

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: P551086

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-87-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: P551086
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-40-UNV-81-87-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

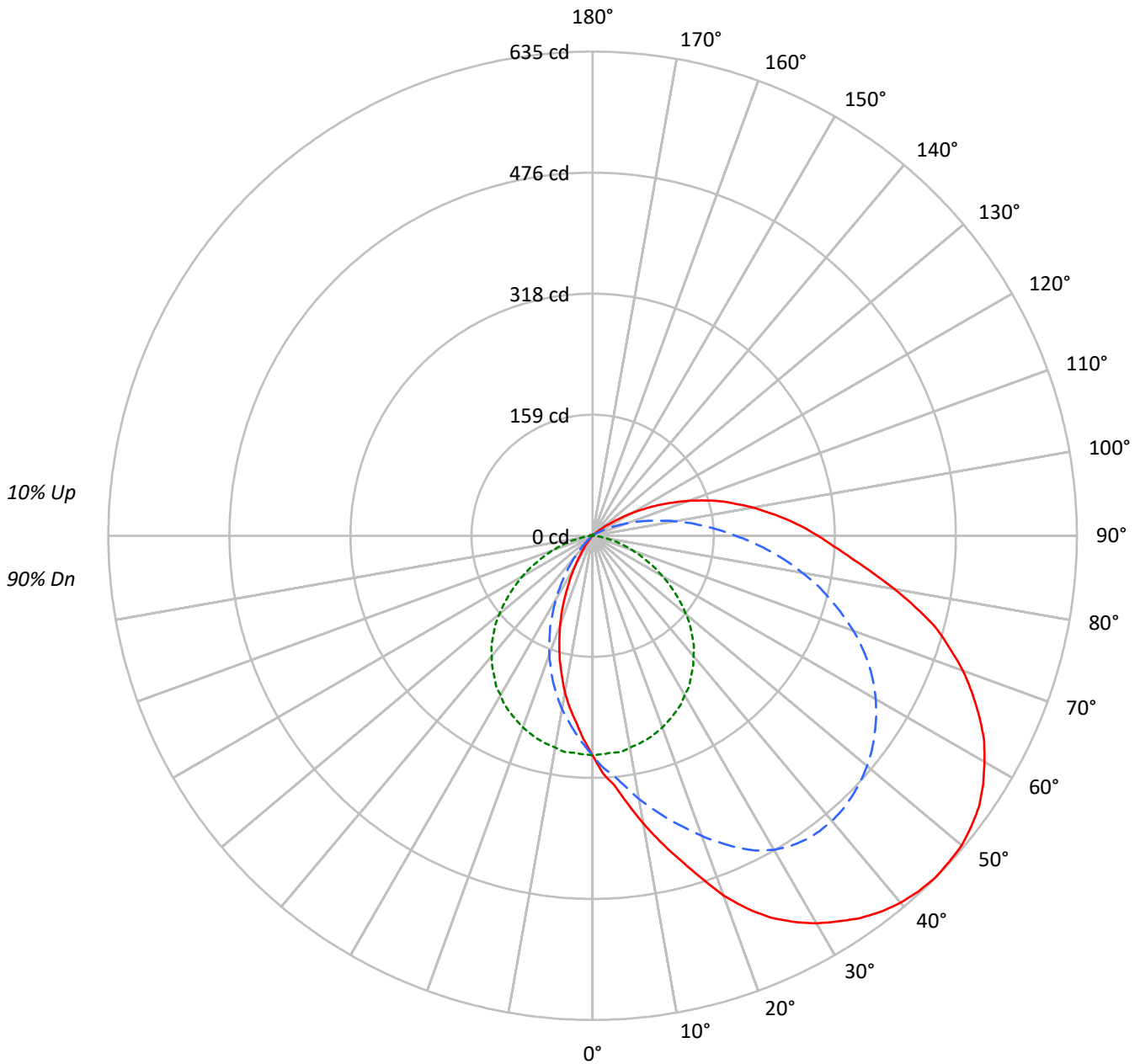
Lumens per Lamp: N/A
Luminaire Lumens: 1423.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{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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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°	3098	3098	3098
5°	3401	3053	2547
10°	3849	3016	2099
15°	4313	2977	1636
20°	4865	2929	1205
25°	5322	2872	791
30°	5662	2797	446
35°	5956	2716	197
40°	6217	2616	48
45°	6441	2491	0
50°	6630	2325	0
55°	6773	2113	0
60°	6845	1869	0
65°	6873	1591	0
70°	6849	1298	0
75°	6762	956	6
80°	6489	584	29
85°	6272	280	40



