

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: P550973

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-82-87-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: P550973  
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-LD4-1STD-30-UNV-82-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

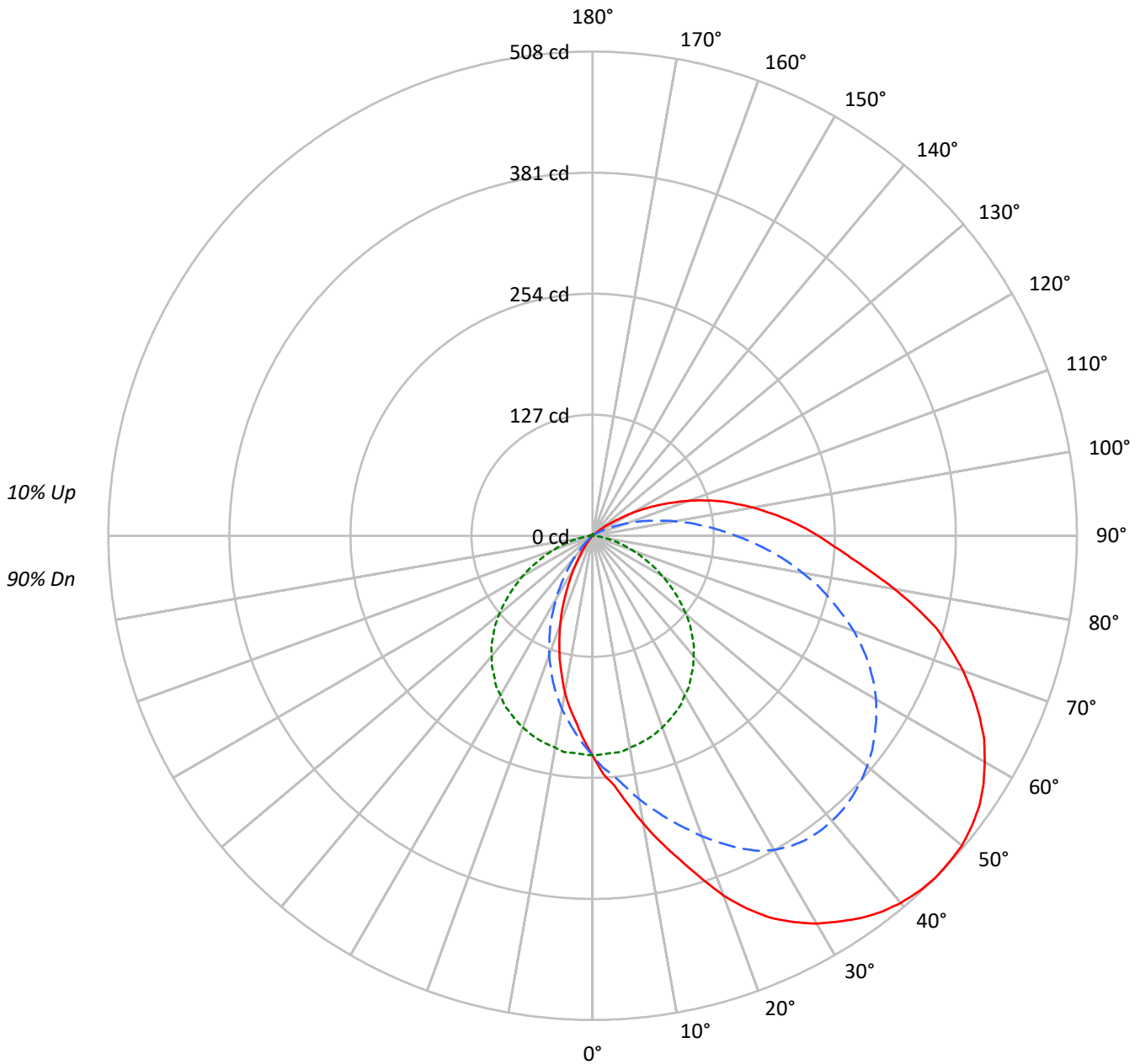
Lumens per Lamp: N/A  
Luminaire Lumens: 1139.1 lumens  
Efficiency: N/A  
Efficacy: 68.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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-LD4-1STD-30-UNV-82-87-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°	2480	2480	2480
5°	2723	2443	2038
10°	3081	2414	1680
15°	3452	2383	1309
20°	3894	2345	964
25°	4260	2299	633
30°	4532	2239	357
35°	4767	2174	157
40°	4977	2093	38
45°	5155	1993	0
50°	5306	1861	0
55°	5421	1691	0
60°	5479	1495	0
65°	5501	1273	0
70°	5482	1038	0
75°	5413	766	4
80°	5194	468	24
85°	5019	224	33



