

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: P551166

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-82-87-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: P551166
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-50-UNV-82-87-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

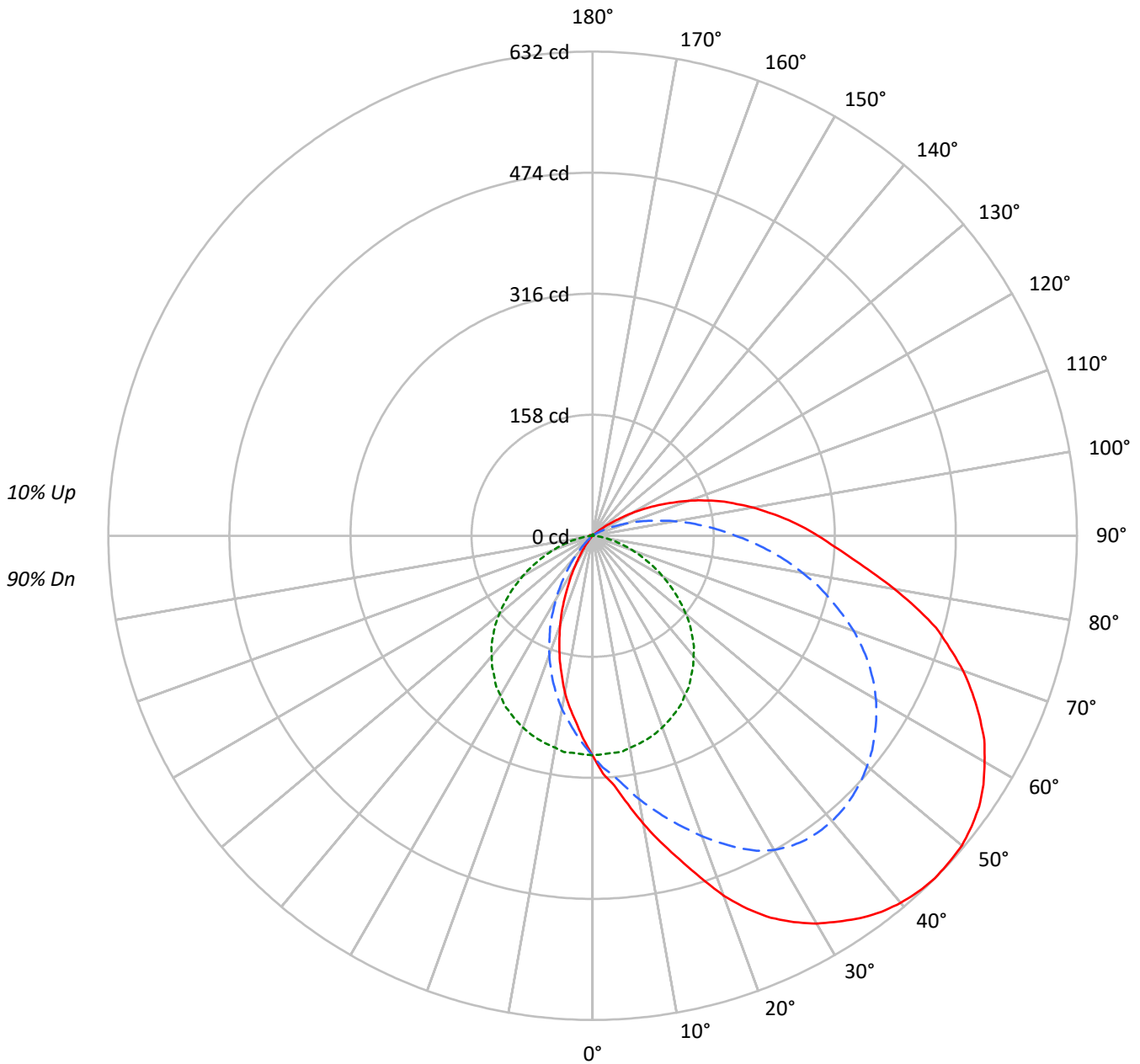
Lumens per Lamp: N/A
Luminaire Lumens: 1417.1 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): 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: P551166

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-87-ED1D

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3085	3085	3085
5°	3387	3040	2536
10°	3833	3003	2090
15°	4295	2964	1629
20°	4845	2917	1200
25°	5299	2861	788
30°	5638	2786	444
35°	5931	2704	196
40°	6191	2605	47
45°	6414	2480	0
50°	6601	2314	0
55°	6744	2105	0
60°	6816	1862	0
65°	6844	1585	0
70°	6821	1291	0
75°	6735	953	6
80°	6461	584	29
85°	6246	280	40



