

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: P550866

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-93-94-ED1D**

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: P550866  
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-LD4-1LO-40-UNV-93-94-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,  
AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

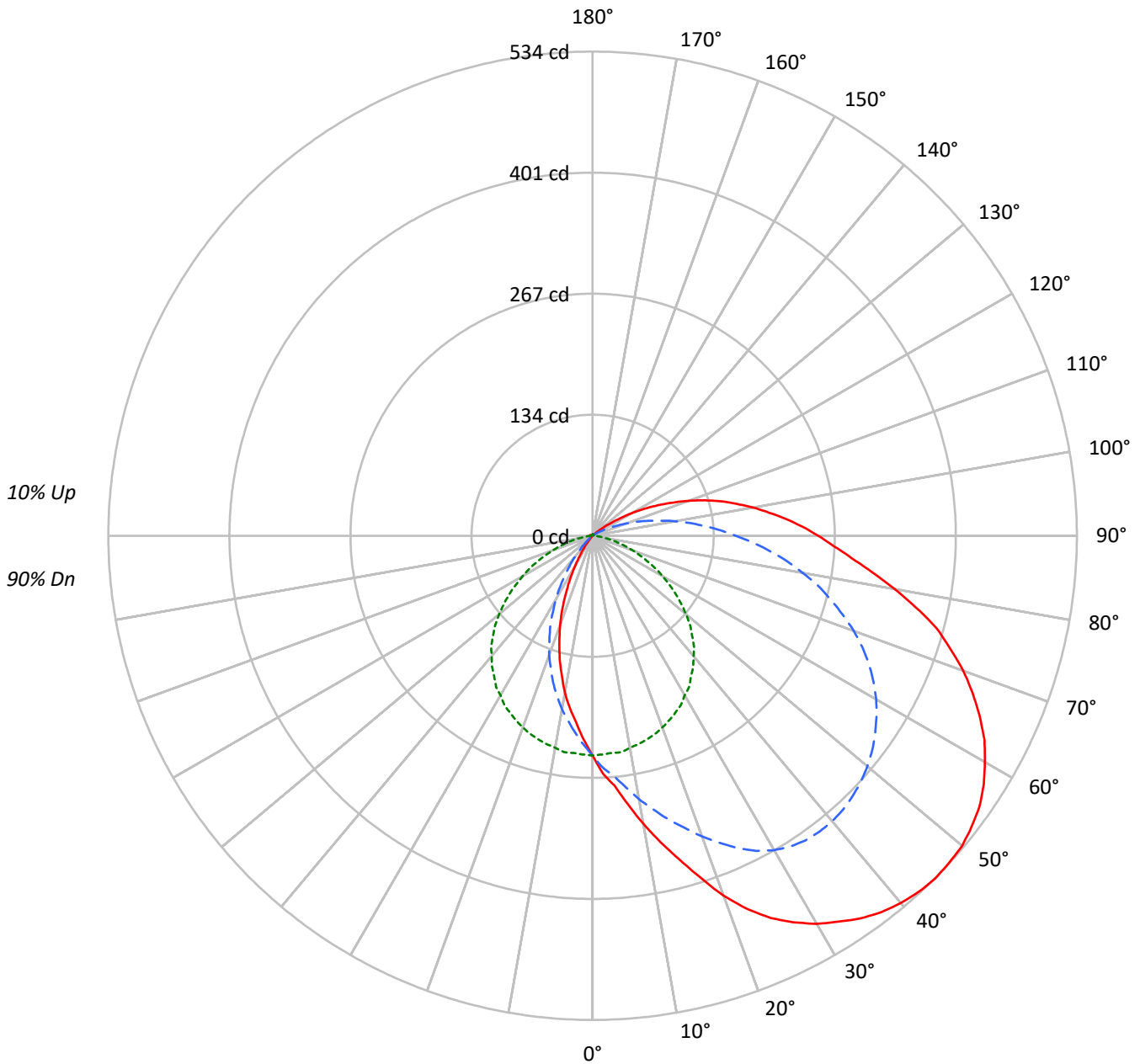
Lumens per Lamp: N/A  
Luminaire Lumens: 1197.9 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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

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CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-93-94-ED1D

