

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: P551211

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-81-86-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: P551211  
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-LD4-2HI-30-UNV-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

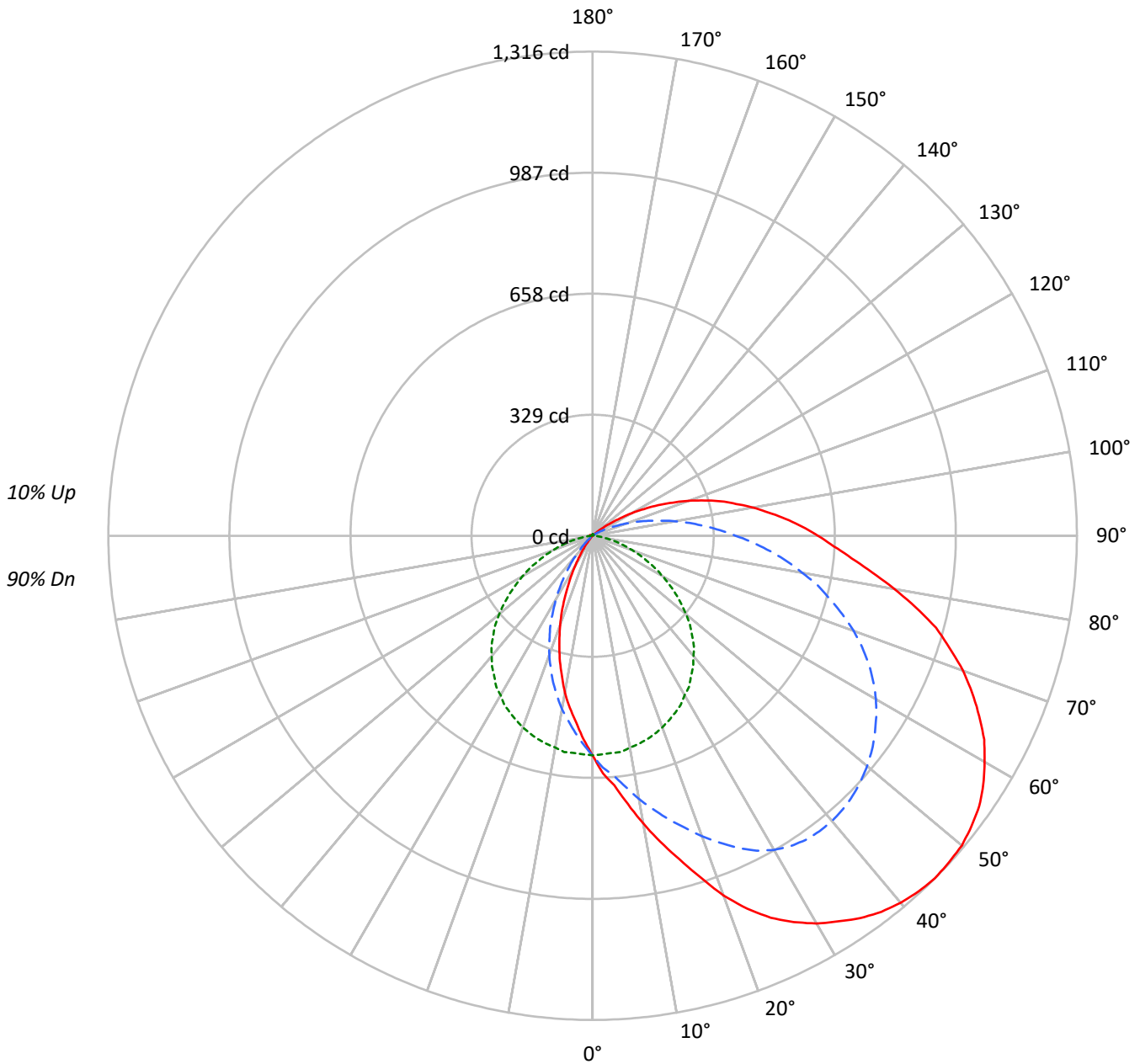
Lumens per Lamp: N/A  
Luminaire Lumens: 2950.0 lumens  
Efficiency: N/A  
Efficacy: 68.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
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-LD4-2HI-30-UNV-81-86-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°	6423	6423	6423
5°	7051	6330	5281
10°	7979	6252	4352
15°	8942	6172	3391
20°	10085	6071	2497
25°	11032	5955	1640
30°	11738	5799	924
35°	12348	5631	407
40°	12889	5423	98
45°	13353	5163	0
50°	13743	4820	0
55°	14040	4382	0
60°	14189	3874	0
65°	14247	3298	0
70°	14200	2689	0
75°	14019	1982	12
80°	13452	1212	61
85°	13001	580	85



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.2	1.9
10°-20°	171.1	5.8
20°-30°	277.1	9.4
30°-40°	356.0	12.1
40°-50°	403.0	13.7
50°-60°	417.5	14.2
60°-70°	393.8	13.3
70°-80°	330.0	11.2
80°-90°	239.2	8.1
90°-100°	157.2	5.3
100°-110°	90.8	3.1
110°-120°	40.1	1.4
120°-130°	10.8	0.4
130°-140°	2.5	0.1
140°-150°	1.6	0.1
150°-160°	1.1	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	505.4	17.1
0°-40°	861.5	29.2
0°-60°	1682.0	57.0
0°-90°	2644.9	89.7
90°-120°	288.1	9.8
90°-150°	303.0	10.3
90°-180°	305.0	10.3
0°-180°	2950.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	597	597	597	597	597	
5°	681	654	592	537	510	69
15°	910	798	572	414	345	262
25°	1146	936	531	272	170	529
35°	1269	1009	466	132	42	796
45°	1316	999	382	30	0	1016
55°	1282	936	275	0	0	1145
65°	1159	829	164	0	0	1147
75°	966	669	70	1	1	1013
85°	707	485	11	3	5	604
90°	613	389	3	5	5	336
95°	526	304	2	5	7	413
105°	362	157	2	4	6	382
115°	197	52	2	2	4	197
125°	58	7	3	2	3	58
135°	3	2	4	3	2	5
145°	1	3	3	2	2	1
155°	2	3	3	2	1	1
165°	2	2	3	2	0	0
175°	2	3	4	2	1	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	596.7	596.7	596.7	596.7	596.7	596.7	596.7	596.7	596.7	596.7	596.7
