

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: P550549

Luminaire Tested: **FCC-X-2-LD4-1HI-35-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: P550549  
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-93-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

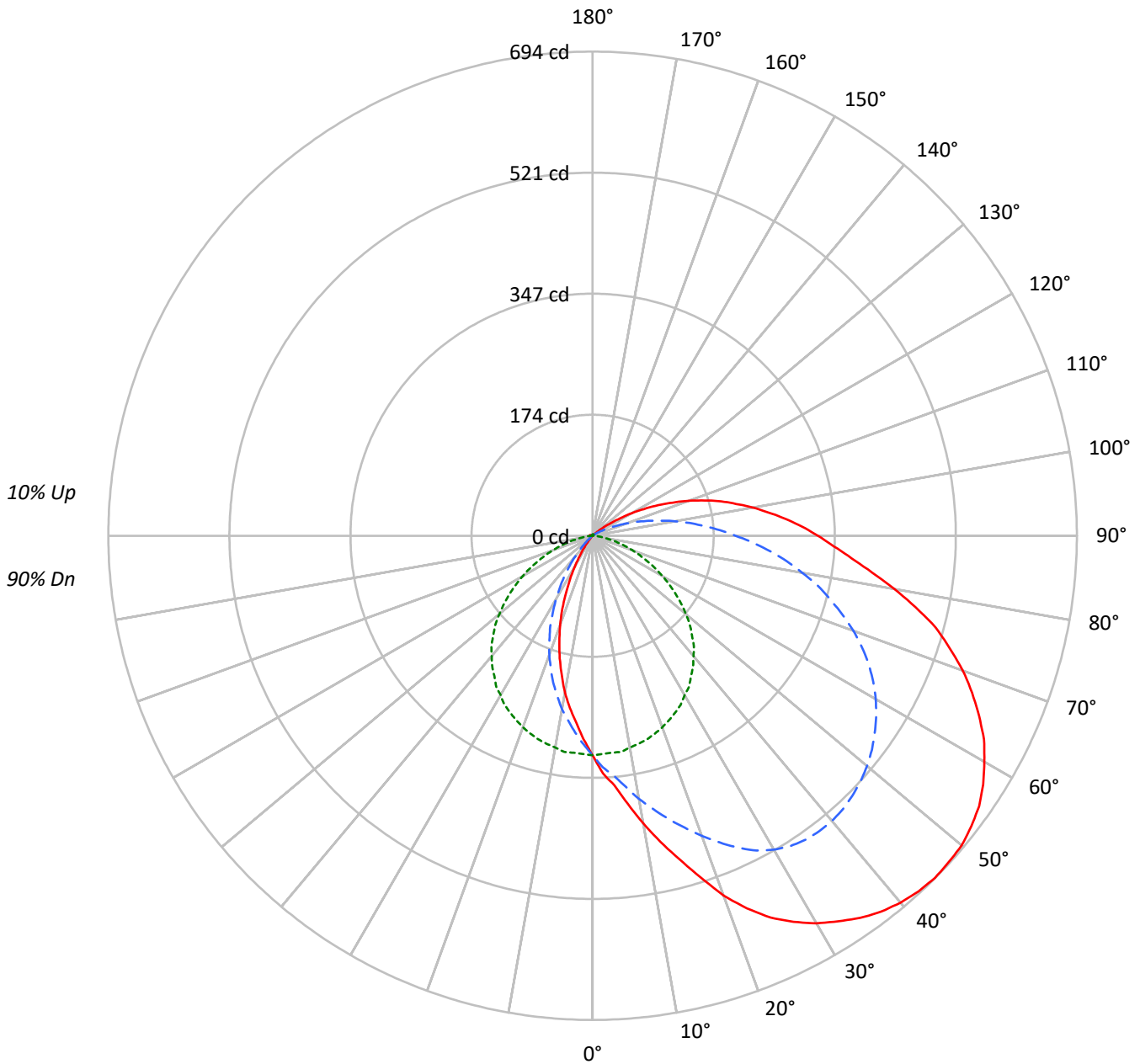
Lumens per Lamp: N/A  
Luminaire Lumens: 1555.0 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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°	3385	3385	3385
5°	3716	3336	2784
10°	4206	3295	2294
15°	4713	3253	1788
20°	5316	3200	1316
25°	5815	3139	865
30°	6187	3057	487
35°	6508	2968	214
40°	6794	2859	51
45°	7039	2721	0
50°	7244	2540	0
55°	7401	2309	0
60°	7479	2042	0
65°	7510	1737	0
70°	7486	1417	0
75°	7390	1046	6
80°	7091	638	32
85°	6853	305	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.1	1.9
10°-20°	90.2	5.8
20°-30°	146.1	9.4
30°-40°	187.7	12.1
40°-50°	212.4	13.7
50°-60°	220.1	14.2
60°-70°	207.6	13.3
70°-80°	173.9	11.2
80°-90°	126.1	8.1
90°-100°	82.9	5.3
100°-110°	47.9	3.1
110°-120°	21.1	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	266.4	17.1
0°-40°	454.1	29.2
0°-60°	886.6	57.0
0°-90°	1394.2	89.7
90°-120°	151.8	9.8
90°-150°	159.7	10.3
90°-180°	161.0	10.4
0°-180°	1555.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	314	314	314	314	314	
5°	359	345	312	283	269	36
15°	480	420	302	218	182	138
25°	604	493	280	143	90	279
35°	669	532	246	70	22	419
45°	694	527	201	16	0	535
55°	676	493	145	0	0	604
65°	611	437	86	0	0	605
75°	509	352	37	0	0	534
85°	373	255	6	2	2	318
90°	323	205	2	2	3	177
95°	277	160	1	3	4	218
105°	191	83	1	2	3	201
115°	104	27	1	1	2	104
125°	31	4	2	1	2	31
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	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°	314.5	314.5	314.5	314.5	314.5	314.5	314.5	314.5	314.5	314.5	314.5
2.5°	341.0	340.6	339.4	337.4	334.6	329.8	325.8	322.2	317.3	313.3	305.7
5°	359.0	357.0	355.4	353.4	347.0	342.6	335.4	327.4	319.7	312.1	296.9
