

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: P550716

Luminaire Tested: **FCC-X-2-LD4-1LO-30-UNV-82-86-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: P550716  
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-30-UNV-82-86-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

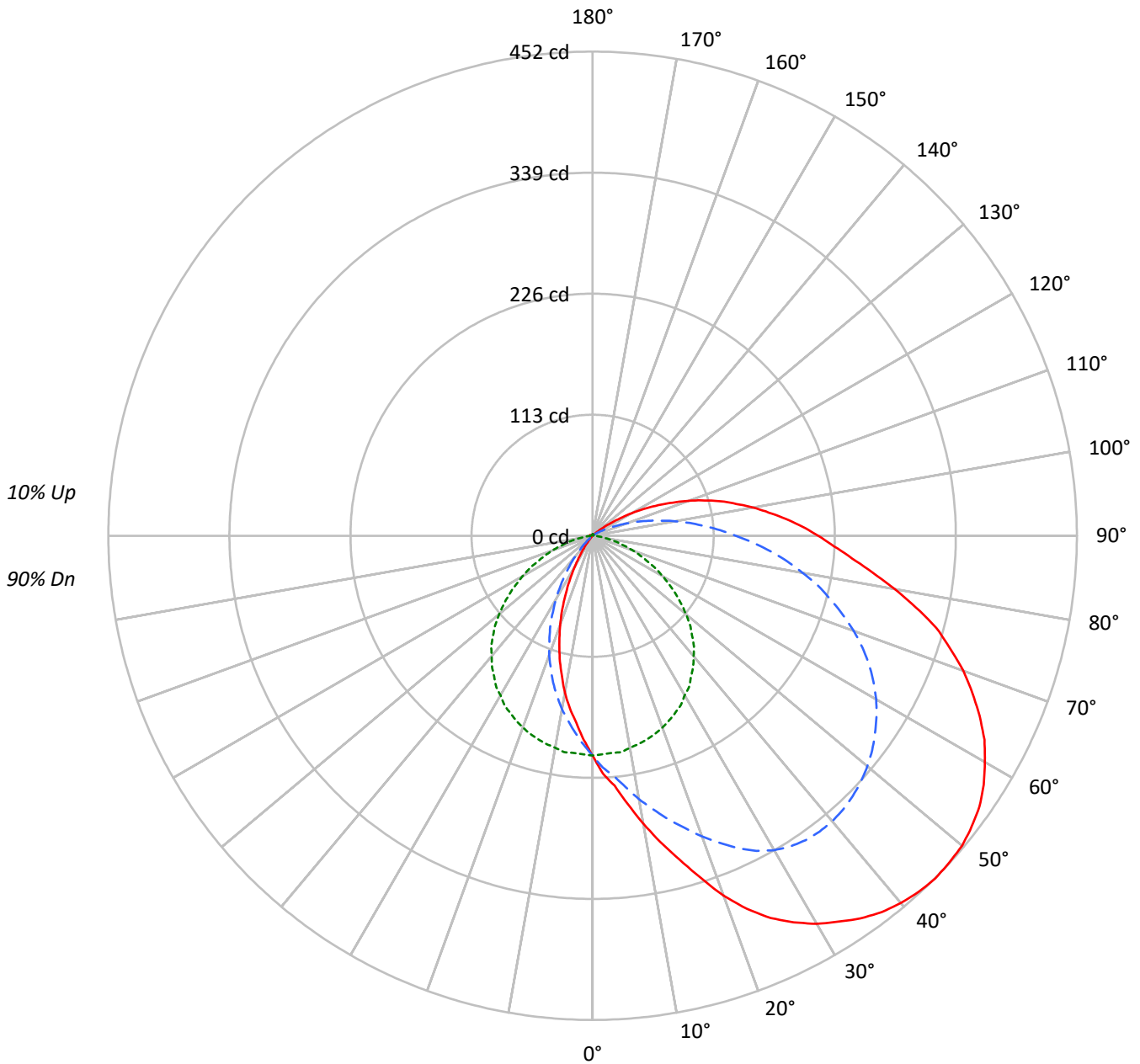
Lumens per Lamp: N/A  
Luminaire Lumens: 1014.0 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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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### 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°	2208	2208	2208
5°	2423	2175	1815
10°	2742	2148	1496
15°	3074	2121	1165
20°	3467	2087	859
25°	3793	2047	563
30°	4034	1993	317
35°	4244	1936	140
40°	4431	1864	34
45°	4590	1775	0
50°	4724	1657	0
55°	4826	1506	0
60°	4878	1331	0
65°	4898	1133	0
70°	4880	925	0
75°	4819	681	4
80°	4624	417	21
85°	4469	198	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.6	1.9
10°-20°	58.8	5.8
20°-30°	95.3	9.4
30°-40°	122.4	12.1
40°-50°	138.5	13.7
50°-60°	143.5	14.2
60°-70°	135.3	13.3
70°-80°	113.4	11.2
80°-90°	82.2	8.1
90°-100°	54.0	5.3
100°-110°	31.2	3.1
110°-120°	13.8	1.4
120°-130°	3.7	0.4
130°-140°	0.8	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	173.7	17.1
0°-40°	296.1	29.2
0°-60°	578.1	57.0
0°-90°	909.1	89.7
90°-120°	99.0	9.8
90°-150°	104.1	10.3
90°-180°	105.0	10.4
0°-180°	1014.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	205	205	205	205	205	
5°	234	225	204	185	175	24
15°	313	274	197	142	119	90
25°	394	322	182	94	58	182
35°	436	347	160	46	14	274
45°	452	344	131	10	0	349
55°	441	322	95	0	0	394
65°	398	285	56	0	0	394
75°	332	230	24	0	0	348
85°	243	167	4	1	2	208
90°	211	134	1	2	2	115
95°	181	104	0	2	2	142
105°	124	54	0	1	2	131
115°	68	18	1	1	1	68
125°	20	2	1	1	1	20
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°	205.1	205.1	205.1	205.1	205.1	205.1	205.1	205.1	205.1	205.1	205.1
2.5°	222.4	222.1	221.3	220.0	218.2	215.0	212.4	210.1	206.9	204.3	199.4
5°	234.1	232.8	231.8	230.5	226.3	223.4	218.7	213.5	208.5	203.5	193.6
7.5°	252.9	250.8	249.3	245.6	239.9	233.3	226.0	221.0	217.6	203.8	186.8
10°	273.0	271.2	268.1	261.5	254.5	245.1	234.6	222.9	212.4	200.9	180.8
12.5°	292.9	290.3	285.8	277.5	267.6	255.8	241.4	227.6	212.7	199.1	173.8
15°	312.8	309.9	305.2	295.0	281.9	266.5	249.0	231.5	214.0	196.7	166.4
17.5°	334.4	330.5	323.5	312.0	295.5	276.4	255.8	234.6	213.5	193.9	158.6
