

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: P550712

Luminaire Tested: **FCC-X-2-LD4-1LO-30-UNV-82-84-ED1D**

Issue Date: 7/9/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P550712  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCC-X-2-LD4-1LO-30-UNV-82-84-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

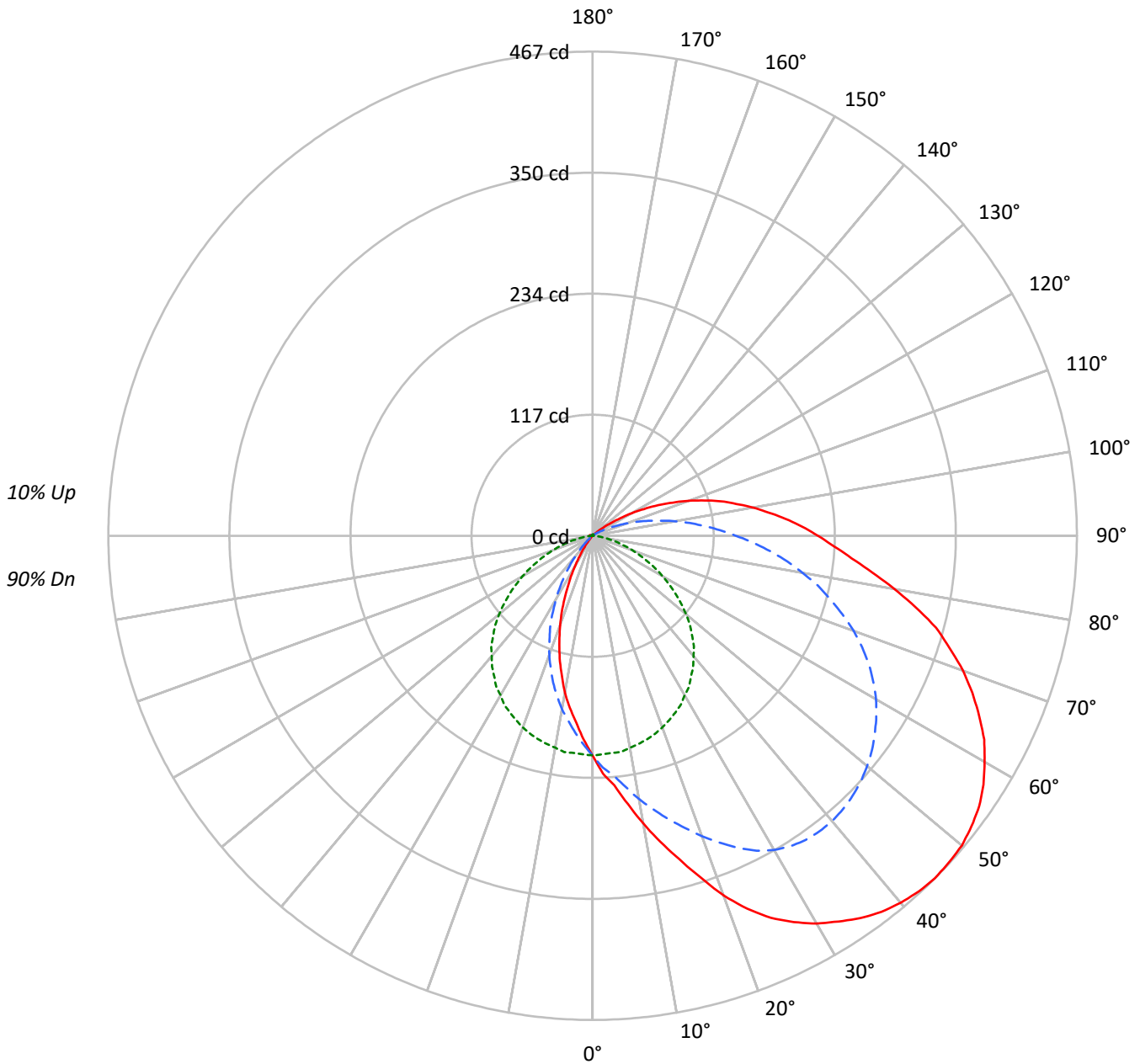
Lumens per Lamp: N/A  
Luminaire Lumens: 1047.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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CATALOG NUMBER: FCC-X-2-LD4-1LO-30-UNV-82-84-ED1D

