

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: P550451

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-96-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: P550451  
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-30-UNV-81-96-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

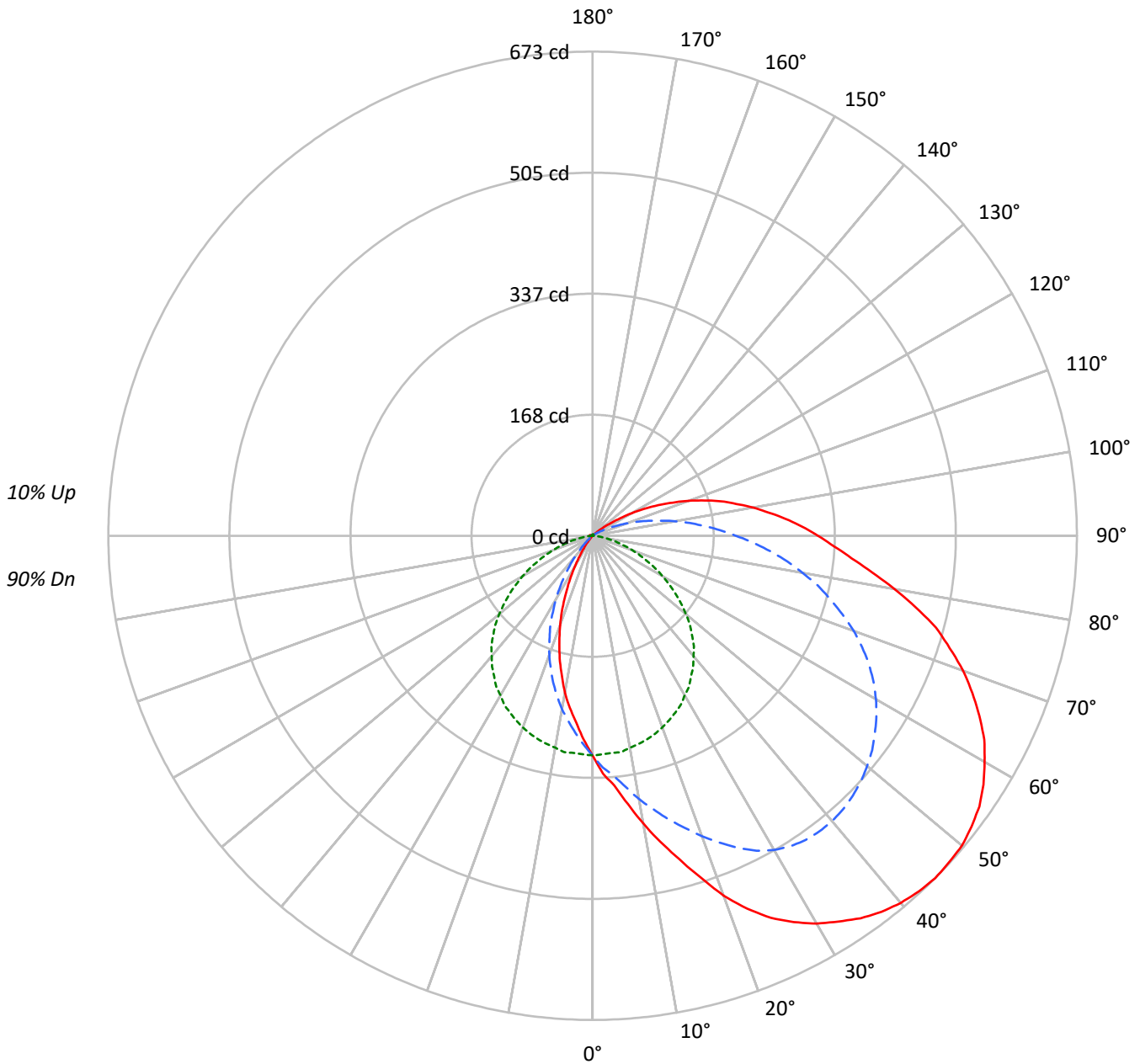
Lumens per Lamp: N/A  
Luminaire Lumens: 1509.1 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): 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-30-UNV-81-96-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°	3285	3285	3285
5°	3607	3237	2701
10°	4081	3198	2226
15°	4574	3157	1734
20°	5159	3106	1277
25°	5644	3046	839
30°	6004	2967	473
35°	6317	2881	208
40°	6593	2774	50
45°	6831	2641	0
50°	7030	2465	0
55°	7182	2242	0
60°	7258	1982	0
65°	7288	1687	0
70°	7264	1375	0
75°	7171	1015	6
80°	6881	620	31
85°	6651	295	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.2	1.9
10°-20°	87.5	5.8
20°-30°	141.8	9.4
30°-40°	182.1	12.1
40°-50°	206.1	13.7
50°-60°	213.6	14.2
60°-70°	201.4	13.3
70°-80°	168.8	11.2
80°-90°	122.3	8.1
90°-100°	80.4	5.3
100°-110°	46.4	3.1
110°-120°	20.5	1.4
120°-130°	5.6	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°	258.6	17.1
0°-40°	440.7	29.2
0°-60°	860.4	57.0
0°-90°	1353.0	89.7
90°-120°	147.4	9.8
90°-150°	155.1	10.3
90°-180°	156.0	10.3
0°-180°	1509.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	305	305	305	305	305	
5°	348	335	303	275	261	35
15°	465	408	293	212	176	134
25°	586	479	271	139	87	271
35°	649	516	238	68	21	407
45°	673	511	195	16	0	520
55°	656	479	141	0	0	586
65°	593	424	84	0	0	587
75°	494	342	36	0	0	518
85°	362	248	6	2	2	309
90°	313	199	2	2	3	172
95°	269	155	1	3	4	211
105°	185	80	1	2	3	195
115°	101	27	1	1	2	101
125°	30	4	2	1	2	30
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°	305.2	305.2	305.2	305.2	305.2	305.2	305.2	305.2	305.2	305.2	305.2
2.5°	330.9	330.5	329.3	327.4	324.7	320.0	316.1	312.6	308.0	304.1	296.7
5°	348.4	346.5	344.9	343.0	336.7	332.5	325.5	317.7	310.3	302.9	288.1
7.5°	376.4	373.3	370.9	365.5	356.9	347.2	336.3	329.0	323.9	303.3	278.0
10°	406.3	403.6	398.9	389.2	378.7	364.7	349.2	331.7	316.1	299.0	269.1
12.5°	435.9	432.0	425.4	412.9	398.2	380.7	359.3	338.7	316.5	296.3	258.6
