

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: P550441

Luminaire Tested: **FCC-X-2-LD4-1HI-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: P550441  
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-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**

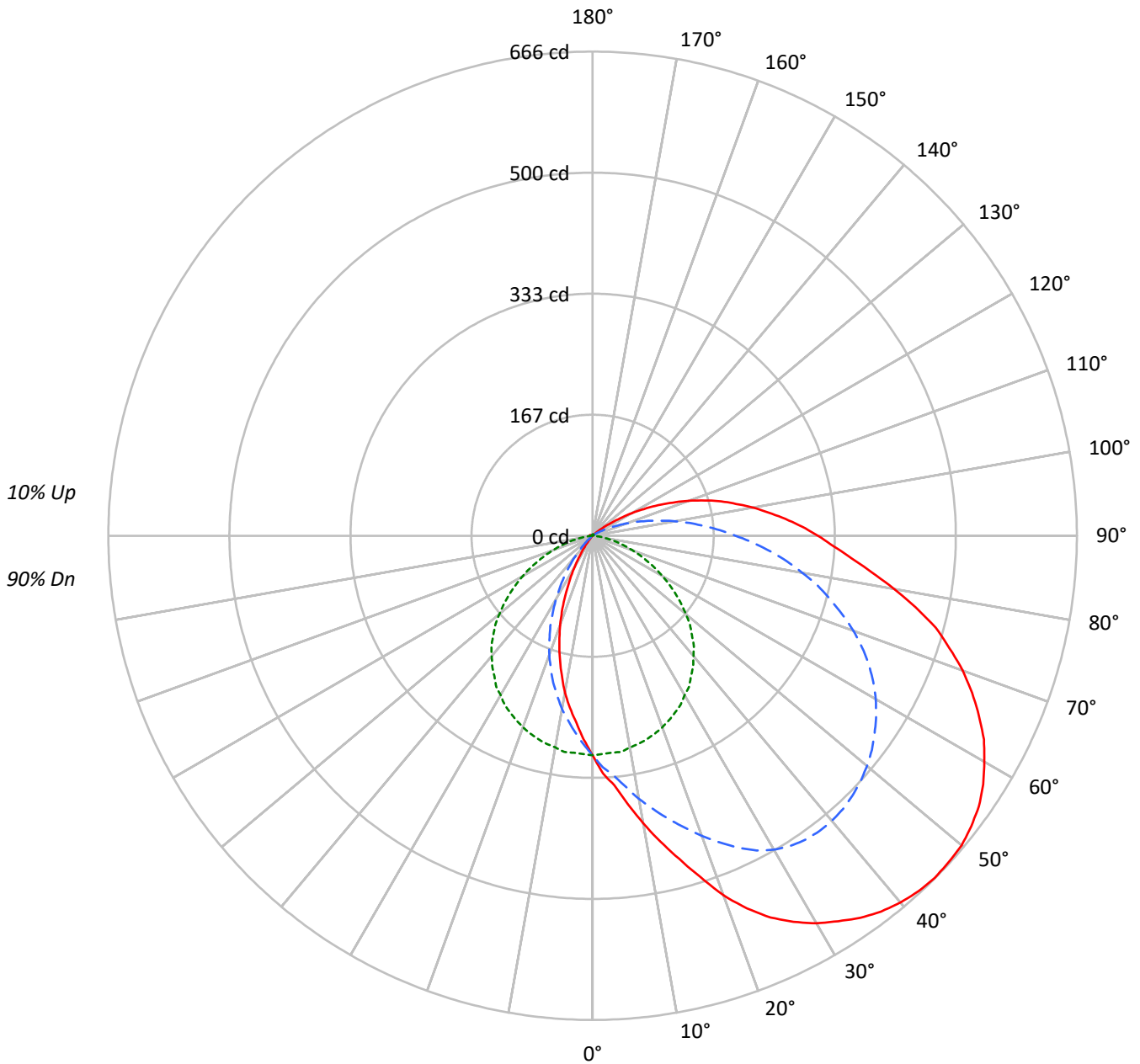
Lumens per Lamp: N/A  
Luminaire Lumens: 1492.1 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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

