

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: P551082

Luminaire Tested: **FCC-X-2-LD4-1STD-40-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: P551082  
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-40-UNV-81-85-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

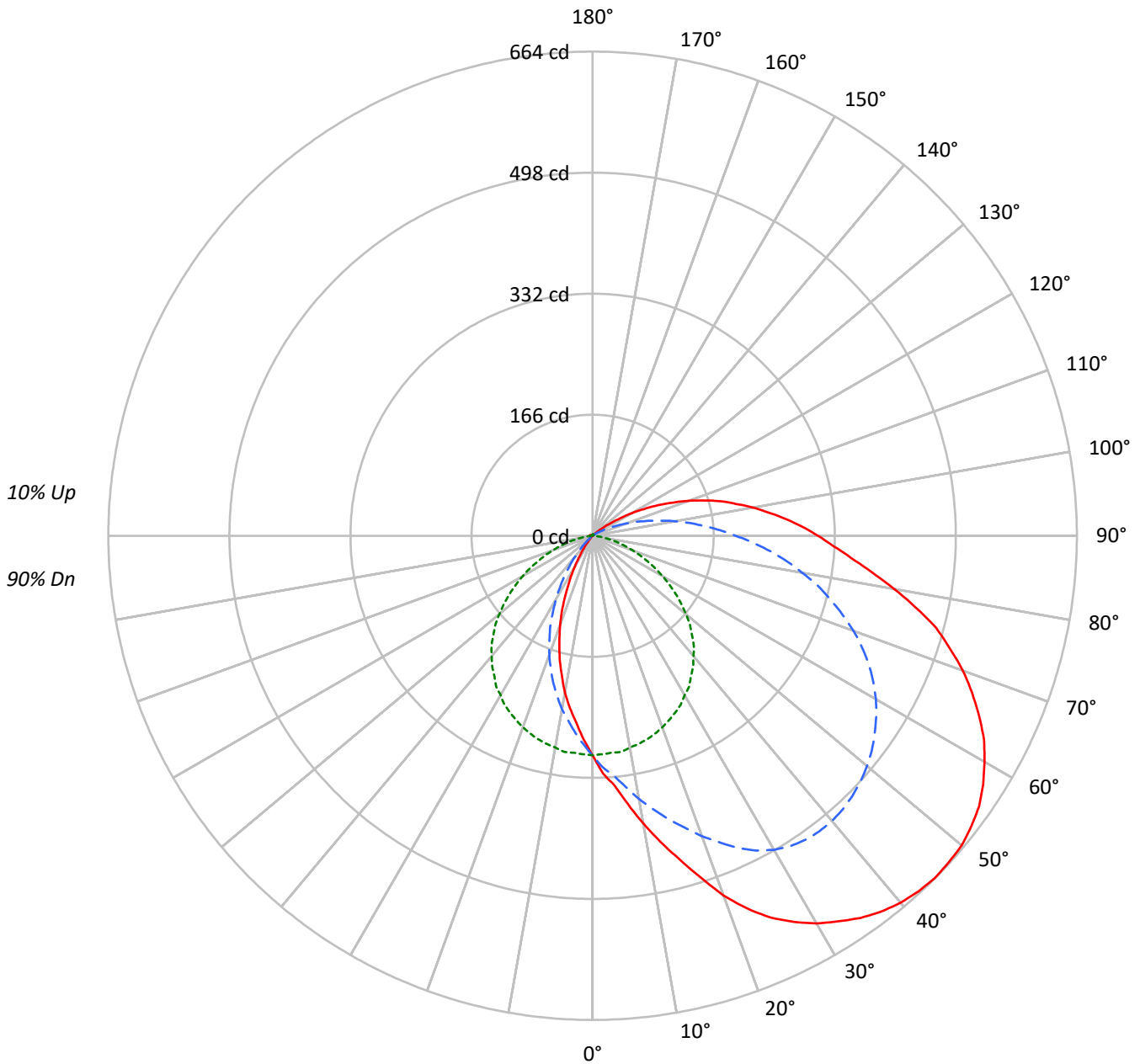
Lumens per Lamp: N/A  
Luminaire Lumens: 1488.1 lumens  
Efficiency: N/A  
Efficacy: 89.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551082

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-85-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551082

