

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: P551089

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-94-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: P551089  
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-81-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

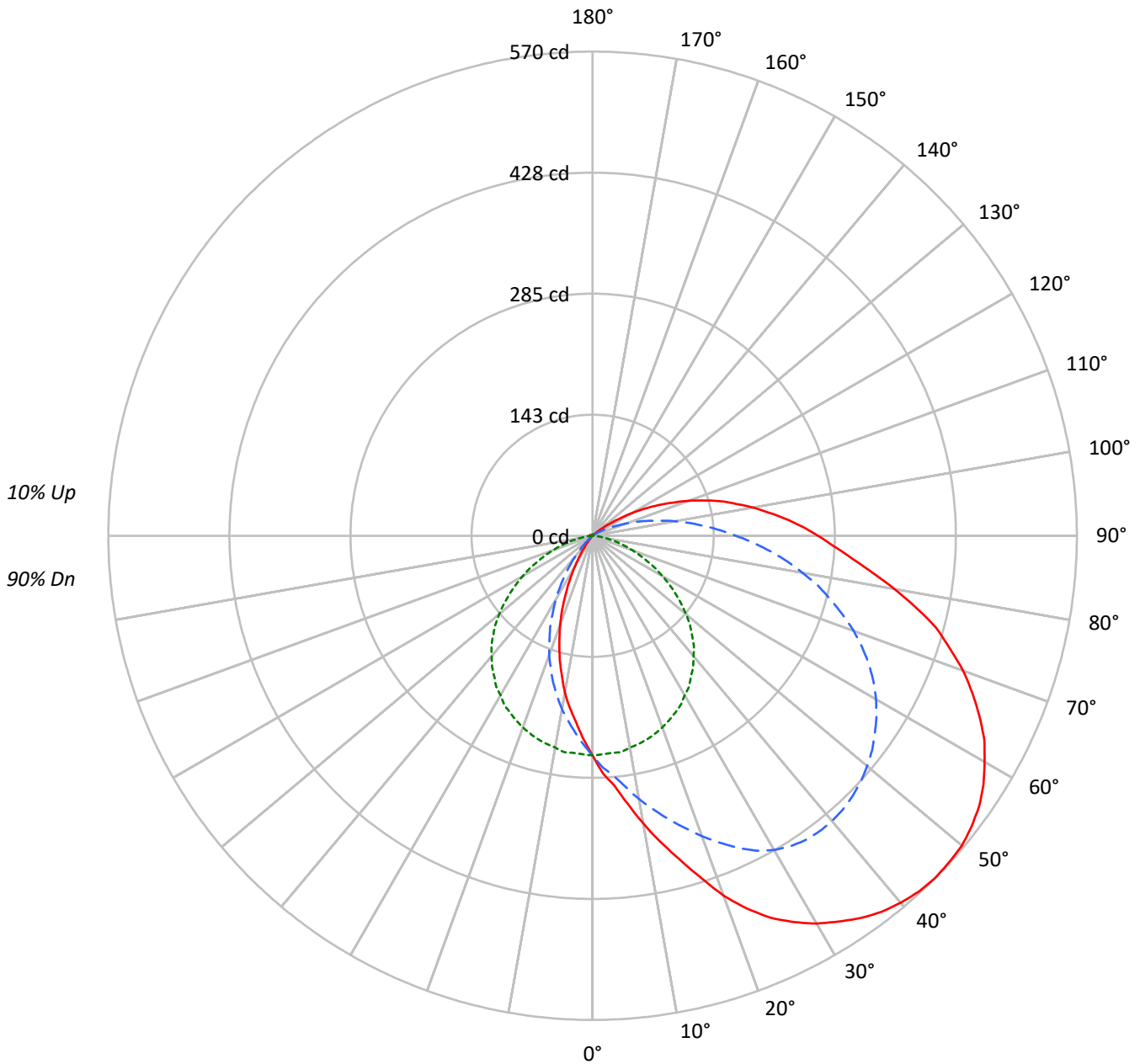
Lumens per Lamp: N/A  
Luminaire Lumens: 1278.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-40-UNV-81-94-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°	2782	2782	2782
5°	3055	2742	2288
10°	3456	2708	1885
15°	3874	2674	1469
20°	4369	2631	1082
25°	4780	2580	711
30°	5085	2512	400
35°	5349	2440	176
40°	5584	2349	43
45°	5785	2237	0
50°	5954	2089	0
55°	6082	1898	0
60°	6147	1678	0
65°	6172	1428	0
70°	6152	1164	0
75°	6074	859	4
80°	5828	526	26
85°	5633	249	37



