

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: P550784

Luminaire Tested: **FCC-X-2-LD4-1LO-35-UNV-82-88-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: P550784  
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-35-UNV-82-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

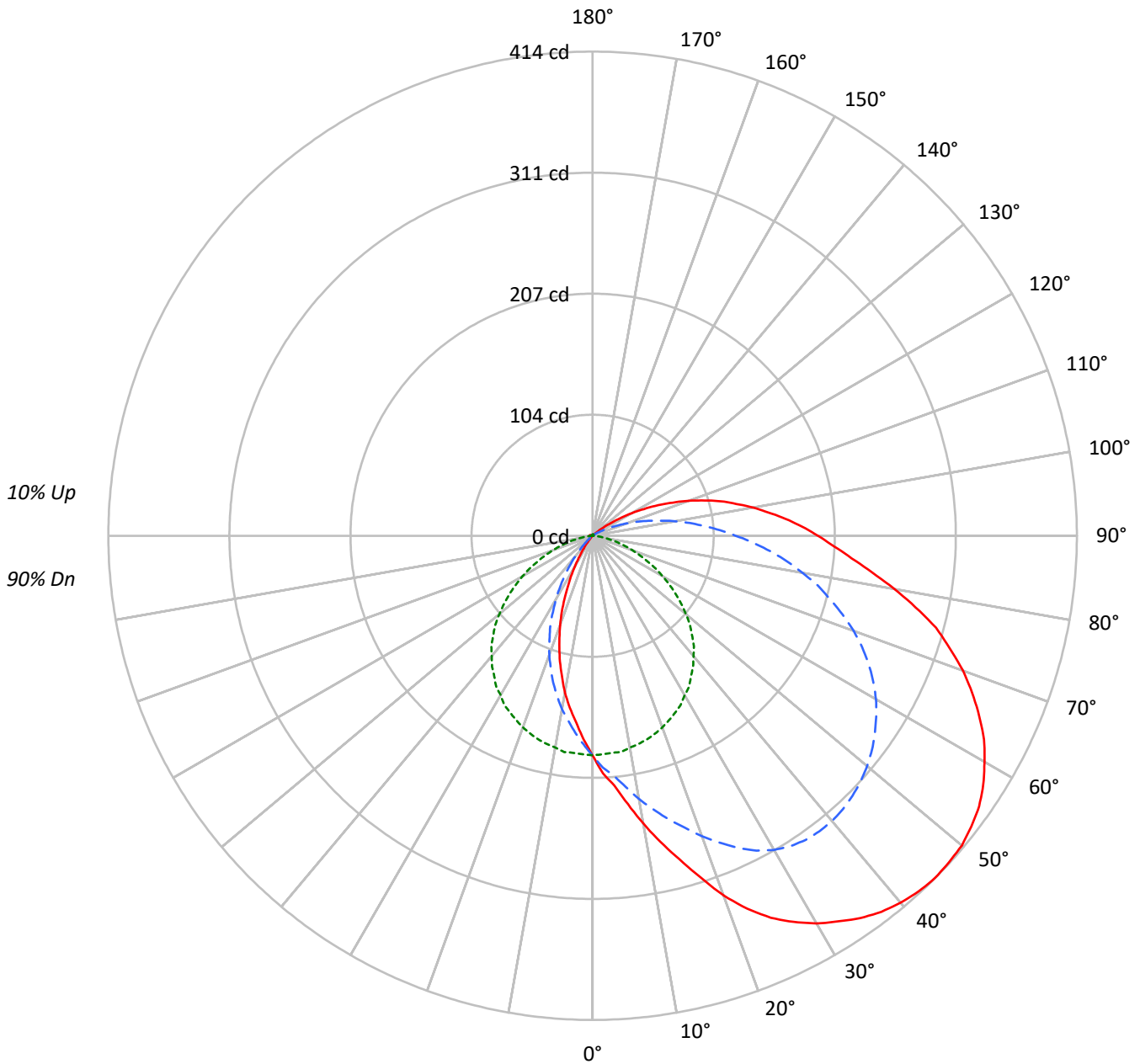
Lumens per Lamp: N/A  
Luminaire Lumens: 928.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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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### 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°	2020	2020	2020
5°	2218	1991	1662
10°	2510	1967	1369
15°	2813	1942	1067
20°	3173	1910	786
25°	3471	1873	516
30°	3692	1823	290
35°	3884	1771	128
40°	4054	1705	31
45°	4200	1624	0
50°	4323	1516	0
55°	4417	1379	0
60°	4464	1219	0
65°	4482	1038	0
70°	4467	846	0
75°	4410	624	3
80°	4231	381	19
85°	4090	183	26



