

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: P551091

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-96-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: P551091  
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-81-96-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

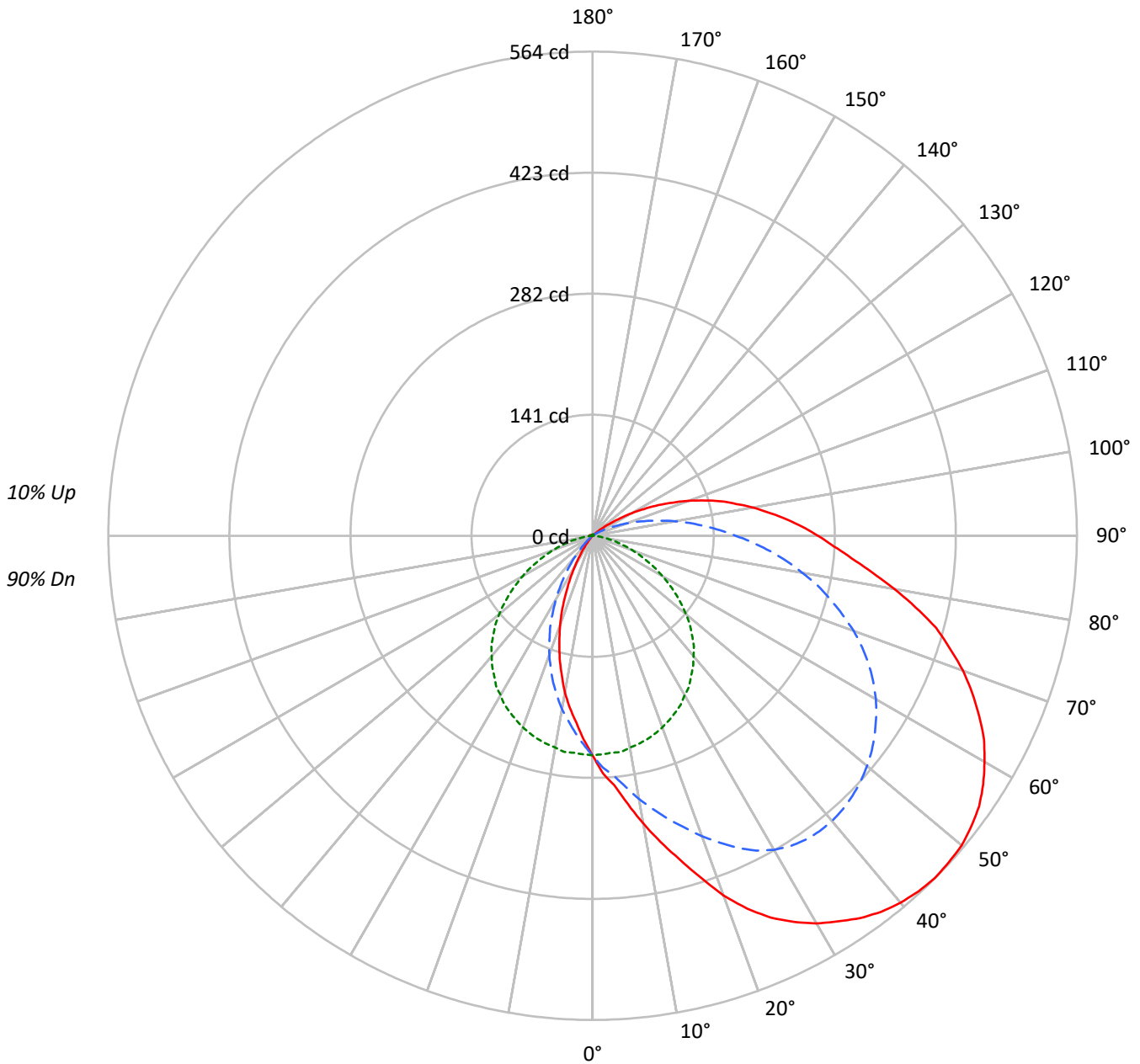
Lumens per Lamp: N/A  
Luminaire Lumens: 1264.1 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551091

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-96-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°	2752	2752	2752
5°	3021	2712	2262
10°	3419	2679	1865
15°	3832	2645	1453
20°	4321	2601	1070
25°	4727	2551	703
30°	5030	2484	395
35°	5291	2413	174
40°	5522	2323	42
45°	5722	2212	0
50°	5889	2065	0
55°	6016	1877	0
60°	6080	1660	0
65°	6105	1414	0
70°	6084	1153	0
75°	6008	851	4
80°	5763	519	26
85°	5571	249	37



