

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: P550848

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D**

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: P550848  
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-LD4-1LO-40-UNV-82-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

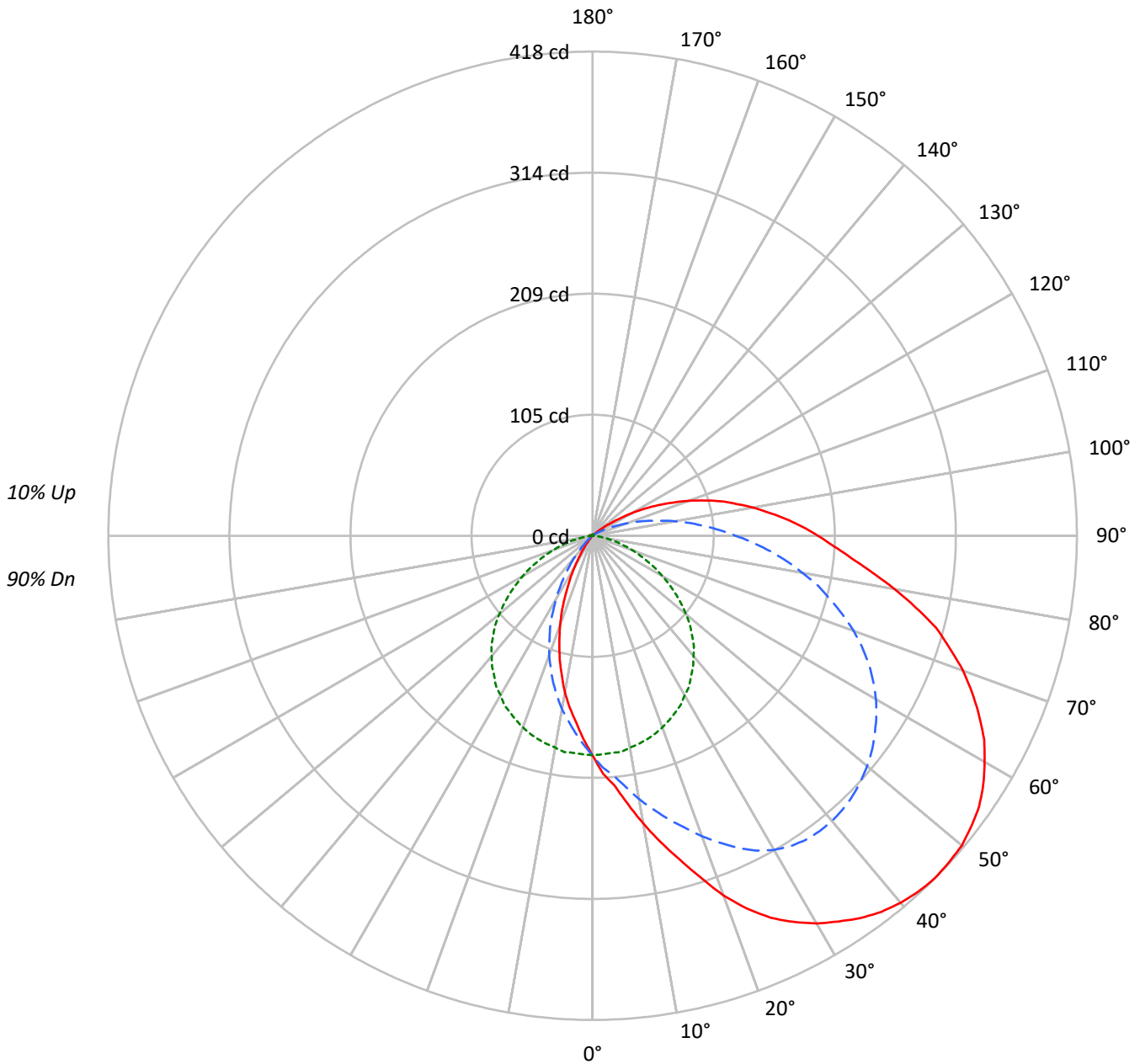
Lumens per Lamp: N/A  
Luminaire Lumens: 937.0 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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-LD4-1LO-40-UNV-82-88-ED1D

### 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°	2040	2040	2040
5°	2239	2010	1677
10°	2534	1986	1382
15°	2840	1960	1077
20°	3203	1928	793
25°	3505	1891	521
30°	3728	1842	293
35°	3922	1788	129
40°	4094	1722	31
45°	4241	1640	0
50°	4365	1530	0
55°	4459	1392	0
60°	4507	1230	0
65°	4525	1048	0
70°	4510	855	0
75°	4453	630	3
80°	4273	384	19
85°	4129	183	26



