

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: P550581

Luminaire Tested: **FCC-X-2-LD4-1HI-40-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: P550581  
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-40-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 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

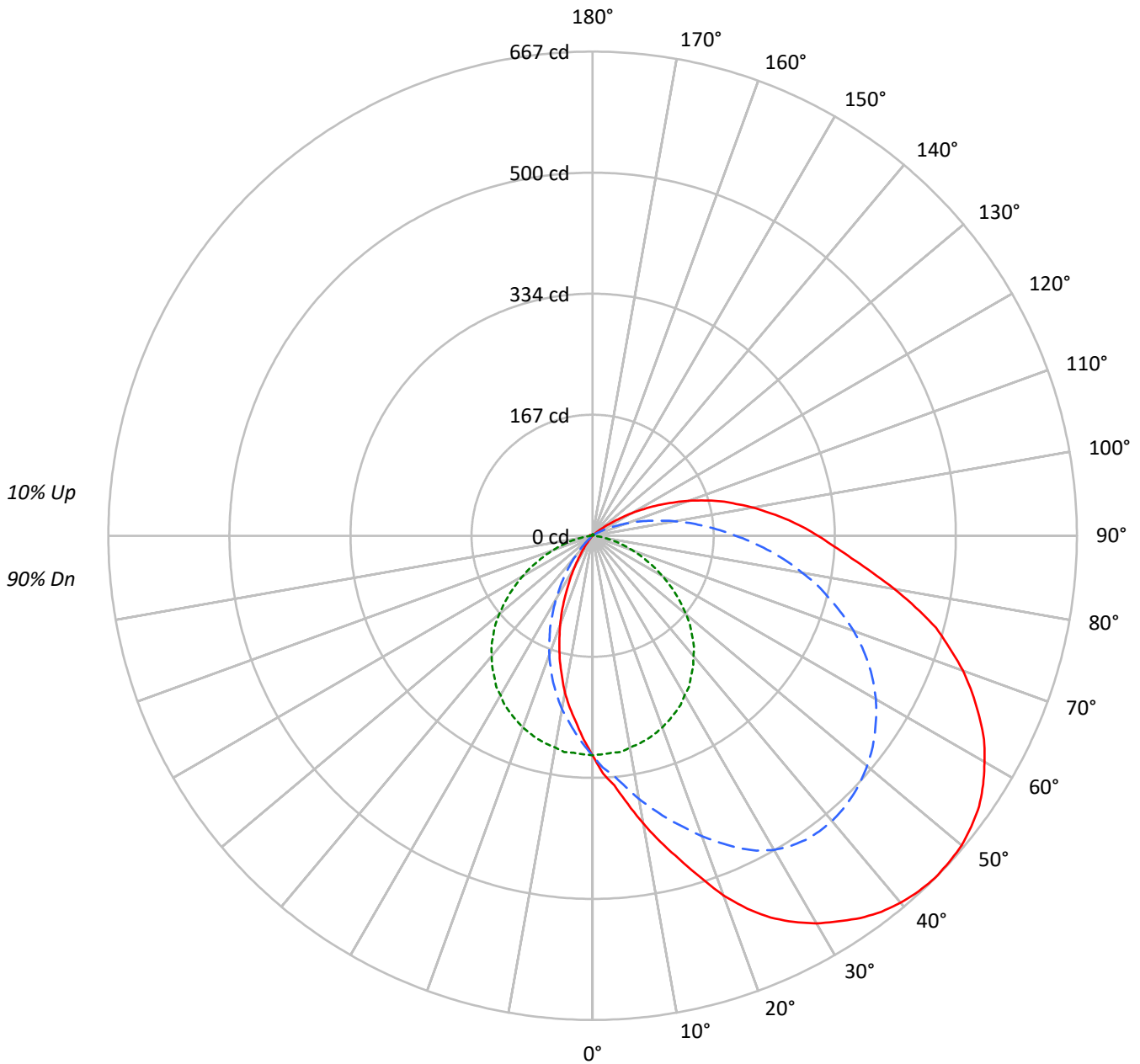
Lumens per Lamp: N/A  
Luminaire Lumens: 1495.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-40-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°	3255	3255	3255
5°	3574	3208	2676
10°	4044	3168	2206
15°	4531	3128	1719
20°	5111	3077	1266
25°	5591	3018	831
30°	5948	2939	468
35°	6257	2853	206
40°	6532	2748	49
45°	6767	2617	0
50°	6964	2443	0
55°	7115	2221	0
60°	7191	1963	0
65°	7221	1671	0
70°	7197	1363	0
75°	7105	1004	6
80°	6817	613	31
85°	6590	295	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.0	1.9
10°-20°	86.7	5.8
20°-30°	140.5	9.4
30°-40°	180.4	12.1
40°-50°	204.2	13.7
50°-60°	211.6	14.2
60°-70°	199.6	13.3
70°-80°	167.2	11.2
80°-90°	121.2	8.1
90°-100°	79.7	5.3
100°-110°	46.0	3.1
110°-120°	20.3	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°	256.1	17.1
0°-40°	436.6	29.2
0°-60°	852.4	57.0
0°-90°	1340.4	89.7
90°-120°	146.0	9.8
90°-150°	153.6	10.3
90°-180°	155.0	10.4
0°-180°	1495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	302	302	302	302	302	
5°	345	332	300	272	258	35
15°	461	404	290	210	175	133
25°	580	474	269	138	86	268
35°	643	511	236	67	21	403
45°	667	506	193	15	0	515
55°	650	474	140	0	0	580
65°	588	420	83	0	0	581
75°	490	339	35	0	0	514
85°	358	246	6	2	2	306
90°	310	197	2	2	3	170
95°	267	154	1	3	4	209
105°	183	80	1	2	3	193
115°	100	26	1	1	2	100
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	302.4	302.4	302.4	302.4	302.4	302.4	302.4	302.4	302.4	302.4	302.4
2.5°	327.8	327.4	326.3	324.4	321.7	317.0	313.2	309.7	305.1	301.2	293.9
5°	345.2	343.2	341.7	339.8	333.6	329.4	322.4	314.7	307.4	300.1	285.5
7.5°	372.9	369.8	367.5	362.1	353.6	344.0	333.2	325.9	320.9	300.5	275.4