20°	357.7	352.2	344.6	329.2	309.9	287.4	262.6	237.8	213.2	190.5	149.7
22.5°	377.0	371.5	363.2	347.2	324.0	296.6	268.3	239.9	212.2	186.6	141.4
25°	393.8	389.3	380.2	361.9	337.3	306.2	273.8	241.4	210.6	182.4	132.5
27.5°	406.8	402.6	392.4	373.6	348.6	314.8	278.0	242.2	208.5	178.2	123.3
30°	418.3	414.1	401.9	382.5	356.1	321.6	282.2	242.5	205.9	171.9	113.4
32.5°	427.2	423.3	410.7	390.1	361.4	326.3	284.5	242.2	202.5	167.5	102.7
35°	436.1	432.2	417.5	395.6	365.3	328.4	286.4	240.9	198.3	160.2	92.5
37.5°	442.9	438.4	423.5	399.2	367.1	329.0	286.1	239.1	193.9	154.2	82.3
40°	447.6	442.9	426.9	401.3	367.6	328.2	284.0	235.9	188.6	146.6	71.6
42.5°	450.7	445.5	428.5	404.5	366.6	326.1	280.9	232.0	182.9	140.0	61.4
45°	452.3	446.8	428.8	401.9	364.8	322.2	276.2	227.1	176.6	131.2	51.2
47.5°	451.5	445.5	427.5	399.0	361.4	318.0	271.0	221.0	169.1	123.3	41.5
50°	450.2	443.9	424.6	395.3	356.7	312.8	265.2	213.7	161.2	113.7	32.9
52.5°	446.0	439.7	421.5	390.1	351.2	306.7	257.4	206.2	152.9	104.3	25.1
55°	440.8	435.0	416.0	385.4	344.1	299.4	250.0	198.1	144.8	94.6	18.0
57.5°	432.7	427.5	409.2	377.8	337.1	291.3	241.9	189.2	134.6	84.9	12.5
60°	422.8	417.5	399.8	369.2	329.0	282.2	233.1	180.0	125.4	75.2	7.8
62.5°	412.3	407.3	388.8	358.5	318.8	272.5	223.4	170.9	115.7	66.4	4.7
65°	398.5	393.8	377.0	345.7	307.5	262.1	212.7	159.9	105.8	56.4	2.6
67.5°	383.8	379.6	362.7	333.9	294.5	250.6	201.7	149.2	95.4	47.8	1.3
70°	368.1	362.9	347.2	318.0	281.1	237.5	189.7	138.2	85.4	39.5	0.0
72.5°	349.9	345.9	330.8	303.1	265.7	223.7	177.4	126.2	74.5	31.4	0.3
75°	332.1	327.1	313.3	287.2	250.6	209.0	163.8	115.0	63.8	24.0	0.3
77.5°	309.1	307.5	294.5	269.1	236.2	194.9	148.9	101.4	53.6	17.2	0.3
80°	286.1	284.5	274.3	251.1	219.5	178.2	135.1	88.6	43.6	11.5	0.3
82.5°	263.4	261.3	251.6	232.3	202.5	164.1	120.7	75.8	34.5	7.1	0.3
85°	243.0	240.4	229.9	212.2	185.0	148.1	105.8	63.2	25.6	3.9	0.5
87.5°	225.5	223.7	212.2	193.9	167.2	133.3	92.8	51.2	18.0	1.8	0.8
90°	210.6	206.7	196.5	177.2	150.5	116.8	78.9	41.0	12.0	1.0	1.0
92.5°	196.0	192.6	181.3	161.5	135.6	102.7	65.6	31.4	7.6	0.5	1.3
95°	180.8	177.2	166.2	147.9	120.5	88.3	53.8	23.0	4.2	0.5	1.3
97.5°	165.9	162.5	151.0	132.7	106.9	75.8	42.6	16.2	2.1	0.5	1.0
100°	152.1	148.1	137.7	119.4	93.3	63.2	32.9	10.5	1.3	0.5	1.0
102.5°	137.4	134.3	123.6	105.8	79.2	51.5	24.6	6.5	0.5	0.5	0.8
105°	124.4	120.5	110.0	91.7	67.4	40.5	17.2	3.9	0.5	0.5	0.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	81.0	77.9	68.7	53.3	34.2	15.9	4.7	0.8	0.8	0.8	0.8
