

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: P550448

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-88-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: P550448  
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-81-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

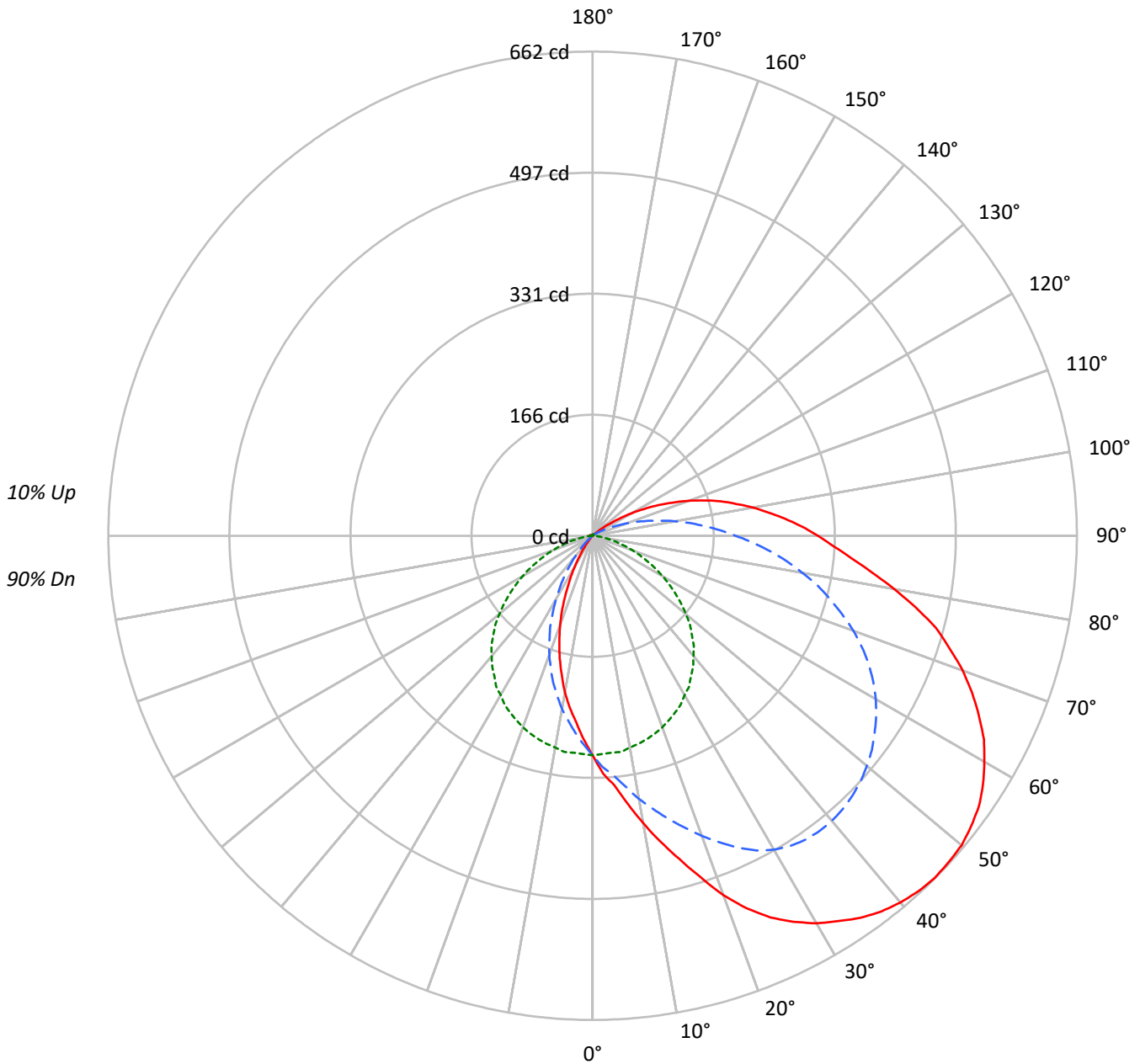
Lumens per Lamp: N/A  
Luminaire Lumens: 1482.9 lumens  
Efficiency: N/A  
Efficacy: 68.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P550448