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	2280	2280	2280
5°	2502	2247	1874
10°	2832	2219	1545
15°	3173	2190	1204
20°	3579	2155	887
25°	3916	2113	582
30°	4166	2058	328
35°	4383	1998	144
40°	4574	1925	35
45°	4739	1832	0
50°	4877	1711	0
55°	4983	1556	0
60°	5036	1375	0
65°	5056	1171	0
70°	5039	953	0
75°	4976	703	4
80°	4774	432	21
85°	4615	203	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.3	1.9
10°-20°	60.7	5.8
20°-30°	98.4	9.4
30°-40°	126.4	12.1
40°-50°	143.0	13.7
50°-60°	148.2	14.2
60°-70°	139.8	13.3
70°-80°	117.1	11.2
80°-90°	84.9	8.1
90°-100°	55.8	5.3
100°-110°	32.2	3.1
110°-120°	14.2	1.4
120°-130°	3.8	0.4
130°-140°	0.9	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	179.4	17.1
0°-40°	305.7	29.2
0°-60°	597.0	57.0
0°-90°	938.7	89.7
90°-120°	102.2	9.8
90°-150°	107.5	10.3
90°-180°	108.0	10.3
0°-180°	1047.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	212	212	212	212	212	
5°	242	232	210	191	181	24
15°	323	283	203	147	122	93
25°	407	332	188	97	60	188
35°	450	358	165	47	15	282
45°	467	355	135	11	0	361
55°	455	332	98	0	0	406
65°	411	294	58	0	0	407
75°	343	237	25	0	0	360
85°	251	172	4	1	2	214
90°	217	138	1	2	2	119
95°	187	108	0	2	2	146
105°	128	56	0	1	2	135
115°	70	18	1	1	1	70
125°	21	3	1	1	1	21
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	1	0	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8	211.8
2.5°	229.6	229.3	228.5	227.2	225.3	222.0	219.3	216.9	213.7	211.0	205.8
5°	241.7	240.4	239.3	238.0	233.6	230.7	225.8	220.4	215.3	210.2	199.9
7.5°	261.2	259.0	257.4	253.6	247.7	240.9	233.4	228.2	224.7	210.4	192.9
10°	281.9	280.0	276.8	270.1	262.8	253.1	242.3	230.1	219.3	207.5	186.7
12.5°	302.4	299.7	295.1	286.5	276.3	264.1	249.3	235.0	219.6	205.6	179.4
15°	322.9	320.0	315.1	304.6	291.1	275.2	257.1	239.0	221.0	203.1	171.9
17.5°	345.3	341.3	334.0	322.1	305.1	285.4	264.1	242.3	220.4	200.2	163.8
20°	369.3	363.7	355.8	339.9	320.0	296.8	271.1	245.5	220.1	196.7	154.6
22.5°	389.3	383.6	375.0	358.5	334.5	306.2	277.1	247.7	219.1	192.6	146.0
25°	406.6	402.0	392.5	373.7	348.3	316.2	282.7	249.3	217.4	188.3	136.8
27.5°	420.1	415.7	405.2	385.8	359.9	325.1	287.1	250.1	215.3	184.0	127.3
30°	431.9	427.6	414.9	395.0	367.7	332.1	291.4	250.4	212.6	177.5	117.1
32.5°	441.1	437.1	424.1	402.8	373.1	337.0	293.8	250.1	209.1	172.9	106.0
35°	450.3	446.2	431.1	408.5	377.2	339.1	295.7	248.7	204.8	165.4	95.5
37.5°	457.3	452.7	437.3	412.2	379.1	339.7	295.4	246.9	200.2	159.2	85.0
40°	462.1	457.3	440.8	414.4	379.6	338.9	293.3	243.6	194.8	151.4	73.9
42.5°	465.4	460.0	442.5	417.6	378.5	336.7	290.0	239.6	188.9	144.6	63.4
45°	467.0	461.3	442.7	414.9	376.6	332.6	285.2	234.4	182.4	135.4	52.9
47.5°	466.2	460.0	441.4	412.0	373.1	328.3	279.8	228.2	174.6	127.3	42.9
50°	464.8	458.4	438.4	408.2	368.3	322.9	273.8	220.7	166.5	117.4	34.0
52.5°	460.5	454.1	435.2	402.8	362.6	316.7	265.7	212.9	157.8	107.6	25.9
55°	455.1	449.2	429.5	397.9	355.3	309.2	258.2	204.5	149.5	97.7	18.6
57.5°	446.8	441.4	422.5	390.1	348.0	300.8	249.8	195.3	138.9	87.7	12.9
60°	436.5	431.1	412.8	381.2	339.7	291.4	240.7	185.9	129.5	77.7	8.1
62.5°	425.7	420.6	401.4	370.1	329.1	281.4	230.7	176.4	119.5	68.5	4.9
65°	411.4	406.6	389.3	356.9	317.5	270.6	219.6	165.1	109.3	58.3	2.7
67.5°	396.3	392.0	374.5	344.8	304.1	258.7	208.3	154.0	98.5	49.4	1.3
70°	380.1	374.7	358.5	328.3	290.3	245.2	195.9	142.7	88.2	40.7	0.0
72.5°	361.2	357.2	341.6	313.0	274.4	230.9	183.2	130.3	76.9	32.4	0.3
75°	342.9	337.8	323.5	296.5	258.7	215.8	169.2	118.7	65.8	24.8	0.3
77.5°	319.2	317.5	304.1	277.9	243.9	201.3	153.8	104.7	55.3	17.8	0.3
80°	295.4	293.8	283.3	259.3	226.6	184.0	139.5	91.5	45.1	11.9	0.3
82.5°	271.9	269.8	259.8	239.8	209.1	169.4	124.6	78.2	35.6	7.3	0.3
85°	250.9	248.2	237.4	219.1	191.0	153.0	109.3	65.3	26.4	4.0	0.5
87.5°	232.8	230.9	219.1	200.2	172.7	137.6	95.8	52.9	18.6	1.9	0.8
90°	217.4	213.4	202.9	182.9	155.4	120.6	81.5	42.4	12.4	1.1	1.1
92.5°	202.3	198.8	187.2	166.7	140.0	106.0	67.7	32.4	7.8	0.5	1.3
95°	186.7	182.9	171.6	152.7	124.4	91.2	55.6	23.7	4.3	0.5	1.3
97.5°	171.3	167.8	155.9	137.1	110.3	78.2	44.0	16.7	2.2	0.5	1.1
100°	157.0	153.0	142.2	123.3	96.3	65.3	34.0	10.8	1.3	0.5	1.1
102.5°	141.9	138.7	127.6	109.3	81.7	53.1	25.4	6.7	0.5	0.5	0.8
105°	128.4	124.4	113.6	94.7	69.6	41.8	17.8	4.0	0.5	0.5	0.8



