

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: P551229

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-82-87-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: P551229  
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-82-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

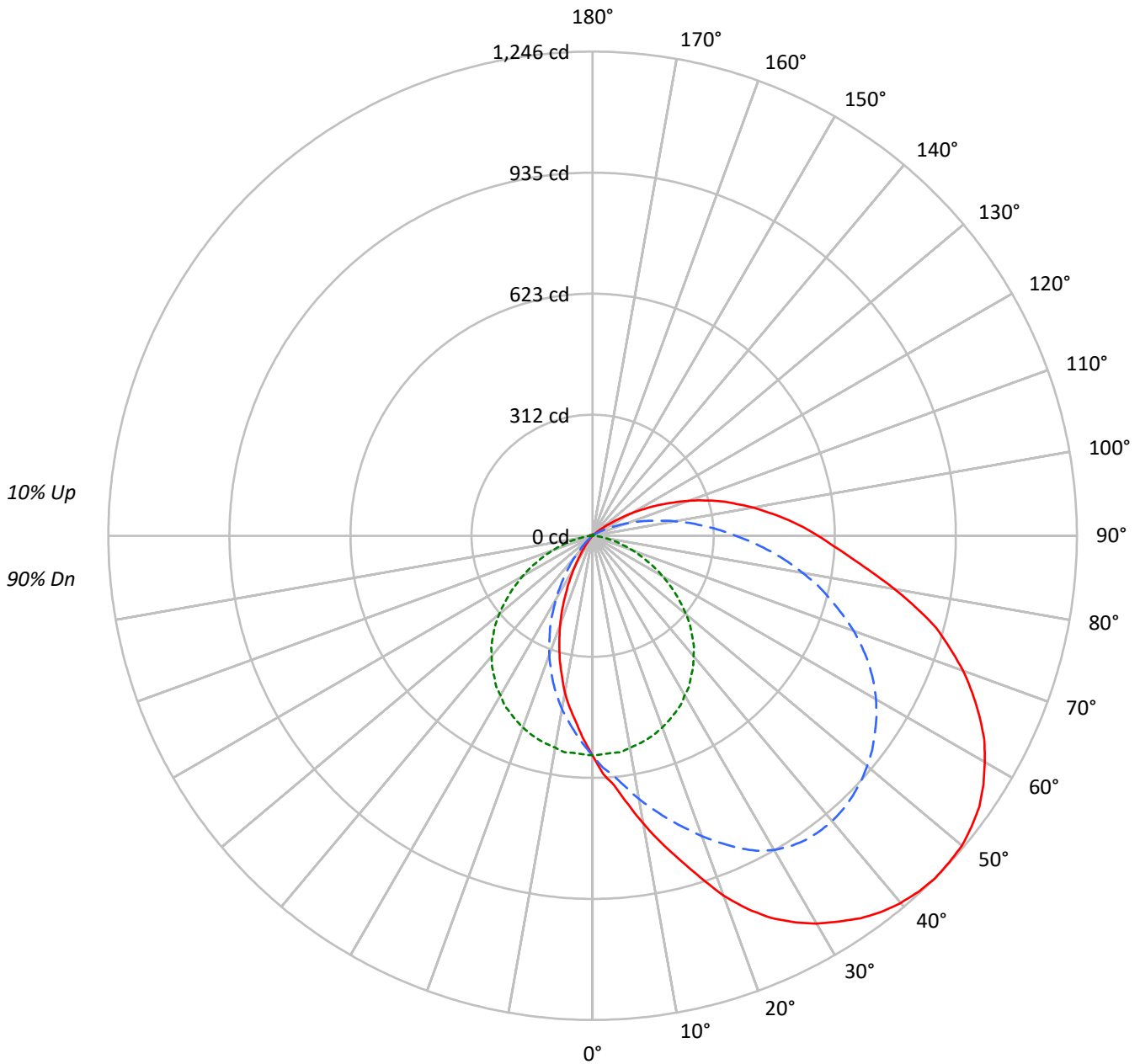
Lumens per Lamp: N/A  
Luminaire Lumens: 2794.1 lumens  
Efficiency: N/A  
Efficacy: 64.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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

