

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: P550567

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-81-84-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: P550567  
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-LD4-1HI-40-UNV-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

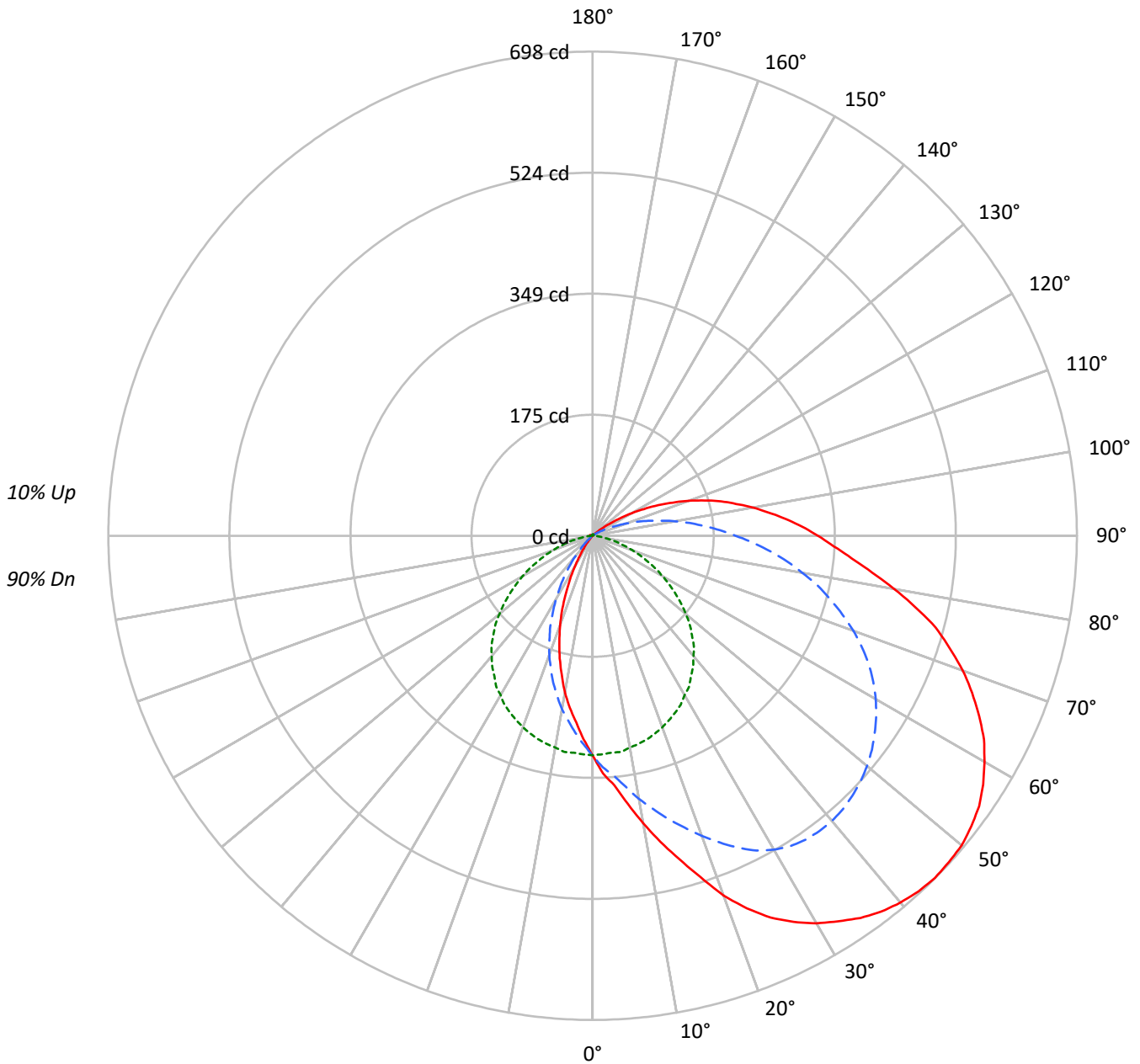
Lumens per Lamp: N/A  
Luminaire Lumens: 1563.9 lumens  
Efficiency: N/A  
Efficacy: 72.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
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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CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-81-84-ED1D-90

### 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°	3406	3406	3406
5°	3738	3355	2799
10°	4230	3314	2307
15°	4741	3272	1798
20°	5347	3219	1324
25°	5849	3157	870
30°	6223	3074	490
35°	6546	2984	216
40°	6833	2875	51
45°	7079	2737	0
50°	7286	2555	0
55°	7444	2323	0
60°	7523	2055	0
65°	7554	1747	0
70°	7528	1427	0
75°	7432	1052	6
80°	7132	642	32
85°	6893	305	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.3	1.9
10°-20°	90.7	5.8
20°-30°	146.9	9.4
30°-40°	188.7	12.1
40°-50°	213.7	13.7
50°-60°	221.4	14.2
60°-70°	208.8	13.3
70°-80°	175.0	11.2
80°-90°	126.8	8.1
90°-100°	83.3	5.3
100°-110°	48.1	3.1
110°-120°	21.2	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	268.0	17.1
0°-40°	456.7	29.2
0°-60°	891.7	57.0
0°-90°	1402.3	89.7
90°-120°	152.7	9.8
90°-150°	160.6	10.3
90°-180°	162.0	10.4
0°-180°	1563.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	316	316	316	316	316	
5°	361	347	314	285	270	36
15°	482	423	304	219	183	139
25°	607	496	281	144	90	281
35°	673	535	247	70	22	422
45°	698	530	202	16	0	539
55°	680	496	146	0	0	607
65°	615	439	87	0	0	608
75°	512	354	37	0	0	537
85°	375	257	6	2	2	320
90°	325	206	2	2	3	178
95°	279	161	1	3	4	219
105°	192	83	1	2	3	202
115°	104	28	1	1	2	105
125°	31	4	2	1	2	31
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	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°	316.4	316.4	316.4	316.4	316.4	316.4	316.4	316.4	316.4	316.4	316.4