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.8	1.9
10°-20°	74.1	5.8
20°-30°	120.1	9.4
30°-40°	154.2	12.1
40°-50°	174.6	13.7
50°-60°	180.9	14.2
60°-70°	170.6	13.3
70°-80°	143.0	11.2
80°-90°	103.6	8.1
90°-100°	68.1	5.3
100°-110°	39.3	3.1
110°-120°	17.4	1.4
120°-130°	4.7	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	219.0	17.1
0°-40°	373.2	29.2
0°-60°	728.7	57.0
0°-90°	1145.8	89.7
90°-120°	124.8	9.8
90°-150°	131.3	10.3
90°-180°	132.0	10.3
0°-180°	1278.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	258	258	258	258	258	
5°	295	283	256	233	221	30
15°	394	346	248	179	150	114
25°	496	406	230	118	74	229
35°	550	437	202	57	18	345
45°	570	433	165	13	0	440
55°	556	406	119	0	0	496
65°	502	359	71	0	0	497
75°	419	290	30	0	0	439
85°	306	210	5	1	2	262
90°	265	168	1	2	2	146
95°	228	132	1	2	3	179
105°	157	68	1	2	3	165
115°	85	23	1	1	2	85
125°	25	3	1	1	1	25
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°	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5
2.5°	280.2	279.9	278.9	277.3	275.0	271.0	267.7	264.8	260.8	257.5	251.3
5°	295.1	293.4	292.1	290.5	285.2	281.6	275.6	269.0	262.8	256.5	244.0
7.5°	318.8	316.1	314.2	309.6	302.3	294.1	284.9	278.6	274.3	256.9	235.5
10°	344.1	341.8	337.9	329.6	320.7	308.9	295.7	280.9	267.7	253.2	227.9
12.5°	369.2	365.9	360.3	349.7	337.2	322.4	304.3	286.8	268.1	250.9	219.0
15°	394.2	390.6	384.6	371.8	355.3	335.9	313.8	291.8	269.7	248.0	209.8
17.5°	421.5	416.6	407.7	393.2	372.5	348.4	322.4	295.7	269.0	244.3	199.9
20°	450.8	443.9	434.4	414.9	390.6	362.2	331.0	299.7	268.7	240.1	188.7
22.5°	475.2	468.3	457.7	437.7	408.3	373.8	338.2	302.3	267.4	235.1	178.2
25°	496.3	490.7	479.1	456.1	425.1	386.0	345.1	304.3	265.4	229.9	167.0
27.5°	512.7	507.5	494.6	470.9	439.3	396.8	350.4	305.3	262.8	224.6	155.4
30°	527.2	522.0	506.5	482.1	448.9	405.4	355.7	305.6	259.5	216.7	142.9
32.5°	538.4	533.5	517.7	491.7	455.4	411.3	358.6	305.3	255.2	211.1	129.4
35°	549.6	544.7	526.2	498.6	460.4	413.9	360.9	303.6	249.9	201.9	116.6
37.5°	558.2	552.6	533.8	503.2	462.7	414.6	360.6	301.3	244.3	194.3	103.7
40°	564.1	558.2	538.1	505.8	463.3	413.6	358.0	297.4	237.8	184.7	90.2
42.5°	568.1	561.5	540.1	509.8	462.0	411.0	354.0	292.4	230.5	176.5	77.4
45°	570.0	563.1	540.4	506.5	459.7	406.0	348.1	286.2	222.6	165.3	64.5
47.5°	569.0	561.5	538.8	502.9	455.4	400.8	341.5	278.6	213.1	155.4	52.4
50°	567.4	559.5	535.1	498.2	449.5	394.2	334.3	269.4	203.2	143.3	41.5
52.5°	562.1	554.2	531.2	491.7	442.6	386.6	324.4	259.8	192.6	131.4	31.6
55°	555.5	548.3	524.3	485.7	433.7	377.4	315.2	249.6	182.4	119.2	22.7
57.5°	545.3	538.8	515.7	476.2	424.8	367.2	304.9	238.4	169.6	107.0	15.8
60°	532.8	526.2	503.8	465.3	414.6	355.7	293.7	226.9	158.1	94.8	9.9
62.5°	519.7	513.4	490.0	451.8	401.8	343.5	281.6	215.4	145.9	83.6	5.9
