

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: P551497

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-93-85-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: P551497  
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-93-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

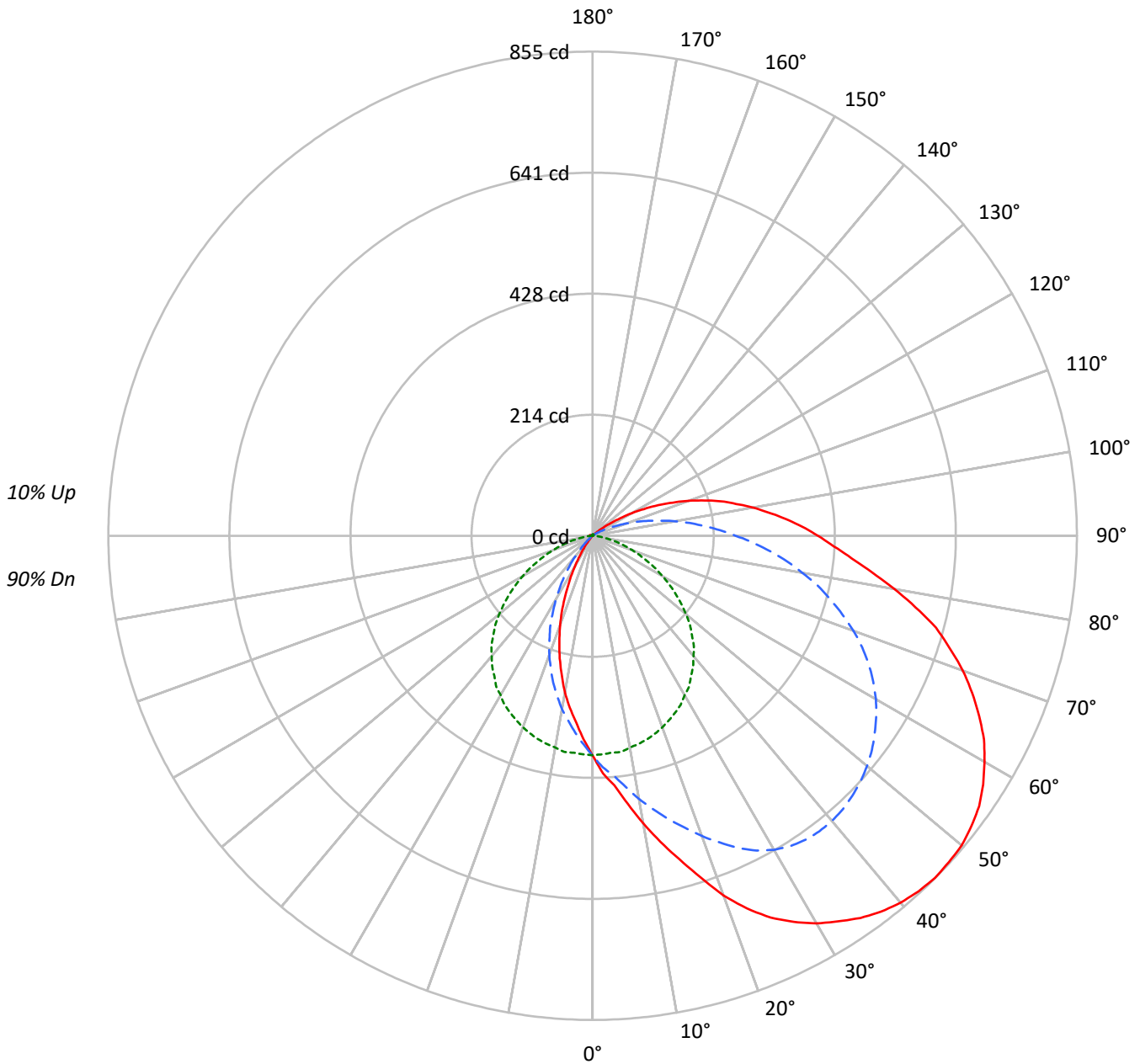
Lumens per Lamp: N/A  
Luminaire Lumens: 1916.1 lumens  
Efficiency: N/A  
Efficacy: 81.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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

TEST NUMBER: P551497

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551497

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-85-ED1D-90

**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°	4172	4172	4172
5°	4580	4111	3430
10°	5182	4061	2826
15°	5808	4009	2202
20°	6550	3943	1622
25°	7166	3867	1065
30°	7623	3766	600
35°	8020	3656	265
40°	8371	3523	63
45°	8673	3353	0
50°	8926	3131	0
55°	9119	2846	0
60°	9216	2516	0
65°	9254	2141	0
70°	9222	1745	0
75°	9106	1287	7
80°	8737	787	40
85°	8444	376	55



