

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: P550633

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-81-85-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: P550633  
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-81-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

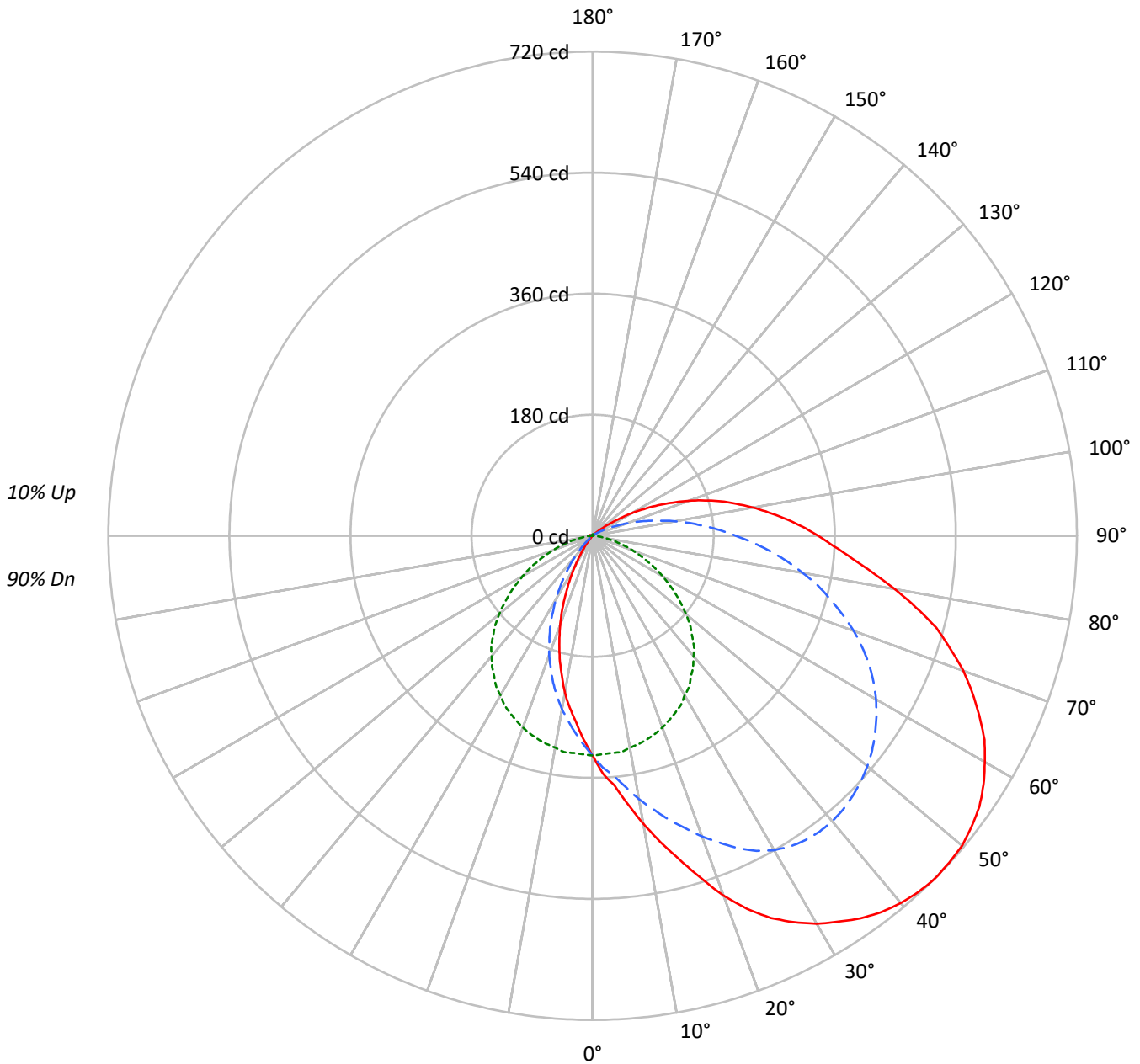
Lumens per Lamp: N/A  
Luminaire Lumens: 1614.9 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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

TEST NUMBER: P550633

CATALOG NUMBER: FCC-X-2-LD4-1HI-50-UNV-81-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P550633

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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°	3517	3517	3517
5°	3860	3465	2890
10°	4368	3422	2383
15°	4895	3379	1856
20°	5521	3324	1367
25°	6040	3260	898
30°	6426	3174	505
35°	6760	3082	223
40°	7057	2970	53
45°	7311	2827	0
50°	7524	2638	0
55°	7686	2398	0
60°	7768	2122	0
65°	7800	1806	0
70°	7775	1471	0
75°	7675	1086	6
80°	7364	664	34
85°	7118	315	46



