

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: P551231

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-82-88-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: P551231  
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-82-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

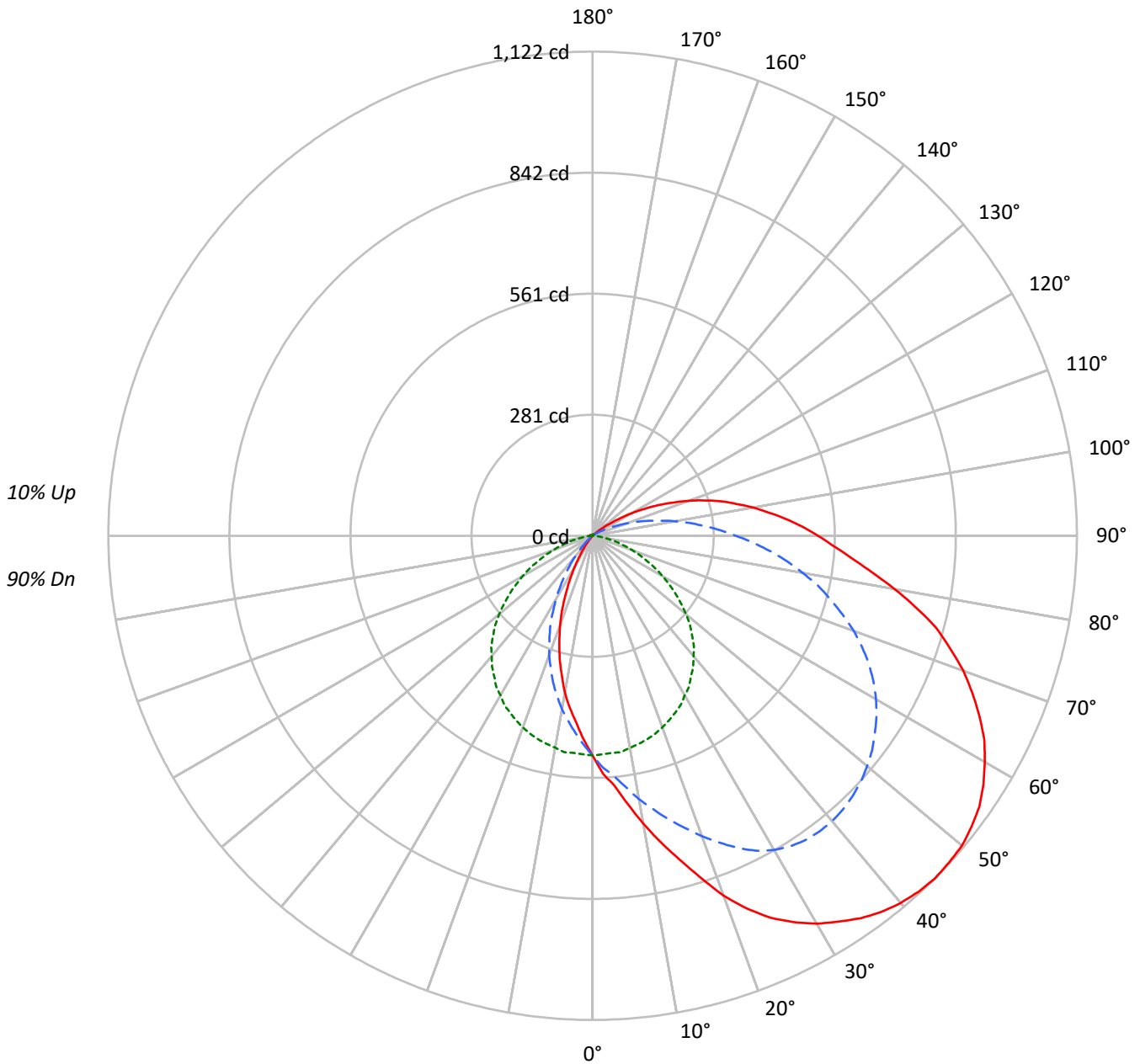
Lumens per Lamp: N/A  
Luminaire Lumens: 2515.9 lumens  
Efficiency: N/A  
Efficacy: 58.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-82-88-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°	5478	5478	5478
5°	6014	5398	4503
10°	6805	5332	3711
15°	7626	5264	2892
20°	8601	5178	2130
25°	9410	5078	1398
30°	10011	4945	788
35°	10531	4802	347
40°	10993	4625	83
45°	11388	4404	0
50°	11721	4110	0
55°	11974	3737	0
60°	12102	3304	0
65°	12152	2812	0
70°	12111	2293	0
75°	11957	1690	9
80°	11473	1034	52
85°	11088	493	72