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CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-82-87-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°	6084	6084	6084
5°	6678	5994	5001
10°	7556	5920	4122
15°	8469	5845	3212
20°	9552	5750	2366
25°	10450	5639	1554
30°	11117	5491	875
35°	11695	5332	385
40°	12208	5137	93
45°	12647	4890	0
50°	13017	4565	0
55°	13298	4150	0
60°	13439	3668	0
65°	13494	3123	0
70°	13449	2546	0
75°	13279	1877	10
80°	12740	1150	58
85°	12315	549	79



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.1	1.9
10°-20°	162.1	5.8
20°-30°	262.5	9.4
30°-40°	337.2	12.1
40°-50°	381.7	13.7
50°-60°	395.4	14.2
60°-70°	372.9	13.3
70°-80°	312.5	11.2
80°-90°	226.5	8.1
90°-100°	148.9	5.3
100°-110°	86.0	3.1
110°-120°	38.0	1.4
120°-130°	10.3	0.4
130°-140°	2.4	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°	478.7	17.1
0°-40°	815.9	29.2
0°-60°	1593.0	57.0
0°-90°	2505.1	89.7
90°-120°	272.9	9.8
90°-150°	287.1	10.3
90°-180°	289.0	10.3
0°-180°	2794.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	565	565	565	565	565	
5°	645	620	561	509	483	65
15°	862	756	542	392	327	248
25°	1085	887	502	258	161	501
35°	1202	956	441	125	40	754
45°	1246	946	361	29	0	962
55°	1215	887	261	0	0	1085
65°	1098	785	156	0	0	1086
75°	915	633	66	1	1	960
85°	670	459	11	3	4	572
90°	580	368	3	4	5	318
95°	498	288	1	5	6	391
105°	343	149	1	4	6	362
115°	186	49	2	2	4	187
125°	55	7	3	2	3	55
135°	3	2	4	3	2	5
145°	1	3	3	2	2	1
155°	1	3	3	2	1	1
165°	1	2	3	2	0	0
175°	1	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°	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2	565.2
2.5°	612.7	612.0	609.8	606.2	601.2	592.5	585.3	578.8	570.2	563.0	549.3
5°	645.1	641.5	638.6	635.0	623.5	615.6	602.6	588.2	574.5	560.8	533.5
7.5°	696.9	691.1	686.8	676.8	660.9	642.9	622.8	609.1	599.7	561.6	514.8
10°	752.3	747.3	738.7	720.7	701.2	675.3	646.5	614.1	585.3	553.6	498.2
12.5°	807.1	799.9	787.6	764.6	737.2	704.8	665.2	627.1	586.0	548.6	478.8
15°	861.8	853.9	840.9	812.8	776.8	734.3	686.1	637.9	589.6	542.1	458.6
17.5°	921.5	910.7	891.3	859.6	814.3	761.7	704.8	646.5	588.2	534.2	437.0
20°	985.6	970.5	949.6	907.1	853.9	791.9	723.5	655.2	587.5	524.8	412.5
22.5°	1038.9	1023.8	1000.7	956.8	892.7	817.1	739.4	660.9	584.6	514.0	389.5
25°	1085.0	1072.7	1047.5	997.1	929.5	843.8	754.5	665.2	580.3	502.5	365.0
27.5°	1121.0	1109.4	1081.4	1029.5	960.4	867.5	766.0	667.4	574.5	491.0	339.8
30°	1152.6	1141.1	1107.3	1054.0	981.3	886.3	777.5	668.1	567.3	473.7	312.5
32.5°	1177.1	1166.3	1131.8	1074.9	995.7	899.2	784.0	667.4	558.0	461.5	282.9
35°	1201.6	1190.8	1150.5	1090.0	1006.5	905.0	789.1	663.8	546.4	441.3	254.9
37.5°	1220.3	1208.1	1167.0	1100.1	1011.5	906.4	788.3	658.8	534.2	424.8	226.8
40°	1233.3	1220.3	1176.4	1105.8	1013.0	904.3	782.6	650.1	519.8	403.9	197.3
42.5°	1241.9	1227.5	1180.7	1114.5	1010.1	898.5	773.9	639.3	504.0	385.9	169.2
45°	1246.2	1231.1	1181.4	1107.3	1005.0	887.7	761.0	625.6	486.7	361.4	141.1
47.5°	1244.1	1227.5	1177.8	1099.4	995.7	876.2	746.6	609.1	465.8	339.8	114.5
50°	1240.5	1223.2	1169.9	1089.3	982.7	861.8	730.7	588.9	444.2	313.2	90.7
