

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: P550574

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-81-87-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: P550574  
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-81-87-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

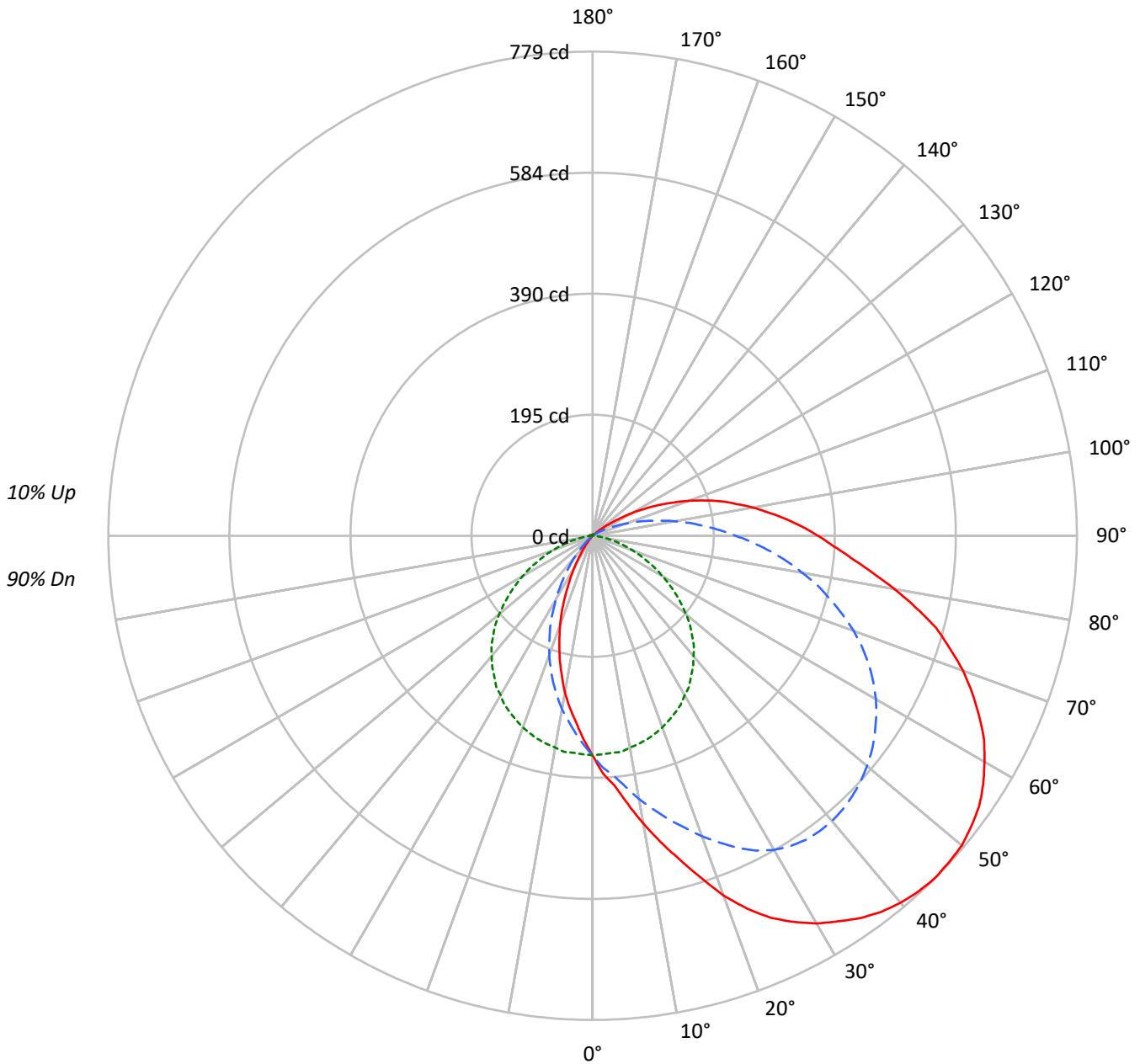
Lumens per Lamp: N/A  
Luminaire Lumens: 1745.8 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (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-LD4-1HI-40-UNV-81-87-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°	3802	3802	3802
5°	4173	3746	3125
10°	4722	3700	2575
15°	5292	3653	2008
20°	5969	3594	1478
25°	6530	3524	971
30°	6947	3431	547
35°	7308	3332	240
40°	7629	3210	57
45°	7904	3057	0
50°	8134	2852	0
55°	8310	2594	0
60°	8398	2293	0
65°	8433	1952	0
70°	8404	1591	0
75°	8297	1174	6
80°	7961	718	36
85°	7695	341	50