TEST NUMBER: P551497

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.1	1.9
10°-20°	111.2	5.8
20°-30°	180.0	9.4
30°-40°	231.2	12.1
40°-50°	261.7	13.7
50°-60°	271.2	14.2
60°-70°	255.7	13.3
70°-80°	214.3	11.2
80°-90°	155.4	8.1
90°-100°	102.1	5.3
100°-110°	59.0	3.1
110°-120°	26.0	1.4
120°-130°	7.1	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	328.3	17.1
0°-40°	559.5	29.2
0°-60°	1092.4	57.0
0°-90°	1717.9	89.7
90°-120°	187.1	9.8
90°-150°	196.9	10.3
90°-180°	198.0	10.3
0°-180°	1916.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	388	388	388	388	388	
5°	442	425	385	349	331	45
15°	591	518	372	269	224	170
25°	744	608	345	177	111	344
35°	824	655	303	86	27	517
45°	855	649	248	20	0	660
55°	833	608	179	0	0	744
65°	753	538	107	0	0	745
75°	628	434	45	0	0	658
85°	459	315	7	2	3	392
90°	398	253	2	3	4	218
95°	342	197	1	4	4	268
105°	235	102	1	2	4	248
115°	128	34	2	2	2	128
125°	38	5	2	2	2	38
135°	2	2	2	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	2	2	0	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°	387.6	387.6	387.6	387.6	387.6	387.6	387.6	387.6	387.6	387.6	387.6
2.5°	420.1	419.7	418.2	415.7	412.2	406.3	401.4	396.9	391.0	386.1	376.7
5°	442.4	439.9	437.9	435.5	427.6	422.1	413.2	403.4	394.0	384.6	365.8
7.5°	477.9	474.0	471.0	464.1	453.2	440.9	427.1	417.7	411.3	385.1	353.0
10°	515.9	512.5	506.5	494.2	480.9	463.1	443.3	421.1	401.4	379.7	341.6
12.5°	553.4	548.5	540.1	524.3	505.6	483.3	456.2	430.0	401.9	376.2	328.3
15°	591.0	585.5	576.7	557.4	532.7	503.6	470.5	437.4	404.3	371.8	314.5
17.5°	631.9	624.5	611.2	589.5	558.4	522.3	483.3	443.3	403.4	366.3	299.7
20°	675.9	665.5	651.2	622.1	585.5	543.1	496.2	449.3	402.9	359.9	282.9
22.5°	712.4	702.1	686.3	656.1	612.2	560.4	507.0	453.2	400.9	352.5	267.1
25°	744.0	735.6	718.3	683.8	637.4	578.6	517.4	456.2	397.9	344.6	250.3
27.5°	768.7	760.8	741.5	706.0	658.6	594.9	525.3	457.7	394.0	336.7	233.0
30°	790.4	782.5	759.3	722.8	672.9	607.8	533.2	458.2	389.0	324.9	214.3
32.5°	807.2	799.8	776.1	737.1	682.8	616.6	537.6	457.7	382.6	316.5	194.0
35°	824.0	816.6	788.9	747.5	690.2	620.6	541.1	455.2	374.7	302.6	174.8
37.5°	836.8	828.4	800.3	754.4	693.7	621.6	540.6	451.7	366.3	291.3	155.5
40°	845.7	836.8	806.7	758.3	694.6	620.1	536.7	445.8	356.5	277.0	135.3
42.5°	851.6	841.8	809.7	764.3	692.7	616.1	530.7	438.4	345.6	264.6	116.0
45°	854.6	844.2	810.2	759.3	689.2	608.7	521.8	429.0	333.7	247.8	96.8
47.5°	853.1	841.8	807.7	753.9	682.8	600.8	512.0	417.7	319.4	233.0	78.5
50°	850.7	838.8	802.3	747.0	673.9	591.0	501.1	403.9	304.6	214.8	62.2
52.5°	842.8	830.9	796.4	737.1	663.5	579.6	486.3	389.5	288.8	197.0	47.4
55°	832.9	822.0	786.0	728.2	650.2	565.8	472.5	374.2	273.5	178.7	34.1
57.5°	817.6	807.7	773.1	713.9	636.9	550.5	457.2	357.4	254.3	160.5	23.7
60°	798.8	788.9	755.4	697.6	621.6	533.2	440.4	340.2	237.0	142.2	14.8
62.5°	779.1	769.7	734.6	677.4	602.3	514.9	422.1	322.9	218.7	125.4	8.9
65°	752.9	744.0	712.4	653.2	581.1	495.2	401.9	302.1	200.0	106.6	4.9
67.5°	725.3	717.4	685.3	631.0	556.4	473.5	381.1	281.9	180.2	90.3	2.5
70°	695.6	685.8	656.1	600.8	531.2	448.8	358.4	261.2	161.4	74.5	0.0
72.5°	661.1	653.7	625.0	572.7	502.1	422.6	335.2	238.5	140.7	59.2	0.5
75°	627.5	618.1	592.0	542.6	473.5	395.0	309.6	217.2	120.5	45.4	0.5
77.5°	584.1	581.1	556.4	508.5	446.3	368.3	281.4	191.6	101.2	32.6	0.5
80°	540.6	537.6	518.4	474.5	414.7	336.7	255.2	167.4	82.4	21.7	0.5
82.5°	497.7	493.7	475.4	438.9	382.6	310.0	228.1	143.2	65.2	13.3	0.5
85°	459.1	454.2	434.5	400.9	349.5	279.9	200.0	119.5	48.4	7.4	1.0
87.5°	426.1	422.6	400.9	366.3	316.0	251.8	175.3	96.8	34.1	3.5	1.5
90°	397.9	390.5	371.3	334.7	284.4	220.7	149.1	77.5	22.7	2.0	2.0
92.5°	370.3	363.9	342.6	305.1	256.2	194.0	123.9	59.2	14.3	1.0	2.5
95°	341.6	334.7	314.0	279.4	227.6	166.9	101.7	43.4	7.9	1.0	2.5
97.5°	313.5	307.1	285.4	250.8	201.9	143.2	80.5	30.6	3.9	1.0	2.0
100°	287.3	279.9	260.2	225.6	176.3	119.5	62.2	19.7	2.5	1.0	2.0
102.5°	259.7	253.8	233.5	200.0	149.6	97.3	46.4	12.3	1.0	1.0	1.5
105°	235.0	227.6	207.9	173.3	127.4	76.5	32.6	7.4	1.0	1.0	1.5



