

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: P551339

Luminaire Tested: **FCC-X-2-LD4-2HI-40-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: P551339  
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-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

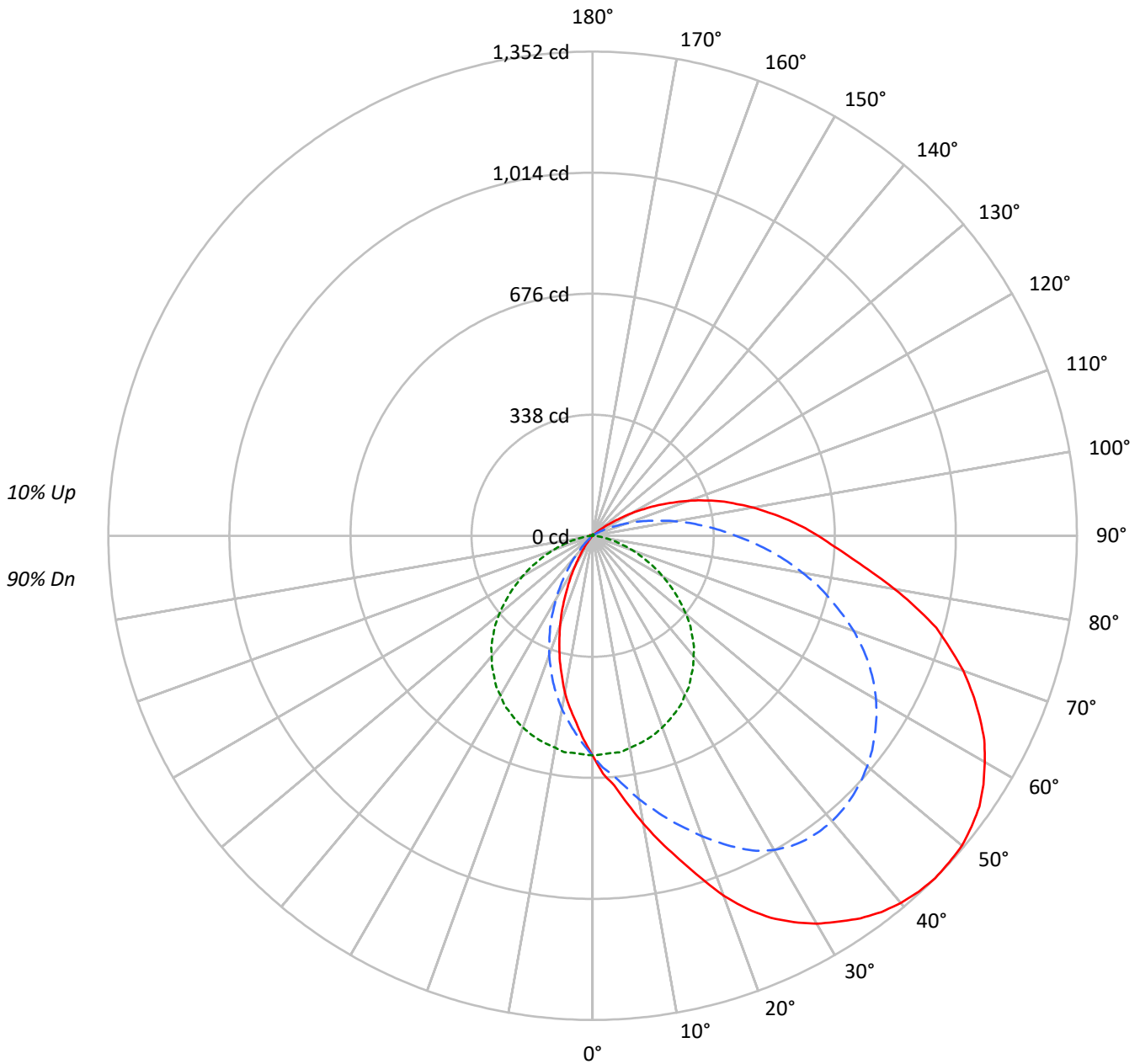
Lumens per Lamp: N/A  
Luminaire Lumens: 3031.9 lumens  
Efficiency: N/A  
Efficacy: 70.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (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-40-UNV-81-86-ED1D-90

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	6602	6602	6602
5°	7247	6505	5427
10°	8200	6425	4473
15°	9190	6343	3486
20°	10366	6240	2567
25°	11340	6120	1685
30°	12064	5960	949
35°	12691	5786	419
40°	13247	5574	101
45°	13725	5307	0
50°	14125	4954	0
55°	14430	4503	0
60°	14584	3982	0
65°	14643	3390	0
70°	14595	2764	0
75°	14409	2039	12
80°	13826	1248	63
85°	13364	595	86