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.8	1.9
10°-20°	101.3	5.8
20°-30°	164.0	9.4
30°-40°	210.7	12.1
40°-50°	238.5	13.7
50°-60°	247.1	14.2
60°-70°	233.1	13.3
70°-80°	195.3	11.2
80°-90°	141.6	8.1
90°-100°	93.0	5.3
100°-110°	53.7	3.1
110°-120°	23.7	1.4
120°-130°	6.4	0.4
130°-140°	1.5	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	299.2	17.1
0°-40°	509.9	29.2
0°-60°	995.5	57.0
0°-90°	1565.4	89.7
90°-120°	170.4	9.8
90°-150°	179.2	10.3
90°-180°	180.0	10.3
0°-180°	1745.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	353	353	353	353	353	
5°	403	387	350	318	302	41
15°	538	472	339	245	204	155
25°	678	554	314	161	101	313
35°	751	597	276	78	25	471
45°	779	591	226	18	0	601
55°	759	554	163	0	0	678
65°	686	490	97	0	0	679
75°	572	396	41	0	0	600
85°	418	287	7	2	3	357
90°	363	230	2	3	3	199
95°	311	180	1	3	4	244
105°	214	93	1	2	4	226
115°	116	31	1	1	2	117
125°	35	4	2	1	2	35
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	353.2	353.2	353.2	353.2	353.2	353.2	353.2	353.2	353.2	353.2	353.2
2.5°	382.9	382.4	381.1	378.8	375.7	370.3	365.8	361.7	356.3	351.8	343.3
5°	403.1	400.9	399.1	396.8	389.6	384.7	376.6	367.6	359.0	350.5	333.4
7.5°	435.5	431.9	429.2	422.9	413.0	401.8	389.2	380.6	374.8	350.9	321.7
10°	470.1	467.0	461.6	450.4	438.2	422.0	404.0	383.8	365.8	346.0	311.3
12.5°	504.3	499.8	492.2	477.8	460.7	440.5	415.7	391.9	366.2	342.8	299.2
15°	538.5	533.6	525.5	507.9	485.4	458.9	428.8	398.6	368.5	338.8	286.6
17.5°	575.9	569.1	557.0	537.2	508.8	476.0	440.5	404.0	367.6	333.8	273.1
20°	615.9	606.5	593.4	566.9	533.6	494.9	452.2	409.4	367.1	328.0	257.8
22.5°	649.2	639.8	625.4	597.9	557.9	510.6	462.1	413.0	365.3	321.2	243.4
25°	678.0	670.4	654.6	623.1	580.8	527.3	471.5	415.7	362.6	314.0	228.1
27.5°	700.5	693.3	675.8	643.4	600.2	542.1	478.7	417.1	359.0	306.8	212.4
30°	720.3	713.1	692.0	658.7	613.2	553.8	485.9	417.5	354.5	296.0	195.3
32.5°	735.6	728.8	707.2	671.7	622.2	561.9	489.9	417.1	348.7	288.4	176.8
35°	750.9	744.1	718.9	681.2	629.0	565.5	493.1	414.8	341.5	275.8	159.3
37.5°	762.6	754.9	729.3	687.5	632.1	566.4	492.6	411.7	333.8	265.4	141.7
40°	770.7	762.6	735.1	691.1	633.0	565.1	489.0	406.3	324.8	252.4	123.3
42.5°	776.1	767.1	737.8	696.4	631.2	561.5	483.6	399.5	314.9	241.1	105.7
45°	778.8	769.3	738.3	692.0	628.1	554.7	475.5	391.0	304.1	225.9	88.2
47.5°	777.4	767.1	736.0	687.0	622.2	547.5	466.5	380.6	291.1	212.4	71.5
50°	775.2	764.4	731.1	680.7	614.1	538.5	456.7	368.0	277.6	195.7	56.7
52.5°	768.0	757.2	725.7	671.7	604.7	528.2	443.2	355.0	263.2	179.5	43.2
55°	759.0	749.1	716.2	663.6	592.5	515.6	430.6	341.0	249.2	162.9	31.0
57.5°	745.0	736.0	704.5	650.6	580.4	501.6	416.6	325.7	231.7	146.2	21.6
60°	727.9	718.9	688.4	635.7	566.4	485.9	401.3	310.0	216.0	129.6	13.5
62.5°	709.9	701.4	669.5	617.3	548.9	469.2	384.7	294.2	199.3	114.3	8.1
65°	686.1	678.0	649.2	595.2	529.5	451.3	366.2	275.3	182.2	97.2	4.5
67.5°	660.9	653.7	624.5	575.0	507.0	431.5	347.3	256.9	164.2	82.3	2.2
70°	633.9	624.9	597.9	547.5	484.1	409.0	326.6	238.0	147.1	67.9	0.0
72.5°	602.4	595.7	569.6	521.9	457.6	385.1	305.5	217.3	128.2	54.0	0.4
75°	571.8	563.3	539.4	494.4	431.5	359.9	282.1	198.0	109.8	41.4	0.4
77.5°	532.2	529.5	507.0	463.4	406.7	335.6	256.4	174.6	92.2	29.7	0.4