115°	67.7	63.0	54.9	41.3	25.3	10.5	2.4	0.8	0.8	0.8	0.8
117.5°	54.1	50.2	44.4	31.4	16.7	6.8	1.3	0.8	0.8	0.8	0.8
120°	42.3	38.7	32.1	21.7	11.2	3.9	0.5	0.8	0.8	0.8	0.8
122.5°	30.3	27.4	21.7	14.1	6.8	1.8	0.8	0.8	1.0	1.0	0.8
125°	20.1	18.6	14.4	8.6	4.2	0.8	0.8	0.8	1.0	1.0	0.8
127.5°	13.1	11.8	8.4	5.0	1.8	0.8	0.8	1.0	1.0	1.0	0.8
130°	7.3	6.5	5.0	2.9	0.8	0.8	0.8	1.0	1.0	1.0	0.8
132.5°	4.2	3.9	2.6	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.0	1.3	1.3	1.3	1.0
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.0
142.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
145°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
150°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
152.5°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
157.5°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
160°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.3
172.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
175°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
177.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.0
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	205.1	205.1	205.1
2.5°	195.2	191.5	190.5
5°	184.7	178.7	175.3
7.5°	174.3	166.2	162.3
10°	164.6	153.1	148.9
12.5°	153.1	139.8	133.3
15°	142.1	124.9	118.6
17.5°	129.9	110.5	103.2
20°	118.4	96.2	88.6
22.5°	105.3	82.0	73.7
25°	93.5	67.9	58.5
27.5°	80.5	53.6	45.5
30°	68.2	41.0	32.9
32.5°	56.4	30.0	22.7
35°	45.5	20.4	14.4
37.5°	35.0	12.5	7.3
40°	25.3	6.5	3.4
42.5°	17.0	3.1	1.8
45°	10.5	1.6	0.0
47.5°	6.0	0.0	0.0
50°	3.1	0.0	0.0
52.5°	1.3	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°	0.3	0.3	0.3
77.5°	0.3	0.5	0.8
80°	0.5	1.0	1.3
82.5°	1.0	1.3	1.3
85°	1.0	1.3	1.6
87.5°	1.3	1.6	1.8
90°	1.6	1.8	1.8
92.5°	1.6	2.1	2.1
95°	1.8	2.1	2.4
97.5°	2.1	2.4	2.4
100°	1.8	2.4	2.6
102.5°	1.6	2.4	2.4
105°	1.3	1.8	2.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.3	1.3
115°	0.8	1.0	1.3
117.5°	0.8	1.0	1.0
120°	0.8	0.8	1.0
122.5°	0.8	0.8	1.0
125°	0.8	0.8	1.0
127.5°	1.0	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.0	0.8	0.8
135°	1.0	0.8	0.8
137.5°	1.0	0.8	0.8
140°	1.0	0.8	0.8
142.5°	1.0	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.0	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	109.7	106.6	96.2	78.9	55.1	30.8	11.5	2.1	0.5	0.8	0.8
110°	95.6	93.0	82.3	65.6	44.4	23.0	7.6	1.3	0.8	0.8	0.8







107.5°	1.0	1.6	1.8
110°	1.0	1.3	1.6



(END OF REPORT)