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.1	1.9
10°-20°	66.1	5.8
20°-30°	107.0	9.4
30°-40°	137.5	12.1
40°-50°	155.6	13.7
50°-60°	161.2	14.2
60°-70°	152.0	13.3
70°-80°	127.4	11.2
80°-90°	92.4	8.1
90°-100°	60.7	5.3
100°-110°	35.1	3.1
110°-120°	15.5	1.4
120°-130°	4.2	0.4
130°-140°	1.0	0.1
140°-150°	0.6	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	195.2	17.1
0°-40°	332.6	29.2
0°-60°	649.4	57.0
0°-90°	1021.2	89.7
90°-120°	111.2	9.8
90°-150°	117.1	10.3
90°-180°	118.0	10.4
0°-180°	1139.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	230	230	230	230	230	
5°	263	253	229	208	197	27
15°	351	308	221	160	133	101
25°	442	361	205	105	66	204
35°	490	390	180	51	16	307
45°	508	386	147	12	0	392
55°	495	361	106	0	0	442
65°	448	320	63	0	0	443
75°	373	258	27	0	0	391
85°	273	187	4	1	2	233
90°	237	150	1	2	2	130
95°	203	117	1	2	3	159
105°	140	61	1	2	2	147
115°	76	20	1	1	2	76
125°	23	3	1	1	1	23
135°	1	1	2	1	1	2
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°	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4
2.5°	249.8	249.5	248.6	247.1	245.1	241.5	238.6	236.0	232.4	229.5	223.9
5°	263.0	261.5	260.3	258.9	254.2	250.9	245.7	239.8	234.2	228.6	217.5
7.5°	284.1	281.8	280.0	275.9	269.4	262.1	253.9	248.3	244.5	228.9	209.8
10°	306.7	304.6	301.1	293.8	285.9	275.3	263.6	250.3	238.6	225.7	203.1
12.5°	329.0	326.1	321.1	311.7	300.5	287.3	271.2	255.6	238.9	223.6	195.2
15°	351.3	348.1	342.8	331.4	316.7	299.4	279.7	260.0	240.4	221.0	187.0
17.5°	375.7	371.3	363.3	350.4	331.9	310.5	287.3	263.6	239.8	217.8	178.2
20°	401.8	395.6	387.1	369.8	348.1	322.8	295.0	267.1	239.5	214.0	168.2
22.5°	423.5	417.3	408.0	390.1	363.9	333.1	301.4	269.4	238.3	209.6	158.8
25°	442.3	437.3	427.0	406.5	378.9	344.0	307.6	271.2	236.6	204.9	148.8
27.5°	457.0	452.3	440.8	419.7	391.5	353.7	312.3	272.1	234.2	200.2	138.5
30°	469.9	465.2	451.4	429.7	400.0	361.3	317.0	272.4	231.3	193.1	127.4
32.5°	479.9	475.5	461.4	438.2	405.9	366.6	319.6	272.1	227.5	188.1	115.3
35°	489.8	485.4	469.0	444.3	410.3	368.9	321.7	270.6	222.8	179.9	103.9
37.5°	497.5	492.5	475.8	448.5	412.4	369.5	321.4	268.5	217.8	173.2	92.5
40°	502.8	497.5	479.6	450.8	412.9	368.6	319.0	265.0	211.9	164.6	80.4
42.5°	506.3	500.4	481.3	454.3	411.8	366.3	315.5	260.6	205.4	157.3	69.0
45°	508.0	501.9	481.6	451.4	409.7	361.9	310.2	255.0	198.4	147.3	57.5
47.5°	507.2	500.4	480.2	448.2	405.9	357.2	304.4	248.3	189.9	138.5	46.7
50°	505.7	498.6	476.9	444.1	400.6	351.3	297.9	240.1	181.1	127.7	37.0
52.5°	501.0	493.9	473.4	438.2	394.5	344.6	289.1	231.6	171.7	117.1	28.2
55°	495.1	488.7	467.2	432.9	386.5	336.3	280.9	222.5	162.6	106.2	20.3
57.5°	486.0	480.2	459.6	424.4	378.6	327.2	271.8	212.5	151.1	95.4	14.1
60°	474.9	469.0	449.0	414.7	369.5	317.0	261.8	202.2	140.9	84.5	8.8
62.5°	463.1	457.6	436.7	402.7	358.1	306.1	250.9	191.9	130.0	74.5	5.3
65°	447.6	442.3	423.5	388.3	345.4	294.4	238.9	179.6	118.9	63.4	2.9
