

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: P550955

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-81-86-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: P550955  
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-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

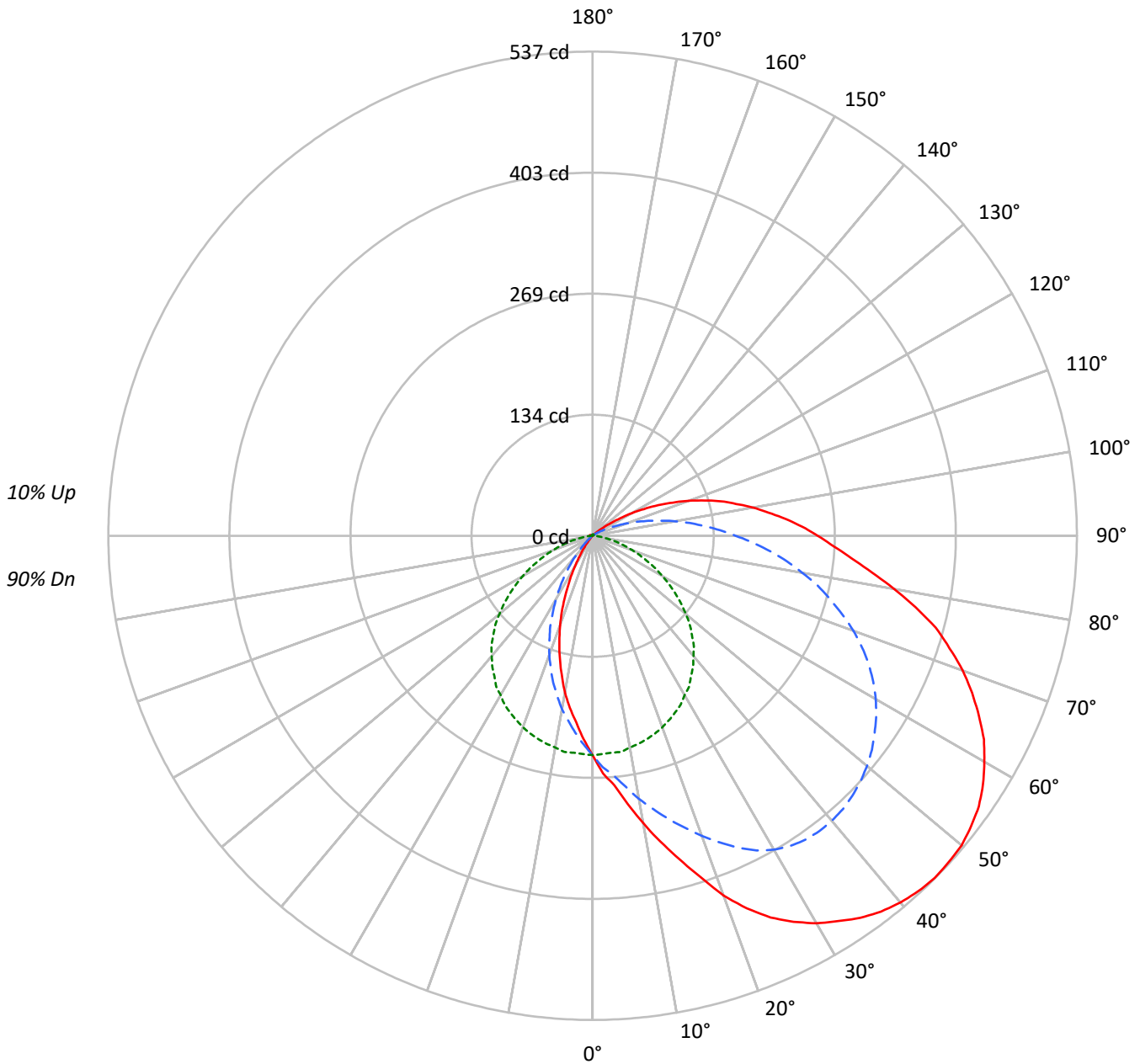
Lumens per Lamp: N/A  
Luminaire Lumens: 1202.9 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (Ain): 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-LD4-1STD-30-UNV-81-86-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°	2619	2619	2619
5°	2875	2581	2153
10°	3253	2550	1775
15°	3647	2517	1383
20°	4113	2476	1019
25°	4499	2429	668
30°	4787	2365	377
35°	5036	2296	165
40°	5256	2212	40
45°	5446	2105	0
50°	5604	1965	0
55°	5725	1787	0
60°	5787	1580	0
65°	5810	1346	0
70°	5791	1096	0
75°	5717	808	4
80°	5485	493	24
85°	5302	234	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.3	1.9
10°-20°	69.8	5.8
20°-30°	113.0	9.4
30°-40°	145.2	12.1
40°-50°	164.3	13.7
50°-60°	170.3	14.2
60°-70°	160.6	13.3
70°-80°	134.6	11.2
80°-90°	97.5	8.1
90°-100°	64.1	5.3
100°-110°	37.0	3.1
110°-120°	16.3	1.4
120°-130°	4.4	0.4
130°-140°	1.0	0.1
140°-150°	0.6	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	206.1	17.1
0°-40°	351.3	29.2
0°-60°	685.9	57.0
0°-90°	1078.6	89.7
90°-120°	117.4	9.8
90°-150°	123.5	10.3
90°-180°	124.0	10.3
0°-180°	1202.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	243	243	243	243	243	
5°	278	267	242	219	208	28
15°	371	325	233	169	141	107
25°	467	382	216	111	69	216
35°	517	412	190	54	17	324
45°	537	407	156	12	0	414
55°	523	382	112	0	0	467
65°	473	338	67	0	0	468
75°	394	273	28	0	0	413
85°	288	198	5	1	2	246
90°	250	159	1	2	2	137
95°	214	124	1	2	3	168
105°	148	64	1	2	2	156
115°	80	21	1	1	2	80
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	243.3	243.3	243.3	243.3	243.3	243.3	243.3	243.3	243.3	243.3	243.3
2.5°	263.8	263.5	262.6	261.0	258.8	255.1	252.0	249.2	245.5	242.4	236.5
5°	277.7	276.2	275.0	273.4	268.4	265.0	259.5	253.3	247.4	241.5	229.7
7.5°	300.1	297.6	295.7	291.4	284.6	276.8	268.1	262.2	258.2	241.8	221.6
10°	323.9	321.8	318.0	310.3	301.9	290.8	278.4	264.4	252.0	238.4	214.5