TEST NUMBER: P550441

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

### 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°	3249	3249	3249
5°	3566	3201	2671
10°	4036	3161	2201
15°	4522	3122	1715
20°	5100	3071	1263
25°	5580	3011	829
30°	5936	2933	467
35°	6246	2848	205
40°	6519	2743	49
45°	6754	2612	0
50°	6951	2437	0
55°	7101	2217	0
60°	7176	1959	0
65°	7206	1667	0
70°	7182	1361	0
75°	7090	1004	6
80°	6804	613	31
85°	6575	295	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.9	1.9
10°-20°	86.6	5.8
20°-30°	140.2	9.4
30°-40°	180.1	12.1
40°-50°	203.8	13.7
50°-60°	211.2	14.2
60°-70°	199.1	13.3
70°-80°	166.9	11.2
80°-90°	121.0	8.1
90°-100°	79.5	5.3
100°-110°	45.9	3.1
110°-120°	20.3	1.4
120°-130°	5.5	0.4
130°-140°	1.3	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°	255.6	17.1
0°-40°	435.7	29.2
0°-60°	850.7	57.0
0°-90°	1337.7	89.7
90°-120°	145.7	9.8
90°-150°	153.3	10.3
90°-180°	154.0	10.3
0°-180°	1492.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	302	302	302	302	302	
5°	344	331	300	272	258	35
15°	460	403	290	209	174	133
25°	579	473	268	138	86	268
35°	642	510	236	67	21	402
45°	666	505	193	15	0	514
55°	649	473	139	0	0	579
65°	586	419	83	0	0	580
75°	489	338	35	0	0	513
85°	358	245	6	2	2	305
90°	310	197	2	2	3	170
95°	266	154	1	3	4	209
105°	183	79	1	2	3	193
115°	100	26	1	1	2	100
125°	30	4	2	1	2	30
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°	301.8	301.8	301.8	301.8	301.8	301.8	301.8	301.8	301.8	301.8	301.8
2.5°	327.2	326.8	325.6	323.7	321.0	316.4	312.6	309.1	304.5	300.6	293.3
5°	344.5	342.5	341.0	339.1	332.9	328.7	321.8	314.1	306.8	299.5	284.9
7.5°	372.2	369.1	366.8	361.4	352.9	343.3	332.6	325.2	320.2	299.9	274.9
10°	401.8	399.1	394.4	384.8	374.5	360.6	345.2	327.9	312.6	295.6	266.0
12.5°	431.0	427.1	420.6	408.3	393.7	376.4	355.2	334.9	312.9	293.0	255.7
15°	460.2	456.0	449.0	434.0	414.8	392.1	366.4	340.6	314.9	289.5	244.9
17.5°	492.1	486.3	476.0	459.0	434.8	406.8	376.4	345.2	314.1	285.3	233.4
20°	526.3	518.2	507.1	484.4	456.0	422.9	386.4	349.9	313.7	280.3	220.3
22.5°	554.8	546.7	534.4	510.9	476.7	436.4	394.8	352.9	312.2	274.5	208.0
25°	579.4	572.8	559.4	532.5	496.3	450.6	402.9	355.2	309.9	268.3	194.9
27.5°	598.6	592.4	577.4	549.8	512.9	463.3	409.1	356.4	306.8	262.2	181.5
30°	615.5	609.4	591.3	562.8	524.0	473.3	415.2	356.8	302.9	253.0	166.9
32.5°	628.6	622.8	604.4	574.0	531.7	480.2	418.7	356.4	298.0	246.4	151.1
35°	641.7	635.9	614.4	582.1	537.5	483.3	421.4	354.5	291.8	235.7	136.1
37.5°	651.6	645.1	623.2	587.4	540.2	484.0	421.0	351.8	285.3	226.8	121.1
40°	658.6	651.6	628.2	590.5	540.9	482.9	417.9	347.2	277.6	215.7	105.3
42.5°	663.2	655.5	630.5	595.1	539.4	479.8	413.3	341.4	269.1	206.1	90.3
45°	665.5	657.4	630.9	591.3	536.7	474.0	406.4	334.1	259.9	193.0	75.4
47.5°	664.3	655.5	629.0	587.1	531.7	467.9	398.7	325.2	248.7	181.5	61.1
50°	662.4	653.2	624.7	581.7	524.8	460.2	390.2	314.5	237.2	167.2	48.4
52.5°	656.3	647.0	620.1	574.0	516.7	451.3	378.7	303.3	224.9	153.4	36.9
55°	648.6	640.1	612.0	567.1	506.3	440.6	367.9	291.4	213.0	139.2	26.5
57.5°	636.7	629.0	602.1	555.9	495.9	428.7	356.0	278.3	198.0	124.9	18.5
60°	622.0	614.4	588.2	543.2	484.0	415.2	342.9	264.9	184.5	110.7	11.5
62.5°	606.7	599.4	572.1	527.5	469.0	401.0	328.7	251.4	170.3	97.7	6.9
65°	586.3	579.4	554.8	508.6	452.5	385.6	312.9	235.3	155.7	83.0	3.8
67.5°	564.8	558.6	533.6	491.3	433.3	368.7	296.8	219.5	140.3	70.4	1.9
70°	541.7	534.0	510.9	467.9	413.7	349.5	279.1	203.4	125.7	58.1	0.0
72.5°	514.8	509.0	486.7	446.0	391.0	329.1	261.0	185.7	109.6	46.1	0.4
75°	488.6	481.3	461.0	422.5	368.7	307.6	241.1	169.2	93.8	35.4	0.4
77.5°	454.8	452.5	433.3	396.0	347.5	286.8	219.1	149.2	78.8	25.4	0.4
80°	421.0	418.7	403.7	369.5	322.9	262.2	198.8	130.3	64.2	16.9	0.4
82.5°	387.5	384.5	370.2	341.8	298.0	241.4	177.6	111.5	50.7	10.4	0.4
85°	357.5	353.7	338.3	312.2	272.2	218.0	155.7	93.0	37.7	5.8	0.8
87.5°	331.8	329.1	312.2	285.3	246.1	196.1	136.5	75.4	26.5	2.7	1.2
90°	309.9	304.1	289.1	260.7	221.4	171.9	116.1	60.4	17.7	1.5	1.5
92.5°	288.3	283.3	266.8	237.6	199.5	151.1	96.5	46.1	11.1	0.8	1.9
95°	266.0	260.7	244.5	217.6	177.2	129.9	79.2	33.8	6.2	0.8	1.9
97.5°	244.1	239.1	222.2	195.3	157.2	111.5	62.7	23.8	3.1	0.8	1.5
100°	223.8	218.0	202.6	175.7	137.2	93.0	48.4	15.4	1.9	0.8	1.5
102.5°	202.2	197.6	181.8	155.7	116.5	75.7	36.1	9.6	0.8	0.8	1.2
105°	183.0	177.2	161.9	134.9	99.2	59.6	25.4	5.8	0.8	0.8	1.2