2.5°	646.9	646.1	643.8	640.0	634.7	625.6	618.0	611.2	602.0	594.4	580.0
5°	681.1	677.3	674.2	670.4	658.3	649.9	636.2	621.0	606.6	592.2	563.3
7.5°	735.8	729.7	725.2	714.5	697.8	678.8	657.5	643.1	633.2	592.9	543.5
10°	794.4	789.0	779.9	760.9	740.4	713.0	682.6	648.4	618.0	584.6	526.0
12.5°	852.1	844.5	831.6	807.3	778.4	744.2	702.4	662.1	618.8	579.2	505.5
15°	909.9	901.5	887.8	858.2	820.2	775.3	724.4	673.5	622.6	572.4	484.2
17.5°	973.0	961.6	941.1	907.6	859.7	804.2	744.2	682.6	621.0	564.0	461.4
20°	1040.6	1024.7	1002.6	957.8	901.5	836.2	763.9	691.7	620.3	554.1	435.6
22.5°	1096.9	1080.9	1056.6	1010.2	942.6	862.8	780.7	697.8	617.2	542.7	411.2
25°	1145.5	1132.6	1106.0	1052.8	981.3	890.9	796.6	702.4	612.7	530.6	385.4
27.5°	1183.5	1171.4	1141.7	1087.0	1014.0	916.0	808.8	704.7	606.6	518.4	358.8
30°	1217.0	1204.8	1169.1	1112.9	1036.1	935.7	821.0	705.4	599.0	500.2	329.9
32.5°	1242.8	1231.4	1194.9	1134.9	1051.3	949.4	827.8	704.7	589.1	487.3	298.7
35°	1268.7	1257.3	1214.7	1150.9	1062.7	955.5	833.1	700.9	577.0	466.0	269.1
37.5°	1288.4	1275.5	1232.2	1161.5	1068.0	957.0	832.4	695.5	564.0	448.5	239.4
40°	1302.1	1288.4	1242.1	1167.6	1069.5	954.7	826.3	686.4	548.8	426.4	208.3
42.5°	1311.3	1296.0	1246.6	1176.7	1066.5	948.7	817.2	675.0	532.1	407.4	178.6
45°	1315.8	1299.8	1247.4	1169.1	1061.2	937.3	803.5	660.6	513.9	381.6	149.0
47.5°	1313.5	1296.0	1243.6	1160.7	1051.3	925.1	788.3	643.1	491.8	358.8	120.9
50°	1309.7	1291.5	1235.2	1150.1	1037.6	909.9	771.5	621.8	469.0	330.7	95.8
52.5°	1297.6	1279.3	1226.1	1134.9	1021.6	892.4	748.7	599.8	444.7	303.3	73.0
55°	1282.4	1265.6	1210.2	1121.2	1001.1	871.1	727.5	576.2	421.1	275.2	52.5
57.5°	1258.8	1243.6	1190.4	1099.2	980.6	847.6	703.9	550.3	391.5	247.0	36.5
60°	1229.9	1214.7	1163.0	1074.1	957.0	821.0	678.0	523.7	364.9	218.9	22.8
62.5°	1199.5	1185.1	1131.1	1042.9	927.4	792.8	649.9	497.1	336.7	193.1	13.7
65°	1159.2	1145.5	1096.9	1005.7	894.7	762.4	618.8	465.2	307.9	164.2	7.6
67.5°	1116.7	1104.5	1055.1	971.5	856.7	729.0	586.8	434.0	277.5	139.1	3.8
70°	1071.0	1055.8	1010.2	925.1	817.9	691.0	551.9	402.1	248.6	114.8	0.0
