

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: P550592

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-82-88-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: P550592  
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-82-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

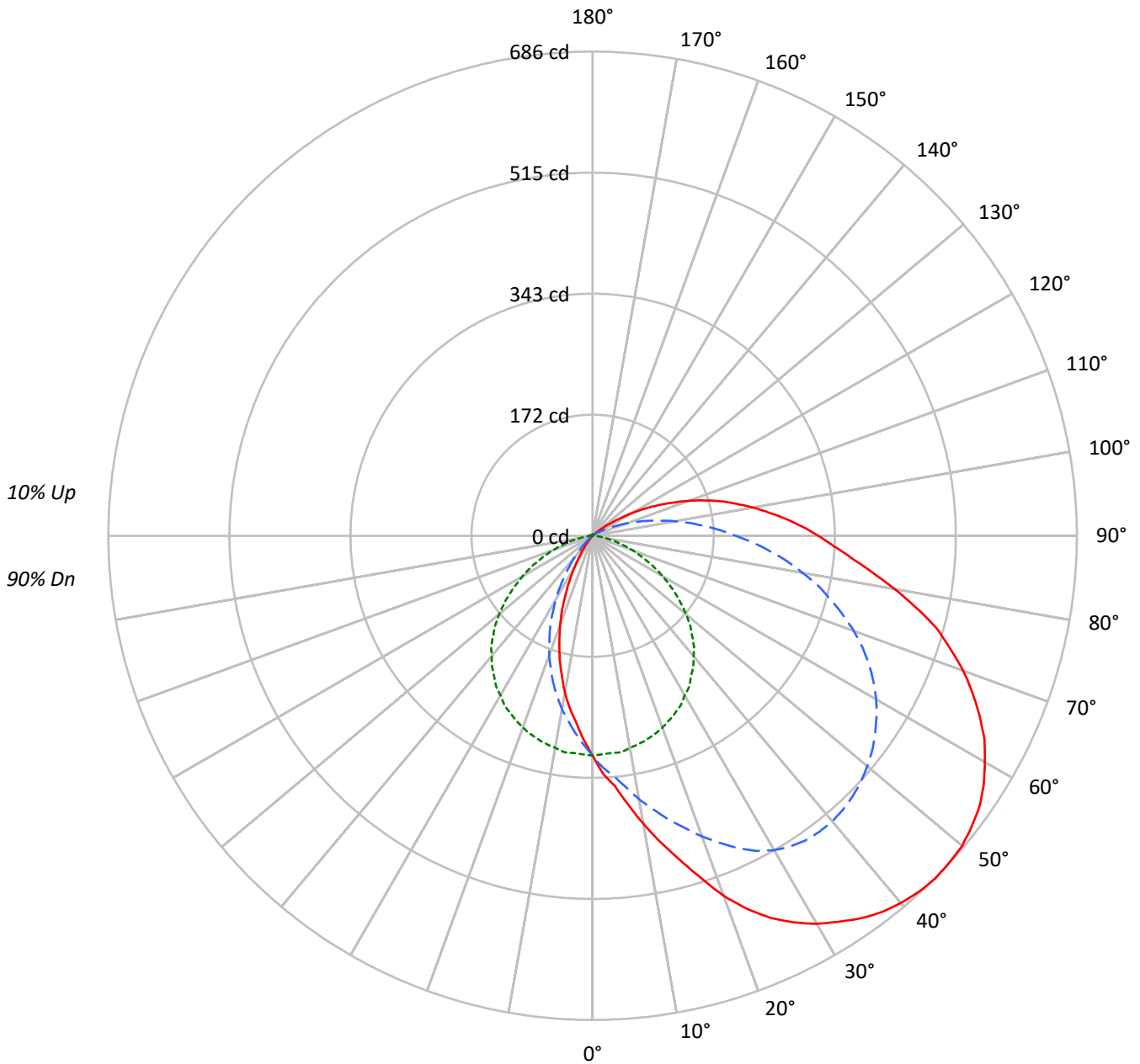
Lumens per Lamp: N/A  
Luminaire Lumens: 1539.1 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-82-88-ED1D

