

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: P551087

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-88-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: P551087
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-81-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

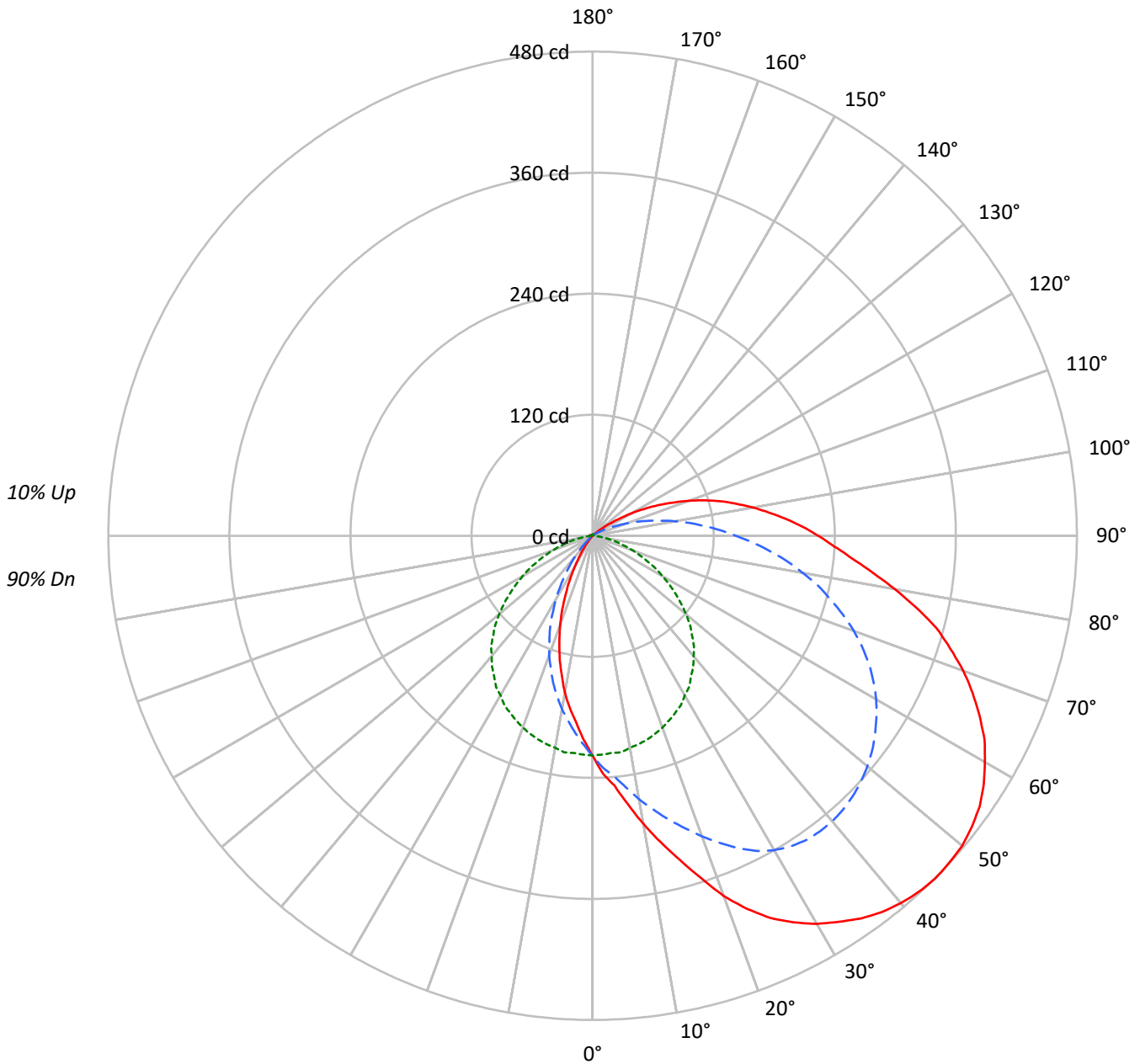
Lumens per Lamp: N/A
Luminaire Lumens: 1077.0 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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				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°	2345	2345	2345
5°	2575	2311	1928
10°	2913	2282	1589
15°	3265	2254	1238
20°	3682	2216	912
25°	4028	2174	599
30°	4285	2117	338
35°	4508	2055	149
40°	4706	1980	36
45°	4875	1885	0
50°	5018	1759	0
55°	5126	1600	0
60°	5180	1414	0
65°	5201	1203	0
70°	5184	982	0
75°	5118	723	4
80°	4911	443	23
85°	4747	214	31