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.7	1.9
10°-20°	146.0	5.8
20°-30°	236.4	9.4
30°-40°	303.6	12.1
40°-50°	343.7	13.7
50°-60°	356.1	14.2
60°-70°	335.8	13.3
70°-80°	281.4	11.2
80°-90°	204.0	8.1
90°-100°	134.1	5.3
100°-110°	77.4	3.1
110°-120°	34.1	1.4
120°-130°	9.2	0.4
130°-140°	2.1	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°	431.1	17.1
0°-40°	734.7	29.2
0°-60°	1434.5	57.0
0°-90°	2255.8	89.7
90°-120°	245.6	9.8
90°-150°	258.4	10.3
90°-180°	260.0	10.3
0°-180°	2515.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	509	509	509	509	509	
5°	581	558	505	458	435	59
15°	776	680	488	353	294	224
25°	977	798	452	232	145	452
35°	1082	861	397	113	36	679
45°	1122	852	326	26	0	866
55°	1094	798	235	0	0	977
65°	989	707	140	0	0	978
75°	824	570	60	1	1	864
85°	603	413	10	3	4	515
90°	522	332	3	4	4	286
95°	449	259	1	4	6	352
105°	309	134	1	3	5	326
115°	168	44	2	2	3	168
125°	50	6	3	2	3	50
135°	3	2	3	3	2	5
145°	1	2	3	2	2	0
155°	1	3	3	2	1	0
165°	1	2	3	2	0	0
175°	1	2	3	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°	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9	508.9
2.5°	551.7	551.1	549.1	545.9	541.3	533.6	527.1	521.2	513.5	507.0	494.7
5°	580.9	577.6	575.1	571.8	561.4	554.3	542.6	529.7	517.4	505.0	480.4
7.5°	627.6	622.4	618.5	609.4	595.2	578.9	560.8	548.5	540.0	505.7	463.5
10°	677.5	672.9	665.2	649.0	631.5	608.1	582.2	553.0	527.1	498.6	448.6
12.5°	726.8	720.3	709.3	688.5	663.9	634.7	599.0	564.7	527.7	494.0	431.1
15°	776.0	768.9	757.2	731.9	699.5	661.3	617.8	574.4	531.0	488.2	413.0
17.5°	829.8	820.1	802.6	774.1	733.2	685.9	634.7	582.2	529.7	481.0	393.5
20°	887.5	873.9	855.1	816.9	768.9	713.1	651.6	590.0	529.0	472.6	371.5
22.5°	935.5	921.9	901.2	861.6	803.9	735.8	665.8	595.2	526.4	462.9	350.7
25°	977.0	966.0	943.3	897.9	837.0	759.8	679.4	599.0	522.5	452.5	328.7
27.5°	1009.4	999.1	973.8	927.1	864.9	781.2	689.8	601.0	517.4	442.2	306.0
30°	1038.0	1027.6	997.1	949.1	883.7	798.1	700.2	601.6	510.9	426.6	281.4
32.5°	1060.0	1050.3	1019.1	967.9	896.6	809.7	706.0	601.0	502.4	415.6	254.8
35°	1082.0	1072.3	1036.0	981.5	906.3	814.9	710.6	597.7	492.1	397.4	229.5
37.5°	1098.9	1087.9	1050.9	990.6	910.9	816.2	709.9	593.2	481.0	382.5	204.2
40°	1110.6	1098.9	1059.3	995.8	912.2	814.3	704.7	585.4	468.1	363.7	177.6
42.5°	1118.3	1105.4	1063.2	1003.6	909.6	809.1	696.9	575.7	453.8	347.5	152.4
45°	1122.2	1108.6	1063.9	997.1	905.0	799.4	685.3	563.4	438.3	325.5	127.1
47.5°	1120.3	1105.4	1060.6	990.0	896.6	789.0	672.3	548.5	419.5	306.0	103.1
50°	1117.0	1101.5	1053.5	980.9	884.9	776.0	658.0	530.3	400.0	282.0	81.7
52.5°	1106.7	1091.1	1045.7	967.9	871.3	761.1	638.6	511.5	379.3	258.7	62.2
55°	1093.7	1079.4	1032.1	956.3	853.8	743.0	620.4	491.4	359.2	234.7	44.7
57.5°	1073.6	1060.6	1015.3	937.5	836.3	722.9	600.3	469.4	333.9	210.7	31.1
60°	1049.0	1036.0	991.9	916.1	816.2	700.2	578.3	446.7	311.2	186.7	19.4
62.5°	1023.0	1010.7	964.7	889.5	790.9	676.2	554.3	424.0	287.2	164.7	11.7
65°	988.7	977.0	935.5	857.7	763.1	650.3	527.7	396.8	262.6	140.0	6.5
67.5°	952.4	942.0	899.9	828.5	730.6	621.7	500.5	370.2	236.6	118.6	3.2
70°	913.5	900.5	861.6	789.0	697.6	589.3	470.7	343.0	212.0	97.9	0.0
72.5°	868.1	858.4	820.8	752.0	659.3	555.0	440.2	313.1	184.8	77.8	0.6
75°	824.0	811.7	777.3	712.5	621.7	518.7	406.5	285.3	158.2	59.6	0.6
77.5°	767.0	763.1	730.6	667.8	586.1	483.6	369.5	251.5	132.9	42.8	0.6
80°	709.9	706.0	680.7	623.0	544.6	442.2	335.2	219.8	108.3	28.5	0.6
82.5°	653.5	648.3	624.3	576.4	502.4	407.1	299.5	188.0	85.6	17.5	0.6
85°	602.9	596.4	570.5	526.4	459.0	367.6	262.6	156.9	63.5	9.7	1.3
87.5°	559.5	555.0	526.4	481.0	414.9	330.6	230.2	127.1	44.7	4.5	1.9
90°	522.5	512.8	487.5	439.6	373.4	289.8	195.8	101.8	29.8	2.6	2.6
92.5°	486.2	477.8	449.9	400.7	336.5	254.8	162.7	77.8	18.8	1.3	3.2
95°	448.6	439.6	412.3	366.9	298.9	219.1	133.6	57.1	10.4	1.3	3.2
97.5°	411.7	403.3	374.7	329.3	265.2	188.0	105.7	40.2	5.2	1.3	2.6
100°	377.3	367.6	341.7	296.3	231.4	156.9	81.7	25.9	3.2	1.3	2.6
102.5°	341.0	333.2	306.7	262.6	196.4	127.7	60.9	16.2	1.3	1.3	1.9
105°	308.6	298.9	272.9	227.6	167.3	100.5	42.8	9.7	1.3	1.3	1.9