65°	502.2	496.3	475.2	435.7	387.6	330.3	268.1	201.5	133.4	71.1	3.3
67.5°	483.8	478.5	457.1	420.9	371.1	315.8	254.2	188.0	120.2	60.3	1.6
70°	464.0	457.4	437.7	400.8	354.3	299.3	239.1	174.2	107.7	49.7	0.0
72.5°	440.9	436.0	416.9	382.0	334.9	281.9	223.6	159.1	93.9	39.5	0.3
75°	418.6	412.3	394.8	361.9	315.8	263.4	206.5	144.9	80.4	30.3	0.3
77.5°	389.6	387.6	371.1	339.2	297.7	245.7	187.7	127.8	67.5	21.7	0.3
80°	360.6	358.6	345.8	316.5	276.6	224.6	170.3	111.6	55.0	14.5	0.3
82.5°	331.9	329.3	317.1	292.8	255.2	206.8	152.1	95.5	43.5	8.9	0.3
85°	306.3	303.0	289.8	267.4	233.2	186.7	133.4	79.7	32.3	4.9	0.7
87.5°	284.2	281.9	267.4	244.3	210.8	167.9	116.9	64.5	22.7	2.3	1.0
90°	265.4	260.5	247.6	223.3	189.7	147.2	99.5	51.7	15.1	1.3	1.3
92.5°	247.0	242.7	228.5	203.5	170.9	129.4	82.7	39.5	9.6	0.7	1.6
95°	227.9	223.3	209.4	186.4	151.8	111.3	67.8	29.0	5.3	0.7	1.6
97.5°	209.1	204.8	190.3	167.3	134.7	95.5	53.7	20.4	2.6	0.7	1.3
100°	191.7	186.7	173.5	150.5	117.6	79.7	41.5	13.2	1.6	0.7	1.3
102.5°	173.2	169.3	155.8	133.4	99.8	64.9	31.0	8.2	0.7	0.7	1.0
105°	156.8	151.8	138.6	115.6	85.0	51.0	21.7	4.9	0.7	0.7	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	102.1	98.1	86.6	67.2	43.1	20.1	5.9	1.0	1.0	1.0	1.0
115°	85.3	79.4	69.2	52.0	31.9	13.2	3.0	1.0	1.0	1.0	1.0
117.5°	68.2	63.2	56.0	39.5	21.1	8.6	1.6	1.0	1.0	1.0	1.0
120°	53.3	48.7	40.5	27.3	14.2	4.9	0.7	1.0	1.0	1.0	1.0
122.5°	38.2	34.6	27.3	17.8	8.6	2.3	1.0	1.0	1.3	1.3	1.0
125°	25.4	23.4	18.1	10.9	5.3	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.5	14.8	10.5	6.3	2.3	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.2	8.2	6.3	3.6	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.3	4.9	3.3	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	258.5	258.5	258.5
2.5°	246.0	241.4	240.1
5°	232.8	225.2	221.0
7.5°	219.7	209.4	204.5
10°	207.5	193.0	187.7
12.5°	193.0	176.2	167.9
15°	179.1	157.4	149.5
17.5°	163.7	139.3	130.1
20°	149.2	121.2	111.6
22.5°	132.7	103.4	92.9
25°	117.9	85.6	73.8
27.5°	101.4	67.5	57.3
30°	86.0	51.7	41.5
32.5°	71.1	37.9	28.7
35°	57.3	25.7	18.1
37.5°	44.1	15.8	9.2
40°	31.9	8.2	4.3
42.5°	21.4	4.0	2.3
45°	13.2	2.0	0.0
47.5°	7.6	0.0	0.0
50°	4.0	0.0	0.0
52.5°	1.6	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	0.7	1.0
80°	0.7	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	2.0
87.5°	1.6	2.0	2.3
90°	2.0	2.3	2.3
92.5°	2.0	2.6	2.6
95°	2.3	2.6	3.0
97.5°	2.6	3.0	3.0
100°	2.3	3.0	3.3
102.5°	2.0	3.0	3.0
105°	1.6	2.3	2.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.3	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	138.3	134.4	121.2	99.5	69.5	38.9	14.5	2.6	0.7	1.0	1.0
110°	120.5	117.2	103.7	82.7	56.0	29.0	9.6	1.6	1.0	1.0	1.0







107.5°	1.3	2.0	2.3
110°	1.3	1.6	2.0



(END OF REPORT)