

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: P551474

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-94-ED1D**

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: P551474  
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-LD4-2LO-30-UNV-81-94-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

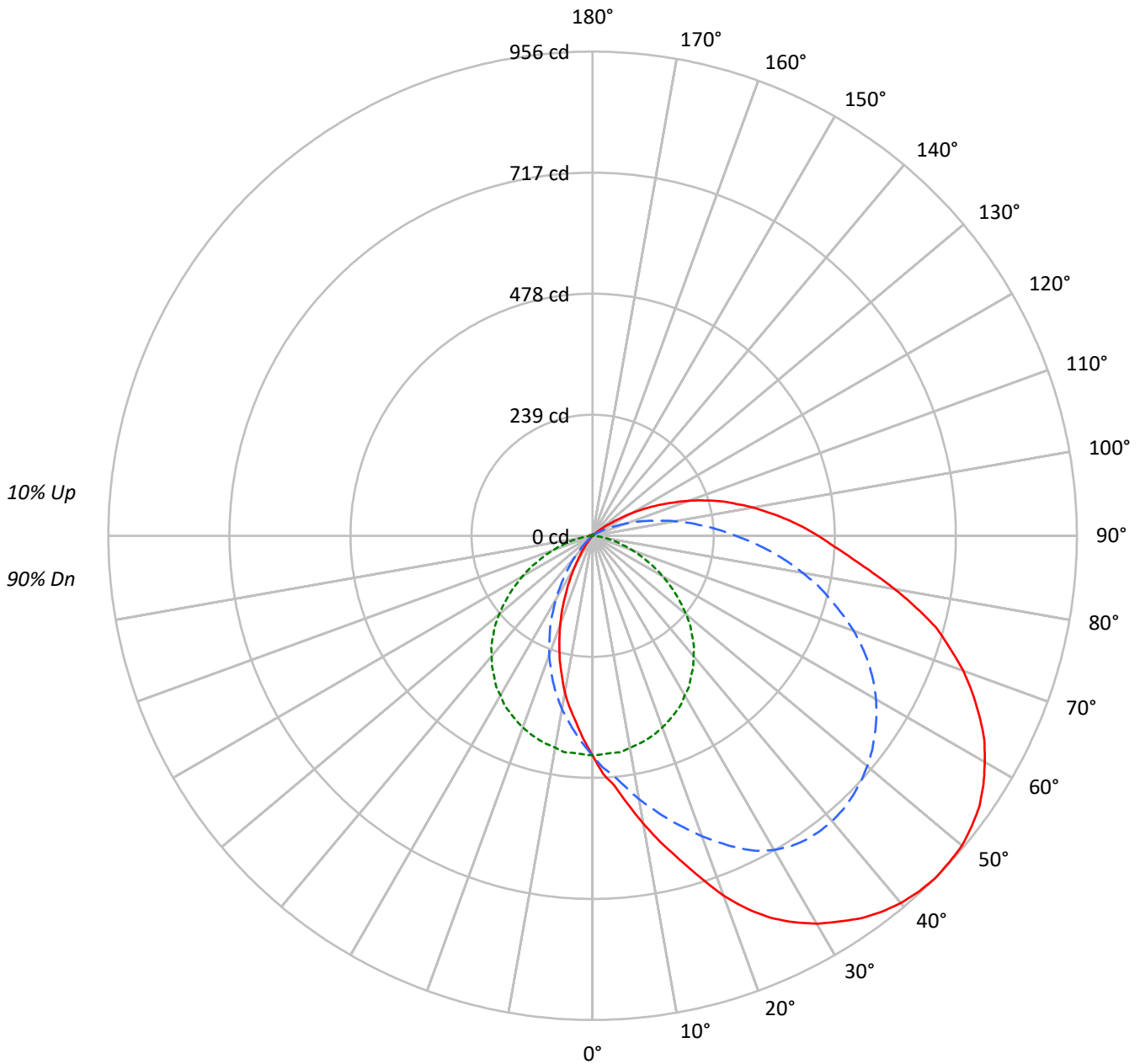
Lumens per Lamp: N/A  
Luminaire Lumens: 2144.1 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
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: P551474

