

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: P550609

Luminaire Tested: **FCC-X-2-LD4-1HI-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: P550609  
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-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**

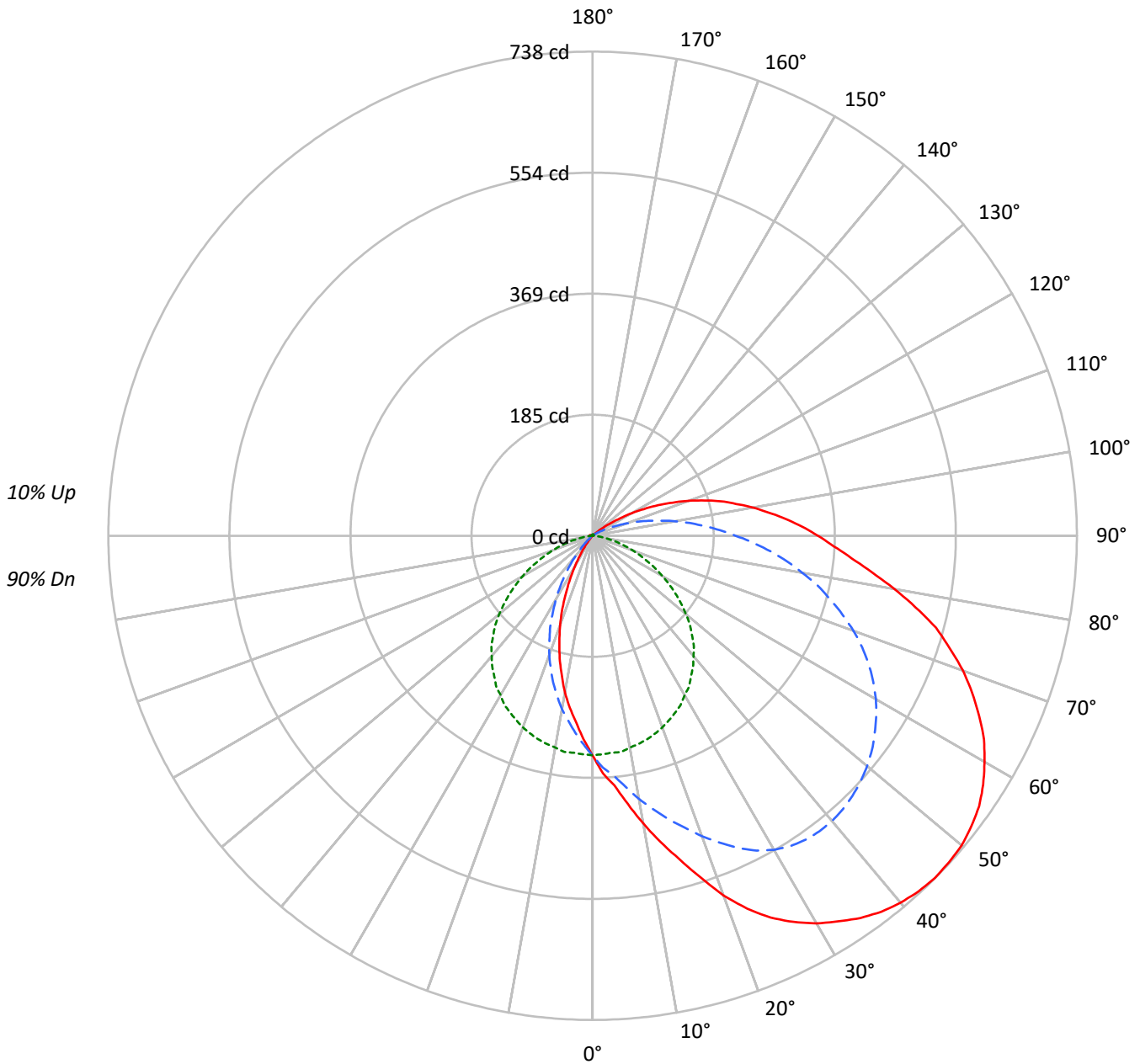
Lumens per Lamp: N/A  
Luminaire Lumens: 1654.1 lumens  
Efficiency: N/A  
Efficacy: 76.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-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°	3602	3602	3602
5°	3953	3548	2961
10°	4474	3505	2440
15°	5014	3460	1902
20°	5655	3404	1400
25°	6186	3339	920
30°	6581	3251	518
35°	6923	3157	228
40°	7227	3041	54
45°	7486	2896	0
50°	7705	2702	0
55°	7872	2457	0
60°	7956	2171	0
65°	7989	1850	0
70°	7962	1509	0
75°	7861	1112	6
80°	7542	682	34
85°	7291	325	48



