

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: P550453

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-97-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: P550453  
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-30-UNV-81-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

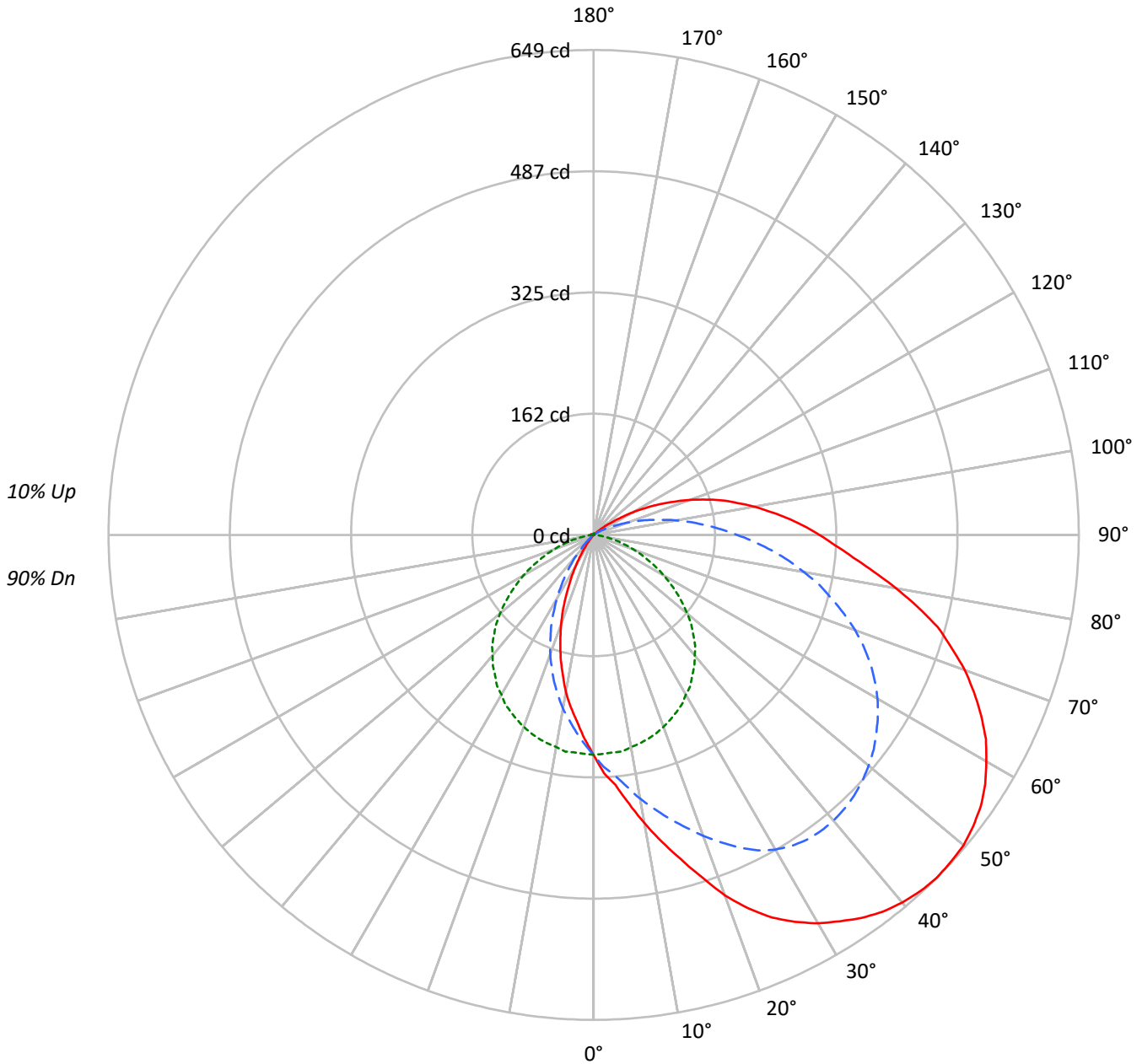
Lumens per Lamp: N/A  
Luminaire Lumens: 1454.9 lumens  
Efficiency: N/A  
Efficacy: 67.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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-30-UNV-81-97-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°	3168	3168	3168
5°	3477	3122	2605
10°	3935	3083	2146
15°	4410	3044	1673
20°	4974	2994	1232
25°	5442	2937	809
30°	5789	2860	455
35°	6090	2777	200
40°	6357	2674	49
45°	6586	2547	0
50°	6779	2377	0
55°	6925	2161	0
60°	6998	1911	0
65°	7028	1627	0
70°	7004	1326	0
75°	6914	978	6
80°	6634	599	31
85°	6413	285	40