72.5°	1017.8	1006.4	962.3	881.8	773.1	650.7	516.1	367.2	216.6	91.2	0.8
75°	966.1	951.7	911.4	835.4	729.0	608.1	476.6	334.5	185.5	69.9	0.8
77.5°	899.3	894.7	856.7	782.9	687.2	567.1	433.3	294.9	155.8	50.2	0.8
80°	832.4	827.8	798.2	730.5	638.5	518.4	393.0	257.7	126.9	33.4	0.8
82.5°	766.2	760.1	732.0	675.8	589.1	477.4	351.2	220.4	100.3	20.5	0.8
85°	706.9	699.3	668.9	617.2	538.2	431.0	307.9	184.0	74.5	11.4	1.5
87.5°	656.0	650.7	617.2	564.0	486.5	387.7	269.9	149.0	52.5	5.3	2.3
90°	612.7	601.3	571.6	515.4	437.8	339.8	229.6	119.3	35.0	3.0	3.0
92.5°	570.1	560.2	527.5	469.8	394.5	298.7	190.8	91.2	22.0	1.5	3.8
95°	526.0	515.4	483.5	430.2	350.4	256.9	156.6	66.9	12.2	1.5	3.8
97.5°	482.7	472.8	439.4	386.2	310.9	220.4	123.9	47.1	6.1	1.5	3.0
100°	442.4	431.0	400.6	347.4	271.4	184.0	95.8	30.4	3.8	1.5	3.0
102.5°	399.8	390.7	359.5	307.9	230.3	149.7	71.5	19.0	1.5	1.5	2.3
105°	361.8	350.4	320.0	266.8	196.1	117.8	50.2	11.4	1.5	1.5	2.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	235.6	226.5	199.9	155.1	99.6	46.4	13.7	2.3	2.3	2.3	2.3
115°	196.9	183.2	159.6	120.1	73.7	30.4	6.8	2.3	2.3	2.3	2.3
117.5°	157.4	145.9	129.2	91.2	48.6	19.8	3.8	2.3	2.3	2.3	2.3
120°	123.1	112.5	93.5	63.1	32.7	11.4	1.5	2.3	2.3	2.3	2.3
122.5°	88.2	79.8	63.1	41.0	19.8	5.3	2.3	2.3	3.0	3.0	2.3
125°	58.5	54.0	41.8	25.1	12.2	2.3	2.3	2.3	3.0	3.0	2.3
127.5°	38.0	34.2	24.3	14.4	5.3	2.3	2.3	3.0	3.0	3.0	2.3
130°	21.3	19.0	14.4	8.4	2.3	2.3	2.3	3.0	3.0	3.0	2.3
132.5°	12.2	11.4	7.6	1.5	2.3	2.3	2.3	3.0	3.0	3.0	3.0
135°	3.0	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0
137.5°	0.8	0.8	1.5	1.5	2.3	2.3	3.0	3.8	3.8	3.8	3.0
140°	0.8	0.8	1.5	2.3	2.3	2.3	3.0	3.8	3.8	3.8	3.0
142.5°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0	3.0
145°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.0	3.0	3.0
147.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0	3.0
150°	0.8	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.0
152.5°	0.8	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.0
155°	1.5	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.8