TEST NUMBER: P551166

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-87-ED1D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.5	1.9
10°-20°	82.2	5.8
20°-30°	133.1	9.4
30°-40°	171.0	12.1
40°-50°	193.6	13.7
50°-60°	200.6	14.2
60°-70°	189.1	13.3
70°-80°	158.5	11.2
80°-90°	114.9	8.1
90°-100°	75.5	5.3
100°-110°	43.6	3.1
110°-120°	19.2	1.4
120°-130°	5.2	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	242.8	17.1
0°-40°	413.8	29.2
0°-60°	807.9	57.0
0°-90°	1270.5	89.7
90°-120°	138.4	9.8
90°-150°	145.6	10.3
90°-180°	147.0	10.4
0°-180°	1417.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	287	287	287	287	287	
5°	327	314	284	258	245	33
15°	437	383	275	199	166	126
25°	550	450	255	131	82	254
35°	609	485	224	64	20	382
45°	632	480	183	15	0	488
55°	616	450	132	0	0	550
65°	557	398	79	0	0	551
75°	464	321	34	0	0	487
85°	340	233	6	2	2	290
90°	294	187	2	2	3	161
95°	253	146	1	3	3	198
105°	174	75	1	2	3	183
115°	95	25	1	1	2	95
125°	28	3	2	1	2	28
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°	286.6	286.6	286.6	286.6	286.6	286.6	286.6	286.6	286.6	286.6	286.6
2.5°	310.7	310.4	309.3	307.4	304.9	300.5	296.8	293.6	289.2	285.5	278.6
5°	327.2	325.3	323.9	322.0	316.2	312.2	305.6	298.3	291.4	284.4	270.6
7.5°	353.4	350.5	348.3	343.2	335.2	326.1	315.8	308.9	304.2	284.8	261.1
10°	381.6	379.0	374.6	365.5	355.6	342.5	327.9	311.5	296.8	280.8	252.7
12.5°	409.3	405.7	399.4	387.8	373.9	357.5	337.4	318.0	297.2	278.2	242.8
15°	437.1	433.0	426.5	412.2	394.0	372.4	348.0	323.5	299.0	274.9	232.6
17.5°	467.4	461.9	452.0	436.0	413.0	386.3	357.5	327.9	298.3	270.9	221.6
20°	499.9	492.2	481.6	460.1	433.0	401.6	367.0	332.3	297.9	266.2	209.2
22.5°	526.9	519.2	507.5	485.3	452.8	414.4	375.0	335.2	296.5	260.7	197.5
25°	550.2	544.0	531.3	505.7	471.4	427.9	382.7	337.4	294.3	254.9	185.1
27.5°	568.5	562.7	548.4	522.1	487.1	440.0	388.5	338.5	291.4	249.0	172.3
30°	584.6	578.7	561.6	534.5	497.7	449.5	394.3	338.8	287.7	240.3	158.5
32.5°	597.0	591.5	574.0	545.1	505.0	456.0	397.6	338.5	283.0	234.0	143.5
35°	609.4	603.9	583.5	552.8	510.4	459.0	400.2	336.6	277.1	223.8	129.3
37.5°	618.9	612.7	591.9	557.9	513.0	459.7	399.8	334.1	270.9	215.4	115.0
40°	625.5	618.9	596.6	560.8	513.7	458.6	396.9	329.7	263.6	204.8	100.0
42.5°	629.8	622.5	598.8	565.2	512.3	455.7	392.5	324.2	255.6	195.7	85.8
45°	632.0	624.4	599.2	561.6	509.7	450.2	385.9	317.3	246.8	183.3	71.6
47.5°	630.9	622.5	597.3	557.5	505.0	444.4	378.6	308.9	236.2	172.3	58.1
50°	629.1	620.4	593.3	552.4	498.4	437.1	370.6	298.7	225.3	158.8	46.0
52.5°	623.3	614.5	589.0	545.1	490.7	428.7	359.7	288.1	213.6	145.7	35.1
55°	616.0	607.9	581.3	538.6	480.9	418.4	349.4	276.8	202.3	132.2	25.2
57.5°	604.7	597.3	571.8	528.0	471.0	407.1	338.1	264.4	188.0	118.7	17.5
60°	590.8	583.5	558.6	515.9	459.7	394.3	325.7	251.6	175.3	105.2	11.0
62.5°	576.2	569.2	543.3	501.0	445.5	380.8	312.2	238.8	161.8	92.7	6.6
65°	556.8	550.2	526.9	483.1	429.8	366.2	297.2	223.5	147.9	78.9	3.7
67.5°	536.4	530.5	506.8	466.6	411.5	350.2	281.9	208.5	133.3	66.8	1.8
70°	514.5	507.2	485.3	444.4	392.9	331.9	265.1	193.2	119.4	55.1	0.0
72.5°	488.9	483.4	462.3	423.5	371.3	312.5	247.9	176.4	104.1	43.8	0.4
75°	464.1	457.1	437.8	401.3	350.2	292.1	228.9	160.7	89.1	33.6	0.4
77.5°	431.9	429.8	411.5	376.1	330.1	272.4	208.1	141.7	74.9	24.1	0.4
80°	399.8	397.6	383.4	350.9	306.7	249.0	188.8	123.8	61.0	16.1	0.4
82.5°	368.0	365.1	351.6	324.6	283.0	229.3	168.7	105.9	48.2	9.9	0.4
85°	339.6	335.9	321.3	296.5	258.5	207.0	147.9	88.4	35.8	5.5	0.7
87.5°	315.1	312.5	296.5	270.9	233.7	186.2	129.6	71.6	25.2	2.6	1.1
90°	294.3	288.8	274.6	247.6	210.3	163.2	110.3	57.3	16.8	1.5	1.5
92.5°	273.8	269.1	253.4	225.6	189.5	143.5	91.6	43.8	10.6	0.7	1.8
95°	252.7	247.6	232.2	206.7	168.3	123.4	75.2	32.1	5.8	0.7	1.8
97.5°	231.9	227.1	211.0	185.5	149.3	105.9	59.5	22.6	2.9	0.7	1.5
100°	212.5	207.0	192.4	166.9	130.4	88.4	46.0	14.6	1.8	0.7	1.5
102.5°	192.1	187.7	172.7	147.9	110.6	71.9	34.3	9.1	0.7	0.7	1.1
105°	173.8	168.3	153.7	128.2	94.2	56.6	24.1	5.5	0.7	0.7	1.1