10°	402.6	399.9	395.2	385.6	375.2	361.3	345.9	328.6	313.2	296.2	266.6
12.5°	431.8	428.0	421.4	409.1	394.5	377.1	355.9	335.5	313.6	293.5	256.2
15°	461.1	456.9	449.9	434.9	415.7	392.9	367.1	341.3	315.5	290.1	245.4
17.5°	493.1	487.3	476.9	460.0	435.7	407.6	377.1	345.9	314.7	285.8	233.8
20°	527.4	519.3	508.1	485.4	456.9	423.7	387.2	350.6	314.3	280.8	220.7
22.5°	555.9	547.8	535.5	512.0	477.7	437.2	395.6	353.6	312.8	275.1	208.4
25°	580.5	574.0	560.5	533.5	497.3	451.5	403.7	355.9	310.5	268.9	195.3
27.5°	599.8	593.6	578.6	550.9	513.9	464.2	409.9	357.1	307.4	262.7	181.8
30°	616.7	610.6	592.5	564.0	525.1	474.2	416.0	357.5	303.6	253.5	167.2
32.5°	629.8	624.1	605.6	575.1	532.8	481.1	419.5	357.1	298.6	246.9	151.4
35°	642.9	637.2	615.6	583.2	538.5	484.2	422.2	355.2	292.4	236.1	136.4
37.5°	653.0	646.4	624.5	588.6	541.2	485.0	421.8	352.5	285.8	227.3	121.3
40°	659.9	653.0	629.5	591.7	542.0	483.8	418.7	347.9	278.1	216.1	105.6
42.5°	664.5	656.8	631.8	596.3	540.5	480.8	414.1	342.1	269.7	206.5	90.5
45°	666.8	658.7	632.2	592.5	537.8	475.0	407.2	334.8	260.4	193.4	75.5
47.5°	665.7	656.8	630.2	588.2	532.8	468.8	399.5	325.9	249.2	181.8	61.3
50°	663.7	654.5	626.0	582.8	525.8	461.1	391.0	315.1	237.7	167.6	48.5
52.5°	657.6	648.3	621.4	575.1	517.7	452.3	379.4	303.9	225.4	153.7	37.0
55°	649.9	641.4	613.3	568.2	507.3	441.5	368.7	292.0	213.4	139.5	26.6
57.5°	637.9	630.2	603.3	557.0	496.9	429.5	356.7	278.9	198.4	125.2	18.5
60°	623.3	615.6	589.4	544.3	485.0	416.0	343.6	265.4	184.9	110.9	11.6
62.5°	607.9	600.6	573.2	528.5	470.0	401.8	329.4	251.9	170.7	97.8	6.9
65°	587.5	580.5	555.9	509.7	453.4	386.4	313.6	235.8	156.0	83.2	3.9
67.5°	565.9	559.7	534.7	492.3	434.1	369.4	297.4	220.0	140.6	70.5	1.9
70°	542.8	535.1	512.0	468.8	414.5	350.2	279.7	203.8	126.0	58.2	0.0
72.5°	515.8	510.0	487.7	446.9	391.8	329.8	261.6	186.1	109.8	46.2	0.4
75°	489.6	482.3	461.9	423.4	369.4	308.2	241.5	169.5	94.0	35.4	0.4
77.5°	455.7	453.4	434.1	396.8	348.2	287.4	219.6	149.5	79.0	25.4	0.4
80°	421.8	419.5	404.5	370.2	323.6	262.7	199.2	130.6	64.3	16.9	0.4
