

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: P550545

Luminaire Tested: **FCC-X-2-LD4-1HI-35-UNV-93-94-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: P550545  
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-LD4-1HI-35-UNV-93-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

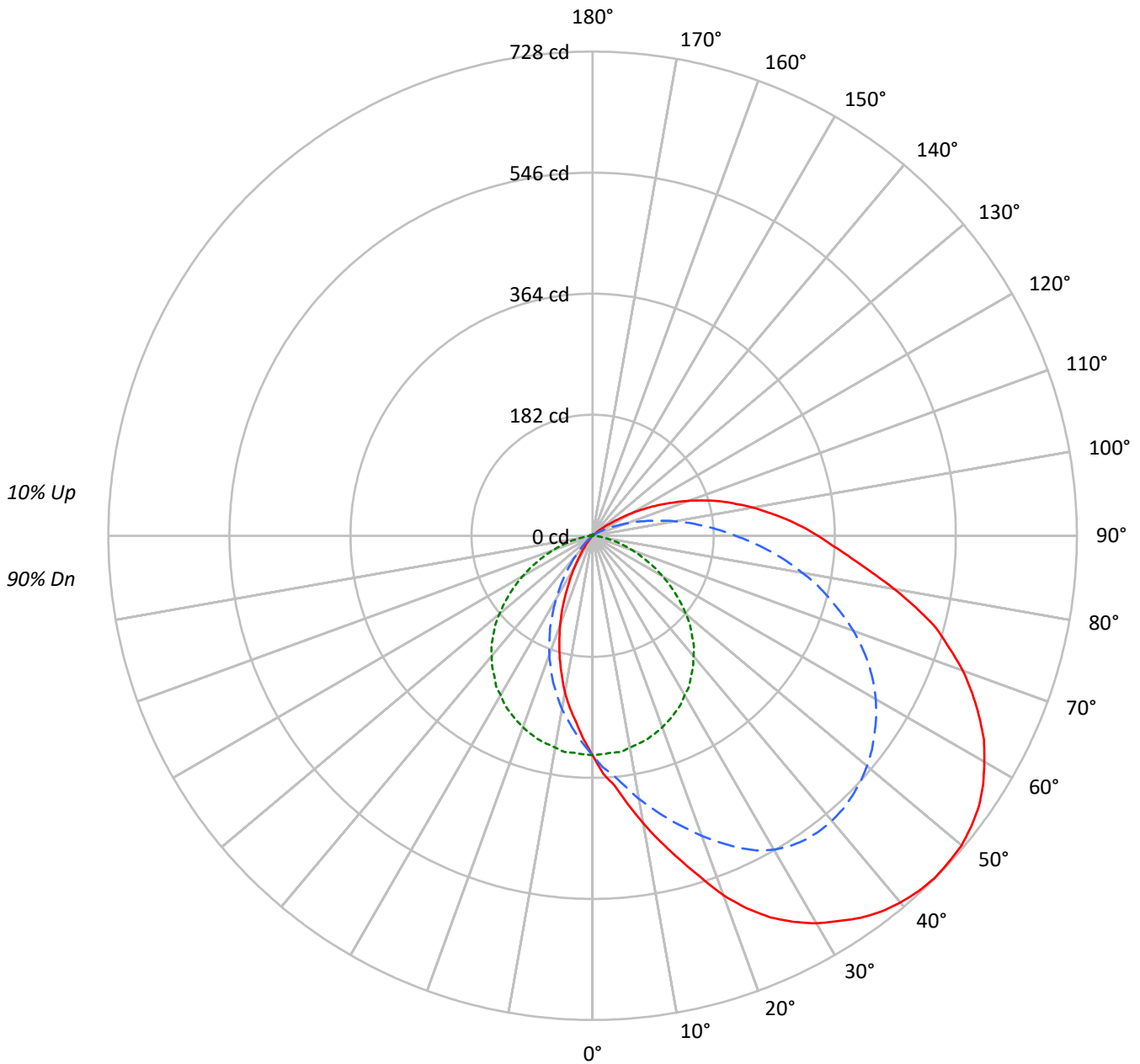
Lumens per Lamp: N/A  
Luminaire Lumens: 1631.1 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
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-LD4-1HI-35-UNV-93-94-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°	3551	3551	3551
5°	3899	3499	2919
10°	4412	3456	2407
15°	4944	3413	1875
20°	5575	3357	1381
25°	6099	3292	906
30°	6490	3205	511
35°	6827	3113	225
40°	7126	2999	54
45°	7383	2855	0
50°	7598	2664	0
55°	7762	2422	0
60°	7845	2141	0
65°	7877	1824	0
70°	7852	1488	0
75°	7752	1097	6
80°	7437	671	34
85°	7189	320	46