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

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

	0°	90°	180°
0°	3240	3240	3240
5°	3556	3193	2664
10°	4025	3154	2196
15°	4511	3113	1711
20°	5087	3062	1260
25°	5565	3003	827
30°	5921	2925	466
35°	6228	2839	205
40°	6501	2736	49
45°	6735	2605	0
50°	6932	2431	0
55°	7081	2210	0
60°	7157	1954	0
65°	7186	1663	0
70°	7162	1356	0
75°	7071	1001	6
80°	6784	613	31
85°	6559	295	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.8	1.9
10°-20°	86.3	5.8
20°-30°	139.8	9.4
30°-40°	179.6	12.1
40°-50°	203.3	13.7
50°-60°	210.6	14.2
60°-70°	198.6	13.3
70°-80°	166.5	11.2
80°-90°	120.7	8.1
90°-100°	79.3	5.3
100°-110°	45.8	3.1
110°-120°	20.2	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°	255.0	17.1
0°-40°	434.5	29.2
0°-60°	848.4	57.0
0°-90°	1334.1	89.7
90°-120°	145.3	9.8
90°-150°	152.9	10.3
90°-180°	154.0	10.3
0°-180°	1488.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	301	301	301	301	301	
5°	344	330	299	271	257	35
15°	459	402	289	209	174	132
25°	578	472	268	137	86	267
35°	640	509	235	67	21	401
45°	664	504	192	15	0	512
55°	647	472	139	0	0	578
65°	585	418	83	0	0	578
75°	487	337	35	0	0	511
85°	357	244	6	2	2	305
90°	309	196	2	2	3	169
95°	265	153	1	3	4	208
105°	182	79	1	2	3	193
115°	99	26	1	1	2	99
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	



TEST NUMBER: P551082

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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
2.5°	326.3	325.9	324.8	322.8	320.2	315.6	311.7	308.3	303.7	299.8	292.6
5°	343.5	341.6	340.1	338.2	332.0	327.8	320.9	313.3	306.0	298.7	284.1
7.5°	371.2	368.1	365.8	360.4	352.0	342.4	331.7	324.4	319.4	299.1	274.1
10°	400.7	398.0	393.4	383.8	373.5	359.7	344.3	327.1	311.7	294.9	265.3
12.5°	429.8	426.0	419.5	407.2	392.6	375.4	354.3	334.0	312.1	292.2	255.0
15°	459.0	454.7	447.8	432.9	413.7	391.1	365.4	339.7	314.0	288.7	244.2
17.5°	490.8	485.0	474.7	457.8	433.7	405.7	375.4	344.3	313.3	284.5	232.7
20°	524.9	516.9	505.7	483.1	454.7	421.8	385.3	348.9	312.9	279.5	219.7
22.5°	553.3	545.2	533.0	509.6	475.4	435.2	393.8	352.0	311.3	273.8	207.4
25°	577.8	571.3	557.9	531.0	495.0	449.4	401.8	354.3	309.0	267.6	194.4
27.5°	597.0	590.9	575.9	548.3	511.5	462.0	408.0	355.4	306.0	261.5	181.0
30°	613.9	607.7	589.7	561.3	522.6	472.0	414.1	355.8	302.1	252.3	166.4
32.5°	626.9	621.1	602.7	572.4	530.3	478.9	417.5	355.4	297.2	245.8	150.7
35°	639.9	634.2	612.7	580.5	536.0	482.0	420.2	353.5	291.0	235.0	135.7
37.5°	649.9	643.4	621.5	585.9	538.7	482.7	419.8	350.8	284.5	226.2	120.8
40°	656.8	649.9	626.5	588.9	539.5	481.6	416.8	346.2	276.8	215.1	105.1
42.5°	661.4	653.7	628.8	593.5	537.9	478.5	412.2	340.5	268.4	205.5	90.1
45°	663.7	655.7	629.2	589.7	535.3	472.8	405.3	333.2	259.2	192.5	75.2
47.5°	662.6	653.7	627.3	585.5	530.3	466.6	397.6	324.4	248.1	181.0	61.0
50°	660.6	651.4	623.1	580.1	523.4	459.0	389.2	313.6	236.6	166.8	48.3
52.5°	654.5	645.3	618.5	572.4	515.3	450.1	377.7	302.5	224.3	153.0	36.8
55°	646.8	638.4	610.4	565.5	505.0	439.4	366.9	290.6	212.4	138.8	26.5
57.5°	634.9	627.3	600.4	554.4	494.6	427.5	355.0	277.6	197.5	124.6	18.4
60°	620.4	612.7	586.6	541.8	482.7	414.1	342.0	264.2	184.0	110.4	11.5
62.5°	605.0	597.8	570.5	526.1	467.8	399.9	327.8	250.8	169.9	97.4	6.9
65°	584.7	577.8	553.3	507.3	451.3	384.6	312.1	234.7	155.3	82.8	3.8
67.5°	563.2	557.1	532.2	490.0	432.1	367.7	296.0	218.9	139.9	70.2	1.9
70°	540.2	532.6	509.6	466.6	412.6	348.5	278.4	202.8	125.4	57.9	0.0
72.5°	513.4	507.7	485.4	444.8	389.9	328.2	260.3	185.2	109.3	46.0	0.4
75°	487.3	480.0	459.7	421.4	367.7	306.7	240.4	168.7	93.6	35.3	0.4
77.5°	453.6	451.3	432.1	394.9	346.6	286.0	218.6	148.8	78.6	25.3	0.4
80°	419.8	417.5	402.6	368.5	322.1	261.5	198.2	130.0	64.0	16.9	0.4
82.5°	386.5	383.4	369.2	340.9	297.2	240.8	177.1	111.2	50.6	10.4	0.4
85°	356.6	352.7	337.4	311.3	271.5	217.4	155.3	92.8	37.6	5.8	0.8
87.5°	330.9	328.2	311.3	284.5	245.4	195.5	136.1	75.2	26.5	2.7	1.2
90°	309.0	303.3	288.3	260.0	220.9	171.4	115.8	60.2	17.6	1.5	1.5
92.5°	287.6	282.6	266.1	237.0	199.0	150.7	96.2	46.0	11.1	0.8	1.9
95°	265.3	260.0	243.9	217.0	176.8	129.6	79.0	33.7	6.1	0.8	1.9
97.5°	243.5	238.5	221.6	194.8	156.8	111.2	62.5	23.8	3.1	0.8	1.5
100°	223.2	217.4	202.1	175.2	136.9	92.8	48.3	15.3	1.9	0.8	1.5
102.5°	201.7	197.1	181.4	155.3	116.2	75.5	36.0	9.6	0.8	0.8	1.2
105°	182.5	176.8	161.4	134.6	98.9	59.4	25.3	5.8	0.8	0.8	1.2



