

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: P551121

Luminaire Tested: **FCC-X-2-LD4-1STD-40-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: P551121  
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-LD4-1STD-40-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 4000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

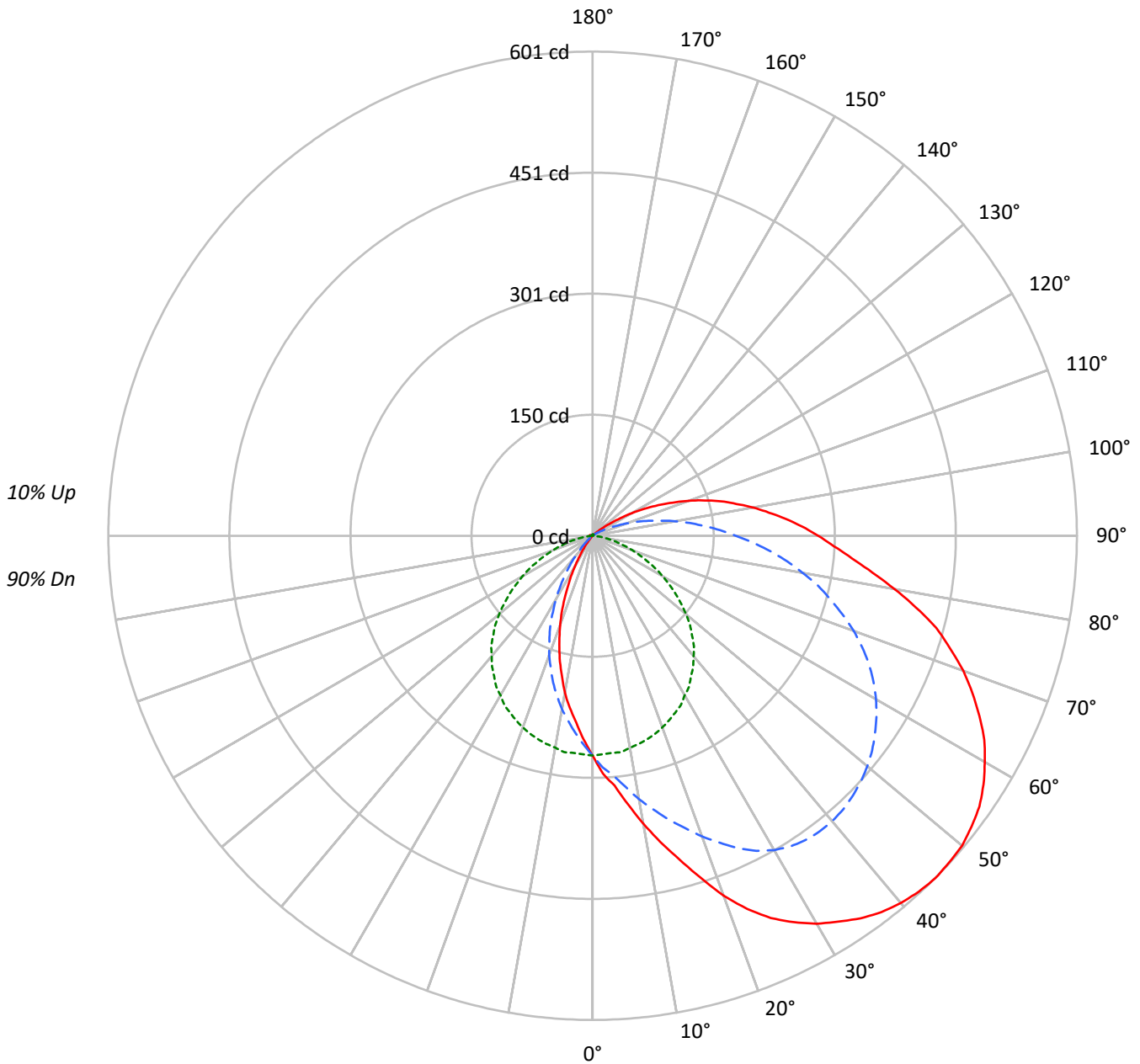
Lumens per Lamp: N/A  
Luminaire Lumens: 1347.9 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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-LD4-1STD-40-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°	2935	2935	2935
5°	3222	2892	2413
10°	3646	2856	1989
15°	4086	2821	1550
20°	4608	2774	1142
25°	5042	2720	749
30°	5364	2650	422
35°	5642	2572	186
40°	5890	2479	45
45°	6102	2360	0
50°	6280	2202	0
55°	6416	2002	0
60°	6484	1770	0
65°	6510	1506	0
70°	6489	1228	0
75°	6407	907	4
80°	6146	555	27
85°	5941	264	39



