

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: P550951

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-81-84-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: P550951  
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-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

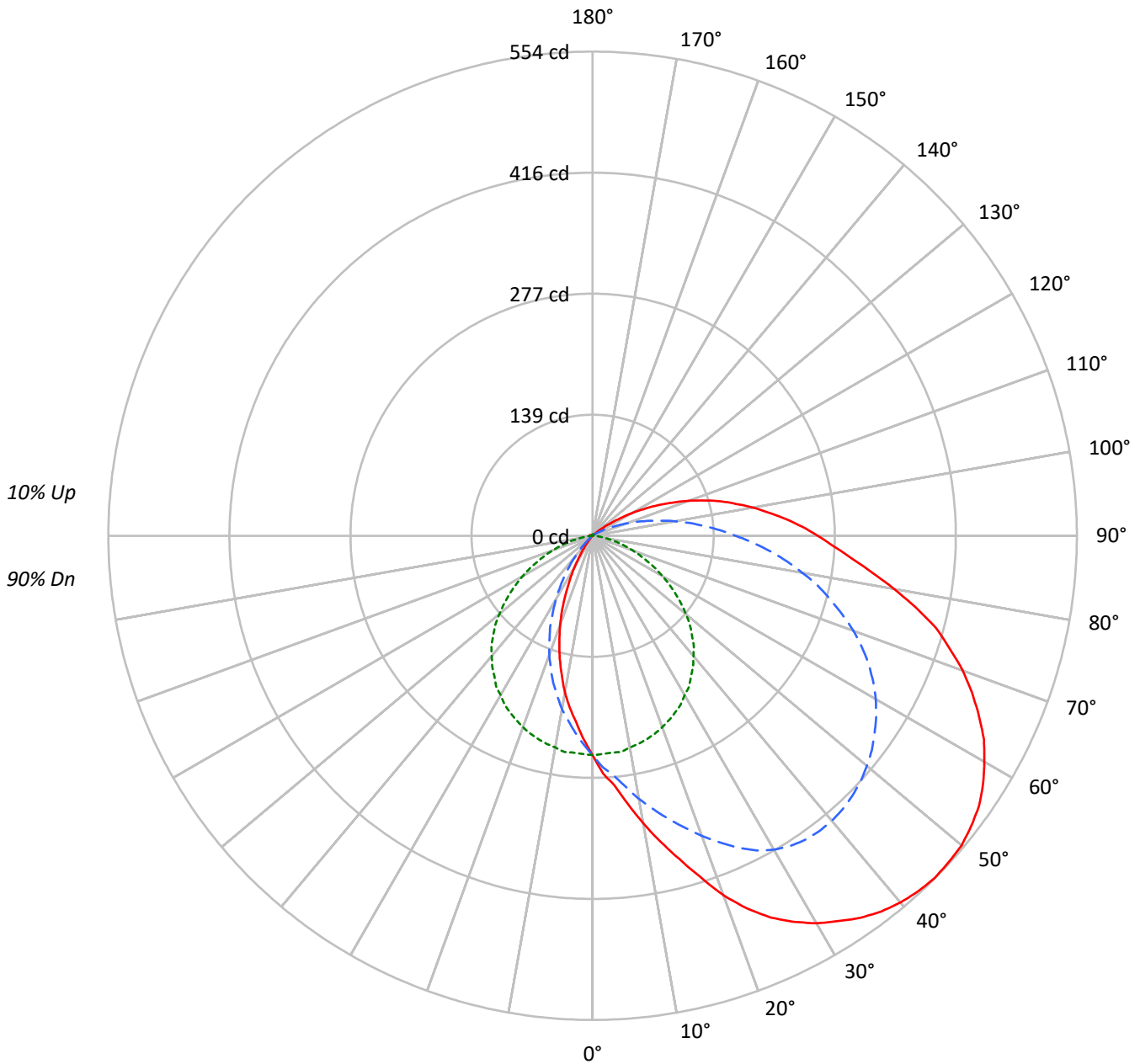
Lumens per Lamp: N/A  
Luminaire Lumens: 1241.1 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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