### 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°	2608	2608	2608
5°	2863	2570	2144
10°	3240	2539	1768
15°	3631	2506	1377
20°	4095	2465	1014
25°	4480	2418	666
30°	4766	2354	375
35°	5014	2286	165
40°	5234	2203	40
45°	5423	2097	0
50°	5581	1957	0
55°	5702	1779	0
60°	5763	1573	0
65°	5786	1340	0
70°	5767	1092	0
75°	5694	805	4
80°	5462	493	24
85°	5280	234	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.2	1.9
10°-20°	69.5	5.8
20°-30°	112.6	9.4
30°-40°	144.6	12.1
40°-50°	163.7	13.7
50°-60°	169.6	14.2
60°-70°	159.9	13.3
70°-80°	134.0	11.2
80°-90°	97.1	8.1
90°-100°	63.8	5.3
100°-110°	36.9	3.1
110°-120°	16.3	1.4
120°-130°	4.4	0.4
130°-140°	1.0	0.1
140°-150°	0.6	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	205.3	17.1
0°-40°	349.8	29.2
0°-60°	683.1	57.0
0°-90°	1074.1	89.7
90°-120°	117.0	9.8
90°-150°	123.0	10.3
90°-180°	124.0	10.4
0°-180°	1197.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	242	242	242	242	242	
5°	277	266	240	218	207	28
15°	370	324	232	168	140	107
25°	465	380	216	110	69	215
35°	515	410	189	54	17	323
45°	534	406	155	12	0	413
55°	521	380	112	0	0	465
65°	471	336	67	0	0	466
75°	392	272	28	0	0	412
85°	287	197	5	1	2	245
90°	249	158	1	2	2	136
95°	214	123	1	2	3	168
105°	147	64	1	2	2	155
115°	80	21	1	1	2	80
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°	242.3	242.3	242.3	242.3	242.3	242.3	242.3	242.3	242.3	242.3	242.3
2.5°	262.7	262.4	261.5	259.9	257.8	254.1	251.0	248.2	244.5	241.4	235.5
5°	276.6	275.0	273.8	272.3	267.3	263.9	258.4	252.2	246.3	240.5	228.7
7.5°	298.8	296.3	294.5	290.2	283.4	275.7	267.0	261.2	257.1	240.8	220.7
10°	322.6	320.4	316.7	309.0	300.7	289.6	277.2	263.3	251.0	237.4	213.6
12.5°	346.0	343.0	337.7	327.8	316.1	302.2	285.2	268.9	251.3	235.2	205.3
15°	369.5	366.1	360.6	348.5	333.1	314.9	294.2	273.5	252.8	232.4	196.6
17.5°	395.1	390.5	382.2	368.6	349.1	326.6	302.2	277.2	252.2	229.1	187.4
20°	422.6	416.1	407.2	389.0	366.1	339.6	310.2	280.9	251.9	225.0	176.9
22.5°	445.4	439.0	429.1	410.3	382.8	350.4	317.0	283.4	250.7	220.4	167.0
25°	465.2	460.0	449.2	427.5	398.5	361.8	323.5	285.2	248.8	215.5	156.5
27.5°	480.6	475.7	463.7	441.4	411.8	372.0	328.5	286.2	246.3	210.5	145.7
30°	494.2	489.3	474.8	451.9	420.8	380.0	333.4	286.5	243.3	203.1	134.0
32.5°	504.7	500.1	485.3	460.9	426.9	385.6	336.2	286.2	239.2	197.9	121.3
35°	515.2	510.6	493.3	467.4	431.6	388.0	338.3	284.6	234.3	189.2	109.3
37.5°	523.2	518.0	500.4	471.7	433.7	388.6	338.0	282.5	229.1	182.1	97.2
40°	528.8	523.2	504.4	474.2	434.3	387.7	335.6	278.8	222.9	173.2	84.6
42.5°	532.5	526.3	506.3	477.9	433.1	385.3	331.8	274.1	216.1	165.5	72.5
45°	534.4	527.9	506.6	474.8	430.9	380.6	326.3	268.3	208.7	155.0	60.5
47.5°	533.4	526.3	505.0	471.4	426.9	375.7	320.1	261.2	199.7	145.7	49.1
50°	531.9	524.5	501.6	467.1	421.4	369.5	313.3	252.5	190.5	134.3	38.9
52.5°	526.9	519.5	497.9	460.9	414.9	362.4	304.1	243.6	180.6	123.2	29.6
55°	520.8	514.0	491.4	455.3	406.6	353.8	295.4	234.0	171.0	111.7	21.3
57.5°	511.2	505.0	483.4	446.4	398.2	344.2	285.9	223.5	159.0	100.3	14.8
60°	499.5	493.3	472.3	436.2	388.6	333.4	275.4	212.7	148.2	88.9	9.3
62.5°	487.1	481.3	459.3	423.5	376.6	322.0	263.9	201.9	136.8	78.4	5.6
65°	470.8	465.2	445.4	408.4	363.3	309.6	251.3	188.9	125.0	66.7	3.1
67.5°	453.5	448.5	428.5	394.5	347.9	296.0	238.3	176.3	112.7	56.5	1.5
70°	435.0	428.8	410.3	375.7	332.2	280.6	224.1	163.3	100.9	46.6	0.0
72.5°	413.3	408.7	390.8	358.1	313.9	264.2	209.6	149.1	88.0	37.0	0.3
75°	392.4	386.5	370.1	339.3	296.0	247.0	193.6	135.8	75.3	28.4	0.3
77.5°	365.2	363.3	347.9	318.0	279.1	230.3	176.0	119.8	63.3	20.4	0.3
80°	338.0	336.2	324.1	296.7	259.3	210.5	159.6	104.6	51.6	13.6	0.3
82.5°	311.2	308.7	297.3	274.4	239.2	193.9	142.6	89.5	40.7	8.3	0.3
85°	287.1	284.0	271.7	250.7	218.6	175.0	125.0	74.7	30.3	4.6	0.6
87.5°	266.4	264.2	250.7	229.1	197.6	157.4	109.6	60.5	21.3	2.2	0.9
90°	248.8	244.2	232.1	209.3	177.8	138.0	93.2	48.5	14.2	1.2	1.2
92.5°	231.5	227.5	214.2	190.8	160.2	121.3	77.5	37.0	9.0	0.6	1.5
95°	213.6	209.3	196.3	174.7	142.3	104.3	63.6	27.2	4.9	0.6	1.5
97.5°	196.0	192.0	178.4	156.8	126.3	89.5	50.3	19.1	2.5	0.6	1.2
100°	179.7	175.0	162.7	141.1	110.2	74.7	38.9	12.3	1.5	0.6	1.2
102.5°	162.4	158.7	146.0	125.0	93.5	60.8	29.0	7.7	0.6	0.6	0.9
105°	146.9	142.3	130.0	108.4	79.6	47.8	20.4	4.6	0.6	0.6	0.9