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.1	1.9
10°-20°	78.2	5.8
20°-30°	126.6	9.4
30°-40°	162.7	12.1
40°-50°	184.2	13.7
50°-60°	190.8	14.2
60°-70°	179.9	13.3
70°-80°	150.8	11.2
80°-90°	109.3	8.1
90°-100°	71.8	5.3
100°-110°	41.5	3.1
110°-120°	18.3	1.4
120°-130°	4.9	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	231.0	17.1
0°-40°	393.6	29.2
0°-60°	768.6	57.0
0°-90°	1208.6	89.7
90°-120°	131.6	9.8
90°-150°	138.4	10.3
90°-180°	139.0	10.3
0°-180°	1347.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	273	273	273	273	273	
5°	311	299	271	246	233	31
15°	416	365	262	189	158	120
25°	524	428	242	124	78	242
35°	580	461	213	60	19	364
45°	601	457	174	14	0	464
55°	586	428	126	0	0	523
65°	530	379	75	0	0	524
75°	442	306	32	0	0	463
85°	323	221	5	1	2	276
90°	280	178	1	2	2	154
95°	240	139	1	2	3	189
105°	165	72	1	2	3	174
115°	90	24	1	1	2	90
125°	27	3	1	1	1	27
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	1	0	0
175°	1	1	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°	272.7	272.7	272.7	272.7	272.7	272.7	272.7	272.7	272.7	272.7	272.7
2.5°	295.6	295.2	294.2	292.5	290.0	285.9	282.4	279.3	275.1	271.6	265.0
5°	311.2	309.5	308.1	306.4	300.8	297.0	290.7	283.8	277.2	270.6	257.4
7.5°	336.2	333.5	331.4	326.5	318.9	310.2	300.5	293.9	289.3	270.9	248.4
10°	363.0	360.5	356.4	347.7	338.3	325.8	311.9	296.3	282.4	267.1	240.4
12.5°	389.4	385.9	380.0	368.9	355.7	340.1	320.9	302.5	282.7	264.7	231.0
15°	415.8	412.0	405.7	392.2	374.8	354.3	331.0	307.8	284.5	261.6	221.3
17.5°	444.6	439.4	430.0	414.7	392.9	367.5	340.1	311.9	283.8	257.7	210.8
20°	475.5	468.2	458.2	437.7	412.0	382.1	349.1	316.1	283.4	253.2	199.0
22.5°	501.2	493.9	482.8	461.6	430.7	394.2	356.7	318.9	282.0	248.0	187.9
25°	523.5	517.5	505.4	481.1	448.4	407.1	364.0	320.9	280.0	242.4	176.1
27.5°	540.8	535.3	521.7	496.7	463.4	418.6	369.6	322.0	277.2	236.9	163.9
30°	556.1	550.5	534.2	508.5	473.4	427.6	375.1	322.3	273.7	228.6	150.7
32.5°	567.9	562.7	546.0	518.6	480.4	433.8	378.3	322.0	269.2	222.6	136.5
35°	579.7	574.5	555.1	525.9	485.6	436.6	380.7	320.3	263.6	212.9	123.0
37.5°	588.8	582.8	563.1	530.7	488.0	437.3	380.3	317.8	257.7	204.9	109.4
40°	595.0	588.8	567.6	533.5	488.7	436.3	377.6	313.7	250.8	194.9	95.2
42.5°	599.2	592.2	569.7	537.7	487.3	433.5	373.4	308.4	243.1	186.2	81.6
45°	601.3	594.0	570.0	534.2	484.9	428.3	367.1	301.8	234.8	174.4	68.1
47.5°	600.2	592.2	568.3	530.4	480.4	422.7	360.2	293.9	224.7	163.9	55.2
50°	598.5	590.1	564.4	525.5	474.1	415.8	352.6	284.1	214.3	151.1	43.8
52.5°	592.9	584.6	560.3	518.6	466.8	407.8	342.1	274.1	203.2	138.6	33.3
55°	586.0	578.3	553.0	512.3	457.5	398.1	332.4	263.3	192.4	125.7	24.0
57.5°	575.2	568.3	543.9	502.3	448.1	387.3	321.6	251.5	178.9	112.9	16.7
60°	562.0	555.1	531.4	490.8	437.3	375.1	309.8	239.3	166.7	100.0	10.4
62.5°	548.1	541.5	516.9	476.6	423.8	362.3	297.0	227.2	153.9	88.2	6.3
65°	529.7	523.5	501.2	459.5	408.8	348.4	282.7	212.6	140.7	75.0	3.5
67.5°	510.3	504.7	482.1	443.9	391.5	333.1	268.2	198.3	126.8	63.6	1.7
70°	489.4	482.5	461.6	422.7	373.7	315.7	252.2	183.7	113.6	52.4	0.0
72.5°	465.1	459.9	439.7	402.9	353.3	297.3	235.8	167.8	99.0	41.7	0.3
75°	441.5	434.9	416.5	381.7	333.1	277.9	217.8	152.8	84.8	32.0	0.3
77.5°	410.9	408.8	391.5	357.8	314.0	259.1	198.0	134.8	71.2	22.9	0.3
