

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: P551207

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-81-84-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: P551207  
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-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

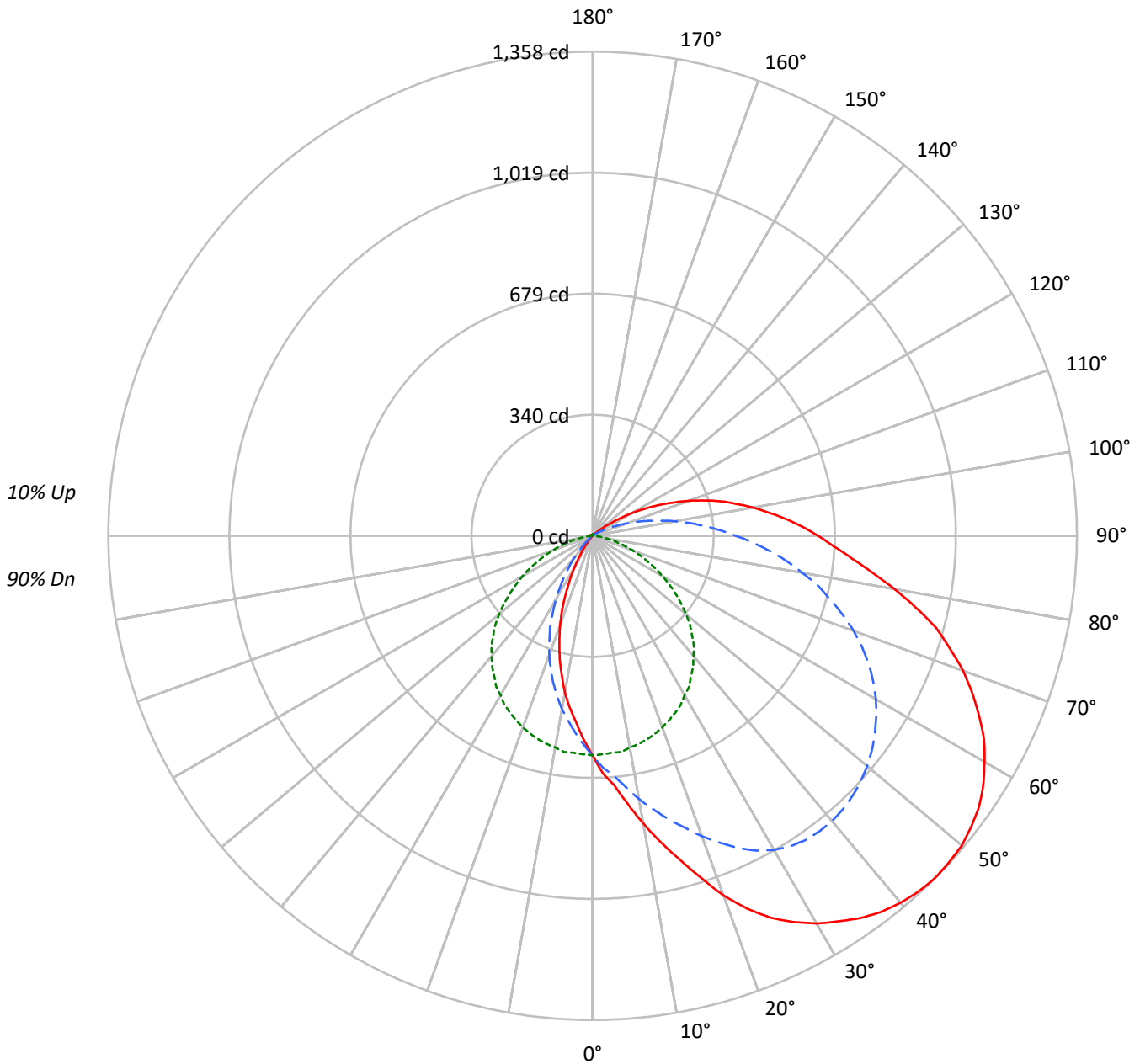
Lumens per Lamp: N/A  
Luminaire Lumens: 3044.0 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-81-84-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°	6627	6627	6627
5°	7276	6530	5448
10°	8233	6451	4491
15°	9227	6368	3499
20°	10406	6265	2577
25°	11384	6144	1692
30°	12112	5983	953
35°	12741	5809	419
40°	13300	5596	101
45°	13778	5329	0
50°	14181	4973	0
55°	14487	4521	0
60°	14641	3998	0
65°	14702	3402	0
70°	14653	2774	0
75°	14466	2048	12
80°	13880	1251	63
85°	13417	600	86



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.0	1.9
10°-20°	176.6	5.8
20°-30°	286.0	9.4
30°-40°	367.4	12.1
40°-50°	415.8	13.7
50°-60°	430.8	14.2
60°-70°	406.3	13.3
70°-80°	340.5	11.2
80°-90°	246.8	8.1
90°-100°	162.2	5.3
100°-110°	93.7	3.1
110°-120°	41.4	1.4
120°-130°	11.2	0.4
130°-140°	2.6	0.1
140°-150°	1.7	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	521.5	17.1
0°-40°	888.9	29.2
0°-60°	1735.6	57.0
0°-90°	2729.2	89.7
90°-120°	297.3	9.8
90°-150°	312.7	10.3
90°-180°	315.0	10.3
0°-180°	3044.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	616	616	616	616	616	
5°	703	675	611	554	526	71
15°	939	823	591	427	356	271
25°	1182	966	548	281	176	546
35°	1309	1041	481	136	43	821
45°	1358	1031	394	31	0	1048
55°	1323	966	284	0	0	1182
65°	1196	855	169	0	0	1183
75°	997	690	72	1	1	1046
85°	730	500	12	3	5	623
90°	632	401	3	5	6	347
95°	543	313	2	6	7	426
105°	373	162	2	4	6	394
115°	203	54	2	2	4	203
125°	60	7	3	2	3	60
135°	3	2	4	3	2	6
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°	615.7	615.7	615.7	615.7	615.7	615.7	615.7	615.7	615.7	615.7	615.7
2.5°	667.5	666.7	664.4	660.4	654.9	645.5	637.7	630.6	621.2	613.4	598.5
5°	702.8	698.9	695.7	691.8	679.3	670.6	656.5	640.8	625.9	611.0	581.2