12.5°	347.5	344.4	339.1	329.2	317.4	303.5	286.4	270.0	252.3	236.2	206.1
15°	371.1	367.6	362.1	350.0	334.5	316.2	295.4	274.6	253.9	233.4	197.5
17.5°	396.8	392.1	383.8	370.1	350.6	328.0	303.5	278.4	253.3	230.0	188.2
20°	424.4	417.9	408.9	390.6	367.6	341.0	311.5	282.1	252.9	226.0	177.6
22.5°	447.3	440.8	430.9	412.0	384.4	351.8	318.4	284.6	251.7	221.3	167.7
25°	467.1	461.9	451.0	429.3	400.2	363.3	324.9	286.4	249.8	216.4	157.2
27.5°	482.6	477.7	465.6	443.3	413.5	373.5	329.8	287.4	247.4	211.4	146.3
30°	496.3	491.3	476.8	453.8	422.5	381.6	334.8	287.7	244.3	204.0	134.5
32.5°	506.8	502.2	487.3	462.8	428.7	387.2	337.6	287.4	240.2	198.7	121.8
35°	517.4	512.7	495.4	469.3	433.4	389.7	339.7	285.8	235.3	190.0	109.7
37.5°	525.4	520.2	502.5	473.7	435.5	390.3	339.4	283.6	230.0	182.9	97.6
40°	531.0	525.4	506.5	476.1	436.1	389.3	337.0	279.9	223.8	173.9	84.9
42.5°	534.7	528.5	508.4	479.9	434.9	386.9	333.2	275.3	217.0	166.2	72.8
45°	536.6	530.1	508.7	476.8	432.7	382.2	327.7	269.4	209.5	155.6	60.8
47.5°	535.7	528.5	507.1	473.3	428.7	377.3	321.5	262.2	200.6	146.3	49.3
50°	534.1	526.7	503.7	469.0	423.1	371.1	314.6	253.6	191.3	134.8	39.1
52.5°	529.1	521.7	500.0	462.8	416.6	363.9	305.3	244.6	181.3	123.7	29.8
55°	522.9	516.1	493.5	457.2	408.2	355.2	296.7	235.0	171.7	112.2	21.4
57.5°	513.3	507.1	485.4	448.2	399.9	345.6	287.0	224.4	159.6	100.7	14.9
60°	501.6	495.4	474.3	438.0	390.3	334.8	276.5	213.6	148.8	89.3	9.3
62.5°	489.2	483.3	461.3	425.3	378.2	323.3	265.0	202.7	137.3	78.7	5.6
65°	472.7	467.1	447.3	410.1	364.9	310.9	252.3	189.7	125.5	67.0	3.1
67.5°	455.4	450.4	430.3	396.2	349.4	297.3	239.3	177.0	113.1	56.7	1.5
70°	436.8	430.6	412.0	377.3	333.5	281.8	225.0	164.0	101.4	46.8	0.0
72.5°	415.1	410.4	392.4	359.6	315.3	265.3	210.5	149.7	88.3	37.2	0.3
75°	394.0	388.1	371.7	340.7	297.3	248.0	194.4	136.4	75.6	28.5	0.3
77.5°	366.7	364.9	349.4	319.3	280.2	231.2	176.7	120.3	63.5	20.5	0.3
80°	339.4	337.6	325.5	297.9	260.4	211.4	160.3	105.1	51.8	13.6	0.3
82.5°	312.5	310.0	298.5	275.6	240.2	194.7	143.2	89.9	40.9	8.4	0.3
85°	288.3	285.2	272.8	251.7	219.5	175.8	125.5	75.0	30.4	4.6	0.6
87.5°	267.5	265.3	251.7	230.0	198.4	158.1	110.0	60.8	21.4	2.2	0.9