CATALOG NUMBER: FCC-X-2-LD4-1HI-30-UNV-81-88-ED1D

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	3229	3229	3229
5°	3545	3182	2654
10°	4011	3143	2188
15°	4495	3102	1705
20°	5069	3052	1255
25°	5547	2993	824
30°	5901	2914	464
35°	6208	2830	204
40°	6480	2727	49
45°	6713	2595	0
50°	6909	2422	0
55°	7058	2202	0
60°	7133	1948	0
65°	7163	1657	0
70°	7138	1352	0
75°	7048	998	6
80°	6762	609	31
85°	6536	290	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.7	1.9
10°-20°	86.0	5.8
20°-30°	139.3	9.4
30°-40°	179.0	12.1
40°-50°	202.6	13.7
50°-60°	209.9	14.2
60°-70°	198.0	13.3
70°-80°	165.9	11.2
80°-90°	120.2	8.1
90°-100°	79.0	5.3
100°-110°	45.6	3.1
110°-120°	20.1	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°	254.1	17.1
0°-40°	433.1	29.2
0°-60°	845.6	57.0
0°-90°	1329.6	89.7
90°-120°	144.8	9.8
90°-150°	152.3	10.3
90°-180°	153.0	10.3
0°-180°	1482.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	300	300	300	300	300	
5°	342	329	298	270	256	35
15°	457	401	288	208	174	132
25°	576	471	267	137	86	266
35°	638	507	234	66	21	400
45°	662	502	192	15	0	511
55°	645	471	138	0	0	576
65°	583	417	82	0	0	577
75°	486	336	35	0	0	509
85°	355	244	6	2	2	303
90°	308	195	2	2	3	169
95°	264	153	1	3	3	207
105°	182	79	1	2	3	192
115°	99	26	1	1	2	99
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
2.5°	325.2	324.8	323.7	321.8	319.1	314.5	310.7	307.2	302.7	298.8	291.6
5°	342.4	340.5	339.0	337.0	330.9	326.7	319.8	312.2	304.9	297.7	283.2
7.5°	369.9	366.8	364.6	359.2	350.8	341.2	330.5	323.3	318.3	298.1	273.2
10°	399.3	396.7	392.1	382.5	372.2	358.4	343.2	326.0	310.7	293.9	264.4
12.5°	428.4	424.6	418.1	405.8	391.3	374.1	353.1	332.8	311.1	291.2	254.1
15°	457.4	453.2	446.3	431.4	412.3	389.8	364.2	338.6	313.0	287.7	243.4
17.5°	489.1	483.4	473.1	456.3	432.2	404.3	374.1	343.2	312.2	283.5	232.0
20°	523.1	515.1	504.0	481.5	453.2	420.3	384.0	347.7	311.8	278.6	219.0
22.5°	551.4	543.4	531.2	507.9	473.8	433.7	392.5	350.8	310.3	272.8	206.7
25°	575.9	569.4	556.0	529.3	493.3	447.9	400.5	353.1	308.0	266.7	193.7
27.5°	595.0	588.9	574.0	546.5	509.8	460.5	406.6	354.2	304.9	260.6	180.4
30°	611.8	605.7	587.7	559.4	520.8	470.4	412.7	354.6	301.1	251.4	165.8
32.5°	624.8	619.1	600.7	570.5	528.5	477.3	416.1	354.2	296.2	244.9	150.2
35°	637.8	632.0	610.7	578.6	534.2	480.3	418.8	352.3	290.0	234.2	135.3
37.5°	647.7	641.2	619.4	583.9	536.9	481.1	418.4	349.7	283.5	225.5	120.4
40°	654.6	647.7	624.4	587.0	537.7	480.0	415.4	345.1	275.9	214.4	104.7
42.5°	659.2	651.5	626.7	591.5	536.1	476.9	410.8	339.3	267.5	204.8	89.8
45°	661.5	653.4	627.1	587.7	533.5	471.2	403.9	332.1	258.3	191.8	74.9
47.5°	660.3	651.5	625.2	583.5	528.5	465.1	396.3	323.3	247.2	180.4	60.8
50°	658.4	649.2	621.0	578.2	521.6	457.4	387.9	312.6	235.8	166.2	48.1
52.5°	652.3	643.1	616.4	570.5	513.6	448.6	376.4	301.5	223.5	152.5	36.7
55°	644.7	636.3	608.4	563.6	503.3	437.9	365.7	289.7	211.7	138.3	26.4
57.5°	632.8	625.2	598.4	552.6	493.0	426.1	353.9	276.7	196.8	124.2	18.3
60°	618.3	610.7	584.7	540.0	481.1	412.7	340.9	263.3	183.4	110.1	11.5
62.5°	603.0	595.7	568.6	524.3	466.2	398.6	326.7	249.9	169.3	97.1	6.9
65°	582.8	575.9	551.4	505.6	449.8	383.3	311.1	233.9	154.8	82.5	3.8
67.5°	561.4	555.2	530.4	488.4	430.7	366.5	295.0	218.2	139.5	69.9	1.9
70°	538.4	530.8	507.9	465.1	411.2	347.4	277.4	202.1	125.0	57.7	0.0
72.5°	511.7	505.9	483.8	443.3	388.6	327.1	259.5	184.6	108.9	45.9	0.4
75°	485.7	478.4	458.2	420.0	366.5	305.7	239.6	168.1	93.2	35.2	0.4
77.5°	452.1	449.8	430.7	393.6	345.4	285.1	217.8	148.3	78.3	25.2	0.4
80°	418.4	416.1	401.2	367.2	321.0	260.6	197.6	129.5	63.8	16.8	0.4
82.5°	385.2	382.1	368.0	339.7	296.2	240.0	176.5	110.8	50.4	10.3	0.4
85°	355.4	351.6	336.3	310.3	270.6	216.7	154.8	92.5	37.4	5.7	0.8
87.5°	329.8	327.1	310.3	283.5	244.6	194.9	135.7	74.9	26.4	2.7	1.1
90°	308.0	302.3	287.4	259.1	220.1	170.8	115.4	60.0	17.6	1.5	1.5
92.5°	286.6	281.6	265.2	236.2	198.3	150.2	95.9	45.9	11.1	0.8	1.9
95°	264.4	259.1	243.0	216.3	176.2	129.2	78.7	33.6	6.1	0.8	1.9
97.5°	242.7	237.7	220.9	194.1	156.3	110.8	62.3	23.7	3.1	0.8	1.5
100°	222.4	216.7	201.4	174.6	136.4	92.5	48.1	15.3	1.9	0.8	1.5
102.5°	201.0	196.4	180.7	154.8	115.8	75.3	35.9	9.6	0.8	0.8	1.1
105°	181.9	176.2	160.9	134.1	98.6	59.2	25.2	5.7	0.8	0.8	1.1