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.6	1.9
10°-20°	94.6	5.8
20°-30°	153.2	9.4
30°-40°	196.8	12.1
40°-50°	222.8	13.7
50°-60°	230.8	14.2
60°-70°	217.7	13.3
70°-80°	182.4	11.2
80°-90°	132.2	8.1
90°-100°	86.9	5.3
100°-110°	50.2	3.1
110°-120°	22.2	1.4
120°-130°	6.0	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	279.5	17.1
0°-40°	476.3	29.2
0°-60°	929.9	57.0
0°-90°	1462.3	89.7
90°-120°	159.3	9.8
90°-150°	167.6	10.3
90°-180°	169.0	10.4
0°-180°	1631.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	330	330	330	330	330	
5°	377	362	327	297	282	38
15°	503	441	316	229	191	145
25°	633	518	293	150	94	293
35°	701	558	258	73	23	440
45°	728	552	211	17	0	562
55°	709	518	152	0	0	633
65°	641	458	91	0	0	634
75°	534	370	39	0	0	560
85°	391	268	6	2	2	334
90°	339	215	2	2	3	186
95°	291	168	1	3	4	228
105°	200	87	1	2	3	211
115°	109	29	1	1	2	109
125°	32	4	2	1	2	32
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°	329.9	329.9	329.9	329.9	329.9	329.9	329.9	329.9	329.9	329.9	329.9
2.5°	357.6	357.2	356.0	353.9	350.9	345.9	341.7	337.9	332.9	328.7	320.7
5°	376.6	374.5	372.8	370.7	364.0	359.3	351.8	343.4	335.4	327.4	311.4
7.5°	406.8	403.5	400.9	395.1	385.8	375.3	363.5	355.5	350.1	327.8	300.5
10°	439.2	436.2	431.2	420.7	409.3	394.2	377.4	358.5	341.7	323.2	290.8
12.5°	471.1	466.9	459.8	446.3	430.4	411.4	388.3	366.1	342.1	320.2	279.5
15°	503.1	498.4	490.9	474.5	453.5	428.7	400.5	372.4	344.2	316.5	267.7
17.5°	537.9	531.6	520.3	501.8	475.3	444.6	411.4	377.4	343.4	311.8	255.1
20°	575.3	566.5	554.3	529.5	498.4	462.3	422.4	382.4	342.9	306.4	240.8
22.5°	606.4	597.6	584.2	558.5	521.1	477.0	431.6	385.8	341.3	300.1	227.4
25°	633.3	626.2	611.5	582.1	542.6	492.6	440.4	388.3	338.7	293.3	213.1
27.5°	654.4	647.6	631.2	601.0	560.6	506.4	447.2	389.6	335.4	286.6	198.4
30°	672.9	666.1	646.4	615.3	572.8	517.4	453.9	390.0	331.2	276.5	182.4
32.5°	687.1	680.8	660.7	627.5	581.2	524.9	457.7	389.6	325.7	269.4	165.2
35°	701.4	695.1	671.6	636.3	587.5	528.3	460.6	387.5	319.0	257.6	148.8
37.5°	712.4	705.2	681.3	642.2	590.5	529.1	460.2	384.5	311.8	248.0	132.4
40°	719.9	712.4	686.7	645.5	591.3	527.9	456.8	379.5	303.4	235.8	115.2
42.5°	725.0	716.6	689.2	650.6	589.6	524.5	451.8	373.2	294.2	225.3	98.8
45°	727.5	718.7	689.7	646.4	586.7	518.2	444.2	365.2	284.1	211.0	82.4
47.5°	726.2	716.6	687.6	641.8	581.2	511.5	435.8	355.5	271.9	198.4	66.8
50°	724.1	714.0	682.9	635.9	573.7	503.1	426.6	343.8	259.3	182.8	53.0
52.5°	717.4	707.3	677.9	627.5	564.8	493.4	414.0	331.6	245.9	167.7	40.3
55°	709.0	699.7	669.1	619.9	553.5	481.6	402.2	318.6	232.8	152.1	29.0
57.5°	696.0	687.6	658.1	607.7	542.1	468.6	389.2	304.3	216.4	136.6	20.2
60°	680.0	671.6	643.0	593.8	529.1	453.9	374.9	289.6	201.7	121.0	12.6
62.5°	663.2	655.2	625.4	576.6	512.7	438.3	359.3	274.9	186.2	106.7	7.6
65°	640.9	633.3	606.4	556.0	494.7	421.5	342.1	257.2	170.2	90.8	4.2