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### 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°	2702	2702	2702
5°	2966	2662	2222
10°	3357	2630	1831
15°	3762	2596	1427
20°	4243	2554	1051
25°	4641	2505	690
30°	4938	2439	389
35°	5194	2368	171
40°	5422	2282	42
45°	5617	2172	0
50°	5782	2027	0
55°	5907	1844	0
60°	5969	1630	0
65°	5994	1388	0
70°	5974	1131	0
75°	5897	834	4
80°	5660	511	26
85°	5470	244	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.0	1.9
10°-20°	72.0	5.8
20°-30°	116.6	9.4
30°-40°	149.8	12.1
40°-50°	169.5	13.7
50°-60°	175.6	14.2
60°-70°	165.6	13.3
70°-80°	138.8	11.2
80°-90°	100.6	8.1
90°-100°	66.1	5.3
100°-110°	38.2	3.1
110°-120°	16.9	1.4
120°-130°	4.6	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°	212.6	17.1
0°-40°	362.4	29.2
0°-60°	707.6	57.0
0°-90°	1112.7	89.7
90°-120°	121.2	9.8
90°-150°	127.6	10.3
90°-180°	128.0	10.3
0°-180°	1241.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	251	251	251	251	251	
5°	286	275	249	226	215	29
15°	383	336	241	174	145	110
25°	482	394	223	114	72	223
35°	534	424	196	56	18	335
45°	554	420	160	13	0	427
55°	540	394	116	0	0	482
65°	488	349	69	0	0	483
75°	406	281	29	0	0	426
85°	297	204	5	1	2	254
90°	258	164	1	2	2	141
95°	221	128	1	2	3	174
105°	152	66	1	2	3	161
115°	83	22	1	1	2	83
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°	251.0	251.0	251.0	251.0	251.0	251.0	251.0	251.0	251.0	251.0	251.0
2.5°	272.1	271.8	270.9	269.3	267.0	263.2	260.0	257.1	253.3	250.1	244.0
5°	286.5	284.9	283.6	282.0	276.9	273.4	267.7	261.3	255.2	249.1	237.0
7.5°	309.5	307.0	305.1	300.6	293.6	285.6	276.6	270.5	266.4	249.4	228.6
10°	334.2	331.9	328.1	320.1	311.5	300.0	287.2	272.8	260.0	245.9	221.3
12.5°	358.5	355.3	349.8	339.6	327.5	313.1	295.5	278.5	260.3	243.7	212.7
15°	382.8	379.3	373.5	361.0	345.0	326.2	304.7	283.3	261.9	240.8	203.7
17.5°	409.3	404.5	395.9	381.8	361.7	338.3	313.1	287.2	261.3	237.3	194.1
20°	437.8	431.1	421.8	402.9	379.3	351.8	321.4	291.0	260.9	233.1	183.2
22.5°	461.4	454.7	444.5	425.0	396.5	362.9	328.4	293.6	259.7	228.3	173.0
25°	481.9	476.5	465.3	442.9	412.8	374.8	335.1	295.5	257.7	223.2	162.1
27.5°	497.9	492.8	480.3	457.3	426.6	385.3	340.2	296.4	255.2	218.1	150.9
30°	512.0	506.8	491.8	468.2	435.9	393.6	345.4	296.8	252.0	210.4	138.8
32.5°	522.8	518.0	502.7	477.4	442.3	399.4	348.2	296.4	247.8	205.0	125.7
35°	533.7	528.9	511.0	484.1	447.0	402.0	350.5	294.8	242.7	196.0	113.2
37.5°	542.0	536.6	518.4	488.6	449.3	402.6	350.2	292.6	237.3	188.7	100.7
40°	547.8	542.0	522.5	491.2	449.9	401.6	347.6	288.8	230.9	179.4	87.6
42.5°	551.6	545.2	524.4	495.0	448.6	399.1	343.8	284.0	223.8	171.4	75.1
45°	553.5	546.8	524.8	491.8	446.4	394.3	338.0	277.9	216.2	160.5	62.7
47.5°	552.6	545.2	523.2	488.3	442.3	389.2	331.6	270.5	206.9	150.9	50.8
50°	551.0	543.3	519.6	483.8	436.5	382.8	324.6	261.6	197.3	139.1	40.3
52.5°	545.9	538.2	515.8	477.4	429.8	375.4	315.0	252.3	187.1	127.6	30.7
55°	539.5	532.4	509.1	471.7	421.1	366.5	306.0	242.4	177.2	115.8	22.1
57.5°	529.5	523.2	500.8	462.4	412.5	356.6	296.1	231.5	164.7	103.9	15.3