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CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	201.0	193.2	170.5	132.3	84.9	39.5	11.7	1.9	1.9	1.9	1.9
115°	167.9	156.2	136.1	102.4	62.9	25.9	5.8	1.9	1.9	1.9	1.9
117.5°	134.2	124.5	110.2	77.8	41.5	16.9	3.2	1.9	1.9	1.9	1.9
120°	105.0	96.0	79.7	53.8	27.9	9.7	1.3	1.9	1.9	1.9	1.9
122.5°	75.2	68.1	53.8	35.0	16.9	4.5	1.9	1.9	2.6	2.6	1.9
125°	49.9	46.0	35.7	21.4	10.4	1.9	1.9	1.9	2.6	2.6	1.9
127.5°	32.4	29.2	20.7	12.3	4.5	1.9	1.9	2.6	2.6	2.6	1.9
130°	18.2	16.2	12.3	7.1	1.9	1.9	1.9	2.6	2.6	2.6	1.9
132.5°	10.4	9.7	6.5	1.3	1.9	1.9	1.9	2.6	2.6	2.6	2.6
135°	2.6	1.3	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	2.6
137.5°	0.6	0.6	1.3	1.3	1.9	1.9	2.6	3.2	3.2	3.2	2.6
140°	0.6	0.6	1.3	1.9	1.9	1.9	2.6	3.2	3.2	3.2	2.6
142.5°	0.6	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	2.6	2.6
145°	0.6	1.3	1.3	1.9	1.9	2.6	2.6	3.2	2.6	2.6	2.6
147.5°	1.3	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	2.6	2.6
150°	0.6	1.3	1.3	1.9	2.6	2.6	2.6	3.2	2.6	2.6	2.6
152.5°	0.6	1.3	1.3	1.9	2.6	2.6	2.6	3.2	2.6	2.6	2.6
155°	1.3	1.3	1.3	1.9	2.6	2.6	2.6	3.2	2.6	2.6	3.2
157.5°	1.3	1.3	1.3	1.9	2.6	2.6	2.6	3.2	2.6	2.6	3.2
160°	1.3	1.3	1.3	1.9	1.9	2.6	2.6	2.6	2.6	2.6	2.6
162.5°	1.3	1.3	1.3	1.9	1.9	2.6	2.6	2.6	2.6	2.6	2.6
165°	1.3	1.3	1.3	1.3	1.9	1.9	2.6	2.6	2.6	2.6	2.6
167.5°	1.3	1.3	1.3	1.9	1.9	1.9	2.6	2.6	2.6	2.6	2.6
170°	1.3	1.3	1.3	1.9	1.9	1.9	2.6	3.2	3.2	3.2	3.2
172.5°	1.3	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	3.2	3.2
175°	1.3	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	3.2	3.2
177.5°	0.6	1.3	1.3	1.9	1.9	2.6	2.6	3.2	3.2	3.2	2.6
180°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9



