

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: P551097

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-82-85-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: P551097  
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-40-UNV-82-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

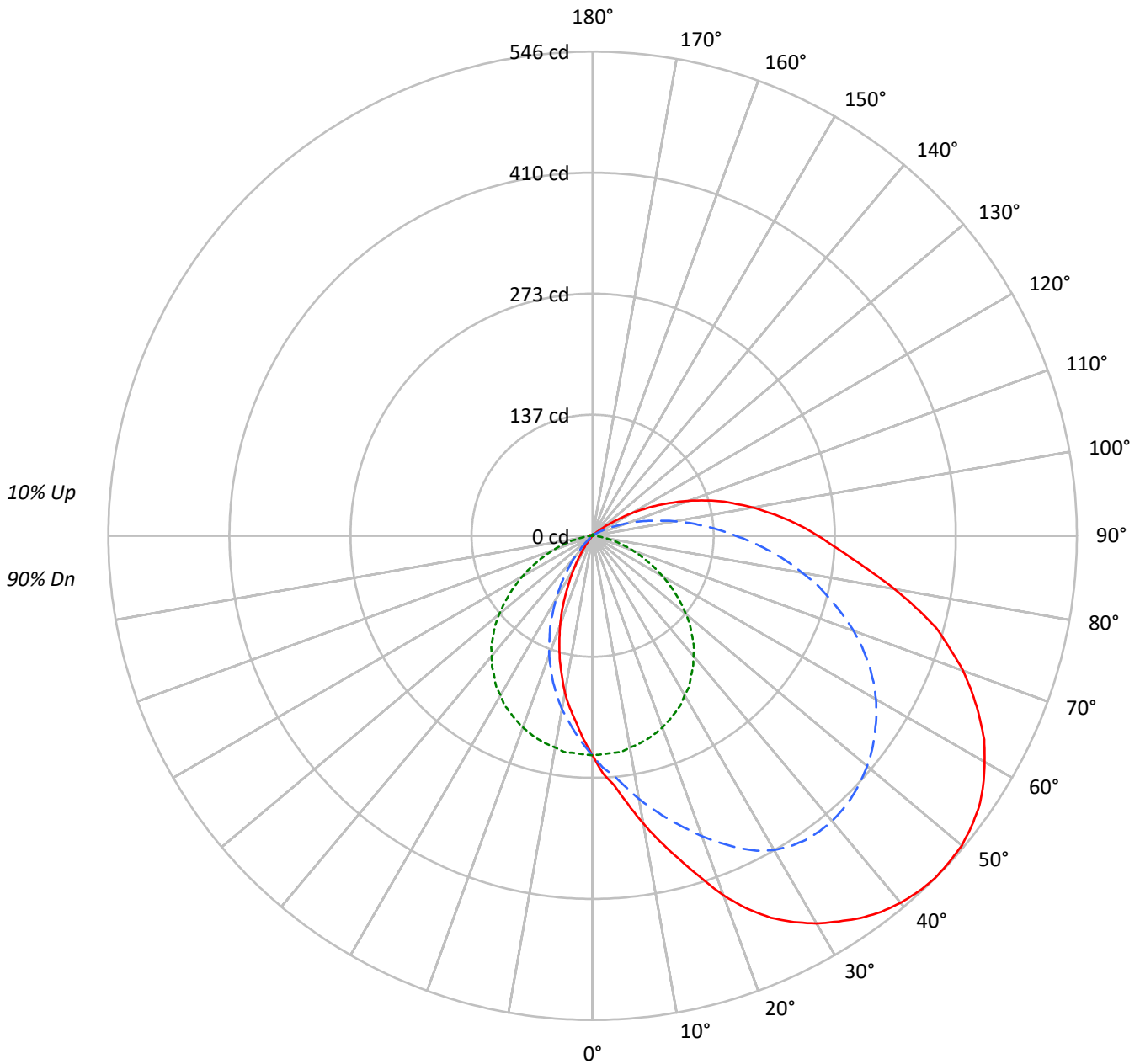
Lumens per Lamp: N/A  
Luminaire Lumens: 1224.0 lumens  
Efficiency: N/A  
Efficacy: 73.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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: P551097