TEST NUMBER: P551082

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-85-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	118.9	114.3	100.8	78.2	50.2	23.4	6.9	1.2	1.2	1.2	1.2
115°	99.3	92.4	80.5	60.6	37.2	15.3	3.5	1.2	1.2	1.2	1.2
117.5°	79.4	73.6	65.2	46.0	24.5	10.0	1.9	1.2	1.2	1.2	1.2
120°	62.1	56.7	47.2	31.8	16.5	5.8	0.8	1.2	1.2	1.2	1.2
122.5°	44.5	40.3	31.8	20.7	10.0	2.7	1.2	1.2	1.5	1.5	1.2
125°	29.5	27.2	21.1	12.7	6.1	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°	10.7	9.6	7.3	4.2	1.2	1.2	1.2	1.5	1.5	1.5	1.2
132.5°	6.1	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



TEST NUMBER: P551082

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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	301.0	301.0	301.0
2.5°	286.4	281.0	279.5
5°	271.1	262.3	257.3
7.5°	255.7	243.9	238.1
10°	241.6	224.7	218.6
12.5°	224.7	205.1	195.5
15°	208.6	183.3	174.1
17.5°	190.6	162.2	151.5
20°	173.7	141.1	130.0
22.5°	154.5	120.4	108.1
25°	137.3	99.7	85.9
27.5°	118.1	78.6	66.7
30°	100.1	60.2	48.3
32.5°	82.8	44.1	33.4
35°	66.7	29.9	21.1
37.5°	51.4	18.4	10.7
40°	37.2	9.6	5.0
42.5°	24.9	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	1.2
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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CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-85-ED1D

**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°	161.0	156.4	141.1	115.8	80.9	45.2	16.9	3.1	0.8	1.2	1.2
110°	140.3	136.5	120.8	96.2	65.2	33.7	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)