82.5°	388.3	385.2	371.0	342.5	298.6	241.9	178.0	111.7	50.8	10.4	0.4
85°	358.3	354.4	339.0	312.8	272.7	218.4	156.0	93.2	37.8	5.8	0.8
87.5°	332.5	329.8	312.8	285.8	246.5	196.5	136.8	75.5	26.6	2.7	1.2
90°	310.5	304.7	289.7	261.2	221.9	172.2	116.3	60.5	17.7	1.5	1.5
92.5°	288.9	283.9	267.3	238.1	199.9	151.4	96.7	46.2	11.2	0.8	1.9
95°	266.6	261.2	245.0	218.0	177.6	130.2	79.4	33.9	6.2	0.8	1.9
97.5°	244.6	239.6	222.7	195.7	157.6	111.7	62.8	23.9	3.1	0.8	1.5
100°	224.2	218.4	203.0	176.0	137.5	93.2	48.5	15.4	1.9	0.8	1.5
102.5°	202.6	198.0	182.2	156.0	116.7	75.9	36.2	9.6	0.8	0.8	1.2
105°	183.4	177.6	162.2	135.2	99.4	59.7	25.4	5.8	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	119.4	114.8	101.3	78.6	50.5	23.5	6.9	1.2	1.2	1.2	1.2
115°	99.8	92.8	80.9	60.9	37.4	15.4	3.5	1.2	1.2	1.2	1.2
117.5°	79.7	74.0	65.5	46.2	24.7	10.0	1.9	1.2	1.2	1.2	1.2
120°	62.4	57.0	47.4	32.0	16.6	5.8	0.8	1.2	1.2	1.2	1.2
122.5°	44.7	40.4	32.0	20.8	10.0	2.7	1.2	1.2	1.5	1.5	1.2
125°	29.7	27.4	21.2	12.7	6.2	1.2	1.2	1.2	1.5	1.5	1.2
127.5°	19.3	17.3	12.3	7.3	2.7	1.2	1.2	1.5	1.5	1.5	1.2
130°	10.8	9.6	7.3	4.2	1.2	1.2	1.2	1.5	1.5	1.5	1.2
132.5°	6.2	5.8	3.9	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



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	302.4	302.4	302.4
2.5°	287.8	282.4	280.8
5°	272.4	263.5	258.5
7.5°	256.9	245.0	239.2
10°	242.7	225.7	219.6
12.5°	225.7	206.1	196.5
15°	209.6	184.1	174.9
17.5°	191.5	163.0	152.2
20°	174.5	141.8	130.6
22.5°	155.2	121.0	108.6
25°	137.9	100.2	86.3
27.5°	118.6	79.0	67.0
30°	100.5	60.5	48.5
32.5°	83.2	44.3	33.5
35°	67.0	30.0	21.2
37.5°	51.6	18.5	10.8
40°	37.4	9.6	5.0
42.5°	25.0	4.6	2.7
45°	15.4	2.3	0.0
47.5°	8.9	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	3.9
102.5°	2.3	3.5	3.5
105°	1.9	2.7	3.1





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**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°	161.8	157.2	141.8	116.3	81.3	45.5	16.9	3.1	0.8	1.2	1.2
110°	141.0	137.1	121.3	96.7	65.5	33.9	11.2	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)