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-94-ED1D

### 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°	4668	4668	4668
5°	5124	4600	3838
10°	5799	4543	3163
15°	6499	4486	2465
20°	7329	4412	1815
25°	8019	4327	1192
30°	8531	4214	671
35°	8975	4092	296
40°	9368	3941	71
45°	9705	3752	0
50°	9988	3502	0
55°	10204	3185	0
60°	10313	2816	0
65°	10355	2396	0
70°	10320	1954	0
75°	10190	1441	9
80°	9776	881	45
85°	9450	422	61



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.5	1.9
10°-20°	124.4	5.8
20°-30°	201.4	9.4
30°-40°	258.7	12.1
40°-50°	292.9	13.7
50°-60°	303.4	14.2
60°-70°	286.2	13.3
70°-80°	239.8	11.2
80°-90°	173.8	8.1
90°-100°	114.3	5.3
100°-110°	66.0	3.1
110°-120°	29.1	1.4
120°-130°	7.9	0.4
130°-140°	1.8	0.1
140°-150°	1.2	0.1
150°-160°	0.8	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	367.4	17.1
0°-40°	626.1	29.2
0°-60°	1222.4	57.0
0°-90°	1922.3	89.7
90°-120°	209.4	9.8
90°-150°	220.3	10.3
90°-180°	222.0	10.4
0°-180°	2144.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	434	434	434	434	434	
5°	495	475	430	391	371	50
15°	661	580	416	300	251	191
25°	833	680	386	198	124	385
35°	922	733	339	96	30	578
45°	956	726	277	22	0	738
55°	932	680	200	0	0	832
65°	842	602	119	0	0	834
75°	702	486	51	1	1	736
85°	514	352	8	2	3	439
90°	445	283	2	3	4	244
95°	382	221	1	4	5	300
105°	263	114	1	3	4	277
115°	143	38	2	2	3	143
125°	42	5	2	2	2	43
135°	2	2	3	2	2	4
145°	1	2	2	2	2	0
155°	1	2	2	2	1	0
165°	1	2	2	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°	433.7	433.7	433.7	433.7	433.7	433.7	433.7	433.7	433.7	433.7	433.7
2.5°	470.1	469.6	467.9	465.2	461.3	454.7	449.1	444.2	437.5	432.0	421.5
5°	495.0	492.2	490.0	487.3	478.4	472.4	462.4	451.4	440.9	430.4	409.4
7.5°	534.8	530.4	527.0	519.3	507.2	493.3	477.9	467.4	460.2	430.9	395.0
10°	577.3	573.5	566.8	553.0	538.1	518.2	496.1	471.2	449.1	424.8	382.3
12.5°	619.3	613.8	604.4	586.7	565.7	540.9	510.5	481.2	449.7	421.0	367.4
15°	661.3	655.2	645.3	623.7	596.1	563.5	526.5	489.5	452.5	416.0	351.9
17.5°	707.1	698.9	683.9	659.6	624.8	584.5	540.9	496.1	451.4	409.9	335.3
20°	756.3	744.7	728.7	696.1	655.2	607.7	555.2	502.7	450.8	402.7	316.6
22.5°	797.2	785.6	767.9	734.2	685.0	627.0	567.4	507.2	448.6	394.5	298.9
25°	832.6	823.2	803.8	765.2	713.2	647.5	579.0	510.5	445.3	385.6	280.1
27.5°	860.2	851.3	829.8	790.0	737.0	665.7	587.8	512.1	440.9	376.8	260.8
30°	884.5	875.6	849.7	808.8	753.0	680.1	596.7	512.7	435.3	363.5	239.8
32.5°	903.3	895.0	868.5	824.8	764.0	690.0	601.6	512.1	428.2	354.1	217.1
35°	922.1	913.8	882.8	836.4	772.3	694.4	605.5	509.4	419.3	338.7	195.6
37.5°	936.4	927.0	895.5	844.2	776.2	695.5	604.9	505.5	409.9	326.0	174.0
40°	946.4	936.4	902.7	848.6	777.3	693.9	600.5	498.9	398.9	309.9	151.4
42.5°	953.0	941.9	906.0	855.2	775.1	689.5	593.9	490.6	386.7	296.1	129.8
45°	956.3	944.7	906.6	849.7	771.2	681.2	583.9	480.1	373.5	277.3	108.3
47.5°	954.6	941.9	903.8	843.6	764.0	672.3	572.9	467.4	357.4	260.8	87.8
50°	951.9	938.6	897.7	835.9	754.1	661.3	560.7	451.9	340.9	240.3	69.6
52.5°	943.0	929.8	891.1	824.8	742.5	648.6	544.2	435.9	323.2	220.4	53.0
55°	932.0	919.8	879.5	814.9	727.6	633.1	528.7	418.8	306.1	200.0	38.1
57.5°	914.9	903.8	865.1	798.9	712.7	616.0	511.6	400.0	284.5	179.5	26.5
60°	893.9	882.8	845.3	780.6	695.5	596.7	492.8	380.6	265.2	159.1	16.6
62.5°	871.8	861.3	822.1	758.0	674.0	576.2	472.4	361.3	244.7	140.3	9.9
65°	842.5	832.6	797.2	730.9	650.2	554.1	449.7	338.1	223.7	119.3	5.5
