

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: P551473

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-94-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: P551473  
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-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

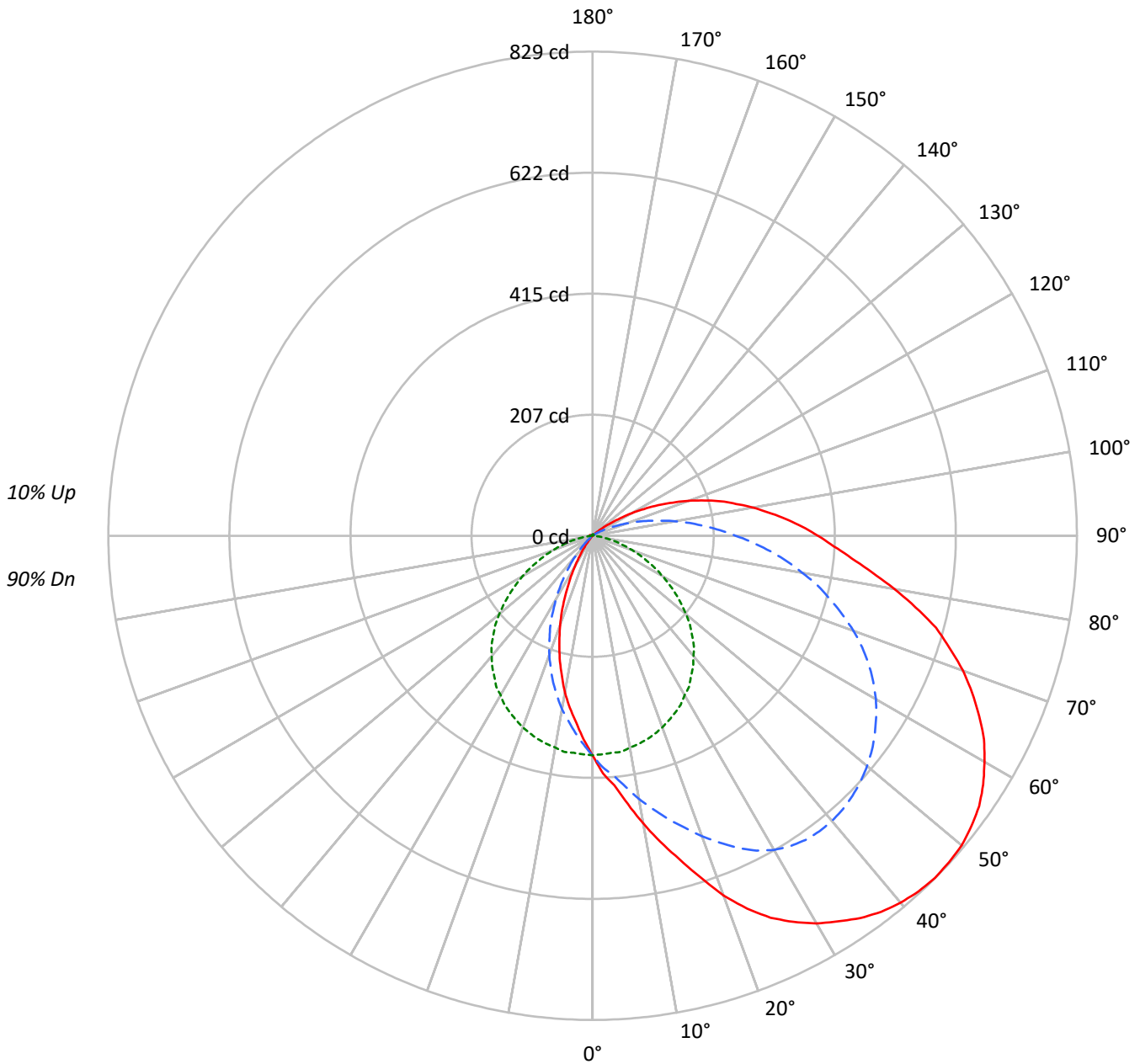
Lumens per Lamp: N/A  
Luminaire Lumens: 1858.0 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
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-LD4-2LO-30-UNV-81-94-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°	4045	4045	4045
5°	4441	3987	3325
10°	5025	3938	2741
15°	5632	3887	2136
20°	6352	3824	1573
25°	6949	3751	1032
30°	7393	3652	582
35°	7777	3546	256
40°	8118	3416	61
45°	8410	3252	0
50°	8656	3036	0
55°	8843	2760	0
60°	8936	2440	0
65°	8973	2077	0
70°	8944	1694	0
75°	8830	1248	7
80°	8471	765	39
85°	8188	366	53