TEST NUMBER: P551497

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	153.0	147.1	129.8	100.7	64.7	30.1	8.9	1.5	1.5	1.5	1.5
115°	127.9	119.0	103.7	78.0	47.9	19.7	4.4	1.5	1.5	1.5	1.5
117.5°	102.2	94.8	83.9	59.2	31.6	12.8	2.5	1.5	1.5	1.5	1.5
120°	80.0	73.1	60.7	41.0	21.2	7.4	1.0	1.5	1.5	1.5	1.5
122.5°	57.3	51.8	41.0	26.7	12.8	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.0	35.1	27.2	16.3	7.9	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.7	22.2	15.8	9.4	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.8	12.3	9.4	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.9	7.4	4.9	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



TEST NUMBER: P551497

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	387.6	387.6	387.6
2.5°	368.8	361.9	359.9
5°	349.1	337.7	331.3
7.5°	329.3	314.0	306.6
10°	311.0	289.3	281.4
12.5°	289.3	264.1	251.8
15°	268.6	236.0	224.1
17.5°	245.4	208.8	195.0
20°	223.6	181.7	167.4
22.5°	199.0	155.0	139.2
25°	176.7	128.4	110.6
27.5°	152.1	101.2	85.9
30°	128.9	77.5	62.2
32.5°	106.6	56.8	43.0
35°	85.9	38.5	27.2
37.5°	66.2	23.7	13.8
40°	47.9	12.3	6.4
42.5°	32.1	5.9	3.5
45°	19.7	3.0	0.0
47.5°	11.4	0.0	0.0
50°	5.9	0.0	0.0
52.5°	2.5	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	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	3.9	3.9
95°	3.5	3.9	4.4
97.5°	3.9	4.4	4.4
100°	3.5	4.4	4.9
102.5°	3.0	4.4	4.4
105°	2.5	3.5	3.9





TEST NUMBER: P551497

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	207.4	201.4	181.7	149.1	104.2	58.3	21.7	3.9	1.0	1.5	1.5
110°	180.7	175.8	155.5	123.9	83.9	43.4	14.3	2.5	1.5	1.5	1.5







107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)