

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: P551159

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-82-84-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: P551159  
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-50-UNV-82-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

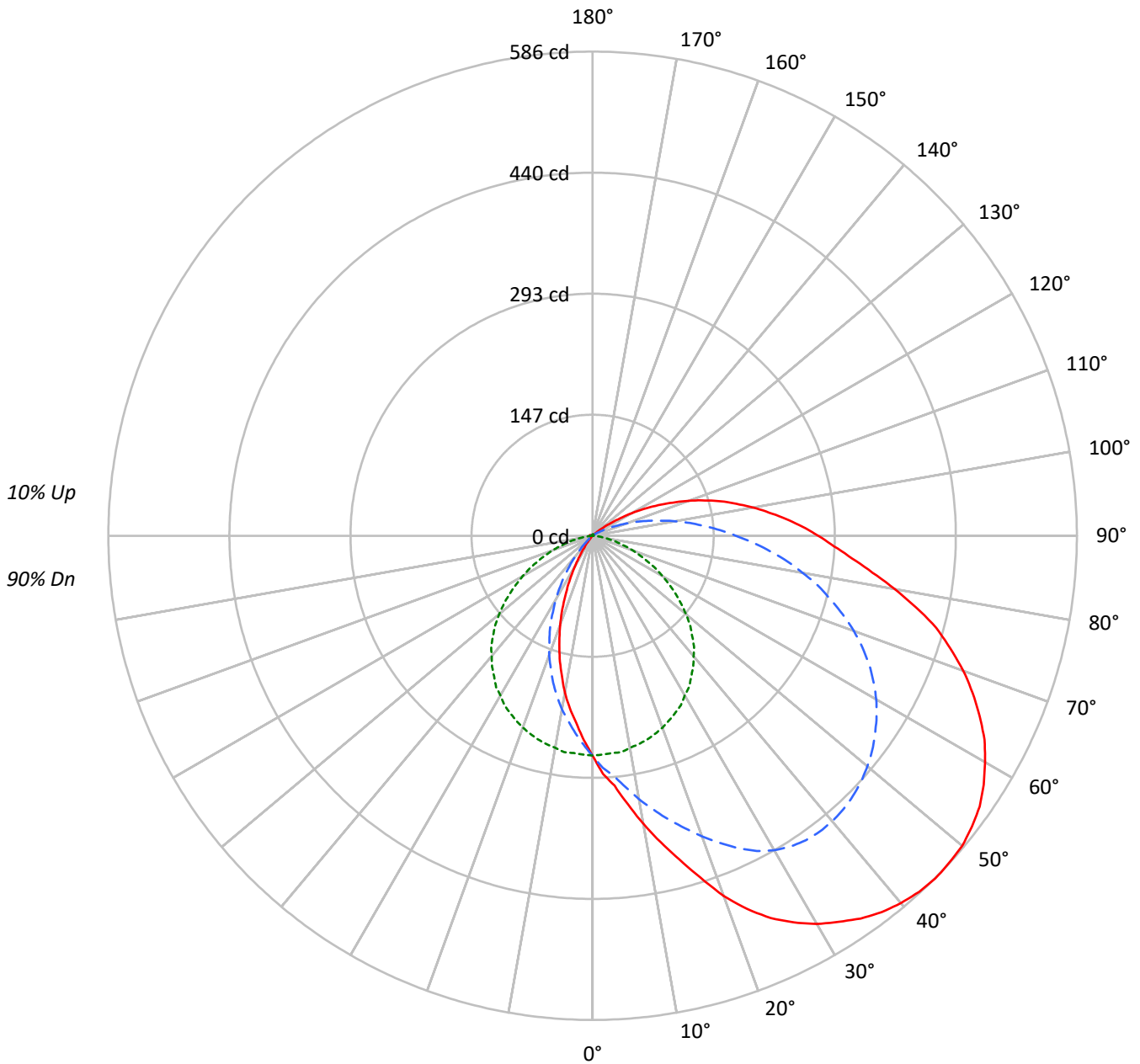
Lumens per Lamp: N/A  
Luminaire Lumens: 1315.0 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (Ain): 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									
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°	2863	2863	2863
5°	3143	2822	2354
10°	3557	2787	1940
15°	3986	2751	1511
20°	4496	2706	1114
25°	4918	2654	731
30°	5232	2585	412
35°	5504	2510	181
40°	5745	2418	44
45°	5952	2302	0
50°	6126	2148	0
55°	6258	1954	0
60°	6326	1727	0
65°	6351	1470	0
70°	6329	1199	0
75°	6250	885	4
80°	5996	540	27
85°	5795	259	37