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.0	1.9
10°-20°	107.8	5.8
20°-30°	174.6	9.4
30°-40°	224.2	12.1
40°-50°	253.8	13.7
50°-60°	263.0	14.2
60°-70°	248.0	13.3
70°-80°	207.8	11.2
80°-90°	150.7	8.1
90°-100°	99.0	5.3
100°-110°	57.2	3.1
110°-120°	25.2	1.4
120°-130°	6.8	0.4
130°-140°	1.6	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	318.3	17.1
0°-40°	542.6	29.2
0°-60°	1059.4	57.0
0°-90°	1665.9	89.7
90°-120°	181.4	9.8
90°-150°	190.8	10.3
90°-180°	192.0	10.3
0°-180°	1858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	376	376	376	376	376	
5°	429	412	373	338	321	43
15°	573	502	360	260	217	165
25°	722	590	334	171	107	333
35°	799	636	294	83	26	501
45°	829	629	240	19	0	640
55°	808	590	173	0	0	721
65°	730	522	103	0	0	722
75°	608	421	44	0	0	638
85°	445	305	7	2	3	380
90°	386	245	2	3	3	212
95°	331	191	1	3	4	260
105°	228	99	1	2	4	240
115°	124	33	1	1	2	124
125°	37	5	2	1	2	37
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	2	1	0	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	375.8	375.8	375.8	375.8	375.8	375.8	375.8	375.8	375.8	375.8	375.8
2.5°	407.4	406.9	405.5	403.1	399.8	394.0	389.2	384.9	379.2	374.4	365.3
5°	429.0	426.6	424.7	422.3	414.6	409.3	400.7	391.1	382.1	373.0	354.8
7.5°	463.4	459.6	456.7	450.0	439.5	427.5	414.1	405.0	398.8	373.4	342.3
10°	500.3	497.0	491.2	479.2	466.3	449.1	429.9	408.4	389.2	368.2	331.3
12.5°	536.7	531.9	523.8	508.4	490.3	468.7	442.4	417.0	389.7	364.8	318.4
15°	573.1	567.8	559.2	540.5	516.6	488.3	456.3	424.2	392.1	360.5	305.0
17.5°	612.8	605.6	592.7	571.6	541.5	506.5	468.7	429.9	391.1	355.2	290.6
20°	655.4	645.4	631.5	603.2	567.8	526.6	481.2	435.7	390.7	349.0	274.3
22.5°	690.9	680.8	665.5	636.3	593.7	543.4	491.7	439.5	388.8	341.8	259.0
25°	721.5	713.4	696.6	663.1	618.1	561.1	501.7	442.4	385.9	334.2	242.7
27.5°	745.4	737.8	719.1	684.6	638.7	576.9	509.4	443.8	382.1	326.5	226.0
30°	766.5	758.8	736.3	700.9	652.6	589.4	517.1	444.3	377.3	315.0	207.8
32.5°	782.8	775.6	752.6	714.8	662.1	598.0	521.4	443.8	371.0	306.9	188.2
35°	799.1	791.9	765.1	724.8	669.3	601.8	524.7	441.4	363.4	293.5	169.5
37.5°	811.5	803.4	776.1	731.5	672.7	602.8	524.2	438.1	355.2	282.5	150.8
40°	820.1	811.5	782.3	735.4	673.6	601.3	520.4	432.3	345.7	268.6	131.2
42.5°	825.9	816.3	785.2	741.1	671.7	597.5	514.7	425.1	335.1	256.6	112.5
45°	828.7	818.7	785.6	736.3	668.4	590.3	506.1	416.0	323.6	240.3	93.8
47.5°	827.3	816.3	783.3	731.1	662.1	582.7	496.5	405.0	309.8	226.0	76.1
50°	824.9	813.4	778.0	724.4	653.5	573.1	485.9	391.6	295.4	208.3	60.3
52.5°	817.2	805.8	772.2	714.8	643.5	562.1	471.6	377.7	280.1	191.0	46.0
55°	807.7	797.1	762.2	706.2	630.5	548.7	458.2	362.9	265.2	173.3	33.0
57.5°	792.8	783.3	749.7	692.3	617.6	533.8	443.3	346.6	246.6	155.6	23.0
60°	774.6	765.1	732.5	676.5	602.8	517.1	427.1	329.9	229.8	137.9	14.4
62.5°	755.5	746.4	712.4	656.9	584.1	499.3	409.3	313.1	212.1	121.6	8.6
65°	730.1	721.5	690.9	633.4	563.5	480.2	389.7	293.0	193.9	103.4	4.8
67.5°	703.3	695.6	664.5	611.9	539.6	459.1	369.6	273.4	174.7	87.6	2.4
70°	674.6	665.0	636.3	582.7	515.1	435.2	347.6	253.3	156.6	72.3	0.0
72.5°	641.1	633.9	606.1	555.4	486.9	409.8	325.1	231.2	136.4	57.5	0.5
