

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: P551343

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-81-88-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: P551343  
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-40-UNV-81-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

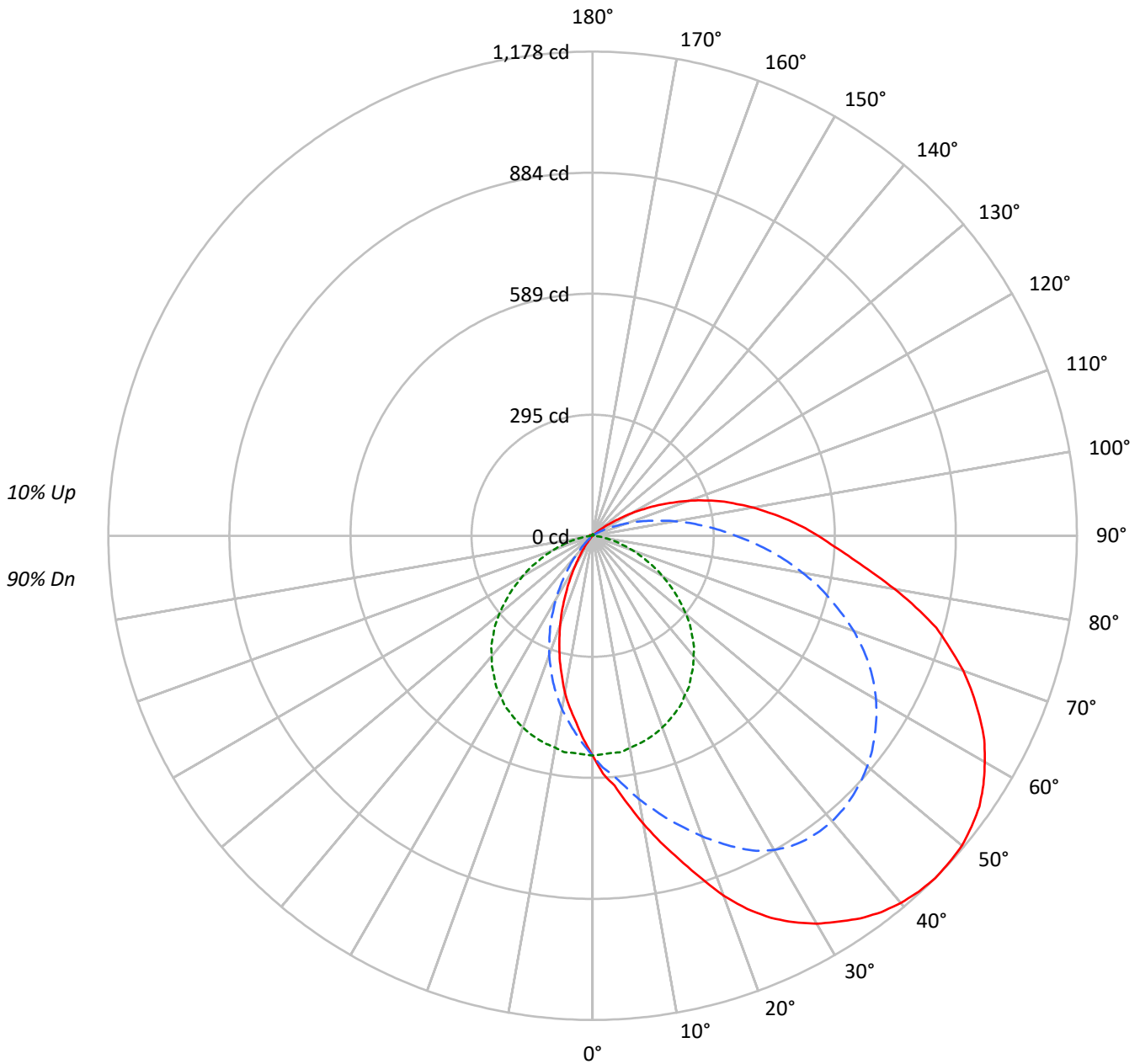
Lumens per Lamp: N/A  
Luminaire Lumens: 2641.9 lumens  
Efficiency: N/A  
Efficacy: 61.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (Ain): 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

TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**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°	5752	5752	5752
5°	6315	5668	4729
10°	7146	5598	3897
15°	8008	5527	3038
20°	9032	5438	2237
25°	9881	5333	1469
30°	10512	5193	828
35°	11058	5042	364
40°	11544	4857	88
45°	11959	4625	0
50°	12308	4316	0
55°	12574	3924	0
60°	12708	3470	0
65°	12760	2953	0
70°	12717	2408	0
75°	12556	1775	10
80°	12048	1088	55
85°	11644	519	75



TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.2	1.9
10°-20°	153.3	5.8
20°-30°	248.2	9.4
30°-40°	318.8	12.1
40°-50°	360.9	13.7
50°-60°	373.9	14.2
60°-70°	352.7	13.3
70°-80°	295.5	11.2
80°-90°	214.2	8.1
90°-100°	140.8	5.3
100°-110°	81.3	3.1
110°-120°	35.9	1.4
120°-130°	9.7	0.4
130°-140°	2.2	0.1
140°-150°	1.4	0.1
150°-160°	1.0	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	452.7	17.1
0°-40°	771.5	29.2
0°-60°	1506.4	57.0
0°-90°	2368.8	89.7
90°-120°	258.0	9.8
90°-150°	271.3	10.3
90°-180°	273.0	10.3
0°-180°	2641.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	534	534	534	534	534	
5°	610	586	530	481	457	62
15°	815	714	513	370	309	235
25°	1026	838	475	244	152	474
35°	1136	904	417	118	37	713
45°	1178	895	342	27	0	910
55°	1148	838	246	0	0	1026
65°	1038	742	147	0	0	1027
75°	865	599	63	1	1	908
85°	633	434	10	3	4	541
90°	549	348	3	4	5	301
95°	471	272	1	5	6	370
105°	324	141	1	3	5	342
115°	176	47	2	2	3	177
125°	52	6	3	2	3	52
135°	3	2	3	3	2	5
145°	1	2	3	2	2	1
155°	1	3	3	2	1	1
165°	1	2	3	2	0	0
175°	1	2	3	2	1	0
180°	2	2	2	2	2	



TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	534.4	534.4	534.4	534.4	534.4	534.4	534.4	534.4	534.4	534.4	534.4
2.5°	579.3	578.7	576.6	573.2	568.5	560.3	553.5	547.3	539.2	532.4	519.4
5°	610.0	606.6	603.9	600.4	589.6	582.1	569.8	556.2	543.3	530.3	504.5
7.5°	659.0	653.5	649.5	639.9	625.0	607.9	588.9	575.9	567.1	531.0	486.8
10°	711.4	706.7	698.5	681.5	663.1	638.6	611.3	580.7	553.5	523.5	471.1
12.5°	763.2	756.3	744.8	723.0	697.1	666.5	629.0	593.0	554.2	518.8	452.7
15°	814.9	807.4	795.2	768.6	734.6	694.4	648.8	603.2	557.6	512.6	433.7
17.5°	871.4	861.2	842.8	812.9	770.0	720.3	666.5	611.3	556.2	505.1	413.2
20°	932.0	917.7	898.0	857.8	807.4	748.9	684.2	619.5	555.5	496.3	390.1
22.5°	982.4	968.1	946.3	904.8	844.2	772.7	699.2	625.0	552.8	486.1	368.3
25°	1025.9	1014.4	990.5	942.9	878.9	797.9	713.5	629.0	548.7	475.2	345.2
27.5°	1060.0	1049.1	1022.5	973.5	908.2	820.3	724.4	631.1	543.3	464.3	321.3
30°	1089.9	1079.0	1047.0	996.7	927.9	838.0	735.2	631.8	536.5	448.0	295.5
32.5°	1113.1	1102.9	1070.2	1016.4	941.5	850.3	741.4	631.1	527.6	436.4	267.5
35°	1136.2	1126.0	1087.9	1030.7	951.7	855.7	746.1	627.7	516.7	417.3	241.0
37.5°	1153.9	1142.4	1103.5	1040.2	956.5	857.1	745.5	622.9	505.1	401.7	214.4
40°	1166.2	1153.9	1112.4	1045.7	957.9	855.1	740.0	614.7	491.5	381.9	186.5
42.5°	1174.3	1160.7	1116.5	1053.8	955.1	849.6	731.8	604.5	476.5	364.9	160.0
45°	1178.4	1164.1	1117.2	1047.0	950.4	839.4	719.6	591.6	460.2	341.8	133.4
47.5°	1176.4	1160.7	1113.8	1039.6	941.5	828.5	706.0	575.9	440.5	321.3	108.2
50°	1173.0	1156.6	1106.3	1030.0	929.3	814.9	691.0	556.9	420.0	296.1	85.8
52.5°	1162.1	1145.8	1098.1	1016.4	915.0	799.2	670.6	537.1	398.3	271.6	65.4
55°	1148.5	1133.5	1083.8	1004.2	896.6	780.2	651.5	516.0	377.2	246.4	47.0
57.5°	1127.4	1113.8	1066.1	984.4	878.2	759.1	630.4	492.9	350.6	221.3	32.7
60°	1101.5	1087.9	1041.6	961.9	857.1	735.2	607.3	469.1	326.8	196.1	20.4
62.5°	1074.3	1061.3	1013.0	934.0	830.6	710.1	582.1	445.2	301.6	172.9	12.3
65°	1038.2	1025.9	982.4	900.7	801.3	682.8	554.2	416.6	275.7	147.0	6.8
67.5°	1000.1	989.2	944.9	870.0	767.2	652.9	525.6	388.7	248.5	124.6	3.4
70°	959.2	945.6	904.8	828.5	732.5	618.8	494.2	360.1	222.6	102.8	0.0
72.5°	911.6	901.4	861.9	789.7	692.4	582.7	462.3	328.8	194.0	81.7	0.7
75°	865.3	852.3	816.3	748.2	652.9	544.6	426.8	299.5	166.1	62.6	0.7
77.5°	805.4	801.3	767.2	701.2	615.4	507.9	388.0	264.1	139.6	44.9	0.7
80°	745.5	741.4	714.8	654.2	571.9	464.3	352.0	230.8	113.7	30.0	0.7
82.5°	686.2	680.8	655.6	605.2	527.6	427.5	314.5	197.4	89.9	18.4	0.7
85°	633.1	626.3	599.1	552.8	482.0	386.0	275.7	164.7	66.7	10.2	1.4
87.5°	587.5	582.7	552.8	505.1	435.7	347.2	241.7	133.4	47.0	4.8	2.0
90°	548.7	538.5	511.9	461.6	392.1	304.3	205.6	106.9	31.3	2.7	2.7
92.5°	510.6	501.7	472.5	420.7	353.3	267.5	170.9	81.7	19.7	1.4	3.4
95°	471.1	461.6	433.0	385.3	313.8	230.1	140.2	59.9	10.9	1.4	3.4
97.5°	432.3	423.4	393.5	345.8	278.4	197.4	111.0	42.2	5.4	1.4	2.7
100°	396.2	386.0	358.8	311.1	243.0	164.7	85.8	27.2	3.4	1.4	2.7
102.5°	358.1	349.9	322.0	275.7	206.3	134.1	64.0	17.0	1.4	1.4	2.0
105°	324.1	313.8	286.6	239.0	175.6	105.5	44.9	10.2	1.4	1.4	2.0



TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	211.0	202.9	179.0	138.9	89.2	41.5	12.3	2.0	2.0	2.0	2.0
115°	176.3	164.1	143.0	107.6	66.0	27.2	6.1	2.0	2.0	2.0	2.0
117.5°	140.9	130.7	115.7	81.7	43.6	17.7	3.4	2.0	2.0	2.0	2.0
120°	110.3	100.8	83.7	56.5	29.3	10.2	1.4	2.0	2.0	2.0	2.0
122.5°	79.0	71.5	56.5	36.8	17.7	4.8	2.0	2.0	2.7	2.7	2.0
125°	52.4	48.3	37.4	22.5	10.9	2.0	2.0	2.0	2.7	2.7	2.0
127.5°	34.0	30.6	21.8	12.9	4.8	2.0	2.0	2.7	2.7	2.7	2.0
130°	19.1	17.0	12.9	7.5	2.0	2.0	2.0	2.7	2.7	2.7	2.0
132.5°	10.9	10.2	6.8	1.4	2.0	2.0	2.0	2.7	2.7	2.7	2.7
135°	2.7	1.4	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	2.7
137.5°	0.7	0.7	1.4	1.4	2.0	2.0	2.7	3.4	3.4	3.4	2.7
140°	0.7	0.7	1.4	2.0	2.0	2.0	2.7	3.4	3.4	3.4	2.7
142.5°	0.7	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	2.7	2.7
145°	0.7	1.4	1.4	2.0	2.0	2.7	2.7	3.4	2.7	2.7	2.7
147.5°	1.4	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	2.7	2.7
150°	0.7	1.4	1.4	2.0	2.7	2.7	2.7	3.4	2.7	2.7	2.7
152.5°	0.7	1.4	1.4	2.0	2.7	2.7	2.7	3.4	2.7	2.7	2.7
155°	1.4	1.4	1.4	2.0	2.7	2.7	2.7	3.4	2.7	2.7	3.4
157.5°	1.4	1.4	1.4	2.0	2.7	2.7	2.7	3.4	2.7	2.7	3.4
160°	1.4	1.4	1.4	2.0	2.0	2.7	2.7	2.7	2.7	2.7	2.7
162.5°	1.4	1.4	1.4	2.0	2.0	2.7	2.7	2.7	2.7	2.7	2.7
165°	1.4	1.4	1.4	1.4	2.0	2.0	2.7	2.7	2.7	2.7	2.7
167.5°	1.4	1.4	1.4	2.0	2.0	2.0	2.7	2.7	2.7	2.7	2.7
170°	1.4	1.4	1.4	2.0	2.0	2.0	2.7	3.4	3.4	3.4	3.4
172.5°	1.4	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	3.4	3.4
175°	1.4	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	3.4	3.4
177.5°	0.7	1.4	1.4	2.0	2.0	2.7	2.7	3.4	3.4	3.4	2.7
180°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0



TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	534.4	534.4	534.4
2.5°	508.5	499.0	496.3
5°	481.3	465.7	456.8
7.5°	454.1	433.0	422.8
10°	428.9	398.9	388.0
12.5°	398.9	364.2	347.2
15°	370.3	325.4	309.1
17.5°	338.3	288.0	268.9
20°	308.4	250.5	230.8
22.5°	274.4	213.8	192.0
25°	243.7	177.0	152.5
27.5°	209.7	139.6	118.5
30°	177.7	106.9	85.8
32.5°	147.0	78.3	59.2
35°	118.5	53.1	37.4
37.5°	91.2	32.7	19.1
40°	66.0	17.0	8.9
42.5°	44.3	8.2	4.8
45°	27.2	4.1	0.0
47.5°	15.7	0.0	0.0
50°	8.2	0.0	0.0
52.5°	3.4	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°	0.7	0.7	0.7
77.5°	0.7	1.4	2.0
80°	1.4	2.7	3.4
82.5°	2.7	3.4	3.4
85°	2.7	3.4	4.1
87.5°	3.4	4.1	4.8
90°	4.1	4.8	4.8
92.5°	4.1	5.4	5.4
95°	4.8	5.4	6.1
97.5°	5.4	6.1	6.1
100°	4.8	6.1	6.8
102.5°	4.1	6.1	6.1
105°	3.4	4.8	5.4





TEST NUMBER: P551343

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-81-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.7	3.4	3.4
115°	2.0	2.7	3.4
117.5°	2.0	2.7	2.7
120°	2.0	2.0	2.7
122.5°	2.0	2.0	2.7
125°	2.0	2.0	2.7
127.5°	2.7	2.0	2.0
130°	2.0	2.0	2.0
132.5°	2.7	2.0	2.0
135°	2.7	2.0	2.0
137.5°	2.7	2.0	2.0
140°	2.7	2.0	2.0
142.5°	2.7	2.0	2.0
145°	2.0	2.0	2.0
147.5°	2.0	2.0	2.0
150°	2.0	2.0	1.4
152.5°	2.0	1.4	1.4
155°	2.0	1.4	0.7
157.5°	2.7	1.4	0.7
160°	2.0	1.4	0.7
162.5°	2.0	1.4	0.7
165°	2.0	1.4	0.0
167.5°	2.0	1.4	0.7
170°	2.0	1.4	0.7
172.5°	2.0	1.4	0.7
175°	2.0	0.7	0.7
177.5°	2.0	0.7	0.7
180°	2.0	2.0	2.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	285.9	277.8	250.5	205.6	143.6	80.3	30.0	5.4	1.4	2.0	2.0
110°	249.2	242.4	214.4	170.9	115.7	59.9	19.7	3.4	2.0	2.0	2.0







107.5°	2.7	4.1	4.8
110°	2.7	3.4	4.1



(END OF REPORT)