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551097

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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°	2665	2665	2665
5°	2926	2626	2191
10°	3311	2593	1806
15°	3710	2561	1407
20°	4185	2519	1036
25°	4578	2470	680
30°	4870	2405	383
35°	5123	2336	168
40°	5348	2250	41
45°	5541	2142	0
50°	5702	2000	0
55°	5826	1818	0
60°	5887	1607	0
65°	5912	1368	0
70°	5892	1115	0
75°	5817	822	4
80°	5582	504	26
85°	5394	239	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.7	1.9
10°-20°	71.0	5.8
20°-30°	115.0	9.4
30°-40°	147.7	12.1
40°-50°	167.2	13.7
50°-60°	173.2	14.2
60°-70°	163.4	13.3
70°-80°	136.9	11.2
80°-90°	99.2	8.1
90°-100°	65.2	5.3
100°-110°	37.7	3.1
110°-120°	16.6	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°	209.7	17.1
0°-40°	357.4	29.2
0°-60°	697.9	57.0
0°-90°	1097.4	89.7
90°-120°	119.5	9.8
90°-150°	125.7	10.3
90°-180°	127.0	10.4
0°-180°	1224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	248	248	248	248	248	
5°	283	271	246	223	212	28
15°	378	331	238	172	143	109
25°	475	388	220	113	71	220
35°	526	419	193	55	17	330
45°	546	415	158	13	0	422
55°	532	388	114	0	0	475
65°	481	344	68	0	0	476
75°	401	277	29	0	0	420
85°	293	201	5	1	2	250
90°	254	161	1	2	2	139
95°	218	126	1	2	3	171
105°	150	65	1	2	2	158
115°	82	22	1	1	2	82
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°	247.6	247.6	247.6	247.6	247.6	247.6	247.6	247.6	247.6	247.6	247.6
2.5°	268.4	268.1	267.1	265.6	263.4	259.6	256.4	253.6	249.8	246.6	240.6
5°	282.6	281.0	279.8	278.2	273.1	269.7	264.0	257.7	251.7	245.7	233.7
7.5°	305.3	302.8	300.9	296.5	289.5	281.6	272.8	266.8	262.7	246.0	225.5
10°	329.6	327.4	323.6	315.7	307.2	295.8	283.2	269.0	256.4	242.5	218.3
12.5°	353.6	350.4	345.0	335.0	323.0	308.8	291.4	274.7	256.7	240.3	209.7
15°	377.5	374.1	368.4	356.1	340.3	321.7	300.6	279.4	258.3	237.5	200.9
17.5°	403.7	399.0	390.5	376.6	356.7	333.7	308.8	283.2	257.7	234.0	191.4
20°	431.8	425.2	416.0	397.4	374.1	346.9	317.0	287.0	257.4	229.9	180.7
22.5°	455.1	448.5	438.4	419.2	391.1	358.0	323.9	289.5	256.1	225.2	170.6
25°	475.3	469.9	458.9	436.8	407.2	369.6	330.5	291.4	254.2	220.1	159.9
27.5°	491.1	486.0	473.7	451.0	420.7	380.1	335.6	292.4	251.7	215.1	148.9
30°	504.9	499.9	485.1	461.7	429.9	388.3	340.6	292.7	248.5	207.5	136.9
32.5°	515.7	510.9	495.8	470.9	436.2	393.9	343.5	292.4	244.4	202.2	124.0
35°	526.4	521.7	504.0	477.5	440.9	396.5	345.7	290.8	239.4	193.3	111.7
37.5°	534.6	529.2	511.3	481.9	443.1	397.1	345.4	288.6	234.0	186.1	99.3
40°	540.3	534.6	515.4	484.4	443.8	396.1	342.8	284.8	227.7	176.9	86.4
42.5°	544.1	537.8	517.2	488.2	442.5	393.6	339.1	280.1	220.8	169.1	74.1
45°	546.0	539.3	517.6	485.1	440.3	388.9	333.4	274.1	213.2	158.3	61.8
47.5°	545.0	537.8	516.0	481.6	436.2	383.8	327.1	266.8	204.1	148.9	50.1
50°	543.4	535.9	512.5	477.2	430.5	377.5	320.1	258.0	194.6	137.2	39.7
52.5°	538.4	530.8	508.7	470.9	423.9	370.3	310.7	248.8	184.5	125.8	30.3
55°	532.1	525.1	502.1	465.2	415.4	361.4	301.8	239.1	174.7	114.2	21.8
57.5°	522.3	516.0	493.9	456.1	406.9	351.7	292.1	228.3	162.4	102.5	15.1
60°	510.3	504.0	482.6	445.7	397.1	340.6	281.3	217.3	151.4	90.8	9.5
62.5°	497.7	491.7	469.3	432.7	384.8	329.0	269.7	206.3	139.7	80.1	5.7
65°	481.0	475.3	455.1	417.3	371.2	316.3	256.7	193.0	127.7	68.1	3.2
67.5°	463.3	458.3	437.8	403.1	355.5	302.5	243.5	180.1	115.1	57.7	1.6
70°	444.4	438.1	419.2	383.8	339.4	286.7	229.0	166.8	103.1	47.6	0.0
72.5°	422.3	417.6	399.3	365.9	320.8	270.0	214.2	152.3	89.9	37.8	0.3
75°	400.9	394.9	378.2	346.6	302.5	252.3	197.8	138.8	77.0	29.0	0.3
77.5°	373.1	371.2	355.5	324.9	285.1	235.3	179.8	122.4	64.7	20.8	0.3
80°	345.4	343.5	331.2	303.1	264.9	215.1	163.1	106.9	52.7	13.9	0.3
82.5°	317.9	315.4	303.7	280.4	244.4	198.1	145.7	91.5	41.6	8.5	0.3
85°	293.3	290.2	277.5	256.1	223.3	178.8	127.7	76.3	30.9	4.7	0.6
87.5°	272.2	270.0	256.1	234.0	201.9	160.9	112.0	61.8	21.8	2.2	0.9
90°	254.2	249.5	237.2	213.8	181.7	141.0	95.2	49.5	14.5	1.3	1.3
92.5°	236.5	232.4	218.9	194.9	163.7	124.0	79.2	37.8	9.1	0.6	1.6
95°	218.3	213.8	200.6	178.5	145.4	106.6	65.0	27.8	5.0	0.6	1.6
97.5°	200.3	196.2	182.3	160.2	129.0	91.5	51.4	19.6	2.5	0.6	1.3
100°	183.6	178.8	166.2	144.1	112.6	76.3	39.7	12.6	1.6	0.6	1.3
102.5°	165.9	162.1	149.2	127.7	95.6	62.1	29.6	7.9	0.6	0.6	0.9
105°	150.1	145.4	132.8	110.7	81.4	48.9	20.8	4.7	0.6	0.6	0.9