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.6	1.9
10°-20°	82.6	5.8
20°-30°	133.7	9.4
30°-40°	171.7	12.1
40°-50°	194.4	13.7
50°-60°	201.4	14.2
60°-70°	189.9	13.3
70°-80°	159.2	11.2
80°-90°	115.4	8.1
90°-100°	75.8	5.3
100°-110°	43.8	3.1
110°-120°	19.3	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°	243.8	17.1
0°-40°	415.5	29.2
0°-60°	811.3	57.0
0°-90°	1275.8	89.7
90°-120°	138.9	9.8
90°-150°	146.2	10.3
90°-180°	147.0	10.3
0°-180°	1423.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	288	288	288	288	288	
5°	328	316	286	259	246	33
15°	439	385	276	200	166	127
25°	553	452	256	131	82	255
35°	612	487	225	64	20	384
45°	635	482	184	15	0	490
55°	619	452	133	0	0	552
65°	559	400	79	0	0	553
75°	466	322	34	0	0	489
85°	341	234	6	2	2	291
90°	296	188	2	2	3	162
95°	254	146	1	3	3	199
105°	174	76	1	2	3	184
115°	95	25	1	1	2	95
125°	28	4	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°	287.8	287.8	287.8	287.8	287.8	287.8	287.8	287.8	287.8	287.8	287.8
2.5°	312.0	311.7	310.6	308.7	306.2	301.8	298.1	294.8	290.4	286.7	279.8
5°	328.5	326.7	325.2	323.4	317.5	313.5	306.9	299.6	292.6	285.6	271.7
7.5°	354.9	352.0	349.8	344.7	336.6	327.4	317.2	310.2	305.4	286.0	262.2
10°	383.2	380.6	376.2	367.0	357.1	343.9	329.3	312.8	298.1	282.0	253.7
12.5°	411.0	407.4	401.1	389.4	375.5	359.0	338.8	319.4	298.5	279.4	243.8
15°	438.9	434.9	428.3	414.0	395.6	374.0	349.4	324.9	300.3	276.1	233.6
17.5°	469.3	463.8	453.9	437.8	414.7	387.9	359.0	329.3	299.6	272.1	222.6
20°	502.0	494.3	483.6	462.0	434.9	403.3	368.5	333.7	299.2	267.3	210.1
22.5°	529.1	521.4	509.7	487.3	454.7	416.2	376.6	336.6	297.7	261.8	198.4
25°	552.6	546.3	533.5	507.8	473.4	429.7	384.3	338.8	295.5	255.9	185.9
27.5°	570.9	565.0	550.7	524.3	489.1	441.8	390.1	339.9	292.6	250.1	173.1
30°	587.0	581.2	563.9	536.8	499.8	451.4	396.0	340.3	288.9	241.3	159.1
32.5°	599.5	594.0	576.4	547.4	507.1	458.0	399.3	339.9	284.2	235.0	144.1
35°	612.0	606.5	585.9	555.1	512.6	460.9	401.9	338.1	278.3	224.8	129.8
37.5°	621.5	615.3	594.4	560.3	515.2	461.6	401.5	335.5	272.1	216.3	115.5
40°	628.1	621.5	599.1	563.2	515.9	460.5	398.6	331.1	264.7	205.7	100.5
42.5°	632.5	625.2	601.3	567.6	514.4	457.6	394.2	325.6	256.7	196.5	86.2
45°	634.7	627.0	601.7	563.9	511.9	452.1	387.6	318.6	247.9	184.1	71.9
47.5°	633.6	625.2	599.9	559.9	507.1	446.2	380.2	310.2	237.2	173.1	58.3
50°	631.8	623.0	595.8	554.8	500.5	438.9	372.2	299.9	226.2	159.5	46.2
52.5°	625.9	617.1	591.4	547.4	492.8	430.5	361.2	289.3	214.5	146.3	35.2
55°	618.6	610.5	583.7	540.8	482.9	420.2	350.9	277.9	203.1	132.7	25.3
57.5°	607.2	599.9	574.2	530.2	473.0	408.8	339.5	265.5	188.8	119.2	17.6
60°	593.3	585.9	561.0	518.1	461.6	396.0	327.1	252.6	176.0	105.6	11.0
62.5°	578.6	571.6	545.6	503.1	447.3	382.4	313.5	239.8	162.4	93.1	6.6
65°	559.2	552.6	529.1	485.1	431.6	367.8	298.5	224.4	148.5	79.2	3.7
67.5°	538.6	532.8	508.9	468.6	413.2	351.6	283.1	209.4	133.8	67.1	1.8
70°	516.6	509.3	487.3	446.2	394.5	333.3	266.2	194.0	119.9	55.4	0.0
72.5°	491.0	485.5	464.2	425.3	372.9	313.9	249.0	177.1	104.5	44.0	0.4
75°	466.0	459.1	439.6	403.0	351.6	293.3	229.9	161.3	89.5	33.7	0.4
77.5°	433.8	431.6	413.2	377.7	331.5	273.5	209.0	142.3	75.2	24.2	0.4
80°	401.5	399.3	385.0	352.4	308.0	250.1	189.6	124.3	61.2	16.1	0.4
82.5°	369.6	366.7	353.1	326.0	284.2	230.3	169.4	106.3	48.4	9.9	0.4
85°	341.0	337.3	322.7	297.7	259.6	207.9	148.5	88.7	35.9	5.5	0.7
87.5°	316.4	313.9	297.7	272.1	234.7	187.0	130.2	71.9	25.3	2.6	1.1
90°	295.5	290.0	275.7	248.6	211.2	163.9	110.7	57.6	16.9	1.5	1.5
92.5°	275.0	270.2	254.5	226.6	190.3	144.1	92.0	44.0	10.6	0.7	1.8
95°	253.7	248.6	233.2	207.5	169.0	123.9	75.5	32.3	5.9	0.7	1.8
97.5°	232.8	228.1	211.9	186.3	150.0	106.3	59.8	22.7	2.9	0.7	1.5
100°	213.4	207.9	193.2	167.6	130.9	88.7	46.2	14.7	1.8	0.7	1.5
102.5°	192.9	188.5	173.4	148.5	111.1	72.2	34.5	9.2	0.7	0.7	1.1
105°	174.5	169.0	154.4	128.7	94.6	56.8	24.2	5.5	0.7	0.7	1.1