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.2	1.9
10°-20°	54.4	5.8
20°-30°	88.0	9.4
30°-40°	113.1	12.1
40°-50°	128.0	13.7
50°-60°	132.6	14.2
60°-70°	125.1	13.3
70°-80°	104.8	11.2
80°-90°	76.0	8.1
90°-100°	49.9	5.3
100°-110°	28.8	3.1
110°-120°	12.7	1.4
120°-130°	3.4	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	160.5	17.1
0°-40°	273.6	29.2
0°-60°	534.3	57.0
0°-90°	840.1	89.7
90°-120°	91.5	9.8
90°-150°	96.2	10.3
90°-180°	97.0	10.4
0°-180°	937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	190	190	190	190	190	
5°	216	208	188	171	162	22
15°	289	253	182	131	110	83
25°	364	297	168	86	54	168
35°	403	320	148	42	13	253
45°	418	317	121	10	0	323
55°	407	297	87	0	0	364
65°	368	263	52	0	0	364
75°	307	212	22	0	0	322
85°	224	154	4	1	1	192
90°	195	124	1	1	2	107
95°	167	96	0	2	2	131
105°	115	50	0	1	2	121
115°	62	17	1	1	1	63
125°	19	2	1	1	1	19
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	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°	189.5	189.5	189.5	189.5	189.5	189.5	189.5	189.5	189.5	189.5	189.5
2.5°	205.5	205.2	204.5	203.3	201.6	198.7	196.3	194.1	191.2	188.8	184.2
5°	216.3	215.1	214.2	213.0	209.1	206.4	202.1	197.3	192.7	188.1	178.9
7.5°	233.7	231.8	230.3	227.0	221.6	215.6	208.8	204.3	201.1	188.3	172.6
10°	252.3	250.6	247.7	241.7	235.2	226.5	216.8	206.0	196.3	185.7	167.1
12.5°	270.7	268.2	264.1	256.4	247.2	236.4	223.1	210.3	196.5	184.0	160.6
15°	289.0	286.4	282.0	272.6	260.5	246.3	230.1	213.9	197.7	181.8	153.8
17.5°	309.0	305.4	298.9	288.3	273.1	255.4	236.4	216.8	197.3	179.2	146.6
20°	330.5	325.5	318.5	304.2	286.4	265.6	242.7	219.7	197.0	176.0	138.3
22.5°	348.4	343.3	335.6	320.9	299.4	274.0	248.0	221.6	196.1	172.4	130.6
25°	363.9	359.7	351.3	334.4	311.7	283.0	253.0	223.1	194.6	168.5	122.4
27.5°	375.9	372.1	362.6	345.3	322.1	290.9	256.9	223.8	192.7	164.7	114.0
30°	386.5	382.7	371.3	353.5	329.1	297.2	260.8	224.1	190.3	158.9	104.8
32.5°	394.8	391.1	379.5	360.5	333.9	301.6	262.9	223.8	187.1	154.8	94.9
35°	403.0	399.3	385.8	365.5	337.5	303.5	264.6	222.6	183.3	148.0	85.5
37.5°	409.2	405.1	391.4	368.9	339.2	304.0	264.4	220.9	179.2	142.5	76.1
40°	413.6	409.2	394.5	370.9	339.7	303.3	262.4	218.0	174.3	135.4	66.2
42.5°	416.5	411.7	396.0	373.8	338.7	301.3	259.6	214.4	169.0	129.4	56.7
45°	417.9	412.9	396.2	371.3	337.1	297.7	255.2	209.8	163.2	121.2	47.3
47.5°	417.2	411.7	395.0	368.7	333.9	293.8	250.4	204.3	156.2	114.0	38.4
50°	416.0	410.2	392.3	365.3	329.6	289.0	245.1	197.5	149.0	105.0	30.4
52.5°	412.1	406.3	389.4	360.5	324.5	283.5	237.8	190.5	141.2	96.3	23.2
55°	407.3	402.0	384.4	356.1	318.0	276.7	231.1	183.0	133.8	87.4	16.7
57.5°	399.8	395.0	378.1	349.1	311.5	269.2	223.6	174.8	124.3	78.5	11.6
60°	390.7	385.8	369.4	341.2	304.0	260.8	215.4	166.4	115.9	69.5	7.2
62.5°	381.0	376.4	359.3	331.3	294.6	251.8	206.4	157.9	107.0	61.3	4.3
65°	368.2	363.9	348.4	319.4	284.2	242.2	196.5	147.8	97.8	52.2	2.4
67.5°	354.7	350.8	335.1	308.6	272.1	231.5	186.4	137.9	88.1	44.2	1.2
70°	340.2	335.4	320.9	293.8	259.8	219.5	175.3	127.7	79.0	36.5	0.0
72.5°	323.3	319.7	305.7	280.1	245.5	206.7	163.9	116.6	68.8	29.0	0.2