60°	517.4	511.0	489.3	451.8	402.6	345.4	285.2	220.3	153.5	92.1	9.6
62.5°	504.6	498.5	475.8	438.7	390.1	333.5	273.4	209.1	141.7	81.2	5.8
65°	487.7	481.9	461.4	423.1	376.4	320.7	260.3	195.7	129.5	69.1	3.2
67.5°	469.8	464.6	443.8	408.7	360.4	306.7	246.9	182.6	116.7	58.5	1.6
70°	450.6	444.2	425.0	389.2	344.1	290.7	232.2	169.2	104.6	48.3	0.0
72.5°	428.2	423.4	404.8	370.9	325.2	273.7	217.1	154.5	91.1	38.4	0.3
75°	406.4	400.4	383.4	351.4	306.7	255.8	200.5	140.7	78.0	29.4	0.3
77.5°	378.3	376.4	360.4	329.4	289.1	238.6	182.3	124.1	65.6	21.1	0.3
80°	350.2	348.2	335.8	307.3	268.6	218.1	165.3	108.4	53.4	14.1	0.3
82.5°	322.3	319.8	307.9	284.3	247.8	200.8	147.7	92.7	42.2	8.6	0.3
85°	297.4	294.2	281.4	259.7	226.4	181.3	129.5	77.4	31.3	4.8	0.6
87.5°	276.0	273.7	259.7	237.3	204.7	163.1	113.5	62.7	22.1	2.2	1.0
90°	257.7	252.9	240.5	216.8	184.2	142.9	96.6	50.2	14.7	1.3	1.3
92.5°	239.8	235.7	221.9	197.6	166.0	125.7	80.3	38.4	9.3	0.6	1.6
95°	221.3	216.8	203.4	181.0	147.4	108.1	65.9	28.1	5.1	0.6	1.6
97.5°	203.1	198.9	184.8	162.4	130.8	92.7	52.1	19.8	2.6	0.6	1.3
100°	186.1	181.3	168.5	146.1	114.2	77.4	40.3	12.8	1.6	0.6	1.3
102.5°	168.2	164.4	151.3	129.5	96.9	63.0	30.1	8.0	0.6	0.6	1.0
105°	152.2	147.4	134.6	112.2	82.5	49.6	21.1	4.8	0.6	0.6	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	99.1	95.3	84.1	65.2	41.9	19.5	5.8	1.0	1.0	1.0	1.0
115°	82.8	77.1	67.2	50.5	31.0	12.8	2.9	1.0	1.0	1.0	1.0
117.5°	66.2	61.4	54.4	38.4	20.5	8.3	1.6	1.0	1.0	1.0	1.0
120°	51.8	47.3	39.3	26.5	13.8	4.8	0.6	1.0	1.0	1.0	1.0
122.5°	37.1	33.6	26.5	17.3	8.3	2.2	1.0	1.0	1.3	1.3	1.0
125°	24.6	22.7	17.6	10.6	5.1	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.0	14.4	10.2	6.1	2.2	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.0	8.0	6.1	3.5	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.1	4.8	3.2	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	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°	251.0	251.0	251.0
2.5°	238.9	234.4	233.1
5°	226.1	218.7	214.6
7.5°	213.3	203.4	198.6
10°	201.5	187.4	182.3
12.5°	187.4	171.1	163.1
15°	174.0	152.9	145.2
17.5°	158.9	135.3	126.3
20°	144.9	117.7	108.4
22.5°	128.9	100.4	90.2
25°	114.5	83.1	71.6
27.5°	98.5	65.6	55.6
30°	83.5	50.2	40.3
32.5°	69.1	36.8	27.8
35°	55.6	24.9	17.6
37.5°	42.9	15.3	9.0
40°	31.0	8.0	4.2
42.5°	20.8	3.8	2.2
45°	12.8	1.9	0.0
47.5°	7.4	0.0	0.0
50°	3.8	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	0.6	1.0
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.6	2.6
95°	2.2	2.6	2.9
97.5°	2.6	2.9	2.9
100°	2.2	2.9	3.2
102.5°	1.9	2.9	2.9
105°	1.6	2.2	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	0.6
152.5°	1.0	0.6	0.6
155°	1.0	0.6	0.3
157.5°	1.3	0.6	0.3
160°	1.0	0.6	0.3
162.5°	1.0	0.6	0.3
165°	1.0	0.6	0.0
167.5°	1.0	0.6	0.3
170°	1.0	0.6	0.3
172.5°	1.0	0.6	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°	134.3	130.5	117.7	96.6	67.5	37.7	14.1	2.6	0.6	1.0	1.0
110°	117.0	113.8	100.7	80.3	54.4	28.1	9.3	1.6	1.0	1.0	1.0







107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)