

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: P551019

Luminaire Tested: **FCC-X-2-LD4-1STD-35-UNV-81-86-ED1D-90**

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: P551019  
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-LD4-1STD-35-UNV-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

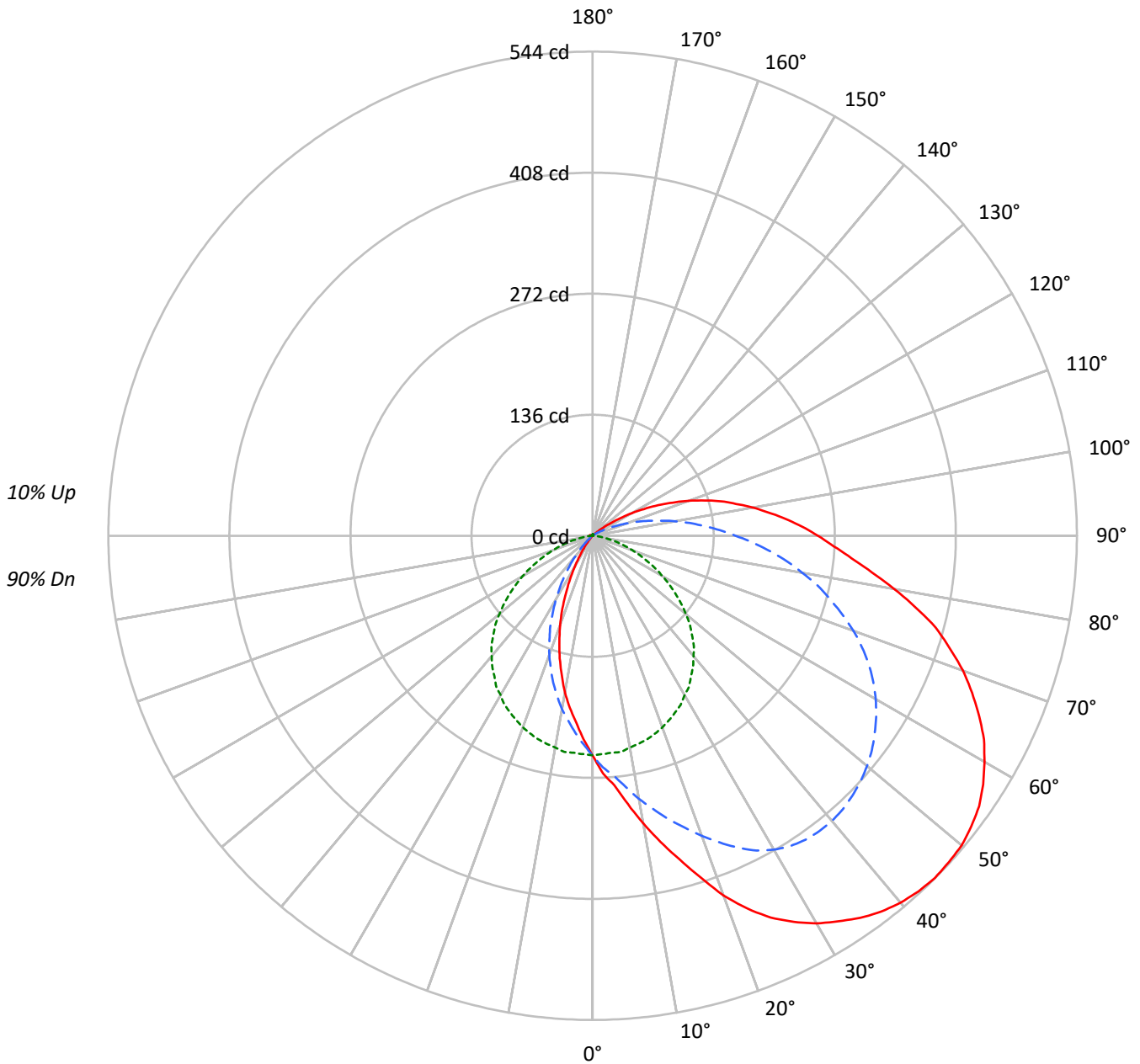
Lumens per Lamp: N/A  
Luminaire Lumens: 1219.0 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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

TEST NUMBER: P551019

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-86-ED1D-90

### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
RC	80									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	90																			
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	67																			
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	53																			
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	43																			
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	36																			
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	30																			
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	26																			
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	23																			
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	20																			
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	18																			
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	16																			