67.5°	431.1	426.4	407.4	375.1	330.8	281.5	226.6	167.6	107.1	53.7	1.5
70°	413.5	407.7	390.1	357.2	315.8	266.8	213.1	155.3	96.0	44.3	0.0
72.5°	393.0	388.6	371.6	340.5	298.5	251.2	199.3	141.8	83.6	35.2	0.3
75°	373.0	367.5	351.9	322.5	281.5	234.8	184.0	129.1	71.6	27.0	0.3
77.5°	347.2	345.4	330.8	302.3	265.3	218.9	167.3	113.9	60.2	19.4	0.3
80°	321.4	319.6	308.2	282.0	246.5	200.2	151.7	99.5	49.0	12.9	0.3
82.5°	295.8	293.5	282.6	260.9	227.5	184.3	135.6	85.1	38.7	7.9	0.3
85°	272.9	270.0	258.3	238.3	207.8	166.4	118.9	71.0	28.8	4.4	0.6
87.5°	253.3	251.2	238.3	217.8	187.8	149.7	104.2	57.5	20.3	2.1	0.9
90°	236.6	232.2	220.7	199.0	169.1	131.2	88.6	46.1	13.5	1.2	1.2
92.5°	220.1	216.3	203.7	181.4	152.3	115.3	73.7	35.2	8.5	0.6	1.5
95°	203.1	199.0	186.7	166.1	135.3	99.2	60.5	25.8	4.7	0.6	1.5
97.5°	186.4	182.6	169.6	149.1	120.0	85.1	47.8	18.2	2.3	0.6	1.2
100°	170.8	166.4	154.7	134.1	104.8	71.0	37.0	11.7	1.5	0.6	1.2
102.5°	154.4	150.9	138.8	118.9	88.9	57.8	27.6	7.3	0.6	0.6	0.9
105°	139.7	135.3	123.6	103.0	75.7	45.5	19.4	4.4	0.6	0.6	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	91.0	87.5	77.2	59.9	38.4	17.9	5.3	0.9	0.9	0.9	0.9
115°	76.0	70.7	61.6	46.4	28.5	11.7	2.6	0.9	0.9	0.9	0.9
117.5°	60.8	56.4	49.9	35.2	18.8	7.6	1.5	0.9	0.9	0.9	0.9
120°	47.5	43.4	36.1	24.4	12.6	4.4	0.6	0.9	0.9	0.9	0.9
122.5°	34.0	30.8	24.4	15.8	7.6	2.1	0.9	0.9	1.2	1.2	0.9
125°	22.6	20.8	16.1	9.7	4.7	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	14.7	13.2	9.4	5.6	2.1	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.2	7.3	5.6	3.2	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	4.7	4.4	2.9	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.5
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.2
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	230.4	230.4	230.4
2.5°	219.2	215.1	214.0
5°	207.5	200.7	196.9
7.5°	195.8	186.7	182.3
10°	184.9	172.0	167.3
12.5°	172.0	157.0	149.7
15°	159.7	140.3	133.2
17.5°	145.9	124.1	115.9
20°	133.0	108.0	99.5
22.5°	118.3	92.2	82.8
25°	105.1	76.3	65.7
27.5°	90.4	60.2	51.1
30°	76.6	46.1	37.0
32.5°	63.4	33.8	25.5
35°	51.1	22.9	16.1
37.5°	39.3	14.1	8.2
40°	28.5	7.3	3.8
42.5°	19.1	3.5	2.1
45°	11.7	1.8	0.0
47.5°	6.8	0.0	0.0
50°	3.5	0.0	0.0
52.5°	1.5	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	0.6	0.9
80°	0.6	1.2	1.5
82.5°	1.2	1.5	1.5
85°	1.2	1.5	1.8
87.5°	1.5	1.8	2.1
90°	1.8	2.1	2.1
92.5°	1.8	2.3	2.3
95°	2.1	2.3	2.6
97.5°	2.3	2.6	2.6
100°	2.1	2.6	2.9
102.5°	1.8	2.6	2.6
105°	1.5	2.1	2.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.2	1.5	1.5
115°	0.9	1.2	1.5
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.2	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	123.3	119.7	108.0	88.6	61.9	34.6	12.9	2.3	0.6	0.9	0.9
110°	107.4	104.5	92.5	73.7	49.9	25.8	8.5	1.5	0.9	0.9	0.9







107.5°	1.2	1.8	2.1
110°	1.2	1.5	1.8



(END OF REPORT)