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.5	1.9
10°-20°	73.3	5.8
20°-30°	118.7	9.4
30°-40°	152.5	12.1
40°-50°	172.7	13.7
50°-60°	178.9	14.2
60°-70°	168.7	13.3
70°-80°	141.4	11.2
80°-90°	102.5	8.1
90°-100°	67.4	5.3
100°-110°	38.9	3.1
110°-120°	17.2	1.4
120°-130°	4.7	0.4
130°-140°	1.1	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°	216.6	17.1
0°-40°	369.1	29.2
0°-60°	720.7	57.0
0°-90°	1133.3	89.7
90°-120°	123.4	9.8
90°-150°	129.9	10.3
90°-180°	131.0	10.4
0°-180°	1264.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	256	256	256	256	256	
5°	292	280	254	230	218	29
15°	390	342	245	177	148	112
25°	491	401	227	117	73	227
35°	544	432	200	57	18	341
45°	564	428	164	13	0	435
55°	550	401	118	0	0	491
65°	497	355	70	0	0	491
75°	414	286	30	0	0	434
85°	303	208	5	1	2	259
90°	262	167	1	2	2	144
95°	225	130	1	2	3	177
105°	155	67	1	2	3	164
115°	84	22	1	1	2	84
125°	25	3	1	1	1	25
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°	255.7	255.7	255.7	255.7	255.7	255.7	255.7	255.7	255.7	255.7	255.7
2.5°	277.2	276.8	275.9	274.2	272.0	268.1	264.8	261.9	258.0	254.7	248.5
5°	291.8	290.2	288.9	287.3	282.1	278.5	272.6	266.1	259.9	253.7	241.3
7.5°	315.3	312.7	310.7	306.2	299.0	290.9	281.7	275.5	271.3	254.0	232.9
10°	340.4	338.1	334.2	326.0	317.2	305.5	292.5	277.8	264.8	250.5	225.4
12.5°	365.1	361.9	356.3	345.9	333.5	318.9	300.9	283.7	265.1	248.2	216.6
15°	389.9	386.3	380.4	367.7	351.4	332.2	310.4	288.6	266.8	245.3	207.5
17.5°	416.9	412.0	403.2	388.9	368.4	344.6	318.9	292.5	266.1	241.7	197.7
20°	445.9	439.0	429.6	410.4	386.3	358.3	327.3	296.4	265.8	237.4	186.6
22.5°	470.0	463.1	452.7	432.9	403.9	369.7	334.5	299.0	264.5	232.6	176.2
25°	490.8	485.3	473.9	451.1	420.5	381.7	341.3	300.9	262.5	227.3	165.1
27.5°	507.1	501.9	489.2	465.8	434.5	392.5	346.5	301.9	259.9	222.1	153.7
30°	521.5	516.2	500.9	476.8	443.9	400.9	351.8	302.3	256.7	214.3	141.4
32.5°	532.5	527.6	512.0	486.3	450.4	406.8	354.7	301.9	252.4	208.8	128.0
35°	543.6	538.7	520.5	493.1	455.3	409.4	357.0	300.3	247.2	199.7	115.3
37.5°	552.1	546.5	528.0	497.7	457.6	410.1	356.6	298.0	241.7	192.2	102.6
40°	557.9	552.1	532.2	500.3	458.3	409.1	354.0	294.1	235.2	182.7	89.2
42.5°	561.8	555.3	534.2	504.2	457.0	406.5	350.1	289.2	228.0	174.6	76.5
45°	563.8	557.0	534.5	500.9	454.7	401.6	344.3	283.0	220.2	163.5	63.8
47.5°	562.8	555.3	532.9	497.3	450.4	396.4	337.8	275.5	210.7	153.7	51.8
50°	561.2	553.4	529.3	492.8	444.6	389.9	330.6	266.4	201.0	141.7	41.0
52.5°	556.0	548.2	525.4	486.3	437.7	382.4	320.8	257.0	190.5	130.0	31.3
55°	549.5	542.3	518.5	480.4	429.0	373.3	311.7	246.9	180.4	117.9	22.5
57.5°	539.4	532.9	510.1	471.0	420.2	363.2	301.6	235.8	167.7	105.9	15.6
60°	527.0	520.5	498.3	460.2	410.1	351.8	290.5	224.4	156.3	93.8	9.8