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.0	1.9
10°-20°	96.0	5.8
20°-30°	155.4	9.4
30°-40°	199.6	12.1
40°-50°	226.0	13.7
50°-60°	234.1	14.2
60°-70°	220.8	13.3
70°-80°	185.0	11.2
80°-90°	134.1	8.1
90°-100°	88.1	5.3
100°-110°	50.9	3.1
110°-120°	22.5	1.4
120°-130°	6.1	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°	283.4	17.1
0°-40°	483.0	29.2
0°-60°	943.1	57.0
0°-90°	1483.0	89.7
90°-120°	161.5	9.8
90°-150°	169.9	10.3
90°-180°	171.0	10.3
0°-180°	1654.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	335	335	335	335	335	
5°	382	367	332	301	286	39
15°	510	447	321	232	194	147
25°	642	525	298	153	96	297
35°	711	566	261	74	23	446
45°	738	560	214	17	0	570
55°	719	525	154	0	0	642
65°	650	465	92	0	0	643
75°	542	375	39	0	0	568
85°	396	272	6	2	3	338
90°	344	218	2	3	3	188
95°	295	170	1	3	4	231
105°	203	88	1	2	3	214
115°	110	29	1	1	2	111
125°	33	4	2	1	2	33
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°	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6
2.5°	362.7	362.3	361.0	358.9	355.9	350.8	346.5	342.7	337.5	333.3	325.2
5°	381.9	379.7	378.0	375.9	369.1	364.4	356.7	348.2	340.1	332.0	315.8
7.5°	412.6	409.1	406.6	400.6	391.2	380.6	368.7	360.6	355.0	332.4	304.7
10°	445.4	442.4	437.3	426.6	415.1	399.8	382.7	363.5	346.5	327.7	294.9
12.5°	477.8	473.5	466.3	452.6	436.4	417.2	393.8	371.2	346.9	324.8	283.4
15°	510.2	505.5	497.8	481.2	459.9	434.7	406.2	377.6	349.1	320.9	271.5
17.5°	545.5	539.1	527.6	508.9	482.0	450.9	417.2	382.7	348.2	316.2	258.7
20°	583.5	574.5	562.2	537.0	505.5	468.8	428.3	387.8	347.8	310.7	244.2
22.5°	615.0	606.1	592.4	566.4	528.5	483.7	437.7	391.2	346.1	304.3	230.6
25°	642.3	635.0	620.1	590.3	550.2	499.5	446.7	393.8	343.5	297.5	216.1
27.5°	663.6	656.8	640.1	609.5	568.5	513.6	453.5	395.1	340.1	290.7	201.2
30°	682.3	675.5	655.5	624.0	580.9	524.6	460.3	395.5	335.8	280.4	185.0
32.5°	696.8	690.4	670.0	636.3	589.4	532.3	464.1	395.1	330.3	273.2	167.5
35°	711.3	704.9	681.1	645.3	595.8	535.7	467.1	393.0	323.5	261.3	150.9
37.5°	722.4	715.2	690.9	651.2	598.8	536.6	466.7	390.0	316.2	251.5	134.3
40°	730.1	722.4	696.4	654.6	599.7	535.3	463.3	384.9	307.7	239.1	116.8
42.5°	735.2	726.7	699.0	659.8	598.0	531.9	458.2	378.5	298.3	228.4	100.2
45°	737.7	728.8	699.4	655.5	595.0	525.5	450.5	370.4	288.1	214.0	83.5
47.5°	736.5	726.7	697.3	650.8	589.4	518.7	442.0	360.6	275.7	201.2	67.8
50°	734.3	724.1	692.6	644.8	581.8	510.2	432.6	348.6	263.0	185.4	53.7
52.5°	727.5	717.3	687.5	636.3	572.8	500.4	419.8	336.3	249.3	170.1	40.9
55°	719.0	709.6	678.5	628.6	561.3	488.4	407.9	323.1	236.1	154.3	29.4
57.5°	705.8	697.3	667.4	616.3	549.8	475.2	394.7	308.6	219.5	138.5	20.5
60°	689.6	681.1	652.1	602.2	536.6	460.3	380.2	293.6	204.6	122.7	12.8
62.5°	672.5	664.4	634.2	584.7	520.0	444.5	364.4	278.7	188.8	108.3	7.7
65°	650.0	642.3	615.0	563.9	501.6	427.5	346.9	260.8	172.6	92.1	4.3
