

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: P550639

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-81-88-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: P550639  
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-81-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

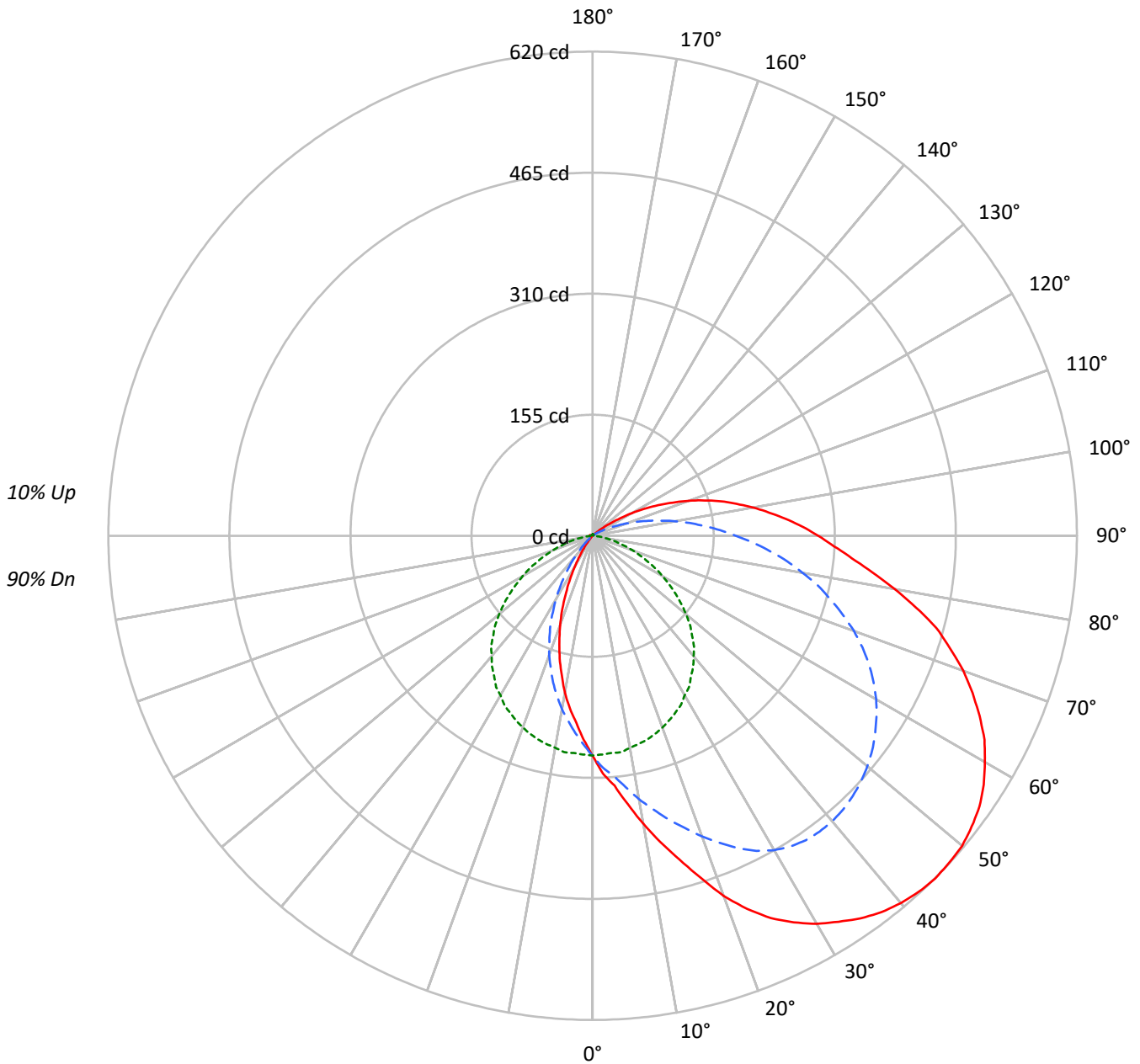
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1391.0 lumens  
Efficiency: N/A  
Efficacy: 64.1 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-50-UNV-81-88-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°	3029	3029	3029
5°	3325	2984	2490
10°	3763	2947	2052
15°	4216	2910	1599
20°	4755	2863	1177
25°	5203	2808	773
30°	5534	2734	436
35°	5822	2655	192
40°	6078	2557	47
45°	6296	2434	0
50°	6481	2272	0
55°	6620	2067	0
60°	6690	1826	0
65°	6718	1555	0
70°	6695	1267	0
75°	6611	936	6
80°	6343	573	29
85°	6130	275	40