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.2	1.9
10°-20°	84.4	5.8
20°-30°	136.7	9.4
30°-40°	175.6	12.1
40°-50°	198.8	13.7
50°-60°	205.9	14.2
60°-70°	194.2	13.3
70°-80°	162.8	11.2
80°-90°	118.0	8.1
90°-100°	77.5	5.3
100°-110°	44.8	3.1
110°-120°	19.8	1.4
120°-130°	5.3	0.4
130°-140°	1.2	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°	249.3	17.1
0°-40°	424.9	29.2
0°-60°	829.6	57.0
0°-90°	1304.5	89.7
90°-120°	142.0	9.8
90°-150°	149.4	10.3
90°-180°	150.0	10.3
0°-180°	1454.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	294	294	294	294	294	
5°	336	323	292	265	252	34
15°	449	393	282	204	170	129
25°	565	462	262	134	84	261
35°	626	498	230	65	21	392
45°	649	493	188	15	0	501
55°	632	462	136	0	0	565
65°	572	409	81	0	0	566
75°	476	330	34	0	0	500
85°	349	239	6	2	2	298
90°	302	192	2	2	3	166
95°	259	150	1	3	3	204
105°	178	77	1	2	3	188
115°	97	26	1	1	2	97
125°	29	4	2	1	2	29
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°	294.3	294.3	294.3	294.3	294.3	294.3	294.3	294.3	294.3	294.3	294.3
2.5°	319.1	318.7	317.6	315.7	313.1	308.6	304.8	301.4	296.9	293.2	286.1
5°	335.9	334.1	332.6	330.7	324.7	320.6	313.8	306.3	299.2	292.1	277.8
7.5°	362.9	359.9	357.7	352.4	344.2	334.8	324.3	317.2	312.3	292.4	268.1
10°	391.8	389.2	384.7	375.3	365.2	351.7	336.7	319.8	304.8	288.3	259.4
12.5°	420.3	416.5	410.2	398.2	383.9	367.0	346.4	326.6	305.2	285.7	249.3
15°	448.8	444.7	437.9	423.3	404.5	382.4	357.3	332.2	307.1	282.3	238.8
17.5°	479.9	474.3	464.1	447.7	424.0	396.7	367.0	336.7	306.3	278.2	227.6
20°	513.3	505.4	494.5	472.4	444.7	412.4	376.8	341.2	305.9	273.3	214.8
22.5°	541.0	533.1	521.1	498.3	464.9	425.5	385.0	344.2	304.4	267.7	202.8
25°	565.0	558.6	545.5	519.3	484.0	439.4	392.9	346.4	302.2	261.7	190.1
27.5°	583.7	577.8	563.1	536.1	500.1	451.8	398.9	347.6	299.2	255.7	177.0
30°	600.2	594.2	576.6	548.9	511.0	461.5	404.9	347.9	295.4	246.7	162.7
32.5°	613.0	607.4	589.4	559.8	518.5	468.3	408.3	347.6	290.6	240.3	147.3
35°	625.7	620.1	599.1	567.6	524.1	471.3	410.9	345.7	284.6	229.8	132.7
37.5°	635.5	629.1	607.7	572.9	526.8	472.0	410.5	343.1	278.2	221.2	118.1
40°	642.2	635.5	612.6	575.9	527.5	470.9	407.5	338.6	270.7	210.3	102.7
42.5°	646.7	639.2	614.9	580.4	526.0	467.9	403.0	332.9	262.4	201.0	88.1
45°	649.0	641.1	615.2	576.6	523.4	462.3	396.3	325.8	253.4	188.2	73.5
47.5°	647.9	639.2	613.4	572.5	518.5	456.3	388.8	317.2	242.6	177.0	59.6
50°	646.0	637.0	609.2	567.3	511.8	448.8	380.5	306.7	231.3	163.1	47.2
52.5°	640.0	631.0	604.7	559.8	503.9	440.2	369.3	295.8	219.3	149.6	36.0
55°	632.5	624.2	596.9	553.0	493.8	429.7	358.8	284.2	207.7	135.7	25.9
57.5°	620.9	613.4	587.1	542.1	483.6	418.0	347.2	271.4	193.1	121.8	18.0
60°	606.6	599.1	573.6	529.8	472.0	404.9	334.4	258.3	180.0	108.0	11.2
62.5°	591.6	584.5	557.9	514.4	457.4	391.0	320.6	245.2	166.1	95.2	6.7
65°	571.8	565.0	541.0	496.0	441.3	376.0	305.2	229.5	151.8	81.0	3.7
67.5°	550.8	544.8	520.4	479.1	422.5	359.5	289.4	214.1	136.8	68.6	1.9