67.5°	626.1	619.3	591.6	544.7	480.3	408.7	329.0	243.4	155.6	78.0	2.1
70°	600.5	592.0	566.4	518.7	458.6	387.4	309.4	225.5	139.4	64.4	0.0
72.5°	570.7	564.3	539.6	494.4	433.4	364.8	289.4	205.9	121.5	51.1	0.4
75°	541.7	533.6	511.0	468.4	408.7	341.0	267.2	187.5	104.0	39.2	0.4
77.5°	504.2	501.6	480.3	439.0	385.3	317.9	242.9	165.4	87.4	28.1	0.4
80°	466.7	464.1	447.5	409.6	358.0	290.7	220.3	144.5	71.2	18.8	0.4
82.5°	429.6	426.2	410.4	378.9	330.3	267.7	196.9	123.6	56.3	11.5	0.4
85°	396.4	392.1	375.1	346.1	301.7	241.7	172.6	103.1	41.8	6.4	0.9
87.5°	367.8	364.8	346.1	316.2	272.8	217.4	151.3	83.5	29.4	3.0	1.3
90°	343.5	337.1	320.5	289.0	245.5	190.5	128.7	66.9	19.6	1.7	1.7
92.5°	319.6	314.1	295.8	263.4	221.2	167.5	107.0	51.1	12.4	0.9	2.1
95°	294.9	289.0	271.1	241.2	196.5	144.1	87.8	37.5	6.8	0.9	2.1
97.5°	270.6	265.1	246.3	216.5	174.3	123.6	69.5	26.4	3.4	0.9	1.7
100°	248.0	241.7	224.6	194.8	152.2	103.1	53.7	17.0	2.1	0.9	1.7
102.5°	224.2	219.1	201.6	172.6	129.1	84.0	40.1	10.7	0.9	0.9	1.3
105°	202.9	196.5	179.4	149.6	110.0	66.1	28.1	6.4	0.9	0.9	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	132.1	127.0	112.1	86.9	55.8	26.0	7.7	1.3	1.3	1.3	1.3
115°	110.4	102.7	89.5	67.3	41.3	17.0	3.8	1.3	1.3	1.3	1.3
117.5°	88.2	81.8	72.5	51.1	27.3	11.1	2.1	1.3	1.3	1.3	1.3
120°	69.0	63.1	52.4	35.4	18.3	6.4	0.9	1.3	1.3	1.3	1.3
122.5°	49.4	44.8	35.4	23.0	11.1	3.0	1.3	1.3	1.7	1.7	1.3
125°	32.8	30.3	23.4	14.1	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.3	19.2	13.6	8.1	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.9	10.7	8.1	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.8	6.4	4.3	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.9	0.9	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°	334.6	334.6	334.6
2.5°	318.4	312.4	310.7
5°	301.3	291.5	286.0
7.5°	284.3	271.1	264.7
10°	268.5	249.8	242.9
12.5°	249.8	228.0	217.4
15°	231.9	203.7	193.5
17.5°	211.8	180.3	168.3
20°	193.1	156.8	144.5
22.5°	171.8	133.8	120.2
25°	152.6	110.8	95.5
27.5°	131.3	87.4	74.2
30°	111.2	66.9	53.7
32.5°	92.1	49.0	37.1
35°	74.2	33.2	23.4
37.5°	57.1	20.5	11.9
40°	41.3	10.7	5.5
42.5°	27.7	5.1	3.0
45°	17.0	2.6	0.0
47.5°	9.8	0.0	0.0
50°	5.1	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	0.9	1.3
80°	0.9	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.6
87.5°	2.1	2.6	3.0
90°	2.6	3.0	3.0
92.5°	2.6	3.4	3.4
95°	3.0	3.4	3.8
97.5°	3.4	3.8	3.8
100°	3.0	3.8	4.3
102.5°	2.6	3.8	3.8
105°	2.1	3.0	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	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.7	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	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°	179.0	173.9	156.8	128.7	89.9	50.3	18.8	3.4	0.9	1.3	1.3
110°	156.0	151.7	134.3	107.0	72.5	37.5	12.4	2.1	1.3	1.3	1.3







107.5°	1.7	2.6	3.0
110°	1.7	2.1	2.6



(END OF REPORT)