52.5°	1229.0	1211.7	1161.3	1074.9	967.6	845.2	709.1	568.0	421.2	287.3	69.1
55°	1214.6	1198.7	1146.2	1061.9	948.2	825.1	689.0	545.7	398.9	260.6	49.7
57.5°	1192.2	1177.8	1127.4	1041.0	928.7	802.7	666.7	521.2	370.8	234.0	34.6
60°	1164.9	1150.5	1101.5	1017.3	906.4	777.5	642.2	496.0	345.6	207.3	21.6
62.5°	1136.1	1122.4	1071.3	987.8	878.3	750.9	615.6	470.8	318.9	182.9	13.0
65°	1097.9	1085.0	1038.9	952.5	847.4	722.1	586.0	440.6	291.6	155.5	7.2
67.5°	1057.6	1046.1	999.3	920.1	811.4	690.4	555.8	411.1	262.8	131.8	3.6
70°	1014.4	1000.0	956.8	876.2	774.7	654.4	522.7	380.9	235.4	108.7	0.0
72.5°	964.0	953.2	911.5	835.1	732.2	616.3	488.8	347.7	205.2	86.4	0.7
75°	915.1	901.4	863.2	791.2	690.4	576.0	451.4	316.8	175.7	66.2	0.7
77.5°	851.7	847.4	811.4	741.5	650.8	537.1	410.4	279.3	147.6	47.5	0.7
80°	788.3	784.0	755.9	691.9	604.8	491.0	372.2	244.1	120.2	31.7	0.7
82.5°	725.7	719.9	693.3	640.0	558.0	452.1	332.6	208.8	95.0	19.4	0.7
85°	669.6	662.4	633.6	584.6	509.7	408.2	291.6	174.2	70.6	10.8	1.4
87.5°	621.3	616.3	584.6	534.2	460.8	367.2	255.6	141.1	49.7	5.0	2.2
90°	580.3	569.5	541.4	488.1	414.7	321.8	217.4	113.0	33.1	2.9	2.9
92.5°	540.0	530.6	499.6	444.9	373.7	282.9	180.7	86.4	20.9	1.4	3.6
95°	498.2	488.1	457.9	407.5	331.9	243.3	148.3	63.4	11.5	1.4	3.6
97.5°	457.2	447.8	416.1	365.7	294.5	208.8	117.4	44.6	5.8	1.4	2.9
100°	419.0	408.2	379.4	329.0	257.0	174.2	90.7	28.8	3.6	1.4	2.9
102.5°	378.7	370.1	340.5	291.6	218.1	141.8	67.7	18.0	1.4	1.4	2.2
105°	342.7	331.9	303.1	252.7	185.7	111.6	47.5	10.8	1.4	1.4	2.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	223.2	214.5	189.3	146.9	94.3	43.9	13.0	2.2	2.2	2.2	2.2
115°	186.5	173.5	151.2	113.8	69.8	28.8	6.5	2.2	2.2	2.2	2.2
117.5°	149.0	138.2	122.4	86.4	46.1	18.7	3.6	2.2	2.2	2.2	2.2
120°	116.6	106.6	88.6	59.8	31.0	10.8	1.4	2.2	2.2	2.2	2.2
122.5°	83.5	75.6	59.8	38.9	18.7	5.0	2.2	2.2	2.9	2.9	2.2
125°	55.4	51.1	39.6	23.8	11.5	2.2	2.2	2.2	2.9	2.9	2.2
127.5°	36.0	32.4	23.0	13.7	5.0	2.2	2.2	2.9	2.9	2.9	2.2
130°	20.2	18.0	13.7	7.9	2.2	2.2	2.2	2.9	2.9	2.9	2.2
132.5°	11.5	10.8	7.2	1.4	2.2	2.2	2.2	2.9	2.9	2.9	2.9
135°	2.9	1.4	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	2.9
137.5°	0.7	0.7	1.4	1.4	2.2	2.2	2.9	3.6	3.6	3.6	2.9
140°	0.7	0.7	1.4	2.2	2.2	2.2	2.9	3.6	3.6	3.6	2.9
142.5°	0.7	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	2.9	2.9
145°	0.7	1.4	1.4	2.2	2.2	2.9	2.9	3.6	2.9	2.9	2.9
147.5°	1.4	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	2.9	2.9
150°	0.7	1.4	1.4	2.2	2.9	2.9	2.9	3.6	2.9	2.9	2.9
152.5°	0.7	1.4	1.4	2.2	2.9	2.9	2.9	3.6	2.9	2.9	2.9
155°	1.4	1.4	1.4	2.2	2.9	2.9	2.9	3.6	2.9	2.9	3.6
157.5°	1.4	1.4	1.4	2.2	2.9	2.9	2.9	3.6	2.9	2.9	3.6
160°	1.4	1.4	1.4	2.2	2.2	2.9	2.9	2.9	2.9	2.9	2.9
162.5°	1.4	1.4	1.4	2.2	2.2	2.9	2.9	2.9	2.9	2.9	2.9
165°	1.4	1.4	1.4	1.4	2.2	2.2	2.9	2.9	2.9	2.9	2.9
167.5°	1.4	1.4	1.4	2.2	2.2	2.2	2.9	2.9	2.9	2.9	2.9
170°	1.4	1.4	1.4	2.2	2.2	2.2	2.9	3.6	3.6	3.6	3.6
172.5°	1.4	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	3.6	3.6
175°	1.4	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	3.6	3.6
177.5°	0.7	1.4	1.4	2.2	2.2	2.9	2.9	3.6	3.6	3.6	2.9
180°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2