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.0	1.9
10°-20°	80.7	5.8
20°-30°	130.7	9.4
30°-40°	167.9	12.1
40°-50°	190.0	13.7
50°-60°	196.9	14.2
60°-70°	185.7	13.3
70°-80°	155.6	11.2
80°-90°	112.8	8.1
90°-100°	74.1	5.3
100°-110°	42.8	3.1
110°-120°	18.9	1.4
120°-130°	5.1	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	238.3	17.1
0°-40°	406.2	29.2
0°-60°	793.1	57.0
0°-90°	1247.2	89.7
90°-120°	135.8	9.8
90°-150°	142.9	10.3
90°-180°	144.0	10.4
0°-180°	1391.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	281	281	281	281	281	
5°	321	308	279	253	240	32
15°	429	376	270	195	163	124
25°	540	441	250	128	80	250
35°	598	476	220	62	20	375
45°	620	471	180	14	0	479
55°	605	441	130	0	0	540
65°	547	391	77	0	0	541
75°	456	315	33	0	0	478
85°	333	228	5	1	2	285
90°	289	183	1	2	2	158
95°	248	143	1	2	3	195
105°	171	74	1	2	3	180
115°	93	25	1	1	2	93
125°	28	3	1	1	1	28
135°	1	1	2	1	1	3
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°	281.4	281.4	281.4	281.4	281.4	281.4	281.4	281.4	281.4	281.4	281.4
2.5°	305.0	304.7	303.6	301.8	299.3	295.0	291.4	288.2	283.9	280.3	273.5
5°	321.2	319.4	317.9	316.1	310.4	306.5	300.0	292.8	286.0	279.2	265.6
7.5°	347.0	344.1	341.9	336.9	329.0	320.1	310.0	303.2	298.6	279.6	256.3
10°	374.6	372.0	367.7	358.8	349.1	336.2	321.9	305.7	291.4	275.6	248.0
12.5°	401.8	398.2	392.1	380.7	367.0	350.9	331.2	312.2	291.8	273.1	238.4
15°	429.0	425.1	418.6	404.7	386.7	365.6	341.6	317.6	293.6	269.9	228.3
17.5°	458.8	453.4	443.7	428.0	405.4	379.2	350.9	321.9	292.8	266.0	217.6
20°	490.7	483.2	472.8	451.6	425.1	394.3	360.2	326.2	292.5	261.3	205.4
22.5°	517.2	509.7	498.2	476.4	444.5	406.8	368.1	329.0	291.0	255.9	193.9
25°	540.2	534.1	521.5	496.4	462.7	420.1	375.6	331.2	288.9	250.2	181.7
27.5°	558.1	552.3	538.4	512.6	478.1	431.9	381.4	332.3	286.0	244.4	169.2
30°	573.8	568.1	551.3	524.7	488.5	441.2	387.1	332.6	282.4	235.8	155.6
32.5°	586.0	580.7	563.4	535.1	495.7	447.7	390.3	332.3	277.8	229.8	140.9
35°	598.2	592.8	572.8	542.7	501.1	450.5	392.8	330.5	272.0	219.7	126.9
37.5°	607.5	601.4	581.0	547.7	503.6	451.3	392.5	328.0	266.0	211.5	112.9
40°	614.0	607.5	585.7	550.5	504.3	450.2	389.6	323.7	258.8	201.1	98.2
42.5°	618.3	611.1	587.8	554.8	502.9	447.3	385.3	318.3	250.9	192.1	84.2
45°	620.4	612.9	588.2	551.3	500.4	441.9	378.9	311.5	242.3	179.9	70.3
47.5°	619.4	611.1	586.4	547.3	495.7	436.2	371.7	303.2	231.9	169.2	57.0
50°	617.6	609.0	582.4	542.3	489.3	429.0	363.8	293.2	221.2	155.9	45.2
52.5°	611.8	603.2	578.1	535.1	481.7	420.8	353.1	282.8	209.7	143.0	34.4
55°	604.7	596.8	570.6	528.7	472.0	410.8	343.0	271.7	198.6	129.8	24.7
57.5°	593.6	586.4	561.3	518.3	462.4	399.6	331.9	259.5	184.6	116.5	17.2
60°	579.9	572.8	548.4	506.5	451.3	387.1	319.7	247.0	172.0	103.2	10.8
62.5°	565.6	558.8	533.3	491.8	437.3	373.8	306.5	234.4	158.8	91.0	6.5
65°	546.6	540.2	517.2	474.2	421.9	359.5	291.8	219.4	145.2	77.4	3.6
67.5°	526.5	520.8	497.5	458.1	403.9	343.7	276.7	204.7	130.8	65.6	1.8
70°	505.0	497.9	476.4	436.2	385.7	325.8	260.2	189.6	117.2	54.1	0.0
72.5°	479.9	474.6	453.8	415.8	364.5	306.8	243.4	173.1	102.2	43.0	0.4
75°	455.6	448.8	429.8	393.9	343.7	286.7	224.7	157.7	87.5	33.0	0.4
77.5°	424.0	421.9	403.9	369.2	324.0	267.4	204.3	139.1	73.5	23.7	0.4