TEST NUMBER: P551231

CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	508.9	508.9	508.9
2.5°	484.3	475.2	472.6
5°	458.4	443.4	435.0
7.5°	432.4	412.3	402.6
10°	408.4	379.9	369.5
12.5°	379.9	346.8	330.6
15°	352.7	309.9	294.3
17.5°	322.2	274.2	256.1
20°	293.7	238.6	219.8
22.5°	261.3	203.6	182.8
25°	232.1	168.6	145.2
27.5°	199.7	132.9	112.8
30°	169.2	101.8	81.7
32.5°	140.0	74.6	56.4
35°	112.8	50.6	35.7
37.5°	86.9	31.1	18.2
40°	62.9	16.2	8.4
42.5°	42.1	7.8	4.5
45°	25.9	3.9	0.0
47.5°	14.9	0.0	0.0
50°	7.8	0.0	0.0
52.5°	3.2	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°	0.6	0.6	0.6
77.5°	0.6	1.3	1.9
80°	1.3	2.6	3.2
82.5°	2.6	3.2	3.2
85°	2.6	3.2	3.9
87.5°	3.2	3.9	4.5
90°	3.9	4.5	4.5
92.5°	3.9	5.2	5.2
95°	4.5	5.2	5.8
97.5°	5.2	5.8	5.8
100°	4.5	5.8	6.5
102.5°	3.9	5.8	5.8
105°	3.2	4.5	5.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.6	3.2	3.2
115°	1.9	2.6	3.2
117.5°	1.9	2.6	2.6
120°	1.9	1.9	2.6
122.5°	1.9	1.9	2.6
125°	1.9	1.9	2.6
127.5°	2.6	1.9	1.9
130°	1.9	1.9	1.9
132.5°	2.6	1.9	1.9
135°	2.6	1.9	1.9
137.5°	2.6	1.9	1.9
140°	2.6	1.9	1.9
142.5°	2.6	1.9	1.9
145°	1.9	1.9	1.9
147.5°	1.9	1.9	1.9
150°	1.9	1.9	1.3
152.5°	1.9	1.3	1.3
155°	1.9	1.3	0.6
157.5°	2.6	1.3	0.6
160°	1.9	1.3	0.6
162.5°	1.9	1.3	0.6
165°	1.9	1.3	0.0
167.5°	1.9	1.3	0.6
170°	1.9	1.3	0.6
172.5°	1.9	1.3	0.6
175°	1.9	0.6	0.6
177.5°	1.9	0.6	0.6
180°	1.9	1.9	1.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	272.3	264.5	238.6	195.8	136.8	76.5	28.5	5.2	1.3	1.9	1.9
110°	237.3	230.8	204.2	162.7	110.2	57.1	18.8	3.2	1.9	1.9	1.9







107.5°	2.6	3.9	4.5
110°	2.6	3.2	3.9



(END OF REPORT)