80°	380.3	378.3	364.7	333.8	291.8	236.9	179.6	117.8	58.0	15.3	0.3
82.5°	350.1	347.3	334.5	308.8	269.2	218.1	160.5	100.7	45.8	9.4	0.3
85°	323.0	319.6	305.7	282.0	245.9	196.9	140.7	84.1	34.0	5.2	0.7
87.5°	299.8	297.3	282.0	257.7	222.3	177.1	123.3	68.1	24.0	2.4	1.0
90°	280.0	274.8	261.2	235.5	200.1	155.3	104.9	54.5	16.0	1.4	1.4
92.5°	260.5	256.0	241.1	214.7	180.3	136.5	87.2	41.7	10.1	0.7	1.7
95°	240.4	235.5	220.9	196.6	160.1	117.4	71.6	30.6	5.6	0.7	1.7
97.5°	220.6	216.1	200.8	176.5	142.1	100.7	56.6	21.5	2.8	0.7	1.4
100°	202.2	196.9	183.1	158.7	124.0	84.1	43.8	13.9	1.7	0.7	1.4
102.5°	182.7	178.5	164.3	140.7	105.2	68.4	32.7	8.7	0.7	0.7	1.0
105°	165.3	160.1	146.2	121.9	89.6	53.8	22.9	5.2	0.7	0.7	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	107.7	103.5	91.4	70.9	45.5	21.2	6.3	1.0	1.0	1.0	1.0
115°	90.0	83.7	72.9	54.9	33.7	13.9	3.1	1.0	1.0	1.0	1.0
117.5°	71.9	66.7	59.0	41.7	22.2	9.0	1.7	1.0	1.0	1.0	1.0
120°	56.3	51.4	42.7	28.8	14.9	5.2	0.7	1.0	1.0	1.0	1.0
122.5°	40.3	36.5	28.8	18.8	9.0	2.4	1.0	1.0	1.4	1.4	1.0
125°	26.7	24.7	19.1	11.5	5.6	1.0	1.0	1.0	1.4	1.4	1.0
127.5°	17.4	15.6	11.1	6.6	2.4	1.0	1.0	1.4	1.4	1.4	1.0
130°	9.7	8.7	6.6	3.8	1.0	1.0	1.0	1.4	1.4	1.4	1.0
132.5°	5.6	5.2	3.5	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.4	1.7	1.7	1.7	1.4
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.4
142.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
145°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
150°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
152.5°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
157.5°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
160°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.7
172.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
175°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
177.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.4
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	272.7	272.7	272.7
2.5°	259.5	254.6	253.2
5°	245.6	237.6	233.1
7.5°	231.7	220.9	215.7
10°	218.8	203.5	198.0
12.5°	203.5	185.8	177.1
15°	189.0	166.0	157.7
17.5°	172.6	146.9	137.2
20°	157.3	127.8	117.8
22.5°	140.0	109.1	98.0
25°	124.4	90.3	77.8
27.5°	107.0	71.2	60.4
30°	90.7	54.5	43.8
32.5°	75.0	39.9	30.2
35°	60.4	27.1	19.1
37.5°	46.5	16.7	9.7
40°	33.7	8.7	4.5
42.5°	22.6	4.2	2.4
45°	13.9	2.1	0.0
47.5°	8.0	0.0	0.0
50°	4.2	0.0	0.0
52.5°	1.7	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°	0.3	0.3	0.3
77.5°	0.3	0.7	1.0
80°	0.7	1.4	1.7
82.5°	1.4	1.7	1.7
85°	1.4	1.7	2.1
87.5°	1.7	2.1	2.4
90°	2.1	2.4	2.4
92.5°	2.1	2.8	2.8
95°	2.4	2.8	3.1
97.5°	2.8	3.1	3.1
100°	2.4	3.1	3.5
102.5°	2.1	3.1	3.1
105°	1.7	2.4	2.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.4	1.7	1.7
115°	1.0	1.4	1.7
117.5°	1.0	1.4	1.4
120°	1.0	1.0	1.4
122.5°	1.0	1.0	1.4
125°	1.0	1.0	1.4
127.5°	1.4	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.4	1.0	1.0
135°	1.4	1.0	1.0
137.5°	1.4	1.0	1.0
140°	1.4	1.0	1.0
142.5°	1.4	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.4	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	145.9	141.7	127.8	104.9	73.3	41.0	15.3	2.8	0.7	1.0	1.0
110°	127.1	123.7	109.4	87.2	59.0	30.6	10.1	1.7	1.0	1.0	1.0







107.5°	1.4	2.1	2.4
110°	1.4	1.7	2.1



(END OF REPORT)