67.5°	811.6	802.7	766.8	706.0	622.6	529.8	426.5	315.5	201.6	101.1	2.8
70°	778.4	767.4	734.2	672.3	594.4	502.2	401.1	292.3	180.7	83.4	0.0
72.5°	739.7	731.5	699.4	640.9	561.9	472.9	375.1	266.8	157.5	66.3	0.6
75°	702.2	691.7	662.4	607.2	529.8	442.0	346.4	243.1	134.8	50.8	0.6
77.5°	653.6	650.2	622.6	569.0	499.4	412.1	314.9	214.4	113.3	36.5	0.6
80°	604.9	601.6	580.1	530.9	464.1	376.8	285.6	187.3	92.3	24.3	0.6
82.5°	556.9	552.5	532.0	491.1	428.2	346.9	255.2	160.2	72.9	14.9	0.6
85°	513.8	508.3	486.2	448.6	391.1	313.2	223.7	133.7	54.1	8.3	1.1
87.5°	476.8	472.9	448.6	409.9	353.6	281.8	196.1	108.3	38.1	3.9	1.7
90°	445.3	437.0	415.4	374.6	318.2	246.9	166.8	86.7	25.4	2.2	2.2
92.5°	414.3	407.2	383.4	341.4	286.7	217.1	138.7	66.3	16.0	1.1	2.8
95°	382.3	374.6	351.4	312.7	254.7	186.7	113.8	48.6	8.8	1.1	2.8
97.5°	350.8	343.6	319.3	280.6	226.0	160.2	90.1	34.3	4.4	1.1	2.2
100°	321.5	313.2	291.1	252.5	197.2	133.7	69.6	22.1	2.8	1.1	2.2
102.5°	290.6	284.0	261.3	223.7	167.4	108.8	51.9	13.8	1.1	1.1	1.7
105°	263.0	254.7	232.6	193.9	142.5	85.6	36.5	8.3	1.1	1.1	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	171.3	164.6	145.3	112.7	72.4	33.7	9.9	1.7	1.7	1.7	1.7
115°	143.1	133.1	116.0	87.3	53.6	22.1	5.0	1.7	1.7	1.7	1.7
117.5°	114.4	106.1	93.9	66.3	35.4	14.4	2.8	1.7	1.7	1.7	1.7
120°	89.5	81.8	68.0	45.9	23.8	8.3	1.1	1.7	1.7	1.7	1.7
122.5°	64.1	58.0	45.9	29.8	14.4	3.9	1.7	1.7	2.2	2.2	1.7
125°	42.5	39.2	30.4	18.2	8.8	1.7	1.7	1.7	2.2	2.2	1.7
127.5°	27.6	24.9	17.7	10.5	3.9	1.7	1.7	2.2	2.2	2.2	1.7
130°	15.5	13.8	10.5	6.1	1.7	1.7	1.7	2.2	2.2	2.2	1.7
132.5°	8.8	8.3	5.5	1.1	1.7	1.7	1.7	2.2	2.2	2.2	2.2
135°	2.2	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.2
137.5°	0.6	0.6	1.1	1.1	1.7	1.7	2.2	2.8	2.8	2.8	2.2
140°	0.6	0.6	1.1	1.7	1.7	1.7	2.2	2.8	2.8	2.8	2.2
142.5°	0.6	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.2	2.2
145°	0.6	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.2	2.2	2.2
147.5°	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.2	2.2
150°	0.6	1.1	1.1	1.7	2.2	2.2	2.2	2.8	2.2	2.2	2.2
152.5°	0.6	1.1	1.1	1.7	2.2	2.2	2.2	2.8	2.2	2.2	2.2
155°	1.1	1.1	1.1	1.7	2.2	2.2	2.2	2.8	2.2	2.2	2.8
157.5°	1.1	1.1	1.1	1.7	2.2	2.2	2.2	2.8	2.2	2.2	2.8
160°	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.2	2.2	2.2	2.2
162.5°	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.2	2.2	2.2	2.2
165°	1.1	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.2	2.2	2.2
167.5°	1.1	1.1	1.1	1.7	1.7	1.7	2.2	2.2	2.2	2.2	2.2
170°	1.1	1.1	1.1	1.7	1.7	1.7	2.2	2.8	2.8	2.8	2.8
172.5°	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.8	2.8
175°	1.1	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.8	2.8
177.5°	0.6	1.1	1.1	1.7	1.7	2.2	2.2	2.8	2.8	2.8	2.2
180°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	433.7	433.7	433.7
2.5°	412.7	405.0	402.7
5°	390.6	377.9	370.7
7.5°	368.5	351.4	343.1
10°	348.0	323.7	314.9
12.5°	323.7	295.6	281.8
15°	300.5	264.1	250.8
17.5°	274.6	233.7	218.2
20°	250.3	203.3	187.3
22.5°	222.6	173.5	155.8
25°	197.8	143.6	123.8
27.5°	170.2	113.3	96.1
30°	144.2	86.7	69.6
32.5°	119.3	63.5	48.1
35°	96.1	43.1	30.4
37.5°	74.0	26.5	15.5
40°	53.6	13.8	7.2
42.5°	35.9	6.6	3.9
45°	22.1	3.3	0.0
47.5°	12.7	0.0	0.0
50°	6.6	0.0	0.0
52.5°	2.8	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	1.1	1.7
80°	1.1	2.2	2.8
82.5°	2.2	2.8	2.8
85°	2.2	2.8	3.3
87.5°	2.8	3.3	3.9
90°	3.3	3.9	3.9
92.5°	3.3	4.4	4.4
95°	3.9	4.4	5.0
97.5°	4.4	5.0	5.0
100°	3.9	5.0	5.5
102.5°	3.3	5.0	5.0
105°	2.8	3.9	4.4





