

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: P550677

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-93-97-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: P550677  
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-50-UNV-93-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 5000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

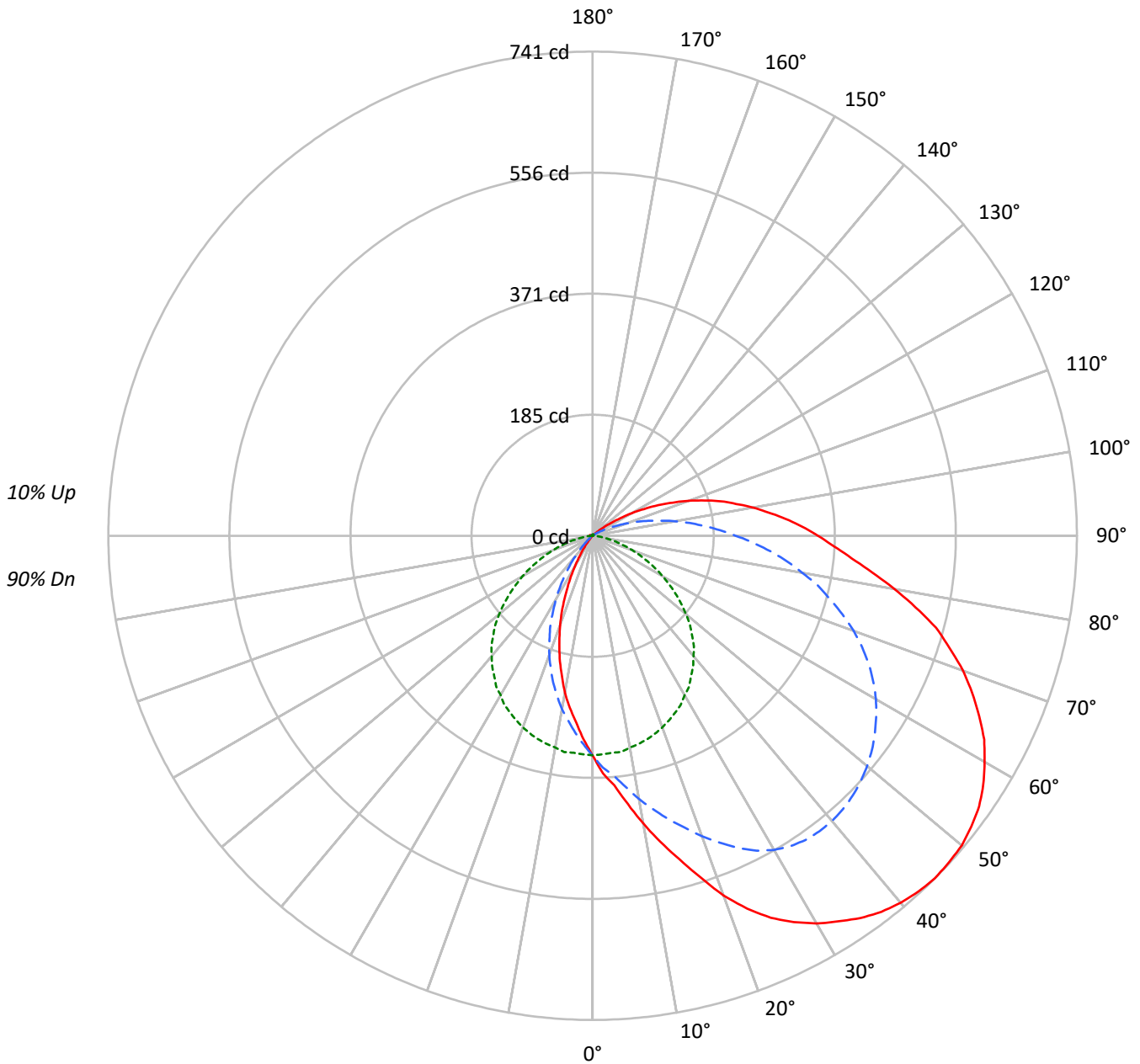
Lumens per Lamp: N/A  
Luminaire Lumens: 1661.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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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### 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°	3617	3617	3617
5°	3970	3563	2973
10°	4493	3519	2451
15°	5034	3475	1909
20°	5678	3418	1406
25°	6212	3352	924
30°	6609	3264	520
35°	6952	3171	229
40°	7258	3053	55
45°	7519	2908	0
50°	7738	2714	0
55°	7905	2467	0
60°	7989	2182	0
65°	8022	1856	0
70°	7996	1513	0
75°	7894	1117	6
80°	7575	682	34
85°	7320	325	48