67.5°	617.4	610.7	583.3	537.1	473.6	403.0	324.4	240.0	153.4	76.9	2.1
70°	592.2	583.8	558.5	511.5	452.2	382.0	305.1	222.3	137.4	63.5	0.0
72.5°	562.7	556.4	532.1	487.5	427.4	359.8	285.4	203.0	119.8	50.4	0.4
75°	534.2	526.2	503.9	461.9	403.0	336.2	263.5	184.9	102.5	38.7	0.4
77.5°	497.2	494.7	473.6	432.9	379.9	313.5	239.6	163.1	86.2	27.7	0.4
80°	460.2	457.7	441.3	403.9	353.0	286.6	217.3	142.5	70.2	18.5	0.4
82.5°	423.6	420.3	404.7	373.6	325.7	263.9	194.2	121.9	55.5	11.3	0.4
85°	390.9	386.6	369.8	341.3	297.6	238.3	170.2	101.7	41.2	6.3	0.8
87.5°	362.7	359.8	341.3	311.8	269.0	214.3	149.2	82.4	29.0	2.9	1.3
90°	338.7	332.4	316.0	284.9	242.1	187.9	126.9	66.0	19.3	1.7	1.7
92.5°	315.2	309.7	291.7	259.7	218.1	165.2	105.5	50.4	12.2	0.8	2.1
95°	290.8	284.9	267.3	237.9	193.7	142.1	86.6	37.0	6.7	0.8	2.1
97.5°	266.9	261.4	242.9	213.5	171.9	121.9	68.5	26.1	3.4	0.8	1.7
100°	244.6	238.3	221.5	192.1	150.0	101.7	53.0	16.8	2.1	0.8	1.7
102.5°	221.1	216.0	198.8	170.2	127.3	82.8	39.5	10.5	0.8	0.8	1.3
105°	200.0	193.7	176.9	147.5	108.4	65.1	27.7	6.3	0.8	0.8	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	130.3	125.2	110.5	85.7	55.1	25.6	7.6	1.3	1.3	1.3	1.3
115°	108.8	101.3	88.3	66.4	40.8	16.8	3.8	1.3	1.3	1.3	1.3
117.5°	87.0	80.7	71.4	50.4	26.9	10.9	2.1	1.3	1.3	1.3	1.3
120°	68.1	62.2	51.7	34.9	18.1	6.3	0.8	1.3	1.3	1.3	1.3
122.5°	48.8	44.1	34.9	22.7	10.9	2.9	1.3	1.3	1.7	1.7	1.3
125°	32.4	29.8	23.1	13.9	6.7	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.0	18.9	13.4	8.0	2.9	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.8	10.5	8.0	4.6	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.7	6.3	4.2	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	329.9	329.9	329.9
2.5°	313.9	308.1	306.4
5°	297.1	287.5	282.0
7.5°	280.3	267.3	261.0
10°	264.8	246.3	239.6
12.5°	246.3	224.8	214.3
15°	228.6	200.9	190.8
17.5°	208.9	177.8	166.0
20°	190.4	154.7	142.5
22.5°	169.4	132.0	118.5
25°	150.5	109.3	94.1
27.5°	129.4	86.2	73.1
30°	109.7	66.0	53.0
32.5°	90.8	48.3	36.6
35°	73.1	32.8	23.1
37.5°	56.3	20.2	11.8
40°	40.8	10.5	5.5
42.5°	27.3	5.0	2.9
45°	16.8	2.5	0.0
47.5°	9.7	0.0	0.0
50°	5.0	0.0	0.0
52.5°	2.1	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.3
80°	0.8	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	2.9
90°	2.5	2.9	2.9
92.5°	2.5	3.4	3.4
95°	2.9	3.4	3.8
97.5°	3.4	3.8	3.8
100°	2.9	3.8	4.2
102.5°	2.5	3.8	3.8
105°	2.1	2.9	3.4





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.3	1.7	2.1
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.8
152.5°	1.3	0.8	0.8
155°	1.3	0.8	0.4
157.5°	1.7	0.8	0.4
160°	1.3	0.8	0.4
162.5°	1.3	0.8	0.4
165°	1.3	0.8	0.0
167.5°	1.3	0.8	0.4
170°	1.3	0.8	0.4
172.5°	1.3	0.8	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	176.5	171.5	154.7	126.9	88.7	49.6	18.5	3.4	0.8	1.3	1.3
110°	153.8	149.6	132.4	105.5	71.4	37.0	12.2	2.1	1.3	1.3	1.3







107.5°	1.7	2.5	2.9
110°	1.7	2.1	2.5



(END OF REPORT)