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.9	1.9
10°-20°	62.5	5.8
20°-30°	101.2	9.4
30°-40°	130.0	12.1
40°-50°	147.1	13.7
50°-60°	152.4	14.2
60°-70°	143.8	13.3
70°-80°	120.5	11.2
80°-90°	87.3	8.1
90°-100°	57.4	5.3
100°-110°	33.1	3.1
110°-120°	14.6	1.4
120°-130°	3.9	0.4
130°-140°	0.9	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	184.5	17.1
0°-40°	314.5	29.2
0°-60°	614.1	57.0
0°-90°	965.6	89.7
90°-120°	105.2	9.8
90°-150°	110.6	10.3
90°-180°	111.0	10.3
0°-180°	1077.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	218	218	218	218	218	
5°	249	239	216	196	186	25
15°	332	291	209	151	126	96
25°	418	342	194	99	62	193
35°	463	368	170	48	15	290
45°	480	365	139	11	0	371
55°	468	342	100	0	0	418
65°	423	302	60	0	0	419
75°	353	244	26	0	0	370
85°	258	177	4	1	2	220
90°	224	142	1	2	2	123
95°	192	111	1	2	2	151
105°	132	57	1	1	2	139
115°	72	19	1	1	1	72
125°	21	3	1	1	1	21
135°	1	1	1	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	1	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°	217.9	217.9	217.9	217.9	217.9	217.9	217.9	217.9	217.9	217.9	217.9
2.5°	236.2	235.9	235.1	233.7	231.7	228.4	225.6	223.1	219.8	217.0	211.7
5°	248.7	247.3	246.2	244.8	240.3	237.3	232.3	226.7	221.5	216.2	205.6
7.5°	268.6	266.4	264.8	260.9	254.8	247.8	240.1	234.8	231.2	216.5	198.4
10°	290.0	288.1	284.7	277.8	270.3	260.3	249.2	236.7	225.6	213.4	192.0
12.5°	311.1	308.3	303.6	294.7	284.2	271.7	256.4	241.7	225.9	211.5	184.5
15°	332.2	329.1	324.1	313.3	299.4	283.1	264.5	245.9	227.3	209.0	176.8
17.5°	355.2	351.1	343.6	331.4	313.9	293.6	271.7	249.2	226.7	205.9	168.5
20°	379.9	374.1	366.0	349.7	329.1	305.3	278.9	252.5	226.5	202.3	159.0
22.5°	400.5	394.6	385.7	368.8	344.1	315.0	285.0	254.8	225.3	198.1	150.1
25°	418.2	413.5	403.8	384.4	358.3	325.3	290.8	256.4	223.7	193.7	140.7
27.5°	432.1	427.7	416.8	396.9	370.2	334.4	295.3	257.3	221.5	189.3	131.0
30°	444.3	439.9	426.8	406.3	378.3	341.6	299.7	257.5	218.7	182.6	120.4
32.5°	453.7	449.6	436.3	414.3	383.8	346.6	302.2	257.3	215.1	177.9	109.1
35°	463.2	459.0	443.5	420.2	388.0	348.8	304.2	255.9	210.6	170.1	98.2
37.5°	470.4	465.7	449.9	424.0	389.9	349.4	303.9	253.9	205.9	163.7	87.4
40°	475.4	470.4	453.5	426.3	390.5	348.6	301.7	250.6	200.4	155.7	76.0
42.5°	478.7	473.2	455.1	429.6	389.4	346.3	298.3	246.4	194.3	148.7	65.2
45°	480.4	474.6	455.4	426.8	387.4	342.2	293.3	241.2	187.6	139.3	54.4
47.5°	479.6	473.2	454.0	423.8	383.8	337.7	287.8	234.8	179.6	131.0	44.1
50°	478.2	471.5	451.0	419.9	378.8	332.2	281.7	227.0	171.2	120.7	35.0
52.5°	473.7	467.1	447.6	414.3	373.0	325.8	273.4	219.0	162.3	110.7	26.6
55°	468.2	462.1	441.8	409.3	365.5	318.0	265.6	210.4	153.7	100.5	19.1
57.5°	459.6	454.0	434.6	401.3	358.0	309.4	257.0	200.9	142.9	90.2	13.3
60°	449.0	443.5	424.6	392.1	349.4	299.7	247.5	191.2	133.2	79.9	8.3
62.5°	437.9	432.6	412.9	380.8	338.6	289.5	237.3	181.5	122.9	70.5	5.0
65°	423.2	418.2	400.5	367.2	326.6	278.4	225.9	169.8	112.4	59.9	2.8
67.5°	407.7	403.2	385.2	354.7	312.8	266.1	214.2	158.5	101.3	50.8	1.4
70°	391.0	385.5	368.8	337.7	298.6	252.3	201.5	146.8	90.7	41.9	0.0
72.5°	371.6	367.4	351.3	321.9	282.2	237.6	188.4	134.0	79.1	33.3	0.3
75°	352.7	347.5	332.7	305.0	266.1	222.0	174.0	122.1	67.7	25.5	0.3
77.5°	328.3	326.6	312.8	285.8	250.9	207.0	158.2	107.7	56.9	18.3	0.3
80°	303.9	302.2	291.4	266.7	233.1	189.3	143.5	94.1	46.3	12.2	0.3
82.5°	279.7	277.5	267.2	246.7	215.1	174.3	128.2	80.5	36.6	7.5	0.3
85°	258.1	255.3	244.2	225.3	196.5	157.4	112.4	67.2	27.2	4.2	0.6
87.5°	239.5	237.6	225.3	205.9	177.6	141.5	98.5	54.4	19.1	1.9	0.8