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

	0°	90°	180°
0°	2654	2654	2654
5°	2913	2615	2182
10°	3297	2583	1798
15°	3695	2550	1401
20°	4167	2509	1032
25°	4559	2460	678
30°	4850	2396	382
35°	5102	2326	168
40°	5326	2241	41
45°	5518	2134	0
50°	5679	1991	0
55°	5802	1811	0
60°	5863	1602	0
65°	5887	1362	0
70°	5868	1110	0
75°	5793	820	4
80°	5558	501	26
85°	5372	239	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.6	1.9
10°-20°	70.7	5.8
20°-30°	114.5	9.4
30°-40°	147.1	12.1
40°-50°	166.5	13.7
50°-60°	172.5	14.2
60°-70°	162.7	13.3
70°-80°	136.4	11.2
80°-90°	98.8	8.1
90°-100°	65.0	5.3
100°-110°	37.5	3.1
110°-120°	16.5	1.4
120°-130°	4.5	0.4
130°-140°	1.0	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	208.9	17.1
0°-40°	356.0	29.2
0°-60°	695.0	57.0
0°-90°	1093.0	89.7
90°-120°	119.0	9.8
90°-150°	125.2	10.3
90°-180°	126.0	10.3
0°-180°	1219.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	247	247	247	247	247	
5°	281	270	245	222	211	28
15°	376	330	236	171	143	108
25°	473	387	219	112	70	219
35°	524	417	192	55	17	329
45°	544	413	158	13	0	420
55°	530	387	114	0	0	473
65°	479	342	68	0	0	474
75°	399	276	29	0	0	419
85°	292	200	5	1	2	249
90°	253	161	1	2	2	139
95°	217	126	1	2	3	171
105°	150	65	1	2	2	158
115°	81	22	1	1	2	81
125°	24	3	1	1	1	24
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	1	0	0
175°	1	1	2	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°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6
2.5°	267.3	267.0	266.0	264.5	262.3	258.5	255.4	252.5	248.8	245.6	239.7
5°	281.4	279.9	278.6	277.0	272.0	268.6	262.9	256.6	250.7	244.7	232.8
7.5°	304.1	301.5	299.7	295.3	288.4	280.5	271.7	265.7	261.7	245.0	224.6
10°	328.2	326.0	322.3	314.4	305.9	294.6	282.1	267.9	255.4	241.5	217.4
12.5°	352.1	349.0	343.6	333.6	321.6	307.5	290.2	273.6	255.7	239.3	208.9
15°	376.0	372.5	366.9	354.6	338.9	320.4	299.3	278.3	257.3	236.5	200.1
17.5°	402.1	397.3	388.9	375.0	355.3	332.3	307.5	282.1	256.6	233.1	190.7
20°	430.0	423.4	414.3	395.8	372.5	345.5	315.7	285.8	256.3	229.0	180.0
22.5°	453.3	446.7	436.6	417.4	389.5	356.5	322.6	288.4	255.1	224.3	169.9
25°	473.4	468.0	457.0	435.0	405.5	368.1	329.2	290.2	253.2	219.2	159.3
27.5°	489.1	484.0	471.8	449.2	419.0	378.5	334.2	291.2	250.7	214.2	148.3
30°	502.9	497.9	483.1	459.9	428.1	386.7	339.2	291.5	247.5	206.7	136.3
32.5°	513.6	508.9	493.8	469.0	434.4	392.3	342.1	291.2	243.4	201.3	123.4
35°	524.2	519.5	501.9	475.6	439.1	394.8	344.3	289.6	238.4	192.5	111.2
37.5°	532.4	527.1	509.2	480.0	441.3	395.5	343.9	287.4	233.1	185.3	98.9
40°	538.1	532.4	513.3	482.5	441.9	394.5	341.4	283.6	226.8	176.2	86.1
42.5°	541.8	535.6	515.1	486.2	440.7	392.0	337.7	278.9	219.9	168.4	73.8
45°	543.7	537.1	515.5	483.1	438.5	387.3	332.0	273.0	212.3	157.7	61.6
47.5°	542.8	535.6	513.9	479.6	434.4	382.3	325.7	265.7	203.2	148.3	49.9
50°	541.2	533.7	510.4	475.2	428.8	376.0	318.8	256.9	193.8	136.6	39.6
52.5°	536.2	528.6	506.7	469.0	422.2	368.8	309.4	247.8	183.8	125.3	30.2
55°	529.9	523.0	500.1	463.3	413.7	360.0	300.6	238.1	174.0	113.7	21.7
57.5°	520.2	513.9	491.9	454.2	405.2	350.2	290.9	227.4	161.8	102.1	15.1
