

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: P550454

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-97-ED1D**

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: P550454  
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  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

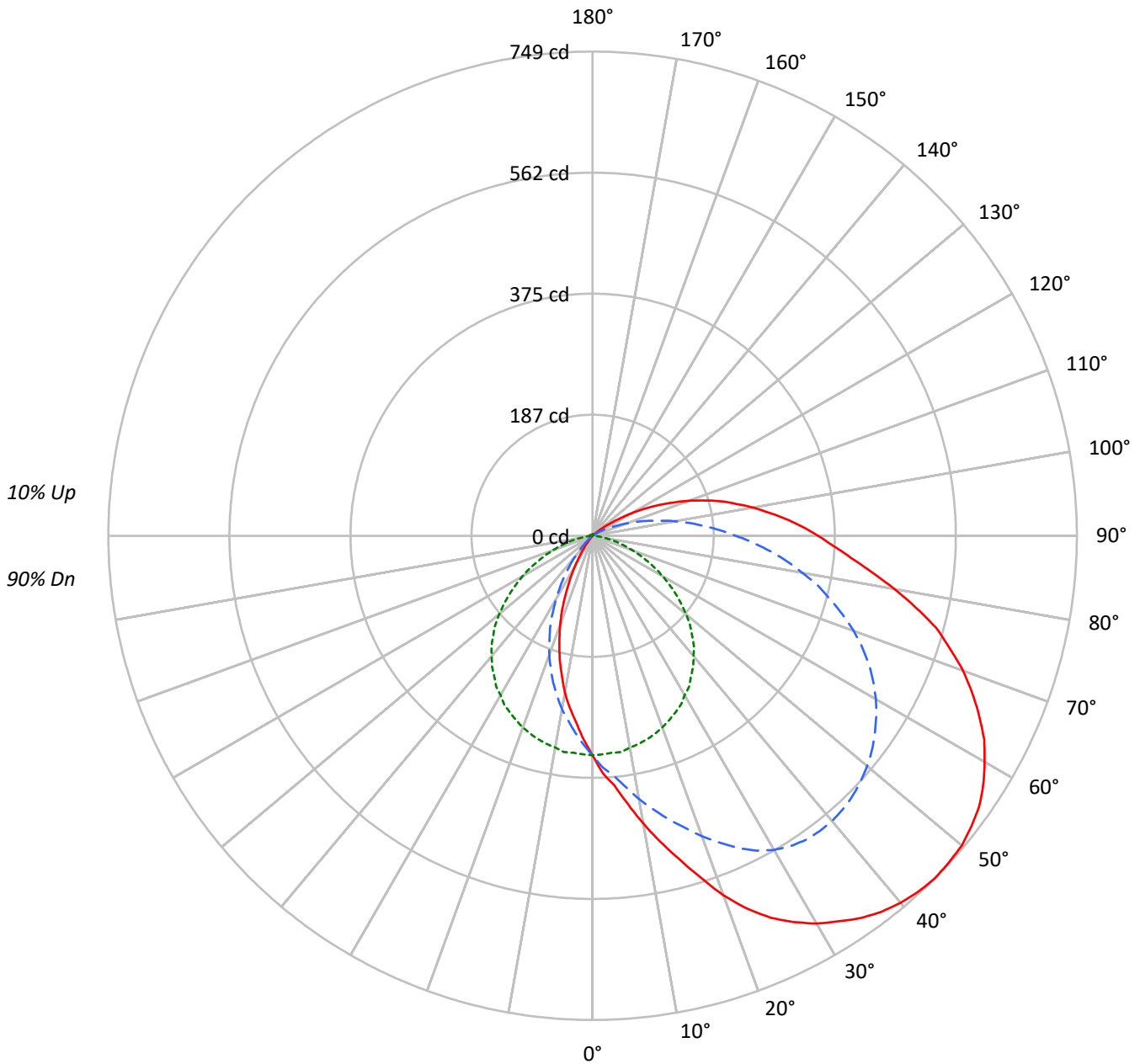
Lumens per Lamp: N/A  
Luminaire Lumens: 1679.0 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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

### 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°	3655	3655	3655
5°	4013	3602	3005
10°	4541	3558	2477
15°	5089	3513	1930
20°	5740	3456	1422
25°	6279	3389	933
30°	6681	3300	526
35°	7028	3204	232
40°	7336	3087	55
45°	7600	2939	0
50°	7822	2743	0
55°	7991	2494	0
60°	8076	2205	0
65°	8109	1876	0
70°	8082	1530	0
75°	7980	1129	6
80°	7655	689	36
85°	7401	331	48