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

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	119.2	114.6	101.1	78.4	50.4	23.5	6.9	1.2	1.2	1.2	1.2
115°	99.6	92.7	80.7	60.7	37.3	15.4	3.5	1.2	1.2	1.2	1.2
117.5°	79.6	73.8	65.4	46.1	24.6	10.0	1.9	1.2	1.2	1.2	1.2
120°	62.3	56.9	47.3	31.9	16.5	5.8	0.8	1.2	1.2	1.2	1.2
122.5°	44.6	40.4	31.9	20.8	10.0	2.7	1.2	1.2	1.5	1.5	1.2
125°	29.6	27.3	21.1	12.7	6.2	1.2	1.2	1.2	1.5	1.5	1.2
127.5°	19.2	17.3	12.3	7.3	2.7	1.2	1.2	1.5	1.5	1.5	1.2
130°	10.8	9.6	7.3	4.2	1.2	1.2	1.2	1.5	1.5	1.5	1.2
132.5°	6.2	5.8	3.8	0.8	1.2	1.2	1.2	1.5	1.5	1.5	1.5
135°	1.5	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.8	0.8	1.2	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.8	0.8	1.2	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.8	0.8	0.8	1.2	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.8	0.8	0.8	1.2	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.5	1.5	1.5
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.5
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.5	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.9	1.5
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°	301.8	301.8	301.8
2.5°	287.2	281.8	280.3
5°	271.8	263.0	258.0
7.5°	256.4	244.5	238.7
10°	242.2	225.3	219.1
12.5°	225.3	205.7	196.1
15°	209.1	183.8	174.5
17.5°	191.1	162.6	151.9
20°	174.2	141.5	130.3
22.5°	154.9	120.7	108.4
25°	137.6	100.0	86.1
27.5°	118.4	78.8	66.9
30°	100.3	60.4	48.4
32.5°	83.0	44.2	33.4
35°	66.9	30.0	21.1
37.5°	51.5	18.5	10.8
40°	37.3	9.6	5.0
42.5°	25.0	4.6	2.7
45°	15.4	2.3	0.0
47.5°	8.8	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	1.2
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	3.1	3.1
95°	2.7	3.1	3.5
97.5°	3.1	3.5	3.5
100°	2.7	3.5	3.8
102.5°	2.3	3.5	3.5
105°	1.9	2.7	3.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.2	1.5	1.9
117.5°	1.2	1.5	1.5
120°	1.2	1.2	1.5
122.5°	1.2	1.2	1.5
125°	1.2	1.2	1.5
127.5°	1.5	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.5	1.2	1.2
135°	1.5	1.2	1.2
137.5°	1.5	1.2	1.2
140°	1.5	1.2	1.2
142.5°	1.5	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°	1.5	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°	161.5	156.9	141.5	116.1	81.1	45.4	16.9	3.1	0.8	1.2	1.2
110°	140.7	136.9	121.1	96.5	65.4	33.8	11.1	1.9	1.2	1.2	1.2







107.5°	1.5	2.3	2.7
110°	1.5	1.9	2.3



(END OF REPORT)