

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: P550509

Luminaire Tested: **FCC-X-2-LD4-1HI-35-UNV-81-87-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: P550509
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-35-UNV-81-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

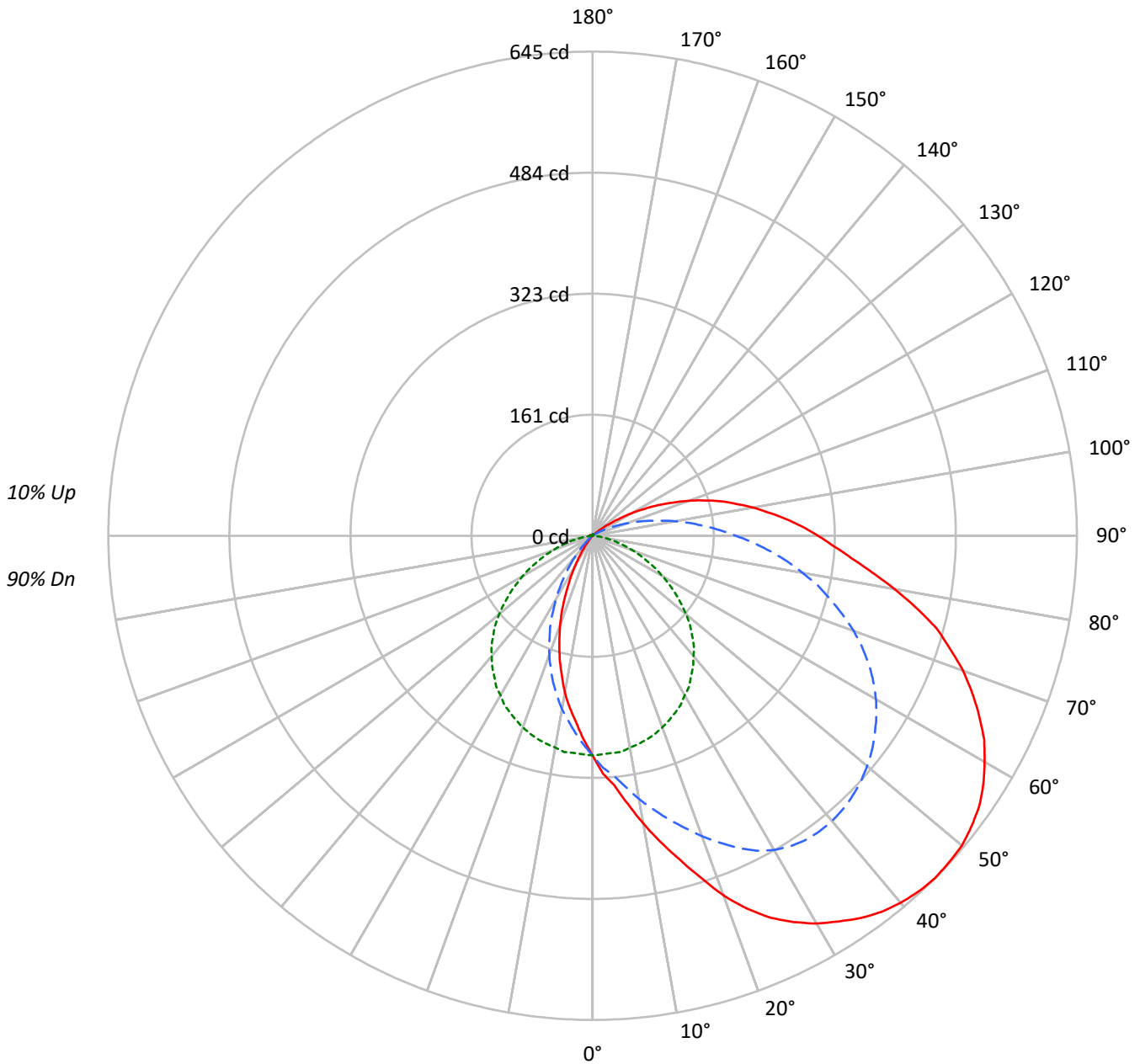
Lumens per Lamp: N/A
Luminaire Lumens: 1446.0 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (A_{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

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CATALOG NUMBER: FCC-X-2-LD4-1HI-35-UNV-81-87-ED1D-90