90°	223.7	219.5	208.7	188.2	159.9	124.1	83.8	43.6	12.8	1.1	1.1
92.5°	208.1	204.5	192.6	171.5	144.0	109.1	69.7	33.3	8.0	0.6	1.4
95°	192.0	188.2	176.5	157.1	127.9	93.8	57.2	24.4	4.4	0.6	1.4
97.5°	176.2	172.6	160.4	141.0	113.5	80.5	45.2	17.2	2.2	0.6	1.1
100°	161.5	157.4	146.3	126.8	99.1	67.2	35.0	11.1	1.4	0.6	1.1
102.5°	146.0	142.6	131.3	112.4	84.1	54.7	26.1	6.9	0.6	0.6	0.8
105°	132.1	127.9	116.8	97.4	71.6	43.0	18.3	4.2	0.6	0.6	0.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	86.0	82.7	73.0	56.6	36.4	16.9	5.0	0.8	0.8	0.8	0.8
115°	71.9	66.9	58.3	43.8	26.9	11.1	2.5	0.8	0.8	0.8	0.8
117.5°	57.4	53.3	47.2	33.3	17.8	7.2	1.4	0.8	0.8	0.8	0.8
120°	45.0	41.1	34.1	23.0	11.9	4.2	0.6	0.8	0.8	0.8	0.8
122.5°	32.2	29.1	23.0	15.0	7.2	1.9	0.8	0.8	1.1	1.1	0.8
125°	21.4	19.7	15.3	9.2	4.4	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	13.9	12.5	8.9	5.3	1.9	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.8	6.9	5.3	3.1	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.4	4.2	2.8	0.6	0.8	0.8	0.8	1.1	1.1	1.1	1.1
135°	1.1	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1
137.5°	0.3	0.3	0.6	0.6	0.8	0.8	1.1	1.4	1.4	1.4	1.1
140°	0.3	0.3	0.6	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.1
142.5°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
145°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.1	1.1	1.1
147.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
150°	0.3	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
152.5°	0.3	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
155°	0.6	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
157.5°	0.6	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
160°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.6	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1
167.5°	0.6	0.6	0.6	0.8	0.8	0.8	1.1	1.1	1.1	1.1	1.1
170°	0.6	0.6	0.6	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.4
172.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
175°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
177.5°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.1
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	217.9	217.9	217.9
2.5°	207.3	203.4	202.3
5°	196.2	189.8	186.2
7.5°	185.1	176.5	172.3
10°	174.8	162.6	158.2
12.5°	162.6	148.5	141.5
15°	151.0	132.7	126.0
17.5°	137.9	117.4	109.6
20°	125.7	102.1	94.1
22.5°	111.8	87.1	78.3
25°	99.4	72.2	62.2
27.5°	85.5	56.9	48.3
30°	72.4	43.6	35.0
32.5°	59.9	31.9	24.1
35°	48.3	21.6	15.3
37.5°	37.2	13.3	7.8
40°	26.9	6.9	3.6
42.5°	18.0	3.3	1.9
45°	11.1	1.7	0.0
47.5°	6.4	0.0	0.0
50°	3.3	0.0	0.0
52.5°	1.4	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	0.8
80°	0.6	1.1	1.4
82.5°	1.1	1.4	1.4
85°	1.1	1.4	1.7
87.5°	1.4	1.7	1.9
90°	1.7	1.9	1.9
92.5°	1.7	2.2	2.2
95°	1.9	2.2	2.5
97.5°	2.2	2.5	2.5
100°	1.9	2.5	2.8
102.5°	1.7	2.5	2.5
105°	1.4	1.9	2.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.1	1.4	1.4
115°	0.8	1.1	1.4
117.5°	0.8	1.1	1.1
120°	0.8	0.8	1.1
122.5°	0.8	0.8	1.1
125°	0.8	0.8	1.1
127.5°	1.1	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.1	0.8	0.8
135°	1.1	0.8	0.8
137.5°	1.1	0.8	0.8
140°	1.1	0.8	0.8
142.5°	1.1	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.6
152.5°	0.8	0.6	0.6
155°	0.8	0.6	0.3
157.5°	1.1	0.6	0.3
160°	0.8	0.6	0.3
162.5°	0.8	0.6	0.3
165°	0.8	0.6	0.0
167.5°	0.8	0.6	0.3
170°	0.8	0.6	0.3
172.5°	0.8	0.6	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	116.6	113.2	102.1	83.8	58.6	32.7	12.2	2.2	0.6	0.8	0.8
110°	101.6	98.8	87.4	69.7	47.2	24.4	8.0	1.4	0.8	0.8	0.8





107.5°	1.1	1.7	1.9
110°	1.1	1.4	1.7



(END OF REPORT)