7.5°	387.9	384.7	382.3	376.6	367.8	357.8	346.6	339.0	333.8	312.5	286.5
10°	418.7	415.9	411.1	401.1	390.3	375.8	359.8	341.8	325.8	308.1	277.3
12.5°	449.2	445.2	438.4	425.5	410.3	392.3	370.2	349.0	326.2	305.3	266.5
15°	479.6	475.2	468.0	452.4	432.3	408.7	381.9	355.0	328.2	301.7	255.2
17.5°	512.9	506.9	496.1	478.4	453.2	423.9	392.3	359.8	327.4	297.3	243.2
20°	548.5	540.1	528.5	504.9	475.2	440.8	402.7	364.6	327.0	292.1	229.6
22.5°	578.2	569.8	557.0	532.5	496.9	454.8	411.5	367.8	325.4	286.1	216.8
25°	603.8	597.0	583.0	555.0	517.3	469.6	419.9	370.2	323.0	279.7	203.1
27.5°	623.9	617.5	601.8	573.0	534.5	482.8	426.3	371.4	319.7	273.3	189.1
30°	641.5	635.1	616.3	586.6	546.1	493.2	432.7	371.8	315.7	263.7	173.9
32.5°	655.1	649.1	629.9	598.2	554.1	500.5	436.3	371.4	310.5	256.8	157.5
35°	668.7	662.7	640.3	606.6	560.2	503.7	439.2	369.4	304.1	245.6	141.8
37.5°	679.2	672.4	649.5	612.2	563.0	504.5	438.8	366.6	297.3	236.4	126.2
40°	686.4	679.2	654.7	615.5	563.8	503.3	435.5	361.8	289.3	224.8	109.8
42.5°	691.2	683.2	657.1	620.3	562.2	500.1	430.7	355.8	280.5	214.8	94.2
45°	693.6	685.2	657.5	616.3	559.4	494.0	423.5	348.2	270.9	201.1	78.5
47.5°	692.4	683.2	655.5	611.8	554.1	487.6	415.5	339.0	259.2	189.1	63.7
50°	690.4	680.8	651.1	606.2	546.9	479.6	406.7	327.8	247.2	174.3	50.5
52.5°	684.0	674.4	646.3	598.2	538.5	470.4	394.7	316.1	234.4	159.9	38.5
55°	676.0	667.1	637.9	591.0	527.7	459.2	383.5	303.7	222.0	145.0	27.6
57.5°	663.5	655.5	627.5	579.4	516.9	446.8	371.0	290.1	206.4	130.2	19.2
60°	648.3	640.3	613.1	566.2	504.5	432.7	357.4	276.1	192.3	115.4	12.0
62.5°	632.3	624.7	596.2	549.7	488.8	417.9	342.6	262.0	177.5	101.8	7.2
65°	611.0	603.8	578.2	530.1	471.6	401.9	326.2	245.2	162.3	86.5	4.0
67.5°	588.6	582.2	556.2	512.1	451.6	384.3	309.3	228.8	146.3	73.3	2.0
70°	564.6	556.6	532.5	487.6	431.1	364.2	290.9	212.0	131.0	60.5	0.0
72.5°	536.5	530.5	507.3	464.8	407.5	343.0	272.1	193.5	114.2	48.1	0.4
75°	509.3	501.7	480.4	440.4	384.3	320.5	251.2	176.3	97.8	36.9	0.4