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°	3148	3148	3148
5°	3456	3103	2588
10°	3911	3064	2133
15°	4383	3026	1663
20°	4943	2976	1224
25°	5408	2919	804
30°	5753	2842	452
35°	6053	2760	200
40°	6318	2658	48
45°	6546	2530	0
50°	6737	2363	0
55°	6882	2148	0
60°	6955	1899	0
65°	6984	1617	0
70°	6961	1319	0
75°	6872	973	6
80°	6594	595	31
85°	6373	285	40



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	1.9
10°-20°	83.9	5.8
20°-30°	135.8	9.4
30°-40°	174.5	12.1
40°-50°	197.5	13.7
50°-60°	204.7	14.2
60°-70°	193.0	13.3
70°-80°	161.8	11.2
80°-90°	117.2	8.1
90°-100°	77.1	5.3
100°-110°	44.5	3.1
110°-120°	19.6	1.4
120°-130°	5.3	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
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0°-30°	247.8	17.1
0°-40°	422.3	29.2
0°-60°	824.5	57.0
0°-90°	1296.5	89.7
90°-120°	141.2	9.8
90°-150°	148.5	10.3
90°-180°	150.0	10.4
0°-180°	1446.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	292	292	292	292	292	
5°	334	321	290	263	250	34
15°	446	391	281	203	169	129
25°	562	459	260	133	84	260
35°	622	495	228	65	20	390
45°	645	490	187	15	0	498
55°	629	459	135	0	0	561
65°	568	406	80	0	0	562
75°	474	328	34	0	0	497
85°	346	238	6	2	2	296
90°	300	191	2	2	3	165
95°	258	149	1	3	3	202
105°	177	77	1	2	3	187
115°	96	26	1	1	2	97
125°	29	4	2	1	2	29
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°	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5
2.5°	317.1	316.7	315.6	313.7	311.1	306.6	302.9	299.6	295.1	291.4	284.3
5°	333.8	332.0	330.5	328.6	322.7	318.6	311.9	304.4	297.3	290.3	276.1
7.5°	360.7	357.7	355.5	350.2	342.0	332.7	322.3	315.2	310.4	290.6	266.4
10°	389.4	386.8	382.3	373.0	362.9	349.5	334.6	317.8	302.9	286.5	257.8
12.5°	417.7	414.0	407.6	395.7	381.5	364.8	344.3	324.5	303.3	283.9	247.8
15°	446.0	441.9	435.2	420.7	402.0	380.1	355.1	330.1	305.2	280.6	237.3
17.5°	476.9	471.3	461.3	444.9	421.4	394.2	364.8	334.6	304.4	276.5	226.2
20°	510.1	502.3	491.5	469.5	441.9	409.9	374.5	339.1	304.0	271.6	213.5
22.5°	537.7	529.8	517.9	495.2	462.0	422.9	382.7	342.0	302.6	266.0	201.6
25°	561.5	555.2	542.1	516.1	481.0	436.7	390.5	344.3	300.3	260.1	188.9
27.5°	580.1	574.2	559.6	532.8	497.0	449.0	396.4	345.4	297.3	254.1	175.9
30°	596.5	590.6	573.1	545.5	507.9	458.7	402.4	345.8	293.6	245.2	161.7
32.5°	609.2	603.6	585.7	556.3	515.3	465.4	405.8	345.4	288.8	238.8	146.4
35°	621.9	616.3	595.4	564.1	520.9	468.4	408.4	343.5	282.8	228.4	131.9
37.5°	631.6	625.2	604.0	569.3	523.5	469.1	408.0	340.9	276.5	219.8	117.4
40°	638.3	631.6	608.8	572.3	524.2	468.0	405.0	336.5	269.0	209.0	102.1
42.5°	642.7	635.3	611.1	576.8	522.8	465.0	400.5	330.9	260.8	199.7	87.6
45°	645.0	637.1	611.4	573.1	520.1	459.4	393.8	323.8	251.9	187.0	73.0
47.5°	643.9	635.3	609.6	569.0	515.3	453.5	386.4	315.2	241.1	175.9	59.2
50°	642.0	633.0	605.5	563.7	508.6	446.0	378.2	304.8	229.9	162.1	46.9
52.5°	636.0	627.1	601.0	556.3	500.8	437.4	367.0	294.0	218.0	148.7	35.8
55°	628.6	620.4	593.2	549.6	490.7	427.0	356.6	282.4	206.4	134.9	25.7
57.5°	617.0	609.6	583.5	538.8	480.7	415.4	345.0	269.8	191.9	121.1	17.9
60°	602.9	595.4	570.1	526.5	469.1	402.4	332.4	256.7	178.8	107.3	11.2
62.5°	588.0	580.9	554.4	511.2	454.6	388.6	318.6	243.7	165.1	94.6	6.7
65°	568.2	561.5	537.7	492.9	438.6	373.7	303.3	228.0	150.9	80.5	3.7
67.5°	547.3	541.4	517.2	476.2	419.9	357.3	287.6	212.8	136.0	68.2	1.9
70°	525.0	517.5	495.2	453.5	400.9	338.7	270.5	197.1	121.8	56.3	0.0
72.5°	498.9	493.3	471.7	432.2	378.9	318.9	253.0	180.0	106.2	44.7	0.4
75°	473.6	466.5	446.7	409.5	357.3	298.1	233.6	163.9	90.9	34.3	0.4
77.5°	440.8	438.6	419.9	383.8	336.8	278.0	212.4	144.6	76.4	24.6	0.4
80°	408.0	405.8	391.2	358.1	313.0	254.1	192.6	126.3	62.2	16.4	0.4
82.5°	375.6	372.6	358.8	331.2	288.8	234.0	172.1	108.1	49.2	10.1	0.4
85°	346.5	342.8	327.9	302.6	263.8	211.3	150.9	90.2	36.5	5.6	0.7
87.5°	321.6	318.9	302.6	276.5	238.5	190.0	132.3	73.0	25.7	2.6	1.1
90°	300.3	294.7	280.2	252.6	214.6	166.6	112.5	58.5	17.1	1.5	1.5
92.5°	279.5	274.6	258.6	230.3	193.4	146.4	93.5	44.7	10.8	0.7	1.9
95°	257.8	252.6	237.0	210.9	171.8	125.9	76.8	32.8	6.0	0.7	1.9
97.5°	236.6	231.8	215.4	189.3	152.4	108.1	60.7	23.1	3.0	0.7	1.5
100°	216.9	211.3	196.4	170.3	133.0	90.2	46.9	14.9	1.9	0.7	1.5
102.5°	196.0	191.5	176.2	150.9	112.9	73.4	35.0	9.3	0.7	0.7	1.1
105°	177.4	171.8	156.9	130.8	96.1	57.8	24.6	5.6	0.7	0.7	1.1