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.5	1.9
10°-20°	97.4	5.8
20°-30°	157.7	9.4
30°-40°	202.6	12.1
40°-50°	229.4	13.7
50°-60°	237.6	14.2
60°-70°	224.1	13.3
70°-80°	187.8	11.2
80°-90°	136.1	8.1
90°-100°	89.5	5.3
100°-110°	51.7	3.1
110°-120°	22.8	1.4
120°-130°	6.2	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	287.7	17.1
0°-40°	490.3	29.2
0°-60°	957.3	57.0
0°-90°	1505.4	89.7
90°-120°	164.0	9.8
90°-150°	172.5	10.3
90°-180°	174.0	10.4
0°-180°	1679.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	340	340	340	340	340	
5°	388	372	337	306	290	39
15°	518	454	326	235	196	149
25°	652	533	302	155	97	301
35°	722	574	265	75	24	453
45°	749	569	217	17	0	578
55°	730	533	157	0	0	652
65°	660	472	93	0	0	653
75°	550	380	40	0	0	577
85°	402	276	6	2	3	344
90°	349	221	2	3	3	191
95°	299	173	1	3	4	235
105°	206	89	1	2	4	217
115°	112	30	1	1	2	112
125°	33	4	2	1	2	33
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6
2.5°	368.2	367.7	366.4	364.3	361.3	356.1	351.7	347.8	342.6	338.3	330.1
5°	387.6	385.5	383.8	381.6	374.7	369.9	362.1	353.5	345.2	337.0	320.6
7.5°	418.8	415.3	412.7	406.7	397.2	386.3	374.2	366.0	360.4	337.5	309.3
10°	452.1	449.1	443.9	433.1	421.4	405.8	388.5	369.0	351.7	332.7	299.4
12.5°	485.0	480.7	473.3	459.5	443.0	423.6	399.8	376.8	352.2	329.7	287.7
15°	517.9	513.1	505.3	488.4	466.8	441.3	412.3	383.3	354.3	325.8	275.6
17.5°	553.8	547.3	535.6	516.6	489.3	457.7	423.6	388.5	353.5	321.0	262.6
20°	592.3	583.2	570.7	545.1	513.1	475.9	434.8	393.7	353.0	315.4	247.9
22.5°	624.3	615.2	601.4	575.0	536.5	491.0	444.3	397.2	351.3	308.9	234.1
25°	652.0	644.6	629.5	599.2	558.5	507.1	453.4	399.8	348.7	302.0	219.3
27.5°	673.6	666.7	649.8	618.7	577.1	521.3	460.3	401.1	345.2	295.1	204.2
30°	692.7	685.7	665.4	633.4	589.7	532.6	467.2	401.5	340.9	284.7	187.8
32.5°	707.4	700.9	680.1	645.9	598.3	540.4	471.1	401.1	335.3	277.3	170.0
35°	722.1	715.6	691.4	655.0	604.8	543.8	474.2	398.9	328.4	265.2	153.2
37.5°	733.3	726.0	701.3	661.1	607.9	544.7	473.7	395.9	321.0	255.3	136.3
40°	741.1	733.3	706.9	664.5	608.7	543.4	470.3	390.7	312.4	242.7	118.5
42.5°	746.3	737.6	709.5	669.7	607.0	539.9	465.1	384.2	302.8	231.9	101.7
45°	748.9	739.8	710.0	665.4	604.0	533.4	457.3	376.0	292.5	217.2	84.8
47.5°	747.6	737.6	707.8	660.6	598.3	526.5	448.6	366.0	279.9	204.2	68.8
50°	745.4	735.1	703.0	654.6	590.6	517.9	439.1	353.9	266.9	188.2	54.5
52.5°	738.5	728.1	697.8	645.9	581.5	507.9	426.1	341.4	253.1	172.6	41.5
55°	729.9	720.3	688.8	638.1	569.8	495.8	414.0	327.9	239.7	156.6	29.9
57.5°	716.4	707.8	677.5	625.6	558.1	482.4	400.6	313.2	222.8	140.6	20.8
60°	700.0	691.4	661.9	611.3	544.7	467.2	385.9	298.1	207.7	124.6	13.0
62.5°	682.7	674.5	643.8	593.6	527.8	451.2	369.9	282.9	191.7	109.9	7.8
65°	659.8	652.0	624.3	572.4	509.2	433.9	352.2	264.8	175.2	93.4	4.3
67.5°	635.5	628.6	600.5	552.9	487.6	414.9	334.0	247.0	157.9	79.2	2.2
70°	609.6	600.9	575.0	526.5	465.5	393.3	314.1	228.9	141.5	65.3	0.0
72.5°	579.3	572.8	547.7	501.9	440.0	370.3	293.8	209.0	123.3	51.9	0.4
75°	549.9	541.7	518.7	475.5	414.9	346.1	271.3	190.4	105.6	39.8	0.4
77.5°	511.8	509.2	487.6	445.6	391.1	322.7	246.6	167.9	88.7	28.6	0.4
80°	473.7	471.1	454.3	415.8	363.4	295.1	223.7	146.7	72.3	19.0	0.4
82.5°	436.1	432.6	416.6	384.6	335.3	271.7	199.9	125.5	57.1	11.7	0.4
85°	402.4	398.0	380.7	351.3	306.3	245.3	175.2	104.7	42.4	6.5	0.9
87.5°	373.4	370.3	351.3	321.0	276.9	220.6	153.6	84.8	29.9	3.0	1.3
90°	348.7	342.2	325.3	293.3	249.2	193.4	130.7	67.9	19.9	1.7	1.7
92.5°	324.5	318.9	300.3	267.4	224.5	170.0	108.6	51.9	12.5	0.9	2.2
95°	299.4	293.3	275.2	244.9	199.4	146.2	89.1	38.1	6.9	0.9	2.2
97.5°	274.7	269.1	250.1	219.8	176.9	125.5	70.5	26.8	3.5	0.9	1.7
100°	251.8	245.3	228.0	197.7	154.5	104.7	54.5	17.3	2.2	0.9	1.7
102.5°	227.6	222.4	204.6	175.2	131.1	85.2	40.7	10.8	0.9	0.9	1.3
105°	205.9	199.4	182.1	151.9	111.6	67.1	28.6	6.5	0.9	0.9	1.3