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CATALOG NUMBER: FCC-X-2-LD4-1HI-30-UNV-81-88-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	118.5	113.9	100.5	78.0	50.1	23.3	6.9	1.1	1.1	1.1	1.1
115°	99.0	92.1	80.2	60.4	37.1	15.3	3.4	1.1	1.1	1.1	1.1
117.5°	79.1	73.4	65.0	45.9	24.5	9.9	1.9	1.1	1.1	1.1	1.1
120°	61.9	56.6	47.0	31.7	16.4	5.7	0.8	1.1	1.1	1.1	1.1
122.5°	44.3	40.1	31.7	20.6	9.9	2.7	1.1	1.1	1.5	1.5	1.1
125°	29.4	27.1	21.0	12.6	6.1	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	19.1	17.2	12.2	7.3	2.7	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.7	9.6	7.3	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



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	300.0	300.0	300.0
2.5°	285.5	280.1	278.6
5°	270.2	261.4	256.4
7.5°	254.9	243.0	237.3
10°	240.7	223.9	217.8
12.5°	223.9	204.4	194.9
15°	207.9	182.7	173.5
17.5°	189.9	161.6	150.9
20°	173.1	140.6	129.5
22.5°	154.0	120.0	107.8
25°	136.8	99.4	85.6
27.5°	117.7	78.3	66.5
30°	99.7	60.0	48.1
32.5°	82.5	43.9	33.2
35°	66.5	29.8	21.0
37.5°	51.2	18.3	10.7
40°	37.1	9.6	5.0
42.5°	24.8	4.6	2.7
45°	15.3	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	1.1
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	3.1	3.1
95°	2.7	3.1	3.4
97.5°	3.1	3.4	3.4
100°	2.7	3.4	3.8
102.5°	2.3	3.4	3.4
105°	1.9	2.7	3.1





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**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°	160.5	155.9	140.6	115.4	80.6	45.1	16.8	3.1	0.8	1.1	1.1
110°	139.9	136.0	120.4	95.9	65.0	33.6	11.1	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)