60°	508.2	501.9	480.6	443.8	395.5	339.2	280.2	216.4	150.8	90.5	9.4
62.5°	495.7	489.7	467.4	431.0	383.2	327.6	268.6	205.4	139.1	79.8	5.7
65°	479.0	473.4	453.3	415.6	369.7	315.0	255.7	192.2	127.2	67.8	3.1
67.5°	461.4	456.4	436.0	401.4	354.0	301.2	242.5	179.4	114.6	57.5	1.6
70°	442.6	436.3	417.4	382.3	338.0	285.5	228.0	166.2	102.7	47.4	0.0
72.5°	420.6	415.9	397.7	364.4	319.4	268.9	213.3	151.7	89.5	37.7	0.3
75°	399.2	393.3	376.6	345.2	301.2	251.3	196.9	138.2	76.6	28.9	0.3
77.5°	371.6	369.7	354.0	323.5	284.0	234.3	179.0	121.9	64.4	20.7	0.3
80°	343.9	342.1	329.8	301.9	263.9	214.2	162.4	106.5	52.5	13.8	0.3
82.5°	316.6	314.1	302.5	279.2	243.4	197.3	145.1	91.1	41.5	8.5	0.3
85°	292.1	289.0	276.4	255.1	222.4	178.1	127.2	76.0	30.8	4.7	0.6
87.5°	271.1	268.9	255.1	233.1	201.0	160.2	111.5	61.6	21.7	2.2	0.9
90°	253.2	248.5	236.2	213.0	180.9	140.4	94.9	49.3	14.4	1.3	1.3
92.5°	235.6	231.5	218.0	194.1	163.0	123.4	78.8	37.7	9.1	0.6	1.6
95°	217.4	213.0	199.8	177.8	144.8	106.2	64.7	27.6	5.0	0.6	1.6
97.5°	199.5	195.4	181.6	159.6	128.5	91.1	51.2	19.5	2.5	0.6	1.3
100°	182.8	178.1	165.5	143.5	112.1	76.0	39.6	12.6	1.6	0.6	1.3
102.5°	165.2	161.5	148.6	127.2	95.2	61.9	29.5	7.9	0.6	0.6	0.9
105°	149.5	144.8	132.2	110.3	81.0	48.7	20.7	4.7	0.6	0.6	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	97.4	93.6	82.6	64.1	41.1	19.2	5.7	0.9	0.9	0.9	0.9
115°	81.4	75.7	66.0	49.6	30.5	12.6	2.8	0.9	0.9	0.9	0.9
117.5°	65.0	60.3	53.4	37.7	20.1	8.2	1.6	0.9	0.9	0.9	0.9
120°	50.9	46.5	38.6	26.1	13.5	4.7	0.6	0.9	0.9	0.9	0.9
122.5°	36.4	33.0	26.1	17.0	8.2	2.2	0.9	0.9	1.3	1.3	0.9
125°	24.2	22.3	17.3	10.4	5.0	0.9	0.9	0.9	1.3	1.3	0.9
127.5°	15.7	14.1	10.1	6.0	2.2	0.9	0.9	1.3	1.3	1.3	0.9
130°	8.8	7.9	6.0	3.5	0.9	0.9	0.9	1.3	1.3	1.3	0.9
132.5°	5.0	4.7	3.1	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.3
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	246.6	246.6	246.6
2.5°	234.6	230.2	229.0
5°	222.1	214.8	210.8
7.5°	209.5	199.8	195.1
10°	197.9	184.1	179.0
12.5°	184.1	168.0	160.2
15°	170.9	150.1	142.6
17.5°	156.1	132.9	124.1
20°	142.3	115.6	106.5
22.5°	126.6	98.6	88.6
25°	112.5	81.7	70.4
27.5°	96.7	64.4	54.7
30°	82.0	49.3	39.6
32.5°	67.8	36.1	27.3
35°	54.7	24.5	17.3
37.5°	42.1	15.1	8.8
40°	30.5	7.9	4.1
42.5°	20.4	3.8	2.2
45°	12.6	1.9	0.0
47.5°	7.2	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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	0.6	0.9
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.5	2.5
95°	2.2	2.5	2.8
97.5°	2.5	2.8	2.8
100°	2.2	2.8	3.1
102.5°	1.9	2.8	2.8
105°	1.6	2.2	2.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	0.9	1.3	1.6
117.5°	0.9	1.3	1.3
120°	0.9	0.9	1.3
122.5°	0.9	0.9	1.3
125°	0.9	0.9	1.3
127.5°	1.3	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.3	0.9	0.9
135°	1.3	0.9	0.9
137.5°	1.3	0.9	0.9
140°	1.3	0.9	0.9
142.5°	1.3	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.3	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	131.9	128.2	115.6	94.9	66.3	37.1	13.8	2.5	0.6	0.9	0.9
110°	115.0	111.8	98.9	78.8	53.4	27.6	9.1	1.6	0.9	0.9	0.9







107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)