80°	492.6	489.9	472.4	432.4	377.9	306.8	232.6	152.5	75.1	19.8	0.4
82.5°	453.5	449.9	433.3	400.0	348.7	282.5	207.9	130.5	59.4	12.1	0.4
85°	418.4	413.9	395.9	365.3	318.5	255.1	182.2	108.9	44.1	6.7	0.9
87.5°	388.3	385.1	365.3	333.8	287.9	229.5	159.7	88.2	31.0	3.1	1.3
90°	362.6	355.9	338.3	305.0	259.1	201.1	135.9	70.6	20.7	1.8	1.8
92.5°	337.4	331.6	312.2	278.0	233.5	176.8	112.9	54.0	13.0	0.9	2.2
95°	311.3	305.0	286.1	254.6	207.4	152.1	92.7	39.6	7.2	0.9	2.2
97.5°	285.7	279.8	260.0	228.6	184.0	130.5	73.3	27.9	3.6	0.9	1.8
100°	261.8	255.1	237.1	205.6	160.6	108.9	56.7	18.0	2.2	0.9	1.8
102.5°	236.6	231.3	212.8	182.2	136.3	88.6	42.3	11.2	0.9	0.9	1.3
105°	214.2	207.4	189.4	157.9	116.1	69.7	29.7	6.7	0.9	0.9	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	139.5	134.1	118.3	91.8	58.9	27.4	8.1	1.3	1.3	1.3	1.3
115°	116.5	108.4	94.5	71.1	43.6	18.0	4.0	1.3	1.3	1.3	1.3
117.5°	93.1	86.4	76.5	54.0	28.8	11.7	2.2	1.3	1.3	1.3	1.3
120°	72.9	66.6	55.3	37.3	19.3	6.7	0.9	1.3	1.3	1.3	1.3
122.5°	52.2	47.2	37.3	24.3	11.7	3.1	1.3	1.3	1.8	1.8	1.3
125°	34.6	31.9	24.7	14.8	7.2	1.3	1.3	1.3	1.8	1.8	1.3
127.5°	22.5	20.2	14.4	8.5	3.1	1.3	1.3	1.8	1.8	1.8	1.3
130°	12.6	11.2	8.5	4.9	1.3	1.3	1.3	1.8	1.8	1.8	1.3
132.5°	7.2	6.7	4.5	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8
135°	1.8	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.8	2.2	2.2	2.2	1.8
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	1.8
142.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
145°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	1.8	1.8	1.8
147.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
150°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
152.5°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
155°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
157.5°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8	1.8
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	1.8
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	353.2	353.2	353.2
2.5°	336.1	329.8	328.0
5°	318.1	307.7	301.9
7.5°	300.1	286.1	279.4
10°	283.4	263.6	256.4
12.5°	263.6	240.7	229.5
15°	244.7	215.1	204.3
17.5°	223.6	190.3	177.7
20°	203.8	165.6	152.5
22.5°	181.3	141.3	126.9
25°	161.1	117.0	100.8
27.5°	138.6	92.2	78.3
30°	117.4	70.6	56.7
32.5°	97.2	51.7	39.1
35°	78.3	35.1	24.7
37.5°	60.3	21.6	12.6
40°	43.6	11.2	5.8
42.5°	29.2	5.4	3.1
45°	18.0	2.7	0.0
47.5°	10.3	0.0	0.0
50°	5.4	0.0	0.0
52.5°	2.2	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	0.9	1.3
80°	0.9	1.8	2.2
82.5°	1.8	2.2	2.2
85°	1.8	2.2	2.7
87.5°	2.2	2.7	3.1
90°	2.7	3.1	3.1
92.5°	2.7	3.6	3.6
95°	3.1	3.6	4.0
97.5°	3.6	4.0	4.0
100°	3.1	4.0	4.5
102.5°	2.7	4.0	4.0
105°	2.2	3.1	3.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.8	2.2	2.2
115°	1.3	1.8	2.2
117.5°	1.3	1.8	1.8
120°	1.3	1.3	1.8
122.5°	1.3	1.3	1.8
125°	1.3	1.3	1.8
127.5°	1.8	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.8	1.3	1.3
135°	1.8	1.3	1.3
137.5°	1.8	1.3	1.3
140°	1.8	1.3	1.3
142.5°	1.8	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.8	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	189.0	183.6	165.6	135.9	94.9	53.1	19.8	3.6	0.9	1.3	1.3
110°	164.7	160.2	141.7	112.9	76.5	39.6	13.0	2.2	1.3	1.3	1.3







107.5°	1.8	2.7	3.1
110°	1.8	2.2	2.7



(END OF REPORT)