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	1.9
10°-20°	175.9	5.8
20°-30°	284.8	9.4
30°-40°	365.9	12.1
40°-50°	414.2	13.7
50°-60°	429.1	14.2
60°-70°	404.7	13.3
70°-80°	339.2	11.2
80°-90°	245.8	8.1
90°-100°	161.6	5.3
100°-110°	93.3	3.1
110°-120°	41.2	1.4
120°-130°	11.1	0.4
130°-140°	2.5	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°	519.5	17.1
0°-40°	885.4	29.2
0°-60°	1728.7	57.0
0°-90°	2718.5	89.7
90°-120°	296.1	9.8
90°-150°	311.4	10.3
90°-180°	313.0	10.3
0°-180°	3031.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	613	613	613	613	613	
5°	700	672	609	552	524	71
15°	935	820	588	425	355	270
25°	1177	962	545	280	175	544
35°	1304	1037	479	136	43	818
45°	1352	1027	392	31	0	1044
55°	1318	962	283	0	0	1177
65°	1191	852	169	0	0	1179
75°	993	687	72	1	1	1041
85°	727	498	12	3	5	620
90°	630	400	3	5	6	345
95°	541	312	2	6	7	424
105°	372	161	2	4	6	392
115°	202	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°	613.3	613.3	613.3	613.3	613.3	613.3	613.3	613.3	613.3	613.3	613.3
2.5°	664.9	664.1	661.7	657.8	652.4	643.0	635.2	628.1	618.8	611.0	596.1
5°	700.0	696.1	693.0	689.1	676.6	668.0	653.9	638.3	623.5	608.6	578.9
7.5°	756.3	750.0	745.3	734.4	717.2	697.7	675.8	661.0	650.8	609.4	558.6
10°	816.4	811.0	801.6	782.1	761.0	732.8	701.6	666.4	635.2	600.8	540.6
12.5°	875.8	868.0	854.7	829.7	800.0	764.9	721.9	680.5	636.0	595.3	519.5
15°	935.2	926.6	912.5	882.1	843.0	796.9	744.6	692.2	639.9	588.3	497.7
17.5°	1000.0	988.3	967.2	932.8	883.6	826.6	764.9	701.6	638.3	579.7	474.2
20°	1069.6	1053.2	1030.5	984.4	926.6	859.4	785.2	711.0	637.5	569.5	447.7
22.5°	1127.4	1111.0	1086.0	1038.3	968.8	886.7	802.4	717.2	634.4	557.8	422.7
25°	1177.4	1164.1	1136.8	1082.1	1008.6	915.7	818.8	721.9	629.7	545.3	396.1
27.5°	1216.4	1203.9	1173.5	1117.2	1042.2	941.4	831.3	724.2	623.5	532.8	368.8
30°	1250.8	1238.3	1201.6	1143.8	1064.9	961.7	843.8	725.0	615.6	514.1	339.1
32.5°	1277.4	1265.7	1228.2	1166.4	1080.5	975.8	850.8	724.2	605.5	500.8	307.0
35°	1303.9	1292.2	1248.5	1182.9	1092.2	982.1	856.3	720.3	593.0	478.9	276.6
37.5°	1324.3	1311.0	1266.4	1193.8	1097.7	983.6	855.5	714.9	579.7	461.0	246.1
40°	1338.3	1324.3	1276.6	1200.0	1099.3	981.3	849.2	705.5	564.1	438.3	214.1
42.5°	1347.7	1332.1	1281.3	1209.4	1096.1	975.0	839.9	693.8	546.9	418.8	183.6
45°	1352.4	1336.0	1282.1	1201.6	1090.7	963.3	825.8	678.9	528.1	392.2	153.1
47.5°	1350.0	1332.1	1278.2	1193.0	1080.5	950.8	810.2	661.0	505.5	368.8	124.2
50°	1346.1	1327.4	1269.6	1182.1	1066.4	935.2	793.0	639.1	482.0	339.9	98.4
52.5°	1333.6	1314.9	1260.2	1166.4	1050.0	917.2	769.6	616.4	457.0	311.7	75.0
55°	1318.0	1300.8	1243.8	1152.4	1028.9	895.3	747.7	592.2	432.8	282.8	53.9
57.5°	1293.8	1278.2	1223.5	1129.7	1007.8	871.1	723.5	565.6	402.4	253.9	37.5
60°	1264.1	1248.5	1195.4	1103.9	983.6	843.8	696.9	538.3	375.0	225.0	23.4
62.5°	1232.9	1218.0	1162.5	1071.9	953.2	814.9	668.0	511.0	346.1	198.4	14.1
65°	1191.4	1177.4	1127.4	1033.6	919.6	783.6	636.0	478.1	316.4	168.8	7.8
67.5°	1147.7	1135.2	1084.4	998.5	880.5	749.2	603.1	446.1	285.2	143.0	3.9
70°	1100.8	1085.2	1038.3	950.8	840.7	710.2	567.2	413.3	255.5	118.0	0.0
72.5°	1046.1	1034.4	989.1	906.3	794.6	668.8	530.5	377.4	222.7	93.8	0.8
75°	993.0	978.2	936.7	858.6	749.2	625.0	489.9	343.8	190.6	71.9	0.8
77.5°	924.2	919.6	880.5	804.7	706.3	582.8	445.3	303.1	160.2	51.6	0.8
80°	855.5	850.8	820.3	750.8	656.3	532.8	403.9	264.9	130.5	34.4	0.8
82.5°	787.5	781.3	752.4	694.6	605.5	490.6	360.9	226.6	103.1	21.1	0.8
85°	726.6	718.8	687.5	634.4	553.1	443.0	316.4	189.1	76.6	11.7	1.6