90°	249.8	245.2	233.1	210.2	178.6	138.6	93.6	48.7	14.3	1.2	1.2
92.5°	232.5	228.5	215.1	191.6	160.9	121.8	77.8	37.2	9.0	0.6	1.5
95°	214.5	210.2	197.2	175.5	142.9	104.8	63.9	27.3	5.0	0.6	1.5
97.5°	196.8	192.8	179.2	157.5	126.8	89.9	50.5	19.2	2.5	0.6	1.2
100°	180.4	175.8	163.4	141.7	110.7	75.0	39.1	12.4	1.5	0.6	1.2
102.5°	163.1	159.3	146.6	125.5	93.9	61.1	29.1	7.7	0.6	0.6	0.9
105°	147.6	142.9	130.5	108.8	80.0	48.0	20.5	4.6	0.6	0.6	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	96.1	92.4	81.5	63.2	40.6	18.9	5.6	0.9	0.9	0.9	0.9
115°	80.3	74.7	65.1	49.0	30.1	12.4	2.8	0.9	0.9	0.9	0.9
117.5°	64.2	59.5	52.7	37.2	19.8	8.1	1.5	0.9	0.9	0.9	0.9
120°	50.2	45.9	38.1	25.7	13.3	4.6	0.6	0.9	0.9	0.9	0.9
122.5°	36.0	32.5	25.7	16.7	8.1	2.2	0.9	0.9	1.2	1.2	0.9
125°	23.9	22.0	17.0	10.2	5.0	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.5	13.9	9.9	5.9	2.2	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.7	7.7	5.9	3.4	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	5.0	4.6	3.1	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.5
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.2
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	243.3	243.3	243.3
2.5°	231.6	227.2	226.0
5°	219.2	212.0	208.0
7.5°	206.8	197.2	192.5
10°	195.3	181.7	176.7
12.5°	181.7	165.8	158.1
15°	168.6	148.2	140.7
17.5°	154.1	131.1	122.4
20°	140.4	114.1	105.1
22.5°	124.9	97.3	87.4
25°	111.0	80.6	69.4
27.5°	95.5	63.5	53.9
30°	80.9	48.7	39.1
32.5°	67.0	35.6	27.0
35°	53.9	24.2	17.0
37.5°	41.5	14.9	8.7
40°	30.1	7.7	4.0
42.5°	20.1	3.7	2.2
45°	12.4	1.9	0.0
47.5°	7.1	0.0	0.0
50°	3.7	0.0	0.0
52.5°	1.5	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	1.2	1.5
82.5°	1.2	1.5	1.5
85°	1.2	1.5	1.9
87.5°	1.5	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°	1.5	2.2	2.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.2	1.5	1.5
115°	0.9	1.2	1.5
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	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°	1.2	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°	130.2	126.5	114.1	93.6	65.4	36.6	13.6	2.5	0.6	0.9	0.9
110°	113.5	110.4	97.6	77.8	52.7	27.3	9.0	1.5	0.9	0.9	0.9







107.5°	1.2	1.9	2.2
110°	1.2	1.5	1.9



(END OF REPORT)