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CATALOG NUMBER: FCC-X-2-LD4-1HI-30-UNV-81-97-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	134.1	128.9	113.8	88.3	56.7	26.4	7.8	1.3	1.3	1.3	1.3
115°	112.1	104.3	90.9	68.4	42.0	17.3	3.9	1.3	1.3	1.3	1.3
117.5°	89.6	83.1	73.5	51.9	27.7	11.2	2.2	1.3	1.3	1.3	1.3
120°	70.1	64.0	53.2	35.9	18.6	6.5	0.9	1.3	1.3	1.3	1.3
122.5°	50.2	45.4	35.9	23.4	11.2	3.0	1.3	1.3	1.7	1.7	1.3
125°	33.3	30.7	23.8	14.3	6.9	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.6	19.5	13.8	8.2	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	12.1	10.8	8.2	4.8	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.9	6.5	4.3	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.2	2.2	2.2	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	339.6	339.6	339.6
2.5°	323.2	317.1	315.4
5°	305.9	295.9	290.3
7.5°	288.6	275.2	268.7
10°	272.6	253.5	246.6
12.5°	253.5	231.5	220.6
15°	235.4	206.8	196.4
17.5°	215.0	183.0	170.9
20°	196.0	159.2	146.7
22.5°	174.4	135.8	122.0
25°	154.9	112.5	96.9
27.5°	133.3	88.7	75.3
30°	112.9	67.9	54.5
32.5°	93.4	49.8	37.6
35°	75.3	33.7	23.8
37.5°	58.0	20.8	12.1
40°	42.0	10.8	5.6
42.5°	28.1	5.2	3.0
45°	17.3	2.6	0.0
47.5°	10.0	0.0	0.0
50°	5.2	0.0	0.0
52.5°	2.2	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	0.9	1.3
80°	0.9	1.7	2.2
82.5°	1.7	2.2	2.2
85°	1.7	2.2	2.6
87.5°	2.2	2.6	3.0
90°	2.6	3.0	3.0
92.5°	2.6	3.5	3.5
95°	3.0	3.5	3.9
97.5°	3.5	3.9	3.9
100°	3.0	3.9	4.3
102.5°	2.6	3.9	3.9
105°	2.2	3.0	3.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.7	2.2	2.2
115°	1.3	1.7	2.2
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.7	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	181.7	176.5	159.2	130.7	91.3	51.1	19.0	3.5	0.9	1.3	1.3
110°	158.3	154.0	136.3	108.6	73.5	38.1	12.5	2.2	1.3	1.3	1.3







107.5°	1.7	2.6	3.0
110°	1.7	2.2	2.6



(END OF REPORT)