77.5°	474.0	471.6	451.6	412.7	362.2	298.9	228.4	155.5	82.1	26.4	0.4
80°	438.8	436.3	420.7	385.1	336.6	273.3	207.2	135.8	66.9	17.6	0.4
82.5°	403.9	400.7	385.9	356.2	310.5	251.6	185.1	116.2	52.9	10.8	0.4
85°	372.6	368.6	352.6	325.4	283.7	227.2	162.3	97.0	39.3	6.0	0.8
87.5°	345.8	343.0	325.4	297.3	256.4	204.4	142.2	78.5	27.6	2.8	1.2
90°	323.0	316.9	301.3	271.7	230.8	179.1	121.0	62.9	18.4	1.6	1.6
92.5°	300.5	295.3	278.1	247.6	208.0	157.5	100.6	48.1	11.6	0.8	2.0
95°	277.3	271.7	254.8	226.8	184.7	135.4	82.5	35.3	6.4	0.8	2.0
97.5°	254.4	249.2	231.6	203.5	163.9	116.2	65.3	24.8	3.2	0.8	1.6
100°	233.2	227.2	211.2	183.1	143.0	97.0	50.5	16.0	2.0	0.8	1.6
102.5°	210.8	206.0	189.5	162.3	121.4	78.9	37.7	10.0	0.8	0.8	1.2
105°	190.7	184.7	168.7	140.6	103.4	62.1	26.4	6.0	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	124.2	119.4	105.4	81.7	52.5	24.4	7.2	1.2	1.2	1.2	1.2
115°	103.8	96.6	84.1	63.3	38.9	16.0	3.6	1.2	1.2	1.2	1.2
117.5°	82.9	76.9	68.1	48.1	25.6	10.4	2.0	1.2	1.2	1.2	1.2
120°	64.9	59.3	49.3	33.3	17.2	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.5	42.1	33.3	21.6	10.4	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.9	28.4	22.0	13.2	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.0	18.0	12.8	7.6	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.2	10.0	7.6	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	314.5	314.5	314.5
2.5°	299.3	293.7	292.1
5°	283.3	274.1	268.9
7.5°	267.3	254.8	248.8
10°	252.4	234.8	228.4
12.5°	234.8	214.4	204.4
15°	218.0	191.5	181.9
17.5°	199.1	169.5	158.3
20°	181.5	147.5	135.8
22.5°	161.5	125.8	113.0
25°	143.4	104.2	89.8
27.5°	123.4	82.1	69.7
30°	104.6	62.9	50.5
32.5°	86.5	46.1	34.9
35°	69.7	31.3	22.0
37.5°	53.7	19.2	11.2
40°	38.9	10.0	5.2
42.5°	26.0	4.8	2.8
45°	16.0	2.4	0.0
47.5°	9.2	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	168.3	163.5	147.5	121.0	84.5	47.3	17.6	3.2	0.8	1.2	1.2
110°	146.7	142.6	126.2	100.6	68.1	35.3	11.6	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)