

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: P551018

Luminaire Tested: **FCC-X-2-LD4-1STD-35-UNV-81-85-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: P551018  
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-35-UNV-81-85-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

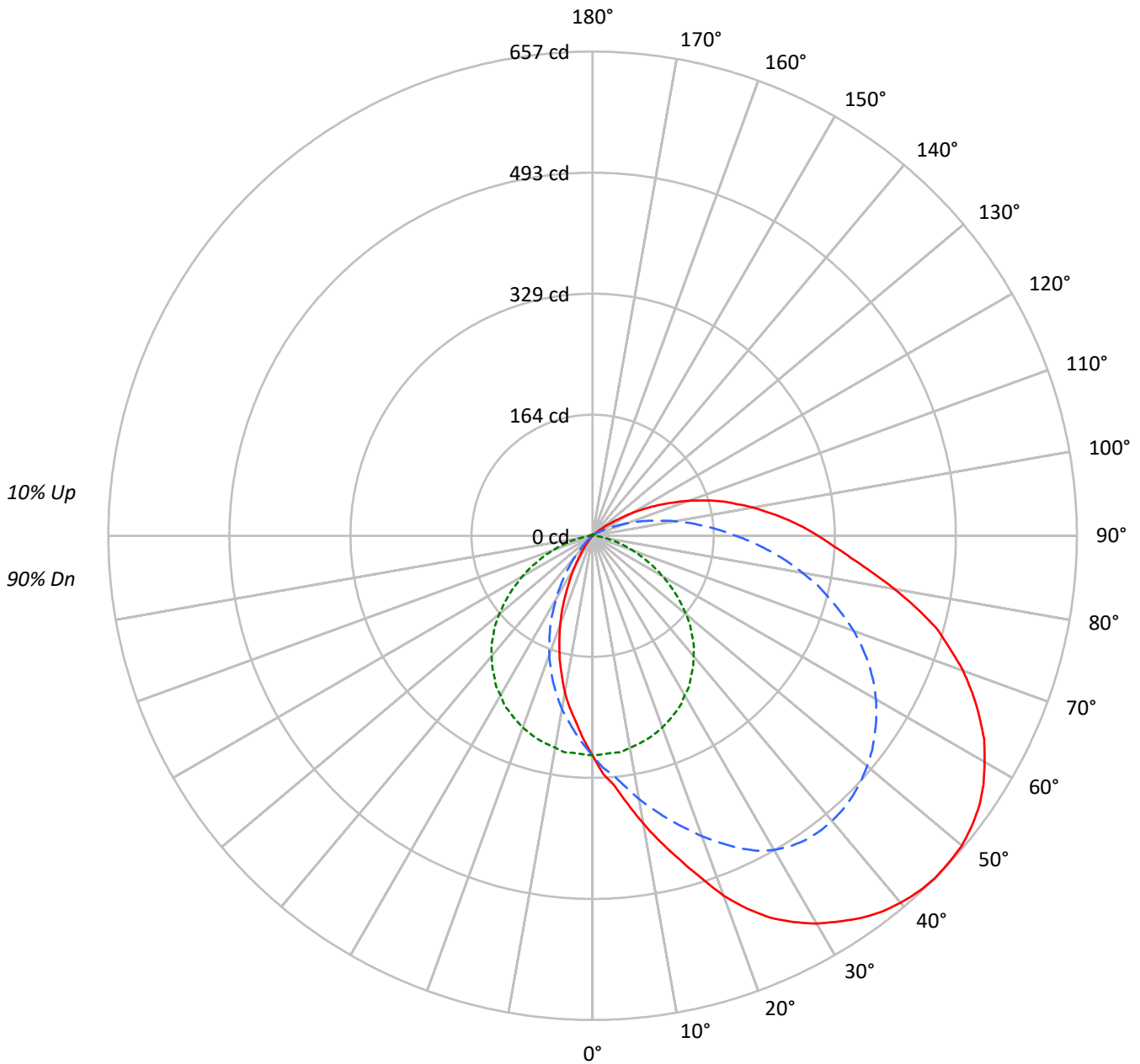
Lumens per Lamp: N/A  
Luminaire Lumens: 1472.9 lumens  
Efficiency: N/A  
Efficacy: 88.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**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°	3208	3208	3208
5°	3521	3160	2637
10°	3984	3122	2173
15°	4464	3082	1693
20°	5035	3032	1247
25°	5509	2973	819
30°	5861	2895	461
35°	6166	2812	203
40°	6436	2708	49
45°	6667	2578	0
50°	6862	2406	0
55°	7010	2188	0
60°	7085	1934	0
65°	7114	1647	0
70°	7091	1342	0
75°	7000	990	6
80°	6716	606	31
85°	6492	290	42



TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.5	1.9
10°-20°	85.5	5.8
20°-30°	138.4	9.4
30°-40°	177.8	12.1
40°-50°	201.2	13.7
50°-60°	208.5	14.2
60°-70°	196.6	13.3
70°-80°	164.8	11.2
80°-90°	119.4	8.1
90°-100°	78.5	5.3
100°-110°	45.3	3.1
110°-120°	20.0	1.4
120°-130°	5.4	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	252.4	17.1
0°-40°	430.1	29.2
0°-60°	839.9	57.0
0°-90°	1320.7	89.7
90°-120°	143.8	9.8
90°-150°	151.3	10.3
90°-180°	152.0	10.3
0°-180°	1472.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	298	298	298	298	298	
5°	340	327	296	268	255	34
15°	454	398	286	206	172	131
25°	572	467	265	136	85	264
35°	634	504	233	66	21	397
45°	657	499	190	15	0	507
55°	640	467	137	0	0	572
65°	579	414	82	0	0	573
75°	482	334	35	0	0	506
85°	353	242	6	2	2	301
90°	306	194	2	2	3	168
95°	263	152	1	3	3	206
105°	181	78	1	2	3	191
115°	98	26	1	1	2	98
125°	29	4	2	1	2	29
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	



TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	298.0	298.0	298.0	298.0	298.0	298.0	298.0	298.0	298.0	298.0	298.0
2.5°	323.0	322.6	321.5	319.6	316.9	312.4	308.6	305.2	300.6	296.8	289.6
5°	340.1	338.2	336.7	334.8	328.7	324.5	317.7	310.1	302.9	295.7	281.3
7.5°	367.4	364.4	362.1	356.8	348.4	338.9	328.3	321.1	316.2	296.1	271.4
10°	396.6	394.0	389.4	379.9	369.7	356.0	340.8	323.8	308.6	291.9	262.7
12.5°	425.5	421.7	415.2	403.1	388.7	371.6	350.7	330.6	309.0	289.2	252.4
15°	454.3	450.2	443.3	428.5	409.5	387.1	361.7	336.3	310.9	285.8	241.8
17.5°	485.8	480.1	469.9	453.2	429.3	401.6	371.6	340.8	310.1	281.6	230.4
20°	519.6	511.6	500.6	478.2	450.2	417.5	381.5	345.4	309.7	276.7	217.5
22.5°	547.7	539.7	527.6	504.4	470.7	430.8	389.8	348.4	308.2	271.0	205.3
25°	572.0	565.5	552.3	525.7	490.0	444.8	397.8	350.7	305.9	264.9	192.4
27.5°	591.0	584.9	570.1	542.8	506.3	457.4	403.8	351.8	302.9	258.9	179.2
30°	607.7	601.6	583.8	555.7	517.3	467.2	409.9	352.2	299.1	249.7	164.7
32.5°	620.6	614.9	596.7	566.7	524.9	474.1	413.3	351.8	294.2	243.3	149.2
35°	633.5	627.8	606.5	574.6	530.6	477.1	416.0	350.0	288.1	232.7	134.4
37.5°	643.3	636.9	615.3	580.0	533.3	477.9	415.6	347.3	281.6	223.9	119.6
40°	650.2	643.3	620.2	583.0	534.0	476.7	412.6	342.7	274.0	212.9	104.0
42.5°	654.7	647.1	622.5	587.6	532.5	473.7	408.0	337.0	265.7	203.4	89.2
45°	657.0	649.0	622.9	583.8	529.9	468.0	401.2	329.8	256.6	190.5	74.4
47.5°	655.9	647.1	621.0	579.6	524.9	461.9	393.6	321.1	245.6	179.2	60.3
50°	654.0	644.9	616.8	574.3	518.1	454.3	385.3	310.5	234.2	165.1	47.8
52.5°	647.9	638.8	612.2	566.7	510.1	445.6	373.9	299.5	222.0	151.4	36.4
55°	640.3	632.0	604.3	559.8	499.9	435.0	363.2	287.7	210.3	137.4	26.2
57.5°	628.5	621.0	594.4	548.8	489.6	423.2	351.5	274.8	195.5	123.4	18.2
60°	614.1	606.5	580.7	536.3	477.9	409.9	338.6	261.5	182.2	109.3	11.4
62.5°	598.9	591.7	564.8	520.8	463.1	395.9	324.5	248.2	168.1	96.4	6.8
65°	578.8	572.0	547.7	502.2	446.7	380.7	309.0	232.3	153.7	82.0	3.8
67.5°	557.6	551.5	526.8	485.1	427.8	364.0	293.0	216.7	138.5	69.5	1.9
70°	534.8	527.2	504.4	461.9	408.4	345.0	275.6	200.8	124.1	57.3	0.0
72.5°	508.2	502.5	480.5	440.3	386.0	324.9	257.7	183.3	108.2	45.5	0.4
75°	482.4	475.2	455.1	417.1	364.0	303.6	238.0	167.0	92.6	34.9	0.4
77.5°	449.0	446.7	427.8	390.9	343.1	283.1	216.3	147.3	77.8	25.1	0.4
80°	415.6	413.3	398.5	364.8	318.8	258.9	196.2	128.7	63.4	16.7	0.4
82.5°	382.6	379.6	365.5	337.4	294.2	238.4	175.4	110.1	50.1	10.2	0.4
85°	353.0	349.2	334.0	308.2	268.7	215.2	153.7	91.9	37.2	5.7	0.8
87.5°	327.6	324.9	308.2	281.6	242.9	193.6	134.7	74.4	26.2	2.7	1.1
90°	305.9	300.2	285.4	257.3	218.6	169.7	114.6	59.6	17.5	1.5	1.5
92.5°	284.7	279.7	263.4	234.6	197.0	149.2	95.3	45.5	11.0	0.8	1.9
95°	262.7	257.3	241.4	214.8	175.0	128.3	78.2	33.4	6.1	0.8	1.9
97.5°	241.0	236.1	219.4	192.8	155.2	110.1	61.9	23.5	3.0	0.8	1.5
100°	220.9	215.2	200.0	173.5	135.5	91.9	47.8	15.2	1.9	0.8	1.5
102.5°	199.6	195.1	179.5	153.7	115.0	74.8	35.7	9.5	0.8	0.8	1.1
105°	180.7	175.0	159.8	133.2	97.9	58.8	25.1	5.7	0.8	0.8	1.1



TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	117.7	113.1	99.8	77.4	49.7	23.2	6.8	1.1	1.1	1.1	1.1
115°	98.3	91.5	79.7	60.0	36.8	15.2	3.4	1.1	1.1	1.1	1.1
117.5°	78.6	72.9	64.5	45.5	24.3	9.9	1.9	1.1	1.1	1.1	1.1
120°	61.5	56.2	46.7	31.5	16.3	5.7	0.8	1.1	1.1	1.1	1.1
122.5°	44.0	39.9	31.5	20.5	9.9	2.7	1.1	1.1	1.5	1.5	1.1
125°	29.2	26.9	20.9	12.5	6.1	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	19.0	17.1	12.1	7.2	2.7	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.6	9.5	7.2	4.2	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.1	5.7	3.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.8	0.8	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.8	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.5
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	298.0	298.0	298.0
2.5°	283.5	278.2	276.7
5°	268.3	259.6	254.7
7.5°	253.2	241.4	235.7
10°	239.1	222.4	216.3
12.5°	222.4	203.1	193.6
15°	206.5	181.4	172.3
17.5°	188.6	160.6	149.9
20°	171.9	139.7	128.7
22.5°	153.0	119.2	107.0
25°	135.9	98.7	85.0
27.5°	116.9	77.8	66.0
30°	99.1	59.6	47.8
32.5°	82.0	43.6	33.0
35°	66.0	29.6	20.9
37.5°	50.9	18.2	10.6
40°	36.8	9.5	4.9
42.5°	24.7	4.6	2.7
45°	15.2	2.3	0.0
47.5°	8.7	0.0	0.0
50°	4.6	0.0	0.0
52.5°	1.9	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	1.1
80°	0.8	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.3
87.5°	1.9	2.3	2.7
90°	2.3	2.7	2.7
92.5°	2.3	3.0	3.0
95°	2.7	3.0	3.4
97.5°	3.0	3.4	3.4
100°	2.7	3.4	3.8
102.5°	2.3	3.4	3.4
105°	1.9	2.7	3.0





TEST NUMBER: P551018

CATALOG NUMBER: FCC-X-2-LD4-1STD-35-UNV-81-85-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.1	1.5	1.9
117.5°	1.1	1.5	1.5
120°	1.1	1.1	1.5
122.5°	1.1	1.1	1.5
125°	1.1	1.1	1.5
127.5°	1.5	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.5	1.1	1.1
135°	1.5	1.1	1.1
137.5°	1.5	1.1	1.1
140°	1.5	1.1	1.1
142.5°	1.5	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.8
152.5°	1.1	0.8	0.8
155°	1.1	0.8	0.4
157.5°	1.5	0.8	0.4
160°	1.1	0.8	0.4
162.5°	1.1	0.8	0.4
165°	1.1	0.8	0.0
167.5°	1.1	0.8	0.4
170°	1.1	0.8	0.4
172.5°	1.1	0.8	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	159.4	154.9	139.7	114.6	80.1	44.8	16.7	3.0	0.8	1.1	1.1
110°	138.9	135.1	119.6	95.3	64.5	33.4	11.0	1.9	1.1	1.1	1.1







107.5°	1.5	2.3	2.7
110°	1.5	1.9	2.3



(END OF REPORT)