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	1.9
10°-20°	76.3	5.8
20°-30°	123.5	9.4
30°-40°	158.7	12.1
40°-50°	179.6	13.7
50°-60°	186.1	14.2
60°-70°	175.5	13.3
70°-80°	147.1	11.2
80°-90°	106.6	8.1
90°-100°	70.1	5.3
100°-110°	40.5	3.1
110°-120°	17.9	1.4
120°-130°	4.8	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°	225.3	17.1
0°-40°	384.0	29.2
0°-60°	749.8	57.0
0°-90°	1179.0	89.7
90°-120°	128.4	9.8
90°-150°	135.1	10.3
90°-180°	136.0	10.3
0°-180°	1315.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	266	266	266	266	266	
5°	304	292	264	240	227	31
15°	406	356	255	184	154	117
25°	511	417	236	121	76	236
35°	566	450	208	59	19	355
45°	586	445	170	14	0	453
55°	572	417	123	0	0	510
65°	517	369	73	0	0	511
75°	431	298	31	0	0	452
85°	315	216	5	1	2	269
90°	273	173	1	2	2	150
95°	234	135	1	2	3	184
105°	161	70	1	2	3	170
115°	88	23	1	1	2	88
125°	26	3	1	1	1	26
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°	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0	266.0
2.5°	288.4	288.0	287.0	285.3	282.9	278.9	275.5	272.4	268.4	265.0	258.5
5°	303.6	301.9	300.6	298.9	293.4	289.7	283.6	276.8	270.4	264.0	251.1
7.5°	328.0	325.3	323.3	318.5	311.1	302.6	293.1	286.7	282.3	264.3	242.3
10°	354.1	351.7	347.7	339.2	330.0	317.8	304.3	289.0	275.5	260.6	234.5
12.5°	379.8	376.5	370.7	359.9	347.0	331.7	313.1	295.1	275.8	258.2	225.3
15°	405.6	401.9	395.8	382.6	365.6	345.6	322.9	300.2	277.5	255.1	215.8
17.5°	433.7	428.6	419.5	404.6	383.2	358.5	331.7	304.3	276.8	251.4	205.7
20°	463.9	456.8	446.9	426.9	401.9	372.7	340.5	308.3	276.5	247.0	194.2
22.5°	489.0	481.8	471.0	450.3	420.2	384.6	348.0	311.1	275.1	241.9	183.3
25°	510.6	504.9	493.0	469.3	437.4	397.1	355.1	313.1	273.1	236.5	171.8
27.5°	527.6	522.2	508.9	484.5	452.0	408.3	360.5	314.1	270.4	231.1	159.9
30°	542.5	537.1	521.1	496.1	461.8	417.1	366.0	314.4	267.0	223.0	147.1
32.5°	554.0	548.9	532.7	505.9	468.6	423.2	369.0	314.1	262.6	217.2	133.2
35°	565.5	560.4	541.5	513.0	473.7	425.9	371.4	312.4	257.2	207.7	120.0
37.5°	574.3	568.6	549.3	517.8	476.1	426.6	371.0	310.0	251.4	199.9	106.7
40°	580.4	574.3	553.7	520.5	476.8	425.6	368.3	306.0	244.6	190.1	92.8
42.5°	584.5	577.7	555.7	524.5	475.4	422.9	364.3	300.9	237.2	181.6	79.6
45°	586.5	579.4	556.0	521.1	473.0	417.8	358.2	294.5	229.1	170.1	66.4
47.5°	585.5	577.7	554.3	517.4	468.6	412.4	351.4	286.7	219.2	159.9	53.9
50°	583.8	575.7	550.6	512.7	462.5	405.6	343.9	277.2	209.1	147.4	42.7
52.5°	578.4	570.3	546.6	505.9	455.4	397.8	333.8	267.3	198.2	135.2	32.5
55°	571.6	564.2	539.4	499.8	446.3	388.3	324.3	256.8	187.7	122.7	23.4
57.5°	561.1	554.3	530.6	490.0	437.1	377.8	313.8	245.3	174.5	110.1	16.3
60°	548.3	541.5	518.4	478.8	426.6	366.0	302.2	233.5	162.6	97.6	10.2
62.5°	534.7	528.3	504.2	464.9	413.4	353.4	289.7	221.6	150.1	86.1	6.1
65°	516.7	510.6	489.0	448.3	398.8	339.9	275.8	207.4	137.2	73.2	3.4
67.5°	497.8	492.3	470.3	433.0	381.9	325.0	261.6	193.5	123.7	62.0	1.7
70°	477.4	470.7	450.3	412.4	364.6	308.0	246.0	179.2	110.8	51.2	0.0
72.5°	453.7	448.6	429.0	393.1	344.6	290.1	230.1	163.7	96.6	40.7	0.3
75°	430.7	424.2	406.3	372.4	325.0	271.1	212.5	149.1	82.7	31.2	0.3
77.5°	400.9	398.8	381.9	349.0	306.3	252.8	193.1	131.5	69.5	22.4	0.3