### Luminous Intensity Polar Plot





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

RF	20				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°	3351	3351	3351
5°	3678	3302	2755
10°	4162	3262	2270
15°	4665	3220	1769
20°	5261	3167	1302
25°	5756	3106	855
30°	6124	3024	482
35°	6442	2937	212
40°	6724	2830	51
45°	6967	2694	0
50°	7170	2514	0
55°	7324	2287	0
60°	7402	2021	0
65°	7433	1721	0
70°	7409	1403	0
75°	7313	1035	6
80°	7017	631	32
85°	6783	300	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.8	1.9
10°-20°	89.3	5.8
20°-30°	144.6	9.4
30°-40°	185.7	12.1
40°-50°	210.3	13.7
50°-60°	217.8	14.2
60°-70°	205.4	13.3
70°-80°	172.2	11.2
80°-90°	124.8	8.1
90°-100°	82.0	5.3
100°-110°	47.4	3.1
110°-120°	20.9	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	263.7	17.1
0°-40°	449.4	29.2
0°-60°	877.5	57.0
0°-90°	1379.9	89.7
90°-120°	150.3	9.8
90°-150°	158.1	10.3
90°-180°	159.0	10.3
0°-180°	1539.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	311	311	311	311	311	
5°	355	341	309	280	266	36
15°	475	416	299	216	180	137
25°	598	488	277	142	89	276
35°	662	526	243	69	22	415
45°	686	521	199	16	0	530
55°	669	488	144	0	0	597
65°	605	432	86	0	0	598
75°	504	349	36	0	0	529
85°	369	253	6	2	2	315
90°	320	203	2	2	3	175
95°	274	158	1	3	4	215
105°	189	82	1	2	3	199
115°	103	27	1	1	2	103
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°	311.3	311.3	311.3	311.3	311.3	311.3	311.3	311.3	311.3	311.3	311.3
2.5°	337.5	337.1	335.9	333.9	331.1	326.4	322.4	318.8	314.1	310.1	302.6
5°	355.3	353.3	351.8	349.8	343.4	339.1	331.9	324.0	316.5	308.9	293.9
7.5°	383.9	380.7	378.3	372.8	364.0	354.1	343.0	335.5	330.3	309.3	283.5
10°	414.4	411.6	406.9	397.0	386.3	372.0	356.1	338.3	322.4	305.0	274.4
12.5°	444.5	440.6	433.8	421.2	406.1	388.2	366.4	345.4	322.8	302.2	263.7
15°	474.7	470.3	463.2	447.7	427.9	404.5	377.9	351.4	324.8	298.6	252.6
17.5°	507.6	501.7	490.9	473.5	448.5	419.6	388.2	356.1	324.0	294.3	240.7
20°	542.9	534.6	523.1	499.7	470.3	436.2	398.5	360.9	323.6	289.1	227.2
22.5°	572.2	563.9	551.2	527.0	491.7	450.1	407.3	364.0	322.0	283.1	214.5
25°	597.6	590.9	577.0	549.2	512.0	464.8	415.6	366.4	319.6	276.8	201.1
27.5°	617.5	611.1	595.6	567.1	529.0	477.9	421.9	367.6	316.5	270.5	187.2
30°	634.9	628.6	609.9	580.6	540.5	488.2	428.3	368.0	312.5	260.9	172.1
32.5°	648.4	642.4	623.4	592.1	548.4	495.3	431.9	367.6	307.3	254.2	155.8
35°	661.9	655.9	633.7	600.4	554.4	498.5	434.6	365.6	301.0	243.1	140.4
37.5°	672.2	665.4	642.8	605.9	557.2	499.3	434.2	362.9	294.3	234.0	124.9
40°	679.3	672.2	648.0	609.1	558.0	498.1	431.1	358.1	286.3	222.5	108.7
42.5°	684.1	676.1	650.4	613.9	556.4	494.9	426.3	352.1	277.6	212.6	93.2
45°	686.5	678.1	650.8	609.9	553.6	489.0	419.2	344.6	268.1	199.1	77.7
47.5°	685.3	676.1	648.8	605.6	548.4	482.6	411.2	335.5	256.6	187.2	63.1
50°	683.3	673.8	644.4	600.0	541.3	474.7	402.5	324.4	244.7	172.5	50.0