TEST NUMBER: P551166

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-87-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	113.2	108.8	96.0	74.5	47.8	22.3	6.6	1.1	1.1	1.1	1.1
115°	94.6	88.0	76.7	57.7	35.4	14.6	3.3	1.1	1.1	1.1	1.1
117.5°	75.6	70.1	62.1	43.8	23.4	9.5	1.8	1.1	1.1	1.1	1.1
120°	59.2	54.0	44.9	30.3	15.7	5.5	0.7	1.1	1.1	1.1	1.1
122.5°	42.4	38.3	30.3	19.7	9.5	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.1	25.9	20.1	12.0	5.8	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.3	16.4	11.7	6.9	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.2	9.1	6.9	4.0	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	5.8	5.5	3.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.5
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.5	1.8	1.8	1.8	1.5
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.5	1.8	1.8	1.8	1.5
142.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.5	1.5
145°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.5	1.5	1.5
147.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.5	1.5
150°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.8	1.5	1.5	1.5
152.5°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.8	1.5	1.5	1.5
155°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.8	1.5	1.5	1.8
157.5°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.8	1.5	1.5	1.8
160°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.8	1.8	1.8	1.8
172.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.8	1.8
175°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.8	1.8
177.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.8	1.8	1.8	1.5
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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CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-87-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	286.6	286.6	286.6
2.5°	272.8	267.6	266.2
5°	258.1	249.7	245.0
7.5°	243.5	232.2	226.7
10°	230.0	214.0	208.1
12.5°	214.0	195.3	186.2
15°	198.6	174.5	165.8
17.5°	181.5	154.4	144.2
20°	165.4	134.4	123.8
22.5°	147.1	114.7	103.0
25°	130.7	94.9	81.8
27.5°	112.5	74.9	63.5
30°	95.3	57.3	46.0
32.5°	78.9	42.0	31.8
35°	63.5	28.5	20.1
37.5°	48.9	17.5	10.2
40°	35.4	9.1	4.7
42.5°	23.7	4.4	2.6
45°	14.6	2.2	0.0
47.5°	8.4	0.0	0.0
50°	4.4	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	1.5	1.8
82.5°	1.5	1.8	1.8
85°	1.5	1.8	2.2
87.5°	1.8	2.2	2.6
90°	2.2	2.6	2.6
92.5°	2.2	2.9	2.9
95°	2.6	2.9	3.3
97.5°	2.9	3.3	3.3
100°	2.6	3.3	3.7
102.5°	2.2	3.3	3.3
105°	1.8	2.6	2.9



TEST NUMBER: P551166

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-87-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.5	1.8	1.8
115°	1.1	1.5	1.8
117.5°	1.1	1.5	1.5
120°	1.1	1.1	1.5
122.5°	1.1	1.1	1.5
125°	1.1	1.1	1.5
127.5°	1.5	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.5	1.1	1.1
135°	1.5	1.1	1.1
137.5°	1.5	1.1	1.1
140°	1.5	1.1	1.1
142.5°	1.5	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°	1.5	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°	153.4	149.0	134.4	110.3	77.0	43.1	16.1	2.9	0.7	1.1	1.1
110°	133.6	130.0	115.0	91.6	62.1	32.1	10.6	1.8	1.1	1.1	1.1





107.5°	1.5	2.2	2.6
110°	1.5	1.8	2.2



(END OF REPORT)