70°	528.3	520.8	498.3	456.3	403.4	340.8	272.2	198.3	122.6	56.6	0.0
72.5°	502.0	496.4	474.6	434.9	381.3	320.9	254.6	181.1	106.9	45.0	0.4
75°	476.5	469.4	449.5	412.0	359.5	299.9	235.1	165.0	91.5	34.5	0.4
77.5°	443.5	441.3	422.5	386.2	338.9	279.7	213.7	145.5	76.9	24.7	0.4
80°	410.5	408.3	393.7	360.3	314.9	255.7	193.8	127.1	62.6	16.5	0.4
82.5°	377.9	374.9	361.0	333.3	290.6	235.4	173.2	108.7	49.5	10.1	0.4
85°	348.7	344.9	329.9	304.4	265.4	212.6	151.8	90.7	36.7	5.6	0.7
87.5°	323.6	320.9	304.4	278.2	239.9	191.2	133.1	73.5	25.9	2.6	1.1
90°	302.2	296.6	281.9	254.2	216.0	167.6	113.2	58.9	17.2	1.5	1.5
92.5°	281.2	276.3	260.2	231.7	194.6	147.3	94.1	45.0	10.9	0.7	1.9
95°	259.4	254.2	238.4	212.2	172.8	126.7	77.2	33.0	6.0	0.7	1.9
97.5°	238.1	233.2	216.7	190.5	153.3	108.7	61.1	23.2	3.0	0.7	1.5
100°	218.2	212.6	197.6	171.3	133.8	90.7	47.2	15.0	1.9	0.7	1.5
102.5°	197.2	192.7	177.3	151.8	113.6	73.9	35.2	9.4	0.7	0.7	1.1
105°	178.5	172.8	157.8	131.6	96.7	58.1	24.7	5.6	0.7	0.7	1.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	116.2	111.7	98.6	76.5	49.1	22.9	6.7	1.1	1.1	1.1	1.1
115°	97.1	90.4	78.7	59.2	36.4	15.0	3.4	1.1	1.1	1.1	1.1
117.5°	77.6	72.0	63.7	45.0	24.0	9.7	1.9	1.1	1.1	1.1	1.1
120°	60.7	55.5	46.1	31.1	16.1	5.6	0.7	1.1	1.1	1.1	1.1
122.5°	43.5	39.4	31.1	20.2	9.7	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.9	26.6	20.6	12.4	6.0	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.7	16.9	12.0	7.1	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.5	9.4	7.1	4.1	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.0	5.6	3.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.5
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	294.3	294.3	294.3
2.5°	280.1	274.8	273.3
5°	265.1	256.4	251.6
7.5°	250.1	238.4	232.8
10°	236.2	219.7	213.7
12.5°	219.7	200.6	191.2
15°	204.0	179.2	170.2
17.5°	186.3	158.6	148.1
20°	169.8	138.0	127.1
22.5°	151.1	117.7	105.7
25°	134.2	97.5	84.0
27.5°	115.5	76.9	65.2
30°	97.9	58.9	47.2
32.5°	81.0	43.1	32.6
35°	65.2	29.2	20.6
37.5°	50.2	18.0	10.5
40°	36.4	9.4	4.9
42.5°	24.4	4.5	2.6
45°	15.0	2.2	0.0
47.5°	8.6	0.0	0.0
50°	4.5	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	0.7	1.1
80°	0.7	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.2
87.5°	1.9	2.2	2.6
90°	2.2	2.6	2.6
92.5°	2.2	3.0	3.0
95°	2.6	3.0	3.4
97.5°	3.0	3.4	3.4
100°	2.6	3.4	3.7
102.5°	2.2	3.4	3.4
105°	1.9	2.6	3.0





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.1	1.5	1.9
117.5°	1.1	1.5	1.5
120°	1.1	1.1	1.5
122.5°	1.1	1.1	1.5
125°	1.1	1.1	1.5
127.5°	1.5	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.5	1.1	1.1
135°	1.5	1.1	1.1
137.5°	1.5	1.1	1.1
140°	1.5	1.1	1.1
142.5°	1.5	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.5	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	157.5	153.0	138.0	113.2	79.1	44.2	16.5	3.0	0.7	1.1	1.1
110°	137.2	133.5	118.1	94.1	63.7	33.0	10.9	1.9	1.1	1.1	1.1







107.5°	1.5	2.2	2.6
110°	1.5	1.9	2.2



(END OF REPORT)