.4	3.6	7.1	8.9
140°	7.2	5.3	3.0	5.0	6.3
142.5°	5.3	3.7	2.8	3.5	4.5
145°	3.6	2.8	2.7	2.7	3.2
147.5°	2.7	2.7	2.6	2.4	2.4
150°	2.6	2.4	2.5	2.3	2.3
152.5°	2.4	2.4	2.3	2.1	2.0
155°	2.3	2.2	2.2	2.0	2.0
157.5°	2.0	2.1	2.0	1.8	1.9
160°	2.0	1.9	1.7	1.7	1.9
162.5°	1.7	1.7	1.7	1.6	1.7
165°	1.7	1.6	1.6	1.6	1.6
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)