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.3	1.9
10°-20°	93.7	5.8
20°-30°	151.7	9.4
30°-40°	194.9	12.1
40°-50°	220.6	13.7
50°-60°	228.6	14.2
60°-70°	215.6	13.3
70°-80°	180.6	11.2
80°-90°	130.9	8.1
90°-100°	86.1	5.3
100°-110°	49.7	3.1
110°-120°	21.9	1.4
120°-130°	5.9	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	276.7	17.1
0°-40°	471.6	29.2
0°-60°	920.8	57.0
0°-90°	1448.0	89.7
90°-120°	157.7	9.8
90°-150°	165.8	10.3
90°-180°	167.0	10.3
0°-180°	1614.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	327	327	327	327	327	
5°	373	358	324	294	279	38
15°	498	437	313	226	189	144
25°	627	512	290	149	93	290
35°	695	552	255	72	23	436
45°	720	547	209	17	0	556
55°	702	512	151	0	0	627
65°	635	454	90	0	0	628
75°	529	366	38	0	0	555
85°	387	265	6	2	2	330
90°	335	213	2	2	3	184
95°	288	166	1	3	4	226
105°	198	86	1	2	3	209
115°	108	28	1	1	2	108
125°	32	4	2	1	2	32
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°	326.7	326.7	326.7	326.7	326.7	326.7	326.7	326.7	326.7	326.7	326.7
2.5°	354.1	353.7	352.5	350.4	347.5	342.5	338.3	334.6	329.6	325.4	317.5
5°	372.9	370.8	369.1	367.0	360.4	355.8	348.3	340.0	332.1	324.2	308.4
7.5°	402.8	399.5	397.0	391.2	382.0	371.6	360.0	352.1	346.7	324.6	297.5
10°	434.9	432.0	427.0	416.6	405.3	390.3	373.7	355.0	338.3	320.0	288.0
12.5°	466.5	462.3	455.3	441.9	426.1	407.4	384.5	362.5	338.7	317.1	276.7
15°	498.1	493.6	486.1	469.8	449.0	424.5	396.6	368.7	340.8	313.4	265.1
17.5°	532.7	526.4	515.2	496.9	470.7	440.3	407.4	373.7	340.0	308.8	252.6
20°	569.7	561.0	548.9	524.3	493.6	457.8	418.2	378.7	339.6	303.4	238.5
22.5°	600.5	591.8	578.4	553.1	516.0	472.3	427.4	382.0	337.9	297.1	225.1
25°	627.1	620.1	605.5	576.4	537.2	487.7	436.1	384.5	335.4	290.5	211.0
27.5°	647.9	641.3	625.1	595.1	555.1	501.5	442.8	385.8	332.1	283.8	196.4
30°	666.3	659.6	640.0	609.2	567.2	512.3	449.4	386.2	327.9	273.8	180.6
32.5°	680.4	674.2	654.2	621.3	575.5	519.8	453.2	385.8	322.5	266.8	163.5
35°	694.6	688.3	665.0	630.0	581.8	523.1	456.1	383.7	315.9	255.1	147.3
37.5°	705.4	698.3	674.6	635.9	584.7	523.9	455.7	380.8	308.8	245.5	131.1
40°	712.9	705.4	680.0	639.2	585.5	522.7	452.4	375.8	300.5	233.5	114.0
42.5°	717.9	709.5	682.5	644.2	583.9	519.4	447.4	369.5	291.3	223.1	97.8
45°	720.4	711.6	682.9	640.0	580.9	513.1	439.9	361.6	281.3	208.9	81.6
47.5°	719.1	709.5	680.8	635.5	575.5	506.5	431.5	352.1	269.2	196.4	66.2
50°	717.0	707.0	676.2	629.6	568.0	498.1	422.4	340.4	256.8	181.0	52.4
52.5°	710.4	700.4	671.2	621.3	559.3	488.6	409.9	328.3	243.4	166.0	40.0
55°	702.0	692.9	662.5	613.8	548.1	476.9	398.3	315.4	230.5	150.6	28.7
57.5°	689.1	680.8	651.7	601.7	536.8	464.0	385.4	301.3	214.3	135.2	20.0
60°	673.3	665.0	636.7	588.0	523.9	449.4	371.2	286.7	199.8	119.9	12.5
62.5°	656.7	648.8	619.2	571.0	507.7	434.0	355.8	272.2	184.4	105.7	7.5
65°	634.6	627.1	600.5	550.6	489.8	417.4	338.7	254.7	168.5	89.9	4.2
67.5°	611.3	604.7	577.6	531.8	469.0	399.1	321.3	237.6	151.9	76.2	2.1
70°	586.4	578.0	553.1	506.5	447.8	378.3	302.1	220.1	136.1	62.8	0.0
72.5°	557.2	551.0	526.8	482.7	423.2	356.2	282.6	201.0	118.6	49.9	0.4
75°	528.9	521.0	499.0	457.3	399.1	332.9	260.9	183.1	101.5	38.3	0.4
77.5°	492.3	489.8	469.0	428.6	376.2	310.4	237.2	161.5	85.3	27.5	0.4
80°	455.7	453.2	437.0	399.9	349.6	283.8	215.1	141.1	69.5	18.3	0.4
82.5°	419.5	416.1	400.7	370.0	322.5	261.3	192.3	120.7	54.9	11.2	0.4
85°	387.0	382.9	366.2	337.9	294.6	236.0	168.5	100.7	40.8	6.2	0.8
87.5°	359.1	356.2	337.9	308.8	266.3	212.2	147.7	81.6	28.7	2.9	1.2
90°	335.4	329.2	312.9	282.1	239.7	186.0	125.7	65.3	19.1	1.7	1.7
92.5°	312.1	306.7	288.8	257.2	216.0	163.5	104.5	49.9	12.1	0.8	2.1
95°	288.0	282.1	264.7	235.5	191.8	140.7	85.7	36.6	6.7	0.8	2.1
97.5°	264.3	258.8	240.5	211.4	170.2	120.7	67.8	25.8	3.3	0.8	1.7
100°	242.2	236.0	219.3	190.2	148.6	100.7	52.4	16.6	2.1	0.8	1.7
102.5°	218.9	213.9	196.8	168.5	126.1	82.0	39.1	10.4	0.8	0.8	1.2
105°	198.1	191.8	175.2	146.1	107.4	64.5	27.5	6.2	0.8	0.8	1.2