62.5°	514.0	507.8	484.6	446.9	397.4	339.7	278.5	213.0	144.3	82.7	5.9
65°	496.7	490.8	470.0	430.9	383.4	326.7	265.1	199.3	131.9	70.4	3.3
67.5°	478.5	473.2	452.1	416.2	367.1	312.3	251.4	186.0	118.9	59.6	1.6
70°	458.9	452.4	432.9	396.4	350.5	296.1	236.5	172.3	106.5	49.2	0.0
72.5°	436.1	431.2	412.3	377.8	331.2	278.8	221.2	157.3	92.8	39.1	0.3
75°	414.0	407.8	390.5	357.9	312.3	260.6	204.2	143.3	79.5	30.0	0.3
77.5°	385.3	383.4	367.1	335.5	294.4	243.0	185.7	126.4	66.8	21.5	0.3
80°	356.6	354.7	342.0	313.0	273.6	222.1	168.4	110.4	54.4	14.3	0.3
82.5°	328.3	325.7	313.7	289.5	252.4	204.5	150.5	94.5	43.0	8.8	0.3
85°	302.9	299.6	286.6	264.5	230.6	184.7	131.9	78.8	31.9	4.9	0.7
87.5°	281.1	278.8	264.5	241.7	208.4	166.1	115.6	63.8	22.5	2.3	1.0
90°	262.5	257.6	244.9	220.8	187.6	145.6	98.4	51.1	15.0	1.3	1.3
92.5°	244.3	240.0	226.0	201.3	169.0	128.0	81.8	39.1	9.4	0.7	1.6
95°	225.4	220.8	207.1	184.3	150.1	110.1	67.1	28.7	5.2	0.7	1.6
97.5°	206.8	202.6	188.3	165.5	133.2	94.5	53.1	20.2	2.6	0.7	1.3
100°	189.6	184.7	171.6	148.8	116.3	78.8	41.0	13.0	1.6	0.7	1.3
102.5°	171.3	167.4	154.1	131.9	98.7	64.2	30.6	8.1	0.7	0.7	1.0
105°	155.0	150.1	137.1	114.3	84.0	50.5	21.5	4.9	0.7	0.7	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	101.0	97.1	85.7	66.4	42.7	19.9	5.9	1.0	1.0	1.0	1.0
115°	84.4	78.5	68.4	51.5	31.6	13.0	2.9	1.0	1.0	1.0	1.0
117.5°	67.4	62.5	55.4	39.1	20.8	8.5	1.6	1.0	1.0	1.0	1.0
120°	52.8	48.2	40.1	27.0	14.0	4.9	0.7	1.0	1.0	1.0	1.0
122.5°	37.8	34.2	27.0	17.6	8.5	2.3	1.0	1.0	1.3	1.3	1.0
125°	25.1	23.1	17.9	10.7	5.2	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.3	14.7	10.4	6.2	2.3	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.1	8.1	6.2	3.6	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.2	4.9	3.3	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	255.7	255.7	255.7
2.5°	243.3	238.7	237.4
5°	230.3	222.8	218.5
7.5°	217.2	207.1	202.3
10°	205.2	190.9	185.7
12.5°	190.9	174.3	166.1
15°	177.2	155.7	147.9
17.5°	161.9	137.8	128.7
20°	147.5	119.9	110.4
22.5°	131.3	102.3	91.8
25°	116.6	84.7	73.0
27.5°	100.3	66.8	56.7
30°	85.0	51.1	41.0
32.5°	70.4	37.5	28.3
35°	56.7	25.4	17.9
37.5°	43.6	15.6	9.1
40°	31.6	8.1	4.2
42.5°	21.2	3.9	2.3
45°	13.0	2.0	0.0
47.5°	7.5	0.0	0.0
50°	3.9	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	0.7	1.0
80°	0.7	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	2.0
87.5°	1.6	2.0	2.3
90°	2.0	2.3	2.3
92.5°	2.0	2.6	2.6
95°	2.3	2.6	2.9
97.5°	2.6	2.9	2.9
100°	2.3	2.9	3.3
102.5°	2.0	2.9	2.9
105°	1.6	2.3	2.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.3	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	136.8	132.9	119.9	98.4	68.7	38.4	14.3	2.6	0.7	1.0	1.0
110°	119.2	116.0	102.6	81.8	55.4	28.7	9.4	1.6	1.0	1.0	1.0







107.5°	1.3	2.0	2.3
110°	1.3	1.6	2.0



(END OF REPORT)