2.5°	343.0	342.6	341.3	339.3	336.5	331.7	327.6	324.0	319.2	315.2	307.5
5°	361.1	359.1	357.5	355.5	349.0	344.6	337.3	329.3	321.6	313.9	298.6
7.5°	390.1	386.9	384.5	378.8	370.0	359.9	348.6	340.9	335.7	314.3	288.1
10°	421.1	418.3	413.5	403.4	392.5	378.0	361.9	343.8	327.6	309.9	278.9
12.5°	451.8	447.7	440.9	428.0	412.7	394.5	372.4	351.0	328.0	307.1	268.0
15°	482.4	478.0	470.7	455.0	434.8	411.1	384.1	357.1	330.1	303.5	256.7
17.5°	515.8	509.8	498.9	481.2	455.8	426.4	394.5	361.9	329.3	299.0	244.6
20°	551.7	543.3	531.6	507.8	478.0	443.3	405.0	366.7	328.9	293.8	230.9
22.5°	581.5	573.1	560.2	535.6	499.7	457.4	413.9	370.0	327.2	287.7	218.0
25°	607.3	600.5	586.4	558.2	520.3	472.3	422.4	372.4	324.8	281.3	204.3
27.5°	627.5	621.0	605.3	576.3	537.6	485.6	428.8	373.6	321.6	274.9	190.2
30°	645.2	638.8	619.8	590.0	549.3	496.1	435.2	374.0	317.6	265.2	174.9
32.5°	658.9	652.9	633.5	601.7	557.4	503.4	438.9	373.6	312.3	258.3	158.4
35°	672.6	666.6	644.0	610.2	563.4	506.6	441.7	371.6	305.9	247.0	142.7
37.5°	683.1	676.2	653.3	615.8	566.2	507.4	441.3	368.8	299.0	237.8	126.9
40°	690.3	683.1	658.5	619.0	567.0	506.2	438.1	363.9	291.0	226.1	110.4
42.5°	695.2	687.1	660.9	623.9	565.4	503.0	433.2	357.9	282.1	216.0	94.7
45°	697.6	689.1	661.3	619.8	562.6	496.9	426.0	350.2	272.4	202.3	79.0
47.5°	696.4	687.1	659.3	615.4	557.4	490.5	417.9	340.9	260.7	190.2	64.1
50°	694.4	684.7	654.9	609.7	550.1	482.4	409.1	329.7	248.7	175.3	50.8
52.5°	687.9	678.3	650.0	601.7	541.6	473.1	397.0	318.0	235.8	160.8	38.7
55°	679.9	671.0	641.6	594.4	530.8	461.8	385.7	305.5	223.3	145.9	27.8
57.5°	667.4	659.3	631.1	582.7	519.9	449.4	373.2	291.8	207.5	131.0	19.3
60°	652.1	644.0	616.6	569.4	507.4	435.2	359.5	277.7	193.4	116.1	12.1
62.5°	635.9	628.3	599.7	552.9	491.7	420.3	344.6	263.6	178.5	102.4	7.3
65°	614.6	607.3	581.5	533.2	474.3	404.2	328.0	246.6	163.2	87.0	4.0
67.5°	592.0	585.6	559.4	515.0	454.2	386.5	311.1	230.1	147.1	73.8	2.0
70°	567.8	559.8	535.6	490.5	433.6	366.3	292.6	213.2	131.8	60.9	0.0
72.5°	539.6	533.6	510.2	467.5	409.9	345.0	273.6	194.7	114.9	48.4	0.4