157.5°	1.5	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.8
160°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0	3.0
162.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0	3.0
165°	1.5	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0
167.5°	1.5	1.5	1.5	2.3	2.3	2.3	3.0	3.0	3.0	3.0	3.0
170°	1.5	1.5	1.5	2.3	2.3	2.3	3.0	3.8	3.8	3.8	3.8
172.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.8
175°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.8
177.5°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.0
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	596.7	596.7	596.7
2.5°	567.8	557.2	554.1
5°	537.4	519.9	510.1
7.5°	507.0	483.5	472.1
10°	478.9	445.4	433.3
12.5°	445.4	406.7	387.7
15°	413.5	363.3	345.1
17.5°	377.8	321.5	300.3
20°	344.3	279.7	257.7
22.5°	306.3	238.7	214.4
25°	272.1	197.6	170.3
27.5°	234.1	155.8	132.3
30°	198.4	119.3	95.8
32.5°	164.2	87.4	66.1
35°	132.3	59.3	41.8
37.5°	101.9	36.5	21.3
40°	73.7	19.0	9.9
42.5°	49.4	9.1	5.3
45°	30.4	4.6	0.0
47.5°	17.5	0.0	0.0
50°	9.1	0.0	0.0
52.5°	3.8	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°	0.8	0.8	0.8
77.5°	0.8	1.5	2.3
80°	1.5	3.0	3.8
82.5°	3.0	3.8	3.8
85°	3.0	3.8	4.6
87.5°	3.8	4.6	5.3
90°	4.6	5.3	5.3
92.5°	4.6	6.1	6.1
95°	5.3	6.1	6.8
97.5°	6.1	6.8	6.8
100°	5.3	6.8	7.6
102.5°	4.6	6.8	6.8
105°	3.8	5.3	6.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.0	3.8	3.8
115°	2.3	3.0	3.8
117.5°	2.3	3.0	3.0
120°	2.3	2.3	3.0
122.5°	2.3	2.3	3.0
125°	2.3	2.3	3.0
127.5°	3.0	2.3	2.3
130°	2.3	2.3	2.3
132.5°	3.0	2.3	2.3
135°	3.0	2.3	2.3
137.5°	3.0	2.3	2.3
140°	3.0	2.3	2.3
142.5°	3.0	2.3	2.3
145°	2.3	2.3	2.3
147.5°	2.3	2.3	2.3
150°	2.3	2.3	1.5
152.5°	2.3	1.5	1.5
155°	2.3	1.5	0.8
157.5°	3.0	1.5	0.8
160°	2.3	1.5	0.8
162.5°	2.3	1.5	0.8
165°	2.3	1.5	0.0
167.5°	2.3	1.5	0.8
170°	2.3	1.5	0.8
172.5°	2.3	1.5	0.8
175°	2.3	0.8	0.8
177.5°	2.3	0.8	0.8
180°	2.3	2.3	2.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	319.3	310.1	279.7	229.6	160.4	89.7	33.4	6.1	1.5	2.3	2.3
110°	278.2	270.6	239.4	190.8	129.2	66.9	22.0	3.8	2.3	2.3	2.3







107.5°	3.0	4.6	5.3
110°	3.0	3.8	4.6



(END OF REPORT)