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.0	1.9
10°-20°	53.8	5.8
20°-30°	87.2	9.4
30°-40°	112.0	12.1
40°-50°	126.8	13.7
50°-60°	131.3	14.2
60°-70°	123.9	13.3
70°-80°	103.8	11.2
80°-90°	75.2	8.1
90°-100°	49.5	5.3
100°-110°	28.6	3.1
110°-120°	12.6	1.4
120°-130°	3.4	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	159.0	17.1
0°-40°	271.0	29.2
0°-60°	529.1	57.0
0°-90°	832.0	89.7
90°-120°	90.6	9.8
90°-150°	95.4	10.3
90°-180°	96.0	10.3
0°-180°	928.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	188	188	188	188	188	
5°	214	206	186	169	160	22
15°	286	251	180	130	109	83
25°	360	294	167	86	54	167
35°	399	317	147	42	13	250
45°	414	314	120	10	0	320
55°	403	294	87	0	0	360
65°	365	261	52	0	0	361
75°	304	210	22	0	0	319
85°	222	152	4	1	1	190
90°	193	122	1	1	2	106
95°	166	96	0	2	2	130
105°	114	49	0	1	2	120
115°	62	16	1	1	1	62
125°	18	2	1	1	1	18
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°	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7
2.5°	203.5	203.3	202.5	201.3	199.7	196.8	194.4	192.3	189.4	187.0	182.5
5°	214.3	213.1	212.1	210.9	207.1	204.5	200.1	195.4	190.8	186.3	177.2
7.5°	231.5	229.6	228.1	224.8	219.5	213.5	206.8	202.3	199.2	186.5	171.0
10°	249.9	248.2	245.3	239.4	232.9	224.3	214.7	204.0	194.4	183.9	165.5
12.5°	268.1	265.7	261.6	253.9	244.9	234.1	221.0	208.3	194.6	182.2	159.0
15°	286.2	283.6	279.3	270.0	258.0	243.9	227.9	211.9	195.8	180.1	152.3
17.5°	306.1	302.5	296.0	285.5	270.4	253.0	234.1	214.7	195.4	177.4	145.1
20°	327.4	322.3	315.4	301.3	283.6	263.0	240.3	217.6	195.1	174.3	137.0
22.5°	345.1	340.0	332.4	317.8	296.5	271.4	245.6	219.5	194.2	170.7	129.4
25°	360.4	356.3	347.9	331.2	308.7	280.3	250.6	221.0	192.7	166.9	121.2
27.5°	372.3	368.5	359.2	341.9	319.0	288.1	254.4	221.7	190.8	163.1	112.9
30°	382.8	379.0	367.8	350.1	325.9	294.4	258.3	221.9	188.4	157.3	103.8
32.5°	391.0	387.4	375.9	357.0	330.7	298.7	260.4	221.7	185.3	153.3	94.0
35°	399.1	395.5	382.1	362.0	334.3	300.6	262.1	220.5	181.5	146.6	84.6
37.5°	405.3	401.2	387.6	365.4	336.0	301.1	261.8	218.8	177.4	141.1	75.3
40°	409.6	405.3	390.7	367.3	336.4	300.3	259.9	215.9	172.6	134.1	65.5
42.5°	412.5	407.7	392.2	370.2	335.5	298.4	257.1	212.3	167.4	128.2	56.2
45°	413.9	408.9	392.4	367.8	333.8	294.8	252.8	207.8	161.6	120.0	46.9
47.5°	413.2	407.7	391.2	365.1	330.7	291.0	248.0	202.3	154.7	112.9	38.0
50°	412.0	406.3	388.6	361.8	326.4	286.2	242.7	195.6	147.5	104.0	30.1
52.5°	408.2	402.4	385.7	357.0	321.4	280.7	235.5	188.7	139.9	95.4	23.0
55°	403.4	398.1	380.7	352.7	314.9	274.0	228.8	181.3	132.5	86.6	16.5
57.5°	396.0	391.2	374.5	345.8	308.5	266.6	221.4	173.1	123.1	77.7	11.5
60°	386.9	382.1	365.9	337.9	301.1	258.3	213.3	164.8	114.8	68.9	7.2
62.5°	377.3	372.8	355.8	328.1	291.7	249.4	204.5	156.4	105.9	60.7	4.3
65°	364.7	360.4	345.1	316.4	281.4	239.8	194.6	146.3	96.8	51.7	2.4
67.5°	351.3	347.4	331.9	305.6	269.5	229.3	184.6	136.5	87.3	43.8	1.2
70°	336.9	332.1	317.8	291.0	257.3	217.4	173.6	126.5	78.2	36.1	0.0
72.5°	320.2	316.6	302.7	277.4	243.2	204.7	162.4	115.5	68.2	28.7	0.2
75°	303.9	299.4	286.7	262.8	229.3	191.3	149.9	105.2	58.3	22.0	0.2