80°	392.5	390.3	376.3	344.4	301.1	244.4	185.3	121.5	59.9	15.8	0.4
82.5°	361.3	358.4	345.2	318.6	277.8	225.1	165.6	103.9	47.3	9.7	0.4
85°	333.3	329.8	315.4	291.0	253.8	203.2	145.2	86.7	35.1	5.4	0.7
87.5°	309.3	306.8	291.0	266.0	229.4	182.8	127.2	70.3	24.7	2.5	1.1
90°	288.9	283.5	269.5	243.0	206.5	160.2	108.2	56.3	16.5	1.4	1.4
92.5°	268.8	264.2	248.7	221.5	186.0	140.9	90.0	43.0	10.4	0.7	1.8
95°	248.0	243.0	228.0	202.9	165.2	121.1	73.8	31.5	5.7	0.7	1.8
97.5°	227.6	222.9	207.2	182.1	146.6	103.9	58.4	22.2	2.9	0.7	1.4
100°	208.6	203.2	188.9	163.8	128.0	86.7	45.2	14.3	1.8	0.7	1.4
102.5°	188.5	184.2	169.5	145.2	108.6	70.6	33.7	9.0	0.7	0.7	1.1
105°	170.6	165.2	150.9	125.8	92.5	55.6	23.7	5.4	0.7	0.7	1.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	111.1	106.8	94.3	73.1	47.0	21.9	6.5	1.1	1.1	1.1	1.1
115°	92.8	86.4	75.3	56.6	34.8	14.3	3.2	1.1	1.1	1.1	1.1
117.5°	74.2	68.8	60.9	43.0	22.9	9.3	1.8	1.1	1.1	1.1	1.1
120°	58.1	53.0	44.1	29.7	15.4	5.4	0.7	1.1	1.1	1.1	1.1
122.5°	41.6	37.6	29.7	19.4	9.3	2.5	1.1	1.1	1.4	1.4	1.1
125°	27.6	25.4	19.7	11.8	5.7	1.1	1.1	1.1	1.4	1.4	1.1
127.5°	17.9	16.1	11.5	6.8	2.5	1.1	1.1	1.4	1.4	1.4	1.1
130°	10.0	9.0	6.8	3.9	1.1	1.1	1.1	1.4	1.4	1.4	1.1
132.5°	5.7	5.4	3.6	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.4	1.8	1.8	1.8	1.4
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.4
142.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
145°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
150°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
152.5°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
157.5°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
160°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.8
172.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
175°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
177.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.4
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	281.4	281.4	281.4
2.5°	267.7	262.7	261.3
5°	253.4	245.2	240.5
7.5°	239.1	228.0	222.6
10°	225.8	210.0	204.3
12.5°	210.0	191.8	182.8
15°	195.0	171.3	162.7
17.5°	178.1	151.6	141.6
20°	162.4	131.9	121.5
22.5°	144.4	112.5	101.1
25°	128.3	93.2	80.3
27.5°	110.4	73.5	62.4
30°	93.5	56.3	45.2
32.5°	77.4	41.2	31.2
35°	62.4	28.0	19.7
37.5°	48.0	17.2	10.0
40°	34.8	9.0	4.7
42.5°	23.3	4.3	2.5
45°	14.3	2.2	0.0
47.5°	8.2	0.0	0.0
50°	4.3	0.0	0.0
52.5°	1.8	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	0.7	1.1
80°	0.7	1.4	1.8
82.5°	1.4	1.8	1.8
85°	1.4	1.8	2.2
87.5°	1.8	2.2	2.5
90°	2.2	2.5	2.5
92.5°	2.2	2.9	2.9
95°	2.5	2.9	3.2
97.5°	2.9	3.2	3.2
100°	2.5	3.2	3.6
102.5°	2.2	3.2	3.2
105°	1.8	2.5	2.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.4	1.8	1.8
115°	1.1	1.4	1.8
117.5°	1.1	1.4	1.4
120°	1.1	1.1	1.4
122.5°	1.1	1.1	1.4
125°	1.1	1.1	1.4
127.5°	1.4	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.4	1.1	1.1
135°	1.4	1.1	1.1
137.5°	1.4	1.1	1.1
140°	1.4	1.1	1.1
142.5°	1.4	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.4	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	150.5	146.2	131.9	108.2	75.6	42.3	15.8	2.9	0.7	1.1	1.1
110°	131.2	127.6	112.9	90.0	60.9	31.5	10.4	1.8	1.1	1.1	1.1







107.5°	1.4	2.2	2.5
110°	1.4	1.8	2.2



(END OF REPORT)