87.5°	674.2	668.8	634.4	579.7	500.0	398.5	277.4	153.1	53.9	5.5	2.3
90°	629.7	618.0	587.5	529.7	450.0	349.2	235.9	122.7	35.9	3.1	3.1
92.5°	586.0	575.8	542.2	482.8	405.5	307.0	196.1	93.8	22.7	1.6	3.9
95°	540.6	529.7	496.9	442.2	360.2	264.1	160.9	68.8	12.5	1.6	3.9
97.5°	496.1	486.0	451.6	396.9	319.5	226.6	127.3	48.4	6.3	1.6	3.1
100°	454.7	443.0	411.7	357.0	278.9	189.1	98.4	31.3	3.9	1.6	3.1
102.5°	411.0	401.6	369.5	316.4	236.7	153.9	73.4	19.5	1.6	1.6	2.3
105°	371.9	360.2	328.9	274.2	201.6	121.1	51.6	11.7	1.6	1.6	2.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	242.2	232.8	205.5	159.4	102.3	47.7	14.1	2.3	2.3	2.3	2.3
115°	202.4	188.3	164.1	123.4	75.8	31.3	7.0	2.3	2.3	2.3	2.3
117.5°	161.7	150.0	132.8	93.8	50.0	20.3	3.9	2.3	2.3	2.3	2.3
120°	126.6	115.6	96.1	64.8	33.6	11.7	1.6	2.3	2.3	2.3	2.3
122.5°	90.6	82.0	64.8	42.2	20.3	5.5	2.3	2.3	3.1	3.1	2.3
125°	60.2	55.5	43.0	25.8	12.5	2.3	2.3	2.3	3.1	3.1	2.3
127.5°	39.1	35.2	25.0	14.8	5.5	2.3	2.3	3.1	3.1	3.1	2.3
130°	21.9	19.5	14.8	8.6	2.3	2.3	2.3	3.1	3.1	3.1	2.3
132.5°	12.5	11.7	7.8	1.6	2.3	2.3	2.3	3.1	3.1	3.1	3.1
135°	3.1	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1
137.5°	0.8	0.8	1.6	1.6	2.3	2.3	3.1	3.9	3.9	3.9	3.1
140°	0.8	0.8	1.6	2.3	2.3	2.3	3.1	3.9	3.9	3.9	3.1
142.5°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1	3.1
145°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.1	3.1	3.1
147.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1	3.1
150°	0.8	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.1
152.5°	0.8	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.1
155°	1.6	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.9
157.5°	1.6	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.9
160°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
162.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.6	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1
167.5°	1.6	1.6	1.6	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1
170°	1.6	1.6	1.6	2.3	2.3	2.3	3.1	3.9	3.9	3.9	3.9
172.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.9
175°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.9
177.5°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.1
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°	613.3	613.3	613.3
2.5°	583.6	572.7	569.5
5°	552.4	534.4	524.2
7.5°	521.1	496.9	485.2
10°	492.2	457.8	445.3
12.5°	457.8	418.0	398.5
15°	425.0	373.4	354.7
17.5°	388.3	330.5	308.6
20°	353.9	287.5	264.9
22.5°	314.9	245.3	220.3
25°	279.7	203.1	175.0
27.5°	240.6	160.2	135.9
30°	203.9	122.7	98.4
32.5°	168.8	89.8	68.0
35°	135.9	60.9	43.0
37.5°	104.7	37.5	21.9
40°	75.8	19.5	10.2
42.5°	50.8	9.4	5.5
45°	31.3	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	2.3
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	7.0
97.5°	6.3	7.0	7.0
100°	5.5	7.0	7.8
102.5°	4.7	7.0	7.0
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°	2.3	3.1	3.9
117.5°	2.3	3.1	3.1
120°	2.3	2.3	3.1
122.5°	2.3	2.3	3.1
125°	2.3	2.3	3.1
127.5°	3.1	2.3	2.3
130°	2.3	2.3	2.3
132.5°	3.1	2.3	2.3
135°	3.1	2.3	2.3
137.5°	3.1	2.3	2.3
140°	3.1	2.3	2.3
142.5°	3.1	2.3	2.3
145°	2.3	2.3	2.3
147.5°	2.3	2.3	2.3
150°	2.3	2.3	1.6
152.5°	2.3	1.6	1.6
155°	2.3	1.6	0.8
157.5°	3.1	1.6	0.8
160°	2.3	1.6	0.8
162.5°	2.3	1.6	0.8
165°	2.3	1.6	0.0
167.5°	2.3	1.6	0.8
170°	2.3	1.6	0.8
172.5°	2.3	1.6	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°	328.1	318.8	287.5	235.9	164.8	92.2	34.4	6.3	1.6	2.3	2.3
110°	285.9	278.1	246.1	196.1	132.8	68.8	22.7	3.9	2.3	2.3	2.3







107.5°	3.1	4.7	5.5
110°	3.1	3.9	4.7



(END OF REPORT)