

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: P551144

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-81-84-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: P551144
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-81-84-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

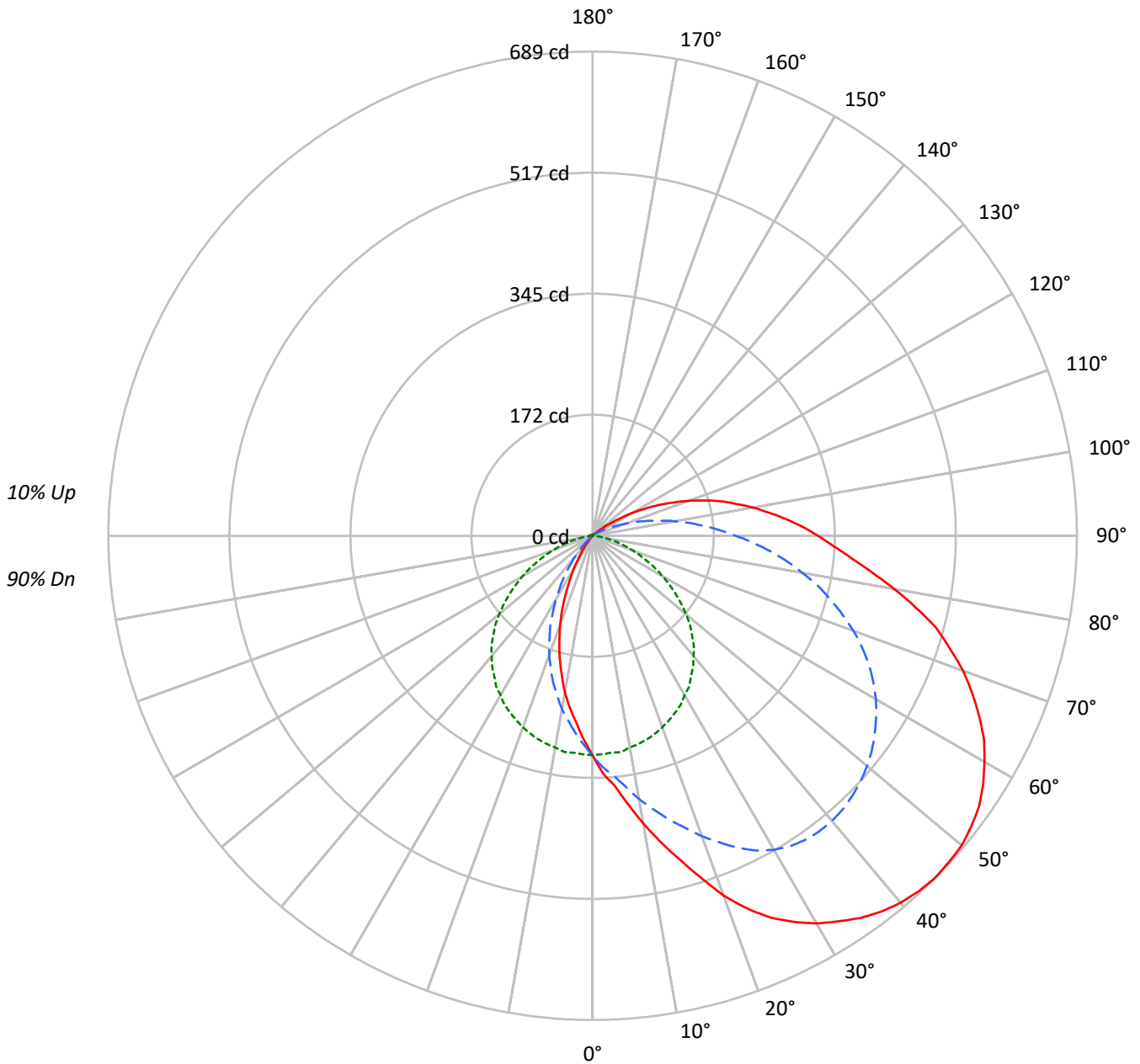
Lumens per Lamp: N/A
Luminaire Lumens: 1544.0 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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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CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-81-84-ED1D