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.2	1.9
10°-20°	96.4	5.8
20°-30°	156.0	9.4
30°-40°	200.5	12.1
40°-50°	226.9	13.7
50°-60°	235.1	14.2
60°-70°	221.7	13.3
70°-80°	185.8	11.2
80°-90°	134.7	8.1
90°-100°	88.5	5.3
100°-110°	51.1	3.1
110°-120°	22.6	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°	284.6	17.1
0°-40°	485.0	29.2
0°-60°	947.0	57.0
0°-90°	1489.2	89.7
90°-120°	162.2	9.8
90°-150°	170.6	10.3
90°-180°	172.0	10.4
0°-180°	1661.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	336	336	336	336	336	
5°	384	368	333	303	287	39
15°	512	449	322	233	194	148
25°	645	527	299	153	96	298
35°	714	568	262	74	24	448
45°	741	563	215	17	0	572
55°	722	527	155	0	0	645
65°	653	467	92	0	0	646
75°	544	376	39	0	0	571
85°	398	273	6	2	3	340
90°	345	219	2	3	3	189
95°	296	171	1	3	4	232
105°	204	88	1	2	3	215
115°	111	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°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	364.2	363.8	362.5	360.4	357.4	352.2	348.0	344.1	339.0	334.7	326.6
5°	383.5	381.3	379.6	377.5	370.6	365.9	358.2	349.7	341.5	333.4	317.1
7.5°	414.3	410.9	408.3	402.3	392.9	382.2	370.2	362.1	356.5	333.8	306.0
10°	447.3	444.3	439.1	428.4	416.9	401.5	384.3	365.1	348.0	329.1	296.2
12.5°	479.8	475.5	468.2	454.5	438.3	419.0	395.5	372.8	348.4	326.1	284.6
15°	512.3	507.6	499.9	483.2	461.8	436.6	407.9	379.2	350.5	322.3	272.6
17.5°	547.8	541.4	529.9	511.0	484.1	452.8	419.0	384.3	349.7	317.6	259.8
20°	585.9	576.9	564.5	539.3	507.6	470.8	430.1	389.5	349.2	312.0	245.2
22.5°	617.6	608.6	594.9	568.8	530.7	485.8	439.6	392.9	347.5	305.6	231.5
25°	645.0	637.7	622.7	592.8	552.5	501.6	448.5	395.5	345.0	298.7	217.0
27.5°	666.4	659.5	642.9	612.0	571.0	515.7	455.4	396.8	341.5	291.9	202.0
30°	685.2	678.4	658.3	626.6	583.4	526.9	462.2	397.2	337.3	281.6	185.8
32.5°	699.8	693.4	672.8	639.0	591.9	534.6	466.1	396.8	331.7	274.3	168.2
35°	714.3	707.9	683.9	648.0	598.3	538.0	469.1	394.6	324.9	262.4	151.5
37.5°	725.5	718.2	693.8	654.0	601.3	538.9	468.7	391.6	317.6	252.5	134.8
40°	733.2	725.5	699.4	657.4	602.2	537.6	465.2	386.5	309.0	240.1	117.3
42.5°	738.3	729.7	701.9	662.5	600.5	534.1	460.1	380.1	299.6	229.4	100.6
45°	740.9	731.9	702.3	658.3	597.5	527.7	452.4	371.9	289.3	214.9	83.9
47.5°	739.6	729.7	700.2	653.6	591.9	520.9	443.8	362.1	276.9	202.0	68.1
50°	737.4	727.2	695.5	647.6	584.2	512.3	434.4	350.1	264.1	186.2	53.9
52.5°	730.6	720.3	690.4	639.0	575.2	502.5	421.6	337.7	250.4	170.8	41.1
55°	722.0	712.6	681.4	631.3	563.7	490.5	409.6	324.4	237.1	154.9	29.5
57.5°	708.8	700.2	670.2	618.9	552.1	477.2	396.3	309.9	220.4	139.1	20.5
60°	692.5	683.9	654.8	604.8	538.9	462.2	381.8	294.9	205.4	123.3	12.8
62.5°	675.4	667.3	636.9	587.2	522.2	446.4	365.9	279.9	189.6	108.7	7.7
65°	652.7	645.0	617.6	566.2	503.8	429.3	348.4	261.9	173.3	92.4	4.3
67.5°	628.7	621.9	594.1	547.0	482.4	410.5	330.4	244.4	156.2	78.3	2.1
70°	603.1	594.5	568.8	520.9	460.5	389.1	310.7	226.4	140.0	64.6	0.0
72.5°	573.1	566.7	541.8	496.5	435.3	366.4	290.6	206.7	122.0	51.4	0.4
75°	544.0	535.9	513.2	470.4	410.5	342.4	268.4	188.3	104.4	39.4	0.4
77.5°	506.3	503.8	482.4	440.8	386.9	319.3	244.0	166.1	87.7	28.2	0.4
80°	468.7	466.1	449.4	411.3	359.5	291.9	221.3	145.1	71.5	18.8	0.4
82.5°	431.4	428.0	412.2	380.5	331.7	268.8	197.7	124.1	56.5	11.6	0.4
85°	398.0	393.8	376.6	347.5	303.0	242.7	173.3	103.6	41.9	6.4	0.9
87.5°	369.4	366.4	347.5	317.6	273.9	218.3	151.9	83.9	29.5	3.0	1.3
90°	345.0	338.5	321.9	290.2	246.5	191.3	129.3	67.2	19.7	1.7	1.7
92.5°	321.0	315.4	297.0	264.5	222.1	168.2	107.4	51.4	12.4	0.9	2.1
95°	296.2	290.2	272.2	242.2	197.3	144.7	88.2	37.7	6.8	0.9	2.1
97.5°	271.8	266.2	247.4	217.4	175.1	124.1	69.8	26.5	3.4	0.9	1.7
100°	249.1	242.7	225.6	195.6	152.8	103.6	53.9	17.1	2.1	0.9	1.7
102.5°	225.1	220.0	202.4	173.3	129.7	84.3	40.2	10.7	0.9	0.9	1.3
105°	203.7	197.3	180.2	150.2	110.4	66.3	28.2	6.4	0.9	0.9	1.3