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.2	2.8	2.8
115°	1.7	2.2	2.8
117.5°	1.7	2.2	2.2
120°	1.7	1.7	2.2
122.5°	1.7	1.7	2.2
125°	1.7	1.7	2.2
127.5°	2.2	1.7	1.7
130°	1.7	1.7	1.7
132.5°	2.2	1.7	1.7
135°	2.2	1.7	1.7
137.5°	2.2	1.7	1.7
140°	2.2	1.7	1.7
142.5°	2.2	1.7	1.7
145°	1.7	1.7	1.7
147.5°	1.7	1.7	1.7
150°	1.7	1.7	1.1
152.5°	1.7	1.1	1.1
155°	1.7	1.1	0.6
157.5°	2.2	1.1	0.6
160°	1.7	1.1	0.6
162.5°	1.7	1.1	0.6
165°	1.7	1.1	0.0
167.5°	1.7	1.1	0.6
170°	1.7	1.1	0.6
172.5°	1.7	1.1	0.6
175°	1.7	0.6	0.6
177.5°	1.7	0.6	0.6
180°	1.7	1.7	1.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	232.0	225.4	203.3	166.8	116.6	65.2	24.3	4.4	1.1	1.7	1.7
110°	202.2	196.7	174.0	138.7	93.9	48.6	16.0	2.8	1.7	1.7	1.7







107.5°	2.2	3.3	3.9
110°	2.2	2.8	3.3



(END OF REPORT)