7.5°	759.3	753.0	748.3	737.3	720.0	700.4	678.5	663.6	653.4	611.8	560.8
10°	819.7	814.2	804.8	785.2	764.0	735.7	704.4	669.1	637.7	603.2	542.8
12.5°	879.3	871.4	858.1	833.0	803.2	767.9	724.8	683.2	638.5	597.7	521.6
15°	938.9	930.3	916.1	885.6	846.3	800.1	747.5	694.9	642.4	590.6	499.6
17.5°	1004.0	992.2	971.0	936.5	887.1	829.9	767.9	704.4	640.8	582.0	476.1
20°	1073.8	1057.3	1034.6	988.3	930.3	862.8	788.3	713.8	640.0	571.8	449.4
22.5°	1131.8	1115.4	1090.3	1042.4	972.6	890.3	805.5	720.0	636.9	560.0	424.3
25°	1182.0	1168.7	1141.3	1086.3	1012.6	919.3	822.0	724.8	632.2	547.5	397.7
27.5°	1221.3	1208.7	1178.1	1121.6	1046.3	945.2	834.6	727.1	625.9	534.9	370.2
30°	1255.8	1243.2	1206.4	1148.3	1069.1	965.6	847.1	727.9	618.1	516.1	340.4
32.5°	1282.4	1270.7	1233.0	1171.1	1084.8	979.7	854.2	727.1	607.9	502.8	308.3
35°	1309.1	1297.3	1253.4	1187.5	1096.5	985.9	859.7	723.2	595.3	480.8	277.7
37.5°	1329.5	1316.2	1271.5	1198.5	1102.0	987.5	858.9	717.7	582.0	462.8	247.1
40°	1343.6	1329.5	1281.7	1204.8	1103.6	985.2	852.6	708.3	566.3	440.0	214.9
42.5°	1353.0	1337.3	1286.4	1214.2	1100.5	978.9	843.2	696.5	549.1	420.4	184.3
45°	1357.7	1341.3	1287.1	1206.4	1095.0	967.1	829.1	681.6	530.2	393.8	153.7
47.5°	1355.4	1337.3	1283.2	1197.7	1084.8	954.6	813.4	663.6	507.5	370.2	124.7
50°	1351.5	1332.6	1274.6	1186.7	1070.7	938.9	796.1	641.6	484.0	341.2	98.8
52.5°	1338.9	1320.1	1265.2	1171.1	1054.2	920.8	772.6	618.9	458.9	313.0	75.3
55°	1323.2	1306.0	1248.7	1156.9	1033.0	898.9	750.6	594.6	434.5	283.9	54.1
57.5°	1298.9	1283.2	1228.3	1134.2	1011.8	874.6	726.3	567.9	403.9	254.9	37.6
60°	1269.1	1253.4	1200.1	1108.3	987.5	847.1	699.7	540.4	376.5	225.9	23.5
62.5°	1237.7	1222.8	1167.1	1076.2	956.9	818.1	670.6	513.0	347.5	199.2	14.1
65°	1196.2	1182.0	1131.8	1037.7	923.2	786.7	638.5	480.0	317.7	169.4	7.8
67.5°	1152.2	1139.7	1088.7	1002.4	884.0	752.2	605.5	447.9	286.3	143.5	3.9
70°	1105.2	1089.5	1042.4	954.6	844.0	713.0	569.5	414.9	256.5	118.4	0.0
72.5°	1050.3	1038.5	993.0	909.9	797.7	671.4	532.6	378.8	223.5	94.1	0.8