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CATALOG NUMBER: FCC-X-2-LD4-1HI-35-UNV-81-87-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	115.5	111.0	98.0	76.0	48.8	22.7	6.7	1.1	1.1	1.1	1.1
115°	96.5	89.8	78.2	58.9	36.1	14.9	3.4	1.1	1.1	1.1	1.1
117.5°	77.1	71.5	63.3	44.7	23.8	9.7	1.9	1.1	1.1	1.1	1.1
120°	60.4	55.1	45.8	30.9	16.0	5.6	0.7	1.1	1.1	1.1	1.1
122.5°	43.2	39.1	30.9	20.1	9.7	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.7	26.5	20.5	12.3	6.0	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.6	16.8	11.9	7.1	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.4	9.3	7.1	4.1	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.0	5.6	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	1.9	1.9	1.5
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
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	1.9	1.9	1.9	1.9
172.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	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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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	292.5	292.5	292.5
2.5°	278.3	273.1	271.6
5°	263.4	254.9	250.0
7.5°	248.5	237.0	231.4
10°	234.7	218.3	212.4
12.5°	218.3	199.3	190.0
15°	202.7	178.1	169.2
17.5°	185.2	157.6	147.2
20°	168.8	137.1	126.3
22.5°	150.2	117.0	105.1
25°	133.4	96.9	83.5
27.5°	114.8	76.4	64.8
30°	97.2	58.5	46.9
32.5°	80.5	42.8	32.4
35°	64.8	29.1	20.5
37.5°	49.9	17.9	10.4
40°	36.1	9.3	4.8
42.5°	24.2	4.5	2.6
45°	14.9	2.2	0.0
47.5°	8.6	0.0	0.0
50°	4.5	0.0	0.0
52.5°	1.9	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	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.2
87.5°	1.9	2.2	2.6
90°	2.2	2.6	2.6
92.5°	2.2	3.0	3.0
95°	2.6	3.0	3.4
97.5°	3.0	3.4	3.4
100°	2.6	3.4	3.7
102.5°	2.2	3.4	3.4
105°	1.9	2.6	3.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.1	1.5	1.9
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°	156.5	152.0	137.1	112.5	78.6	44.0	16.4	3.0	0.7	1.1	1.1
110°	136.4	132.6	117.4	93.5	63.3	32.8	10.8	1.9	1.1	1.1	1.1





107.5°	1.5	2.2	2.6
110°	1.5	1.9	2.2



(END OF REPORT)