80°	371.0	369.0	355.8	325.6	284.6	231.1	175.2	114.9	56.6	14.9	0.3
82.5°	341.6	338.8	326.3	301.2	262.6	212.8	156.5	98.3	44.7	9.1	0.3
85°	315.1	311.7	298.2	275.1	239.9	192.1	137.2	82.0	33.2	5.1	0.7
87.5°	292.4	290.1	275.1	251.4	216.9	172.8	120.3	66.4	23.4	2.4	1.0
90°	273.1	268.0	254.8	229.7	195.2	151.5	102.3	53.2	15.6	1.4	1.4
92.5°	254.1	249.7	235.2	209.4	175.9	133.2	85.0	40.7	9.8	0.7	1.7
95°	234.5	229.7	215.5	191.8	156.2	114.5	69.8	29.8	5.4	0.7	1.7
97.5°	215.2	210.8	195.9	172.1	138.6	98.3	55.2	21.0	2.7	0.7	1.4
100°	197.2	192.1	178.6	154.9	121.0	82.0	42.7	13.6	1.7	0.7	1.4
102.5°	178.2	174.2	160.3	137.2	102.7	66.8	31.9	8.5	0.7	0.7	1.0
105°	161.3	156.2	142.7	118.9	87.4	52.5	22.4	5.1	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°	105.0	101.0	89.1	69.1	44.4	20.7	6.1	1.0	1.0	1.0	1.0
115°	87.8	81.7	71.2	53.5	32.9	13.6	3.0	1.0	1.0	1.0	1.0
117.5°	70.1	65.1	57.6	40.7	21.7	8.8	1.7	1.0	1.0	1.0	1.0
120°	54.9	50.1	41.7	28.1	14.6	5.1	0.7	1.0	1.0	1.0	1.0
122.5°	39.3	35.6	28.1	18.3	8.8	2.4	1.0	1.0	1.4	1.4	1.0
125°	26.1	24.1	18.6	11.2	5.4	1.0	1.0	1.0	1.4	1.4	1.0
127.5°	16.9	15.2	10.8	6.4	2.4	1.0	1.0	1.4	1.4	1.4	1.0
130°	9.5	8.5	6.4	3.7	1.0	1.0	1.0	1.4	1.4	1.4	1.0
132.5°	5.4	5.1	3.4	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.4	1.7	1.7	1.7	1.4
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.4
142.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
145°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
150°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
152.5°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
157.5°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
160°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.7
172.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
175°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
177.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.4
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°	266.0	266.0	266.0
2.5°	253.1	248.4	247.0
5°	239.6	231.8	227.4
7.5°	226.0	215.5	210.4
10°	213.5	198.6	193.1
12.5°	198.6	181.3	172.8
15°	184.3	162.0	153.8
17.5°	168.4	143.3	133.8
20°	153.5	124.7	114.9
22.5°	136.6	106.4	95.6
25°	121.3	88.1	75.9
27.5°	104.4	69.5	59.0
30°	88.4	53.2	42.7
32.5°	73.2	39.0	29.5
35°	59.0	26.4	18.6
37.5°	45.4	16.3	9.5
40°	32.9	8.5	4.4
42.5°	22.0	4.1	2.4
45°	13.6	2.0	0.0
47.5°	7.8	0.0	0.0
50°	4.1	0.0	0.0
52.5°	1.7	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	1.4	1.7
82.5°	1.4	1.7	1.7
85°	1.4	1.7	2.0
87.5°	1.7	2.0	2.4
90°	2.0	2.4	2.4
92.5°	2.0	2.7	2.7
95°	2.4	2.7	3.0
97.5°	2.7	3.0	3.0
100°	2.4	3.0	3.4
102.5°	2.0	3.0	3.0
105°	1.7	2.4	2.7





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.4	1.7	1.7
115°	1.0	1.4	1.7
117.5°	1.0	1.4	1.4
120°	1.0	1.0	1.4
122.5°	1.0	1.0	1.4
125°	1.0	1.0	1.4
127.5°	1.4	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.4	1.0	1.0
135°	1.4	1.0	1.0
137.5°	1.4	1.0	1.0
140°	1.4	1.0	1.0
142.5°	1.4	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°	1.4	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°	142.3	138.2	124.7	102.3	71.5	40.0	14.9	2.7	0.7	1.0	1.0
110°	124.0	120.6	106.7	85.0	57.6	29.8	9.8	1.7	1.0	1.0	1.0







107.5°	1.4	2.0	2.4
110°	1.4	1.7	2.0



(END OF REPORT)