TEST NUMBER: P551229

CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-82-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	565.2	565.2	565.2
2.5°	537.8	527.7	524.8
5°	509.0	492.4	483.1
7.5°	480.2	457.9	447.1
10°	453.6	421.9	410.4
12.5°	421.9	385.2	367.2
15°	391.7	344.1	326.9
17.5°	357.8	304.5	284.4
20°	326.1	264.9	244.1
22.5°	290.1	226.1	203.0
25°	257.7	187.2	161.3
27.5°	221.7	147.6	125.3
30°	187.9	113.0	90.7
32.5°	155.5	82.8	62.6
35°	125.3	56.2	39.6
37.5°	96.5	34.6	20.2
40°	69.8	18.0	9.4
42.5°	46.8	8.6	5.0
45°	28.8	4.3	0.0
47.5°	16.6	0.0	0.0
50°	8.6	0.0	0.0
52.5°	3.6	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	2.2
80°	1.4	2.9	3.6
82.5°	2.9	3.6	3.6
85°	2.9	3.6	4.3
87.5°	3.6	4.3	5.0
90°	4.3	5.0	5.0
92.5°	4.3	5.8	5.8
95°	5.0	5.8	6.5
97.5°	5.8	6.5	6.5
100°	5.0	6.5	7.2
102.5°	4.3	6.5	6.5
105°	3.6	5.0	5.8





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CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-82-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.9	3.6	3.6
115°	2.2	2.9	3.6
117.5°	2.2	2.9	2.9
120°	2.2	2.2	2.9
122.5°	2.2	2.2	2.9
125°	2.2	2.2	2.9
127.5°	2.9	2.2	2.2
130°	2.2	2.2	2.2
132.5°	2.9	2.2	2.2
135°	2.9	2.2	2.2
137.5°	2.9	2.2	2.2
140°	2.9	2.2	2.2
142.5°	2.9	2.2	2.2
145°	2.2	2.2	2.2
147.5°	2.2	2.2	2.2
150°	2.2	2.2	1.4
152.5°	2.2	1.4	1.4
155°	2.2	1.4	0.7
157.5°	2.9	1.4	0.7
160°	2.2	1.4	0.7
162.5°	2.2	1.4	0.7
165°	2.2	1.4	0.0
167.5°	2.2	1.4	0.7
170°	2.2	1.4	0.7
172.5°	2.2	1.4	0.7
175°	2.2	0.7	0.7
177.5°	2.2	0.7	0.7
180°	2.2	2.2	2.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	302.4	293.7	264.9	217.4	151.9	85.0	31.7	5.8	1.4	2.2	2.2
110°	263.5	256.3	226.8	180.7	122.4	63.4	20.9	3.6	2.2	2.2	2.2







107.5°	2.9	4.3	5.0
110°	2.9	3.6	4.3



(END OF REPORT)