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CATALOG NUMBER: FCC-X-2-LD4-1HI-50-UNV-93-97-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	132.7	127.5	112.6	87.3	56.1	26.1	7.7	1.3	1.3	1.3	1.3
115°	110.9	103.1	89.9	67.6	41.5	17.1	3.9	1.3	1.3	1.3	1.3
117.5°	88.6	82.2	72.8	51.4	27.4	11.1	2.1	1.3	1.3	1.3	1.3
120°	69.3	63.3	52.6	35.5	18.4	6.4	0.9	1.3	1.3	1.3	1.3
122.5°	49.6	44.9	35.5	23.1	11.1	3.0	1.3	1.3	1.7	1.7	1.3
125°	33.0	30.4	23.5	14.1	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.4	19.3	13.7	8.1	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	12.0	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°	336.0	336.0	336.0
2.5°	319.7	313.7	312.0
5°	302.6	292.8	287.2
7.5°	285.5	272.2	265.8
10°	269.6	250.8	244.0
12.5°	250.8	229.0	218.3
15°	232.8	204.6	194.3
17.5°	212.7	181.0	169.1
20°	193.9	157.5	145.1
22.5°	172.5	134.4	120.7
25°	153.2	111.3	95.9
27.5°	131.8	87.7	74.5
30°	111.7	67.2	53.9
32.5°	92.4	49.2	37.2
35°	74.5	33.4	23.5
37.5°	57.4	20.5	12.0
40°	41.5	10.7	5.6
42.5°	27.8	5.1	3.0
45°	17.1	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	3.9
97.5°	3.4	3.9	3.9
100°	3.0	3.9	4.3
102.5°	2.6	3.9	3.9
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°	179.8	174.6	157.5	129.3	90.3	50.5	18.8	3.4	0.9	1.3	1.3
110°	156.6	152.4	134.8	107.4	72.8	37.7	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)