75°	608.5	599.4	574.0	526.2	459.1	383.0	300.2	210.7	116.8	44.0	0.5
77.5°	566.4	563.5	539.6	493.1	432.8	357.2	272.9	185.8	98.1	31.6	0.5
80°	524.2	521.4	502.7	460.1	402.2	326.5	247.5	162.3	80.0	21.1	0.5
82.5°	482.6	478.8	461.0	425.6	371.0	300.7	221.2	138.8	63.2	12.9	0.5
85°	445.2	440.5	421.3	388.8	339.0	271.5	193.9	115.9	46.9	7.2	1.0
87.5°	413.2	409.8	388.8	355.2	306.4	244.2	170.0	93.8	33.0	3.4	1.4
90°	385.9	378.7	360.0	324.6	275.8	214.0	144.6	75.2	22.0	1.9	1.9
92.5°	359.1	352.8	332.3	295.9	248.5	188.2	120.2	57.5	13.9	1.0	2.4
95°	331.3	324.6	304.5	271.0	220.7	161.8	98.6	42.1	7.7	1.0	2.4
97.5°	304.0	297.8	276.7	243.2	195.8	138.8	78.0	29.7	3.8	1.0	1.9
100°	278.6	271.5	252.3	218.8	170.9	115.9	60.3	19.2	2.4	1.0	1.9
102.5°	251.8	246.1	226.5	193.9	145.1	94.3	45.0	12.0	1.0	1.0	1.4
105°	227.9	220.7	201.6	168.0	123.5	74.2	31.6	7.2	1.0	1.0	1.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	148.4	142.7	125.9	97.7	62.7	29.2	8.6	1.4	1.4	1.4	1.4
115°	124.0	115.4	100.5	75.6	46.4	19.2	4.3	1.4	1.4	1.4	1.4
117.5°	99.1	91.9	81.4	57.5	30.6	12.4	2.4	1.4	1.4	1.4	1.4
120°	77.6	70.9	58.9	39.7	20.6	7.2	1.0	1.4	1.4	1.4	1.4
122.5°	55.5	50.3	39.7	25.9	12.4	3.4	1.4	1.4	1.9	1.9	1.4
125°	36.9	34.0	26.3	15.8	7.7	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.9	21.5	15.3	9.1	3.4	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.4	12.0	9.1	5.3	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.7	7.2	4.8	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9
137.5°	0.5	0.5	1.0	1.0	1.4	1.4	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
160°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	1.9
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	375.8	375.8	375.8
2.5°	357.6	350.9	349.0
5°	338.5	327.5	321.2
7.5°	319.3	304.5	297.3
10°	301.6	280.6	272.9
12.5°	280.6	256.1	244.2
15°	260.4	228.8	217.4
17.5°	237.9	202.5	189.1
20°	216.9	176.2	162.3
22.5°	192.9	150.3	135.0
25°	171.4	124.5	107.2
27.5°	147.5	98.1	83.3
30°	125.0	75.2	60.3
32.5°	103.4	55.1	41.7
35°	83.3	37.3	26.3
37.5°	64.2	23.0	13.4
40°	46.4	12.0	6.2
42.5°	31.1	5.7	3.4
45°	19.2	2.9	0.0
47.5°	11.0	0.0	0.0
50°	5.7	0.0	0.0
52.5°	2.4	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°	0.5	0.5	0.5
77.5°	0.5	1.0	1.4
80°	1.0	1.9	2.4
82.5°	1.9	2.4	2.4
85°	1.9	2.4	2.9
87.5°	2.4	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.8	3.8
95°	3.4	3.8	4.3
97.5°	3.8	4.3	4.3
100°	3.4	4.3	4.8
102.5°	2.9	4.3	4.3
105°	2.4	3.4	3.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.4	1.9	2.4
117.5°	1.4	1.9	1.9
120°	1.4	1.4	1.9
122.5°	1.4	1.4	1.9
125°	1.4	1.4	1.9
127.5°	1.9	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.9	1.4	1.4
135°	1.9	1.4	1.4
137.5°	1.9	1.4	1.4
140°	1.9	1.4	1.4
142.5°	1.9	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	1.0
152.5°	1.4	1.0	1.0
155°	1.4	1.0	0.5
157.5°	1.9	1.0	0.5
160°	1.4	1.0	0.5
162.5°	1.4	1.0	0.5
165°	1.4	1.0	0.0
167.5°	1.4	1.0	0.5
170°	1.4	1.0	0.5
172.5°	1.4	1.0	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	201.1	195.3	176.2	144.6	101.0	56.5	21.1	3.8	1.0	1.4	1.4
110°	175.2	170.4	150.8	120.2	81.4	42.1	13.9	2.4	1.4	1.4	1.4







107.5°	1.9	2.9	3.4
110°	1.9	2.4	2.9



(END OF REPORT)