75°	512.2	504.6	483.2	442.9	386.5	322.4	252.7	177.3	98.3	37.1	0.4
77.5°	476.8	474.3	454.2	415.1	364.3	300.6	229.7	156.4	82.6	26.6	0.4
80°	441.3	438.9	423.2	387.3	338.5	274.9	208.4	136.6	67.3	17.7	0.4
82.5°	406.2	403.0	388.1	358.3	312.3	253.1	186.2	116.9	53.2	10.9	0.4
85°	374.8	370.8	354.6	327.2	285.3	228.5	163.2	97.5	39.5	6.0	0.8
87.5°	347.8	345.0	327.2	299.0	257.9	205.5	143.1	79.0	27.8	2.8	1.2
90°	324.8	318.8	303.1	273.2	232.1	180.1	121.7	63.3	18.5	1.6	1.6
92.5°	302.3	297.0	279.7	249.1	209.2	158.4	101.2	48.4	11.7	0.8	2.0
95°	278.9	273.2	256.3	228.1	185.8	136.2	83.0	35.5	6.4	0.8	2.0
97.5°	255.9	250.7	232.9	204.7	164.8	116.9	65.7	25.0	3.2	0.8	1.6
100°	234.5	228.5	212.4	184.2	143.9	97.5	50.8	16.1	2.0	0.8	1.6
102.5°	212.0	207.1	190.6	163.2	122.1	79.4	37.9	10.1	0.8	0.8	1.2
105°	191.8	185.8	169.7	141.5	104.0	62.5	26.6	6.0	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	124.9	120.1	106.0	82.2	52.8	24.6	7.3	1.2	1.2	1.2	1.2
115°	104.4	97.1	84.6	63.7	39.1	16.1	3.6	1.2	1.2	1.2	1.2
117.5°	83.4	77.4	68.5	48.4	25.8	10.5	2.0	1.2	1.2	1.2	1.2
120°	65.3	59.6	49.6	33.4	17.3	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.7	42.3	33.4	21.8	10.5	2.8	1.2	1.2	1.6	1.6	1.2
125°	31.0	28.6	22.2	13.3	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.2	18.1	12.9	7.7	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.3	10.1	7.7	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	316.4	316.4	316.4
2.5°	301.0	295.4	293.8
5°	284.9	275.7	270.4
7.5°	268.8	256.3	250.3
10°	253.9	236.2	229.7
12.5°	236.2	215.6	205.5
15°	219.2	192.6	183.0
17.5°	200.3	170.5	159.2
20°	182.6	148.3	136.6
22.5°	162.4	126.5	113.6
25°	144.3	104.8	90.3
27.5°	124.1	82.6	70.1
30°	105.2	63.3	50.8
32.5°	87.0	46.3	35.1
35°	70.1	31.4	22.2
37.5°	54.0	19.3	11.3
40°	39.1	10.1	5.2
42.5°	26.2	4.8	2.8
45°	16.1	2.4	0.0
47.5°	9.3	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	169.3	164.4	148.3	121.7	85.0	47.6	17.7	3.2	0.8	1.2	1.2
110°	147.5	143.5	126.9	101.2	68.5	35.5	11.7	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)