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CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-87-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	113.7	109.3	96.4	74.8	48.0	22.4	6.6	1.1	1.1	1.1	1.1
115°	95.0	88.4	77.0	57.9	35.6	14.7	3.3	1.1	1.1	1.1	1.1
117.5°	75.9	70.4	62.3	44.0	23.5	9.5	1.8	1.1	1.1	1.1	1.1
120°	59.4	54.3	45.1	30.4	15.8	5.5	0.7	1.1	1.1	1.1	1.1
122.5°	42.5	38.5	30.4	19.8	9.5	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.2	26.0	20.2	12.1	5.9	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.3	16.5	11.7	7.0	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.3	9.2	7.0	4.0	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	5.9	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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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	287.8	287.8	287.8
2.5°	273.9	268.8	267.3
5°	259.2	250.8	246.0
7.5°	244.6	233.2	227.7
10°	231.0	214.9	209.0
12.5°	214.9	196.2	187.0
15°	199.5	175.3	166.5
17.5°	182.2	155.1	144.8
20°	166.1	134.9	124.3
22.5°	147.8	115.1	103.4
25°	131.3	95.3	82.1
27.5°	112.9	75.2	63.8
30°	95.7	57.6	46.2
32.5°	79.2	42.2	31.9
35°	63.8	28.6	20.2
37.5°	49.1	17.6	10.3
40°	35.6	9.2	4.8
42.5°	23.8	4.4	2.6
45°	14.7	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



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CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-87-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°	154.0	149.6	134.9	110.7	77.4	43.3	16.1	2.9	0.7	1.1	1.1
110°	134.2	130.5	115.5	92.0	62.3	32.3	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)