75°	996.9	982.0	940.5	862.0	752.2	627.5	491.8	345.1	191.4	72.2	0.8
77.5°	927.9	923.2	884.0	807.9	709.1	585.1	447.1	304.3	160.8	51.8	0.8
80°	858.9	854.2	823.6	753.8	658.9	534.9	405.5	265.9	131.0	34.5	0.8
82.5°	790.6	784.4	755.3	697.3	607.9	492.6	362.4	227.5	103.5	21.2	0.8
85°	729.5	721.6	690.2	636.9	555.3	444.7	317.7	189.8	76.9	11.8	1.6
87.5°	676.9	671.4	636.9	582.0	502.0	400.0	278.5	153.7	54.1	5.5	2.4
90°	632.2	620.4	589.8	531.8	451.8	350.6	236.9	123.1	36.1	3.1	3.1
92.5°	588.3	578.1	544.4	484.7	407.1	308.3	196.9	94.1	22.7	1.6	3.9
95°	542.8	531.8	498.9	444.0	361.6	265.1	161.6	69.0	12.5	1.6	3.9
97.5°	498.1	487.9	453.4	398.5	320.8	227.5	127.9	48.6	6.3	1.6	3.1
100°	456.5	444.7	413.4	358.5	280.0	189.8	98.8	31.4	3.9	1.6	3.1
102.5°	412.6	403.2	371.0	317.7	237.7	154.5	73.7	19.6	1.6	1.6	2.4
105°	373.4	361.6	330.2	275.3	202.4	121.6	51.8	11.8	1.6	1.6	2.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	243.2	233.7	206.3	160.0	102.8	47.8	14.1	2.4	2.4	2.4	2.4
115°	203.2	189.0	164.7	123.9	76.1	31.4	7.1	2.4	2.4	2.4	2.4
117.5°	162.4	150.6	133.3	94.1	50.2	20.4	3.9	2.4	2.4	2.4	2.4
120°	127.1	116.1	96.5	65.1	33.7	11.8	1.6	2.4	2.4	2.4	2.4
122.5°	91.0	82.4	65.1	42.4	20.4	5.5	2.4	2.4	3.1	3.1	2.4
125°	60.4	55.7	43.1	25.9	12.5	2.4	2.4	2.4	3.1	3.1	2.4
127.5°	39.2	35.3	25.1	14.9	5.5	2.4	2.4	3.1	3.1	3.1	2.4
130°	22.0	19.6	14.9	8.6	2.4	2.4	2.4	3.1	3.1	3.1	2.4
132.5°	12.5	11.8	7.8	1.6	2.4	2.4	2.4	3.1	3.1	3.1	3.1
135°	3.1	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.1	3.9	3.9	3.9	3.1
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.1	3.9	3.9	3.9	3.1
142.5°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1	3.1
145°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.1	3.1	3.1
147.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1	3.1
150°	0.8	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.1
152.5°	0.8	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.1
155°	1.6	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.9
157.5°	1.6	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.9