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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°	3362	3362	3362
5°	3691	3312	2764
10°	4176	3271	2278
15°	4680	3230	1775
20°	5279	3177	1307
25°	5775	3116	858
30°	6144	3035	483
35°	6463	2947	213
40°	6746	2839	51
45°	6989	2702	0
50°	7193	2523	0
55°	7349	2293	0
60°	7426	2028	0
65°	7457	1725	0
70°	7433	1408	0
75°	7338	1038	6
80°	7040	635	32
85°	6805	305	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.9	1.9
10°-20°	89.6	5.8
20°-30°	145.1	9.4
30°-40°	186.3	12.1
40°-50°	210.9	13.7
50°-60°	218.5	14.2
60°-70°	206.1	13.3
70°-80°	172.7	11.2
80°-90°	125.2	8.1
90°-100°	82.3	5.3
100°-110°	47.5	3.1
110°-120°	21.0	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	264.5	17.1
0°-40°	450.9	29.2
0°-60°	880.3	57.0
0°-90°	1384.3	89.7
90°-120°	150.8	9.8
90°-150°	158.6	10.3
90°-180°	160.0	10.4
0°-180°	1544.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	312	312	312	312	312	
5°	356	342	310	281	267	36
15°	476	418	300	216	181	137
25°	600	490	278	142	89	277
35°	664	528	244	69	22	416
45°	689	523	200	16	0	532
55°	671	490	144	0	0	599
65°	607	434	86	0	0	600
75°	506	350	37	0	0	530
85°	370	254	6	2	2	316
90°	321	204	2	2	3	176
95°	275	159	1	3	4	216
105°	189	82	1	2	3	200
115°	103	27	1	1	2	103
125°	31	4	2	1	2	31
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°	312.3	312.3	312.3	312.3	312.3	312.3	312.3	312.3	312.3	312.3	312.3
2.5°	338.6	338.2	337.0	335.0	332.2	327.4	323.5	319.9	315.1	311.1	303.6
5°	356.5	354.5	352.9	350.9	344.5	340.2	333.0	325.0	317.5	309.9	294.8
7.5°	385.1	381.9	379.6	374.0	365.2	355.3	344.1	336.6	331.4	310.3	284.5
10°	415.8	413.0	408.2	398.3	387.5	373.2	357.3	339.4	323.5	305.9	275.3
12.5°	446.0	442.0	435.3	422.5	407.4	389.5	367.6	346.5	323.9	303.2	264.6
15°	476.2	471.9	464.7	449.2	429.3	405.8	379.2	352.5	325.8	299.6	253.4
17.5°	509.3	503.3	492.5	475.0	450.0	420.9	389.5	357.3	325.0	295.2	241.5
20°	544.7	536.3	524.8	501.3	471.9	437.6	399.8	362.0	324.6	290.0	228.0
22.5°	574.1	565.7	553.0	528.7	493.3	451.6	408.6	365.2	323.1	284.1	215.2
25°	599.6	592.8	578.9	551.0	513.6	466.3	416.9	367.6	320.7	277.7	201.7
27.5°	619.5	613.1	597.6	568.9	530.7	479.4	423.3	368.8	317.5	271.3	187.8
30°	637.0	630.6	611.9	582.5	542.3	489.8	429.7	369.2	313.5	261.8	172.7
32.5°	650.5	644.5	625.4	594.0	550.2	496.9	433.3	368.8	308.3	255.0	156.4
35°	664.0	658.0	635.8	602.3	556.2	500.1	436.0	366.8	302.0	243.9	140.8
37.5°	674.4	667.6	644.9	607.9	559.0	500.9	435.6	364.0	295.2	234.7	125.3
40°	681.5	674.4	650.1	611.1	559.8	499.7	432.5	359.3	287.2	223.2	109.0
42.5°	686.3	678.3	652.5	615.9	558.2	496.5	427.7	353.3	278.5	213.2	93.5
45°	688.7	680.3	652.9	611.9	555.4	490.6	420.5	345.7	268.9	199.7	78.0
47.5°	687.5	678.3	650.9	607.5	550.2	484.2	412.6	336.6	257.4	187.8	63.3
50°	685.5	676.0	646.5	602.0	543.1	476.2	403.8	325.4	245.5	173.1	50.1
52.5°	679.1	669.6	641.7	594.0	534.7	467.1	391.9	313.9	232.7	158.7	38.2
