

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: P550953

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-81-85-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: P550953  
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-30-UNV-81-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

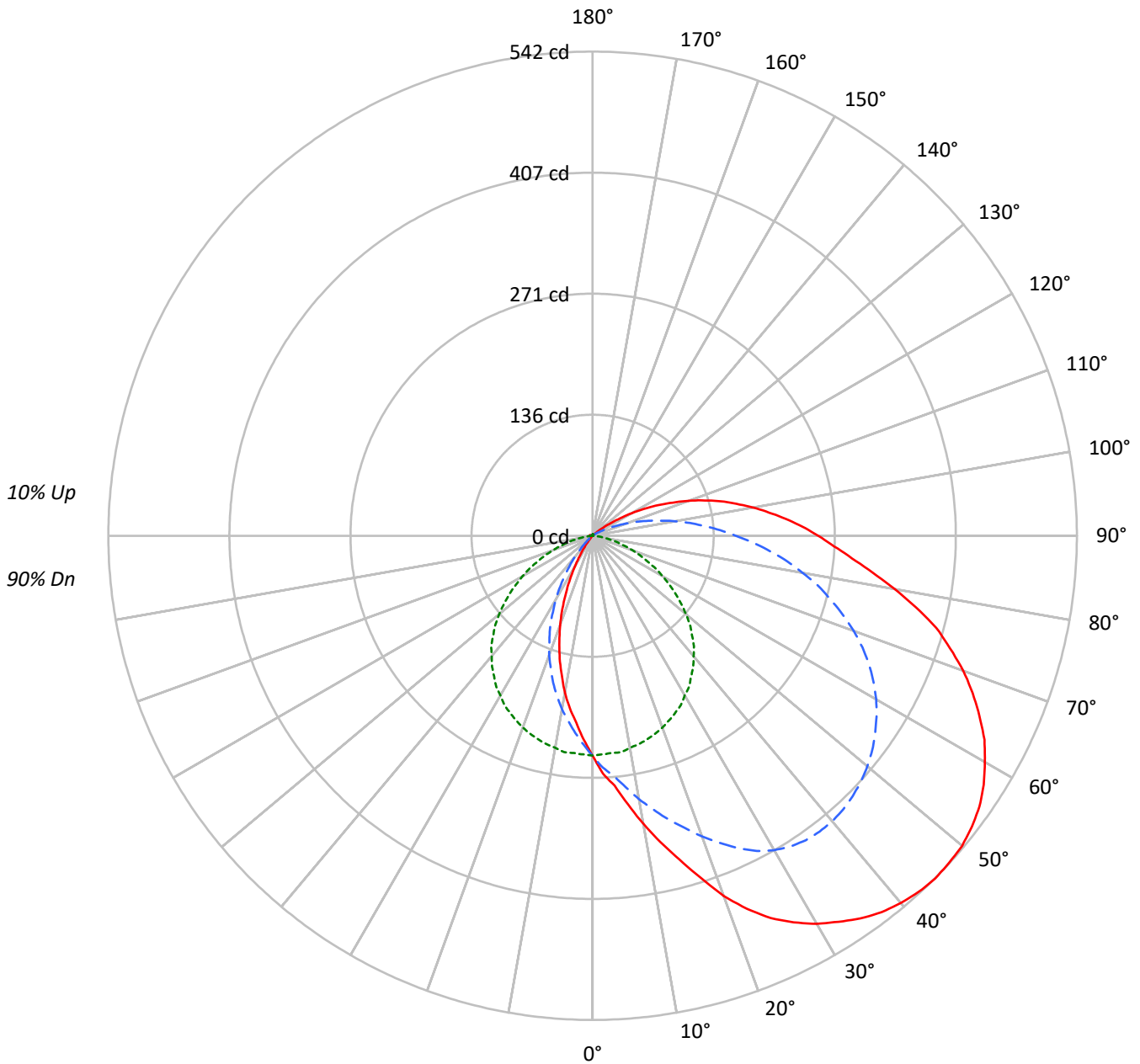
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1216.0 lumens  
Efficiency: N/A  
Efficacy: 72.8 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: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**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°	2648	2648	2648
5°	2906	2609	2176
10°	3289	2577	1794
15°	3686	2544	1398
20°	4157	2502	1029
25°	4548	2454	676
30°	4838	2390	381
35°	5090	2321	167
40°	5312	2236	41
45°	5504	2128	0
50°	5665	1987	0
55°	5787	1806	0
60°	5849	1596	0
65°	5873	1360	0
70°	5854	1108	0
75°	5778	817	4
80°	5545	501	26
85°	5359	239	35



TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.6	1.9
10°-20°	70.5	5.8
20°-30°	114.2	9.4
30°-40°	146.7	12.1
40°-50°	166.1	13.7
50°-60°	172.1	14.2
60°-70°	162.3	13.3
70°-80°	136.0	11.2
80°-90°	98.6	8.1
90°-100°	64.8	5.3
100°-110°	37.4	3.1
110°-120°	16.5	1.4
120°-130°	4.5	0.4
130°-140°	1.0	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°	208.3	17.1
0°-40°	355.1	29.2
0°-60°	693.3	57.0
0°-90°	1090.2	89.7
90°-120°	118.7	9.8
90°-150°	124.9	10.3
90°-180°	126.0	10.4
0°-180°	1216.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	246	246	246	246	246	
5°	281	270	244	222	210	28
15°	375	329	236	170	142	108
25°	472	386	219	112	70	218
35°	523	416	192	54	17	328
45°	542	412	157	12	0	419
55°	529	386	113	0	0	472
65°	478	342	68	0	0	473
75°	398	276	29	0	0	418
85°	291	200	5	1	2	249
90°	252	160	1	2	2	138
95°	217	125	1	2	3	170
105°	149	65	1	2	2	157
115°	81	21	1	1	2	81
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	



TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	246.0	246.0	246.0	246.0	246.0	246.0	246.0	246.0	246.0	246.0	246.0
2.5°	266.6	266.3	265.4	263.8	261.6	257.9	254.7	251.9	248.2	245.0	239.1
5°	280.7	279.2	277.9	276.4	271.3	267.9	262.3	256.0	250.0	244.1	232.2
7.5°	303.3	300.8	298.9	294.5	287.6	279.8	271.0	265.1	261.0	244.4	224.0
10°	327.4	325.2	321.5	313.6	305.2	293.9	281.4	267.3	254.7	241.0	216.8
12.5°	351.2	348.1	342.8	332.8	320.9	306.8	289.5	272.9	255.1	238.8	208.4
15°	375.1	371.6	366.0	353.8	338.1	319.6	298.6	277.6	256.6	235.9	199.6
17.5°	401.1	396.4	387.9	374.1	354.4	331.5	306.8	281.4	256.0	232.5	190.2
20°	429.0	422.4	413.3	394.8	371.6	344.7	314.9	285.1	255.7	228.4	179.5
22.5°	452.1	445.6	435.5	416.4	388.5	355.6	321.8	287.6	254.4	223.7	169.5
25°	472.2	466.9	455.9	434.0	404.5	367.2	328.4	289.5	252.5	218.7	158.9
27.5°	487.9	482.8	470.6	448.1	418.0	377.6	333.4	290.5	250.0	213.7	147.9
30°	501.6	496.6	481.9	458.7	427.1	385.7	338.4	290.8	246.9	206.2	136.0
32.5°	512.3	507.6	492.6	467.8	433.3	391.4	341.2	290.5	242.8	200.8	123.1
35°	523.0	518.3	500.7	474.4	438.0	393.9	343.4	288.9	237.8	192.1	110.9
37.5°	531.1	525.8	507.9	478.8	440.2	394.5	343.1	286.7	232.5	184.9	98.7
40°	536.7	531.1	512.0	481.3	440.9	393.5	340.6	282.9	226.2	175.8	85.9
42.5°	540.5	534.2	513.9	485.0	439.6	391.0	336.8	278.2	219.3	167.9	73.6
45°	542.4	535.8	514.2	481.9	437.4	386.3	331.2	272.3	211.8	157.3	61.4
47.5°	541.4	534.2	512.6	478.5	433.3	381.3	324.9	265.1	202.7	147.9	49.8
50°	539.9	532.4	509.2	474.1	427.7	375.1	318.0	256.3	193.3	136.3	39.5
52.5°	534.9	527.3	505.4	467.8	421.1	367.9	308.6	247.2	183.3	125.0	30.1
55°	528.6	521.7	498.8	462.2	412.7	359.1	299.9	237.5	173.6	113.4	21.6
57.5°	518.9	512.6	490.7	453.1	404.2	349.4	290.1	226.9	161.4	101.8	15.0
60°	507.0	500.7	479.4	442.7	394.5	338.4	279.5	215.9	150.4	90.2	9.4
62.5°	494.4	488.5	466.2	429.9	382.3	326.8	267.9	204.9	138.8	79.6	5.6
65°	477.8	472.2	452.1	414.5	368.8	314.3	255.1	191.8	126.9	67.7	3.1
67.5°	460.3	455.3	434.9	400.4	353.1	300.5	241.9	178.9	114.4	57.3	1.6
70°	441.5	435.2	416.4	381.3	337.1	284.8	227.5	165.8	102.5	47.3	0.0
72.5°	419.6	414.9	396.7	363.5	318.7	268.2	212.8	151.3	89.3	37.6	0.3
75°	398.2	392.3	375.7	344.4	300.5	250.7	196.5	137.9	76.5	28.8	0.3
77.5°	370.7	368.8	353.1	322.7	283.3	233.7	178.6	121.6	64.2	20.7	0.3
80°	343.1	341.2	329.0	301.1	263.2	213.7	162.0	106.2	52.3	13.8	0.3
82.5°	315.8	313.3	301.7	278.6	242.8	196.8	144.8	90.9	41.4	8.5	0.3
85°	291.4	288.3	275.7	254.4	221.8	177.7	126.9	75.8	30.7	4.7	0.6
87.5°	270.4	268.2	254.4	232.5	200.5	159.8	111.2	61.4	21.6	2.2	0.9
90°	252.5	247.8	235.6	212.4	180.5	140.1	94.6	49.2	14.4	1.3	1.3
92.5°	235.0	230.9	217.5	193.6	162.6	123.1	78.6	37.6	9.1	0.6	1.6
95°	216.8	212.4	199.3	177.3	144.4	105.9	64.5	27.6	5.0	0.6	1.6
97.5°	199.0	194.9	181.1	159.2	128.2	90.9	51.1	19.4	2.5	0.6	1.3
100°	182.4	177.7	165.1	143.2	111.9	75.8	39.5	12.5	1.6	0.6	1.3
102.5°	164.8	161.1	148.2	126.9	94.9	61.7	29.5	7.8	0.6	0.6	0.9
105°	149.1	144.4	131.9	110.0	80.8	48.6	20.7	4.7	0.6	0.6	0.9



TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	97.1	93.4	82.4	63.9	41.0	19.1	5.6	0.9	0.9	0.9	0.9
115°	81.2	75.5	65.8	49.5	30.4	12.5	2.8	0.9	0.9	0.9	0.9
117.5°	64.9	60.2	53.3	37.6	20.1	8.1	1.6	0.9	0.9	0.9	0.9
120°	50.8	46.4	38.5	26.0	13.5	4.7	0.6	0.9	0.9	0.9	0.9
122.5°	36.3	32.9	26.0	16.9	8.1	2.2	0.9	0.9	1.3	1.3	0.9
125°	24.1	22.2	17.2	10.3	5.0	0.9	0.9	0.9	1.3	1.3	0.9
127.5°	15.7	14.1	10.0	6.0	2.2	0.9	0.9	1.3	1.3	1.3	0.9
130°	8.8	7.8	6.0	3.4	0.9	0.9	0.9	1.3	1.3	1.3	0.9
132.5°	5.0	4.7	3.1	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.3
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	246.0	246.0	246.0
2.5°	234.1	229.7	228.4
5°	221.5	214.3	210.2
7.5°	209.0	199.3	194.6
10°	197.4	183.6	178.6
12.5°	183.6	167.6	159.8
15°	170.5	149.8	142.3
17.5°	155.7	132.5	123.8
20°	141.9	115.3	106.2
22.5°	126.3	98.4	88.4
25°	112.2	81.5	70.2
27.5°	96.5	64.2	54.5
30°	81.8	49.2	39.5
32.5°	67.7	36.0	27.3
35°	54.5	24.4	17.2
37.5°	42.0	15.0	8.8
40°	30.4	7.8	4.1
42.5°	20.4	3.8	2.2
45°	12.5	1.9	0.0
47.5°	7.2	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	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°	1.6	2.2	2.5





TEST NUMBER: P550953

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	0.9	1.3	1.6
117.5°	0.9	1.3	1.3
120°	0.9	0.9	1.3
122.5°	0.9	0.9	1.3
125°	0.9	0.9	1.3
127.5°	1.3	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.3	0.9	0.9
135°	1.3	0.9	0.9
137.5°	1.3	0.9	0.9
140°	1.3	0.9	0.9
142.5°	1.3	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°	1.3	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°	131.6	127.8	115.3	94.6	66.1	37.0	13.8	2.5	0.6	0.9	0.9
110°	114.7	111.5	98.7	78.6	53.3	27.6	9.1	1.6	0.9	0.9	0.9







107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)