160°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1	3.1
162.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.6	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1
167.5°	1.6	1.6	1.6	2.4	2.4	2.4	3.1	3.1	3.1	3.1	3.1
170°	1.6	1.6	1.6	2.4	2.4	2.4	3.1	3.9	3.9	3.9	3.9
172.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.9
175°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.9
177.5°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.1
180°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	615.7	615.7	615.7
2.5°	585.9	574.9	571.8
5°	554.5	536.5	526.3
7.5°	523.2	498.9	487.1
10°	494.2	459.6	447.1
12.5°	459.6	419.6	400.0
15°	426.7	374.9	356.1
17.5°	389.8	331.8	309.8
20°	355.3	288.6	265.9
22.5°	316.1	246.3	221.2
25°	280.8	203.9	175.7
27.5°	241.6	160.8	136.5
30°	204.7	123.1	98.8
32.5°	169.4	90.2	68.2
35°	136.5	61.2	43.1
37.5°	105.1	37.6	22.0
40°	76.1	19.6	10.2
42.5°	51.0	9.4	5.5
45°	31.4	4.7	0.0
47.5°	18.0	0.0	0.0
50°	9.4	0.0	0.0
52.5°	3.9	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°	0.8	0.8	0.8
77.5°	0.8	1.6	2.4
80°	1.6	3.1	3.9
82.5°	3.1	3.9	3.9
85°	3.1	3.9	4.7
87.5°	3.9	4.7	5.5
90°	4.7	5.5	5.5
92.5°	4.7	6.3	6.3
95°	5.5	6.3	7.1
97.5°	6.3	7.1	7.1
100°	5.5	7.1	7.8
102.5°	4.7	7.1	7.1
105°	3.9	5.5	6.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.1	3.9	3.9
115°	2.4	3.1	3.9
117.5°	2.4	3.1	3.1
120°	2.4	2.4	3.1
122.5°	2.4	2.4	3.1
125°	2.4	2.4	3.1
127.5°	3.1	2.4	2.4
130°	2.4	2.4	2.4
132.5°	3.1	2.4	2.4
135°	3.1	2.4	2.4
137.5°	3.1	2.4	2.4
140°	3.1	2.4	2.4
142.5°	3.1	2.4	2.4
145°	2.4	2.4	2.4
147.5°	2.4	2.4	2.4
150°	2.4	2.4	1.6
152.5°	2.4	1.6	1.6
155°	2.4	1.6	0.8
157.5°	3.1	1.6	0.8
160°	2.4	1.6	0.8
162.5°	2.4	1.6	0.8
165°	2.4	1.6	0.0
167.5°	2.4	1.6	0.8
170°	2.4	1.6	0.8
172.5°	2.4	1.6	0.8
175°	2.4	0.8	0.8
177.5°	2.4	0.8	0.8
180°	2.4	2.4	2.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	329.4	320.0	288.6	236.9	165.5	92.6	34.5	6.3	1.6	2.4	2.4
110°	287.1	279.2	247.1	196.9	133.3	69.0	22.7	3.9	2.4	2.4	2.4







107.5°	3.1	4.7	5.5
110°	3.1	3.9	4.7



(END OF REPORT)