77.5°	282.9	281.4	269.5	246.3	216.2	178.4	136.3	92.8	49.0	15.8	0.2
80°	261.8	260.4	251.1	229.8	200.9	163.1	123.6	81.1	39.9	10.5	0.2
82.5°	241.0	239.1	230.3	212.6	185.3	150.2	110.5	69.3	31.6	6.5	0.2
85°	222.4	220.0	210.4	194.2	169.3	135.6	96.8	57.9	23.4	3.6	0.5
87.5°	206.4	204.7	194.2	177.4	153.0	122.0	84.9	46.9	16.5	1.7	0.7
90°	192.7	189.1	179.8	162.1	137.7	106.9	72.2	37.5	11.0	1.0	1.0
92.5°	179.3	176.2	166.0	147.8	124.1	94.0	60.0	28.7	6.9	0.5	1.2
95°	165.5	162.1	152.1	135.3	110.2	80.8	49.3	21.0	3.8	0.5	1.2
97.5°	151.8	148.7	138.2	121.5	97.8	69.3	39.0	14.8	1.9	0.5	1.0
100°	139.2	135.6	126.0	109.3	85.4	57.9	30.1	9.6	1.2	0.5	1.0
102.5°	125.8	122.9	113.1	96.8	72.5	47.1	22.5	6.0	0.5	0.5	0.7
105°	113.8	110.2	100.7	83.9	61.7	37.1	15.8	3.6	0.5	0.5	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.1	71.3	62.9	48.8	31.3	14.6	4.3	0.7	0.7	0.7	0.7
115°	61.9	57.6	50.2	37.8	23.2	9.6	2.2	0.7	0.7	0.7	0.7
117.5°	49.5	45.9	40.7	28.7	15.3	6.2	1.2	0.7	0.7	0.7	0.7
120°	38.7	35.4	29.4	19.8	10.3	3.6	0.5	0.7	0.7	0.7	0.7
122.5°	27.7	25.1	19.8	12.9	6.2	1.7	0.7	0.7	1.0	1.0	0.7
125°	18.4	17.0	13.2	7.9	3.8	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.0	10.8	7.7	4.5	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.7	6.0	4.5	2.6	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.8	3.6	2.4	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.2	1.2	1.2	1.0
140°	0.2	0.2	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.0
142.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
145°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
150°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
152.5°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
157.5°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
160°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	187.7	187.7	187.7
2.5°	178.6	175.3	174.3
5°	169.1	163.6	160.5
7.5°	159.5	152.1	148.5
10°	150.6	140.1	136.3
12.5°	140.1	127.9	122.0
15°	130.1	114.3	108.6
17.5°	118.8	101.1	94.5
20°	108.3	88.0	81.1
22.5°	96.4	75.1	67.4
25°	85.6	62.2	53.6
27.5°	73.7	49.0	41.6
30°	62.4	37.5	30.1
32.5°	51.7	27.5	20.8
35°	41.6	18.7	13.2
37.5°	32.0	11.5	6.7
40°	23.2	6.0	3.1
42.5°	15.5	2.9	1.7
45°	9.6	1.4	0.0
47.5°	5.5	0.0	0.0
50°	2.9	0.0	0.0
52.5°	1.2	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°	0.2	0.2	0.2
77.5°	0.2	0.5	0.7
80°	0.5	1.0	1.2
82.5°	1.0	1.2	1.2
85°	1.0	1.2	1.4
87.5°	1.2	1.4	1.7
90°	1.4	1.7	1.7
92.5°	1.4	1.9	1.9
95°	1.7	1.9	2.2
97.5°	1.9	2.2	2.2
100°	1.7	2.2	2.4
102.5°	1.4	2.2	2.2
105°	1.2	1.7	1.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.2	1.2
115°	0.7	1.0	1.2
117.5°	0.7	1.0	1.0
120°	0.7	0.7	1.0
122.5°	0.7	0.7	1.0
125°	0.7	0.7	1.0
127.5°	1.0	0.7	0.7
130°	0.7	0.7	0.7
132.5°	1.0	0.7	0.7
135°	1.0	0.7	0.7
137.5°	1.0	0.7	0.7
140°	1.0	0.7	0.7
142.5°	1.0	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	1.0	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	100.4	97.6	88.0	72.2	50.5	28.2	10.5	1.9	0.5	0.7	0.7
110°	87.5	85.1	75.3	60.0	40.7	21.0	6.9	1.2	0.7	0.7	0.7







107.5°	1.0	1.4	1.7
110°	1.0	1.2	1.4



(END OF REPORT)