75°	306.9	302.3	289.5	265.3	231.5	193.2	151.4	106.2	58.9	22.2	0.2
77.5°	285.6	284.2	272.1	248.7	218.3	180.1	137.6	93.7	49.5	15.9	0.2
80°	264.4	262.9	253.5	232.0	202.8	164.7	124.8	81.8	40.3	10.6	0.2
82.5°	243.4	241.4	232.5	214.6	187.1	151.6	111.5	70.0	31.9	6.5	0.2
85°	224.5	222.1	212.5	196.1	170.9	136.9	97.8	58.4	23.7	3.6	0.5
87.5°	208.4	206.7	196.1	179.2	154.5	123.1	85.7	47.3	16.7	1.7	0.7
90°	194.6	191.0	181.6	163.7	139.1	107.9	72.9	37.9	11.1	1.0	1.0
92.5°	181.1	177.9	167.6	149.2	125.3	94.9	60.6	29.0	7.0	0.5	1.2
95°	167.1	163.7	153.6	136.7	111.3	81.6	49.7	21.2	3.9	0.5	1.2
97.5°	153.3	150.2	139.6	122.7	98.8	70.0	39.4	15.0	1.9	0.5	1.0
100°	140.5	136.9	127.2	110.3	86.2	58.4	30.4	9.7	1.2	0.5	1.0
102.5°	127.0	124.1	114.2	97.8	73.2	47.6	22.7	6.0	0.5	0.5	0.7
105°	114.9	111.3	101.6	84.7	62.3	37.4	15.9	3.6	0.5	0.5	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.8	71.9	63.5	49.3	31.6	14.7	4.3	0.7	0.7	0.7	0.7
115°	62.5	58.2	50.7	38.1	23.4	9.7	2.2	0.7	0.7	0.7	0.7
117.5°	50.0	46.4	41.0	29.0	15.5	6.3	1.2	0.7	0.7	0.7	0.7
120°	39.1	35.7	29.7	20.0	10.4	3.6	0.5	0.7	0.7	0.7	0.7
122.5°	28.0	25.4	20.0	13.0	6.3	1.7	0.7	0.7	1.0	1.0	0.7
125°	18.6	17.1	13.3	8.0	3.9	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.1	10.9	7.7	4.6	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.8	6.0	4.6	2.7	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.9	3.6	2.4	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.2	1.2	1.2	1.0
140°	0.2	0.2	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.0
142.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
145°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
150°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
152.5°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
157.5°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
160°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	189.5	189.5	189.5
2.5°	180.4	177.0	176.0
5°	170.7	165.1	162.0
7.5°	161.0	153.6	149.9
10°	152.1	141.5	137.6
12.5°	141.5	129.2	123.1
15°	131.3	115.4	109.6
17.5°	120.0	102.1	95.4
20°	109.4	88.9	81.8
22.5°	97.3	75.8	68.1
25°	86.4	62.8	54.1
27.5°	74.4	49.5	42.0
30°	63.0	37.9	30.4
32.5°	52.2	27.8	21.0
35°	42.0	18.8	13.3
37.5°	32.4	11.6	6.8
40°	23.4	6.0	3.1
42.5°	15.7	2.9	1.7
45°	9.7	1.4	0.0
47.5°	5.6	0.0	0.0
50°	2.9	0.0	0.0
52.5°	1.2	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°	0.2	0.2	0.2
77.5°	0.2	0.5	0.7
80°	0.5	1.0	1.2
82.5°	1.0	1.2	1.2
85°	1.0	1.2	1.4
87.5°	1.2	1.4	1.7
90°	1.4	1.7	1.7
92.5°	1.4	1.9	1.9
95°	1.7	1.9	2.2
97.5°	1.9	2.2	2.2
100°	1.7	2.2	2.4
102.5°	1.4	2.2	2.2
105°	1.2	1.7	1.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.2	1.2
115°	0.7	1.0	1.2
117.5°	0.7	1.0	1.0
120°	0.7	0.7	1.0
122.5°	0.7	0.7	1.0
125°	0.7	0.7	1.0
127.5°	1.0	0.7	0.7
130°	0.7	0.7	0.7
132.5°	1.0	0.7	0.7
135°	1.0	0.7	0.7
137.5°	1.0	0.7	0.7
140°	1.0	0.7	0.7
142.5°	1.0	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	1.0	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	101.4	98.5	88.9	72.9	50.9	28.5	10.6	1.9	0.5	0.7	0.7
110°	88.4	86.0	76.1	60.6	41.0	21.2	7.0	1.2	0.7	0.7	0.7







107.5°	1.0	1.4	1.7
110°	1.0	1.2	1.4



(END OF REPORT)