15°	465.4	461.2	454.2	439.0	419.6	396.6	370.6	344.5	318.5	292.8	247.7
17.5°	497.7	491.9	481.4	464.3	439.8	411.4	380.7	349.2	317.7	288.5	236.0
20°	532.3	524.1	512.9	489.9	461.2	427.7	390.8	353.8	317.3	283.5	222.8
22.5°	561.1	552.9	540.5	516.8	482.2	441.3	399.3	356.9	315.7	277.6	210.4
25°	586.0	579.4	565.8	538.5	502.0	455.7	407.5	359.3	313.4	271.4	197.1
27.5°	605.4	599.2	584.0	556.0	518.7	468.5	413.7	360.4	310.3	265.2	183.5
30°	622.5	616.3	598.0	569.3	530.0	478.7	419.9	360.8	306.4	255.9	168.8
32.5°	635.7	629.9	611.2	580.5	537.8	485.7	423.4	360.4	301.3	249.2	152.8
35°	649.0	643.1	621.4	588.7	543.6	488.8	426.2	358.5	295.1	238.4	137.6
37.5°	659.1	652.5	630.3	594.1	546.3	489.5	425.8	355.8	288.5	229.4	122.5
40°	666.1	659.1	635.4	597.2	547.1	488.4	422.7	351.1	280.7	218.1	106.5
42.5°	670.7	663.0	637.7	601.9	545.5	485.3	418.0	345.3	272.2	208.4	91.4
45°	673.1	664.9	638.1	598.0	542.8	479.4	411.0	337.9	262.9	195.2	76.2
47.5°	671.9	663.0	636.1	593.7	537.8	473.2	403.2	329.0	251.6	183.5	61.8
50°	670.0	660.6	631.9	588.3	530.8	465.4	394.7	318.1	239.9	169.1	49.0
52.5°	663.7	654.4	627.2	580.5	522.6	456.5	383.0	306.8	227.5	155.1	37.3
55°	656.0	647.4	619.0	573.5	512.1	445.6	372.1	294.7	215.4	140.8	26.8
57.5°	643.9	636.1	608.9	562.3	501.6	433.5	360.1	281.5	200.2	126.4	18.7
60°	629.1	621.4	594.9	549.4	489.5	419.9	346.8	267.9	186.6	112.0	11.7
62.5°	613.6	606.2	578.6	533.5	474.4	405.6	332.5	254.3	172.3	98.8	7.0
65°	593.0	586.0	561.1	514.4	457.7	390.0	316.5	238.0	157.5	84.0	3.9
67.5°	571.2	565.0	539.7	496.9	438.2	372.9	300.2	222.0	141.9	71.2	1.9
70°	547.9	540.1	516.8	473.2	418.4	353.4	282.3	205.7	127.1	58.7	0.0
72.5°	520.6	514.8	492.3	451.0	395.4	332.8	264.0	187.8	110.8	46.7	0.4
75°	494.2	486.8	466.2	427.3	372.9	311.1	243.8	171.1	94.9	35.8	0.4
77.5°	460.0	457.7	438.2	400.5	351.5	290.1	221.6	150.9	79.7	25.7	0.4
80°	425.8	423.4	408.3	373.7	326.6	265.2	201.0	131.8	64.9	17.1	0.4
82.5°	391.9	388.8	374.4	345.7	301.3	244.2	179.6	112.8	51.3	10.5	0.4
85°	361.6	357.7	342.2	315.7	275.3	220.5	157.5	94.1	38.1	5.8	0.8
87.5°	335.6	332.8	315.7	288.5	248.9	198.3	138.0	76.2	26.8	2.7	1.2
90°	313.4	307.6	292.4	263.6	224.0	173.8	117.4	61.0	17.9	1.6	1.6
92.5°	291.6	286.6	269.9	240.3	201.8	152.8	97.6	46.7	11.3	0.8	1.9
95°	269.1	263.6	247.3	220.1	179.3	131.4	80.1	34.2	6.2	0.8	1.9