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CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-93-94-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	95.7	92.0	81.2	63.0	40.4	18.8	5.6	0.9	0.9	0.9	0.9
115°	80.0	74.4	64.8	48.8	29.9	12.3	2.8	0.9	0.9	0.9	0.9
117.5°	63.9	59.3	52.5	37.0	19.8	8.0	1.5	0.9	0.9	0.9	0.9
120°	50.0	45.7	38.0	25.6	13.3	4.6	0.6	0.9	0.9	0.9	0.9
122.5°	35.8	32.4	25.6	16.7	8.0	2.2	0.9	0.9	1.2	1.2	0.9
125°	23.8	21.9	17.0	10.2	4.9	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.4	13.9	9.9	5.9	2.2	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.6	7.7	5.9	3.4	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	4.9	4.6	3.1	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.5
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.2
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°	242.3	242.3	242.3
2.5°	230.6	226.3	225.0
5°	218.2	211.1	207.1
7.5°	205.9	196.3	191.7
10°	194.5	180.9	176.0
12.5°	180.9	165.2	157.4
15°	167.9	147.6	140.1
17.5°	153.4	130.6	121.9
20°	139.8	113.6	104.6
22.5°	124.4	96.9	87.1
25°	110.5	80.3	69.1
27.5°	95.1	63.3	53.7
30°	80.6	48.5	38.9
32.5°	66.7	35.5	26.9
35°	53.7	24.1	17.0
37.5°	41.4	14.8	8.6
40°	29.9	7.7	4.0
42.5°	20.1	3.7	2.2
45°	12.3	1.9	0.0
47.5°	7.1	0.0	0.0
50°	3.7	0.0	0.0
52.5°	1.5	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	1.2	1.5
82.5°	1.2	1.5	1.5
85°	1.2	1.5	1.9
87.5°	1.5	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°	1.5	2.2	2.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.2	1.5	1.5
115°	0.9	1.2	1.5
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	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°	1.2	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°	129.7	125.9	113.6	93.2	65.1	36.4	13.6	2.5	0.6	0.9	0.9
110°	113.0	109.9	97.2	77.5	52.5	27.2	9.0	1.5	0.9	0.9	0.9







107.5°	1.2	1.9	2.2
110°	1.2	1.5	1.9



(END OF REPORT)