52.5°	676.9	667.4	639.7	592.1	533.0	465.6	390.6	312.9	232.0	158.2	38.1
55°	669.0	660.3	631.3	584.9	522.3	454.5	379.5	300.6	219.7	143.6	27.4
57.5°	656.7	648.8	621.0	573.4	511.6	442.2	367.2	287.1	204.2	128.9	19.0
60°	641.6	633.7	606.7	560.3	499.3	428.3	353.7	273.2	190.4	114.2	11.9
62.5°	625.8	618.2	590.1	544.1	483.8	413.6	339.1	259.4	175.7	100.7	7.1
65°	604.8	597.6	572.2	524.7	466.8	397.8	322.8	242.7	160.6	85.7	4.0
67.5°	582.6	576.2	550.4	506.8	446.9	380.3	306.1	226.4	144.7	72.6	2.0
70°	558.8	550.8	527.0	482.6	426.7	360.5	287.9	209.8	129.7	59.9	0.0
72.5°	531.0	525.1	502.1	460.0	403.3	339.5	269.3	191.5	113.0	47.6	0.4
75°	504.0	496.5	475.5	435.8	380.3	317.3	248.6	174.5	96.8	36.5	0.4
77.5°	469.1	466.8	446.9	408.5	358.5	295.8	226.0	153.9	81.3	26.2	0.4
80°	434.2	431.9	416.4	381.1	333.1	270.5	205.0	134.4	66.2	17.4	0.4
82.5°	399.7	396.6	381.9	352.5	307.3	249.0	183.2	115.0	52.3	10.7	0.4
85°	368.8	364.8	349.0	322.0	280.8	224.9	160.6	96.0	38.9	5.9	0.8
87.5°	342.2	339.5	322.0	294.3	253.8	202.2	140.8	77.7	27.4	2.8	1.2
90°	319.6	313.7	298.2	268.9	228.4	177.3	119.8	62.3	18.2	1.6	1.6
92.5°	297.4	292.3	275.2	245.1	205.8	155.8	99.5	47.6	11.5	0.8	2.0
95°	274.4	268.9	252.2	224.5	182.8	134.0	81.7	34.9	6.3	0.8	2.0
97.5°	251.8	246.7	229.2	201.5	162.2	115.0	64.6	24.6	3.2	0.8	1.6
100°	230.8	224.9	209.0	181.2	141.6	96.0	50.0	15.9	2.0	0.8	1.6
102.5°	208.6	203.8	187.6	160.6	120.2	78.1	37.3	9.9	0.8	0.8	1.2
105°	188.8	182.8	167.0	139.2	102.3	61.5	26.2	5.9	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	122.9	118.2	104.3	80.9	51.9	24.2	7.1	1.2	1.2	1.2	1.2
115°	102.7	95.6	83.3	62.7	38.5	15.9	3.6	1.2	1.2	1.2	1.2
117.5°	82.1	76.1	67.4	47.6	25.4	10.3	2.0	1.2	1.2	1.2	1.2
120°	64.2	58.7	48.8	32.9	17.1	5.9	0.8	1.2	1.2	1.2	1.2
122.5°	46.0	41.6	32.9	21.4	10.3	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.5	28.2	21.8	13.1	6.3	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.8	17.8	12.7	7.5	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.1	9.9	7.5	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.3	5.9	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
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°	311.3	311.3	311.3
2.5°	296.2	290.7	289.1
5°	280.4	271.2	266.1
7.5°	264.5	252.2	246.3
10°	249.8	232.4	226.0
12.5°	232.4	212.2	202.2
15°	215.7	189.6	180.0
17.5°	197.1	167.7	156.6
20°	179.6	145.9	134.4
22.5°	159.8	124.5	111.8
25°	142.0	103.1	88.8
27.5°	122.1	81.3	69.0
30°	103.5	62.3	50.0
32.5°	85.7	45.6	34.5
35°	69.0	30.9	21.8
37.5°	53.1	19.0	11.1
40°	38.5	9.9	5.2
42.5°	25.8	4.8	2.8
45°	15.9	2.4	0.0
47.5°	9.1	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	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°	1.6	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°	166.6	161.8	145.9	119.8	83.7	46.8	17.4	3.2	0.8	1.2	1.2
110°	145.1	141.2	124.9	99.5	67.4	34.9	11.5	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)