97.5°	246.9	241.9	224.7	197.5	159.0	112.8	63.4	24.1	3.1	0.8	1.6
100°	226.3	220.5	204.9	177.7	138.8	94.1	49.0	15.6	1.9	0.8	1.6
102.5°	204.5	199.9	183.9	157.5	117.8	76.6	36.6	9.7	0.8	0.8	1.2
105°	185.1	179.3	163.7	136.5	100.3	60.3	25.7	5.8	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°	120.5	115.9	102.3	79.3	50.9	23.7	7.0	1.2	1.2	1.2	1.2
115°	100.7	93.7	81.7	61.4	37.7	15.6	3.5	1.2	1.2	1.2	1.2
117.5°	80.5	74.7	66.1	46.7	24.9	10.1	1.9	1.2	1.2	1.2	1.2
120°	63.0	57.5	47.8	32.3	16.7	5.8	0.8	1.2	1.2	1.2	1.2
122.5°	45.1	40.8	32.3	21.0	10.1	2.7	1.2	1.2	1.6	1.6	1.2
125°	29.9	27.6	21.4	12.8	6.2	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.4	17.5	12.4	7.4	2.7	1.2	1.2	1.6	1.6	1.6	1.2
130°	10.9	9.7	7.4	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.2	5.8	3.9	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	1.9	1.9	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	1.9	1.9	1.9	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	1.9	1.9	1.9	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.9
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.9
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	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	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°	305.2	305.2	305.2
2.5°	290.5	285.0	283.5
5°	274.9	266.0	260.9
7.5°	259.4	247.3	241.5
10°	245.0	227.9	221.6
12.5°	227.9	208.0	198.3
15°	211.5	185.9	176.5
17.5°	193.3	164.5	153.6
20°	176.1	143.1	131.8
22.5°	156.7	122.1	109.7
25°	139.2	101.1	87.1
27.5°	119.8	79.7	67.7
30°	101.5	61.0	49.0
32.5°	84.0	44.7	33.8
35°	67.7	30.3	21.4
37.5°	52.1	18.7	10.9
40°	37.7	9.7	5.1
42.5°	25.3	4.7	2.7
45°	15.6	2.3	0.0
47.5°	8.9	0.0	0.0
50°	4.7	0.0	0.0
52.5°	1.9	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	1.9
82.5°	1.6	1.9	1.9
85°	1.6	1.9	2.3
87.5°	1.9	2.3	2.7
90°	2.3	2.7	2.7
92.5°	2.3	3.1	3.1
95°	2.7	3.1	3.5
97.5°	3.1	3.5	3.5
100°	2.7	3.5	3.9
102.5°	2.3	3.5	3.5
105°	1.9	2.7	3.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	1.9	1.9
115°	1.2	1.6	1.9
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°	163.3	158.6	143.1	117.4	82.0	45.9	17.1	3.1	0.8	1.2	1.2
110°	142.3	138.4	122.5	97.6	66.1	34.2	11.3	1.9	1.2	1.2	1.2







107.5°	1.6	2.3	2.7
110°	1.6	1.9	2.3



(END OF REPORT)