TEST NUMBER: P551097

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	97.8	94.0	82.9	64.3	41.3	19.2	5.7	0.9	0.9	0.9	0.9
115°	81.7	76.0	66.2	49.8	30.6	12.6	2.8	0.9	0.9	0.9	0.9
117.5°	65.3	60.6	53.6	37.8	20.2	8.2	1.6	0.9	0.9	0.9	0.9
120°	51.1	46.7	38.8	26.2	13.6	4.7	0.6	0.9	0.9	0.9	0.9
122.5°	36.6	33.1	26.2	17.0	8.2	2.2	0.9	0.9	1.3	1.3	0.9
125°	24.3	22.4	17.3	10.4	5.0	0.9	0.9	0.9	1.3	1.3	0.9
127.5°	15.8	14.2	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	3.2	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°	247.6	247.6	247.6
2.5°	235.6	231.2	229.9
5°	223.0	215.7	211.6
7.5°	210.4	200.6	195.9
10°	198.7	184.8	179.8
12.5°	184.8	168.7	160.9
15°	171.6	150.8	143.2
17.5°	156.8	133.4	124.6
20°	142.9	116.1	106.9
22.5°	127.1	99.0	88.9
25°	112.9	82.0	70.6
27.5°	97.1	64.7	54.9
30°	82.3	49.5	39.7
32.5°	68.1	36.3	27.4
35°	54.9	24.6	17.3
37.5°	42.3	15.1	8.8
40°	30.6	7.9	4.1
42.5°	20.5	3.8	2.2
45°	12.6	1.9	0.0
47.5°	7.3	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	3.2
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°	132.5	128.7	116.1	95.2	66.5	37.2	13.9	2.5	0.6	0.9	0.9
110°	115.4	112.3	99.3	79.2	53.6	27.8	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)