55°	671.2	662.4	633.4	586.8	524.0	455.9	380.7	301.6	220.4	144.0	27.5
57.5°	658.8	650.9	623.0	575.3	513.2	443.6	368.4	288.0	204.9	129.3	19.1
60°	643.7	635.8	608.7	562.2	500.9	429.7	354.9	274.1	191.0	114.6	11.9
62.5°	627.8	620.3	592.0	545.9	485.4	415.0	340.2	260.2	176.2	101.1	7.2
65°	606.7	599.6	574.1	526.4	468.3	399.0	323.9	243.5	161.1	85.9	4.0
67.5°	584.4	578.1	552.2	508.5	448.4	381.5	307.1	227.2	145.2	72.8	2.0
70°	560.6	552.6	528.7	484.2	428.1	361.6	288.8	210.5	130.1	60.1	0.0
72.5°	532.7	526.8	503.7	461.5	404.6	340.6	270.1	192.2	113.4	47.7	0.4
75°	505.7	498.1	477.0	437.2	381.5	318.3	249.5	175.1	97.1	36.6	0.4
77.5°	470.7	468.3	448.4	409.8	359.7	296.8	226.8	154.4	81.6	26.3	0.4
80°	435.6	433.3	417.7	382.3	334.2	271.3	205.7	134.9	66.4	17.5	0.4
82.5°	401.0	397.9	383.1	353.7	308.3	249.9	183.8	115.4	52.5	10.7	0.4
85°	370.0	366.0	350.1	323.1	281.7	225.6	161.1	96.3	39.0	6.0	0.8
87.5°	343.3	340.6	323.1	295.2	254.6	202.9	141.2	78.0	27.5	2.8	1.2
90°	320.7	314.7	299.2	269.7	229.2	177.8	120.2	62.5	18.3	1.6	1.6
92.5°	298.4	293.2	276.1	245.9	206.5	156.4	99.9	47.7	11.5	0.8	2.0
95°	275.3	269.7	253.0	225.2	183.4	134.5	82.0	35.0	6.4	0.8	2.0
97.5°	252.6	247.5	230.0	202.1	162.7	115.4	64.8	24.7	3.2	0.8	1.6
100°	231.6	225.6	209.7	181.8	142.0	96.3	50.1	15.9	2.0	0.8	1.6
102.5°	209.3	204.5	188.2	161.1	120.5	78.4	37.4	9.9	0.8	0.8	1.2
105°	189.4	183.4	167.5	139.6	102.6	61.7	26.3	6.0	0.8	0.8	1.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	123.3	118.6	104.6	81.2	52.1	24.3	7.2	1.2	1.2	1.2	1.2
115°	103.0	95.9	83.5	62.9	38.6	15.9	3.6	1.2	1.2	1.2	1.2
117.5°	82.4	76.4	67.6	47.7	25.5	10.3	2.0	1.2	1.2	1.2	1.2
120°	64.5	58.9	48.9	33.0	17.1	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.2	41.8	33.0	21.5	10.3	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.6	28.2	21.9	13.1	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.9	17.9	12.7	7.6	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.1	9.9	7.6	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
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°	312.3	312.3	312.3
2.5°	297.2	291.6	290.0
5°	281.3	272.1	267.0
7.5°	265.4	253.0	247.1
10°	250.6	233.1	226.8
12.5°	233.1	212.9	202.9
15°	216.4	190.2	180.6
17.5°	197.7	168.3	157.2
20°	180.2	146.4	134.9
22.5°	160.3	124.9	112.2
25°	142.4	103.4	89.1
27.5°	122.5	81.6	69.2
30°	103.8	62.5	50.1
32.5°	85.9	45.8	34.6
35°	69.2	31.0	21.9
37.5°	53.3	19.1	11.1
40°	38.6	9.9	5.2
42.5°	25.9	4.8	2.8
45°	15.9	2.4	0.0
47.5°	9.2	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	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°	1.6	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



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







107.5°	167.1	162.3	146.4	120.2	83.9	46.9	17.5	3.2	0.8	1.2	1.2
110°	145.6	141.6	125.3	99.9	67.6	35.0	11.5	2.0	1.2	1.2	1.2





107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)