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CATALOG NUMBER: FCC-X-2-LD4-1LO-30-UNV-82-84-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	83.6	80.4	71.0	55.0	35.3	16.5	4.9	0.8	0.8	0.8	0.8
115°	69.9	65.0	56.7	42.6	26.2	10.8	2.4	0.8	0.8	0.8	0.8
117.5°	55.8	51.8	45.9	32.4	17.3	7.0	1.3	0.8	0.8	0.8	0.8
120°	43.7	39.9	33.2	22.4	11.6	4.0	0.5	0.8	0.8	0.8	0.8
122.5°	31.3	28.3	22.4	14.6	7.0	1.9	0.8	0.8	1.1	1.1	0.8
125°	20.8	19.2	14.8	8.9	4.3	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	13.5	12.1	8.6	5.1	1.9	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.6	6.7	5.1	3.0	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.3	4.0	2.7	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1
135°	1.1	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.1
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.1	1.3	1.3	1.3	1.1
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.1	1.3	1.3	1.3	1.1
142.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.1	1.1
145°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.1	1.1	1.1
147.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.1	1.1
150°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.3	1.1	1.1	1.1
152.5°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.3	1.1	1.1	1.1
155°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.3	1.1	1.1	1.3
157.5°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.3	1.1	1.1	1.3
160°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1	1.1
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.3	1.3	1.3	1.3
172.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.3	1.3
175°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.3	1.3
177.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.3	1.3	1.3	1.1
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	211.8	211.8	211.8
2.5°	201.5	197.8	196.7
5°	190.7	184.5	181.0
7.5°	179.9	171.6	167.5
10°	170.0	158.1	153.8
12.5°	158.1	144.3	137.6
15°	146.8	129.0	122.5
17.5°	134.1	114.1	106.6
20°	122.2	99.3	91.5
22.5°	108.7	84.7	76.1
25°	96.6	70.1	60.4
27.5°	83.1	55.3	46.9
30°	70.4	42.4	34.0
32.5°	58.3	31.0	23.5
35°	46.9	21.0	14.8
37.5°	36.2	12.9	7.6
40°	26.2	6.7	3.5
42.5°	17.5	3.2	1.9
45°	10.8	1.6	0.0
47.5°	6.2	0.0	0.0
50°	3.2	0.0	0.0
52.5°	1.3	0.0	0.0
55°	0.0	0.0	0.0
57.5°	0.0	0.0	0.0
60°	0.0	0.0	0.0
62.5°	0.0	0.0	0.0
65°	0.0	0.0	0.0
67.5°	0.0	0.0	0.0
70°	0.0	0.0	0.0
72.5°	0.0	0.0	0.0
75°	0.3	0.3	0.3
77.5°	0.3	0.5	0.8
80°	0.5	1.1	1.3
82.5°	1.1	1.3	1.3
85°	1.1	1.3	1.6
87.5°	1.3	1.6	1.9
90°	1.6	1.9	1.9
92.5°	1.6	2.2	2.2
95°	1.9	2.2	2.4
97.5°	2.2	2.4	2.4
100°	1.9	2.4	2.7
102.5°	1.6	2.4	2.4
105°	1.3	1.9	2.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.1	1.3	1.3
115°	0.8	1.1	1.3
117.5°	0.8	1.1	1.1
120°	0.8	0.8	1.1
122.5°	0.8	0.8	1.1
125°	0.8	0.8	1.1
127.5°	1.1	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.1	0.8	0.8
135°	1.1	0.8	0.8
137.5°	1.1	0.8	0.8
140°	1.1	0.8	0.8
142.5°	1.1	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.1	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	113.3	110.1	99.3	81.5	56.9	31.8	11.9	2.2	0.5	0.8	0.8
110°	98.7	96.0	85.0	67.7	45.9	23.7	7.8	1.3	0.8	0.8	0.8







107.5°	1.1	1.6	1.9
110°	1.1	1.3	1.6



(END OF REPORT)