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CATALOG NUMBER: FCC-X-2-LD4-1HI-50-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	129.0	124.0	109.4	84.9	54.5	25.4	7.5	1.2	1.2	1.2	1.2
115°	107.8	100.3	87.4	65.8	40.4	16.6	3.7	1.2	1.2	1.2	1.2
117.5°	86.1	79.9	70.7	49.9	26.6	10.8	2.1	1.2	1.2	1.2	1.2
120°	67.4	61.6	51.2	34.5	17.9	6.2	0.8	1.2	1.2	1.2	1.2
122.5°	48.3	43.7	34.5	22.5	10.8	2.9	1.2	1.2	1.7	1.7	1.2
125°	32.0	29.5	22.9	13.7	6.7	1.2	1.2	1.2	1.7	1.7	1.2
127.5°	20.8	18.7	13.3	7.9	2.9	1.2	1.2	1.7	1.7	1.7	1.2
130°	11.7	10.4	7.9	4.6	1.2	1.2	1.2	1.7	1.7	1.7	1.2
132.5°	6.7	6.2	4.2	0.8	1.2	1.2	1.2	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	1.7
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°	326.7	326.7	326.7
2.5°	310.9	305.0	303.4
5°	294.2	284.6	279.2
7.5°	277.6	264.7	258.4
10°	262.2	243.9	237.2
12.5°	243.9	222.6	212.2
15°	226.4	198.9	188.9
17.5°	206.8	176.0	164.4
20°	188.5	153.1	141.1
22.5°	167.7	130.7	117.4
25°	149.0	108.2	93.2
27.5°	128.2	85.3	72.4
30°	108.6	65.3	52.4
32.5°	89.9	47.9	36.2
35°	72.4	32.5	22.9
37.5°	55.8	20.0	11.7
40°	40.4	10.4	5.4
42.5°	27.0	5.0	2.9
45°	16.6	2.5	0.0
47.5°	9.6	0.0	0.0
50°	5.0	0.0	0.0
52.5°	2.1	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	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	2.9
90°	2.5	2.9	2.9
92.5°	2.5	3.3	3.3
95°	2.9	3.3	3.7
97.5°	3.3	3.7	3.7
100°	2.9	3.7	4.2
102.5°	2.5	3.7	3.7
105°	2.1	2.9	3.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.2	1.7	2.1
117.5°	1.2	1.7	1.7
120°	1.2	1.2	1.7
122.5°	1.2	1.2	1.7
125°	1.2	1.2	1.7
127.5°	1.7	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.7	1.2	1.2
135°	1.7	1.2	1.2
137.5°	1.7	1.2	1.2
140°	1.7	1.2	1.2
142.5°	1.7	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°	1.7	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°	174.8	169.8	153.1	125.7	87.8	49.1	18.3	3.3	0.8	1.2	1.2
110°	152.3	148.1	131.1	104.5	70.7	36.6	12.1	2.1	1.2	1.2	1.2







107.5°	1.7	2.5	2.9
110°	1.7	2.1	2.5



(END OF REPORT)