

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: P551083

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-86-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: P551083
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-81-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

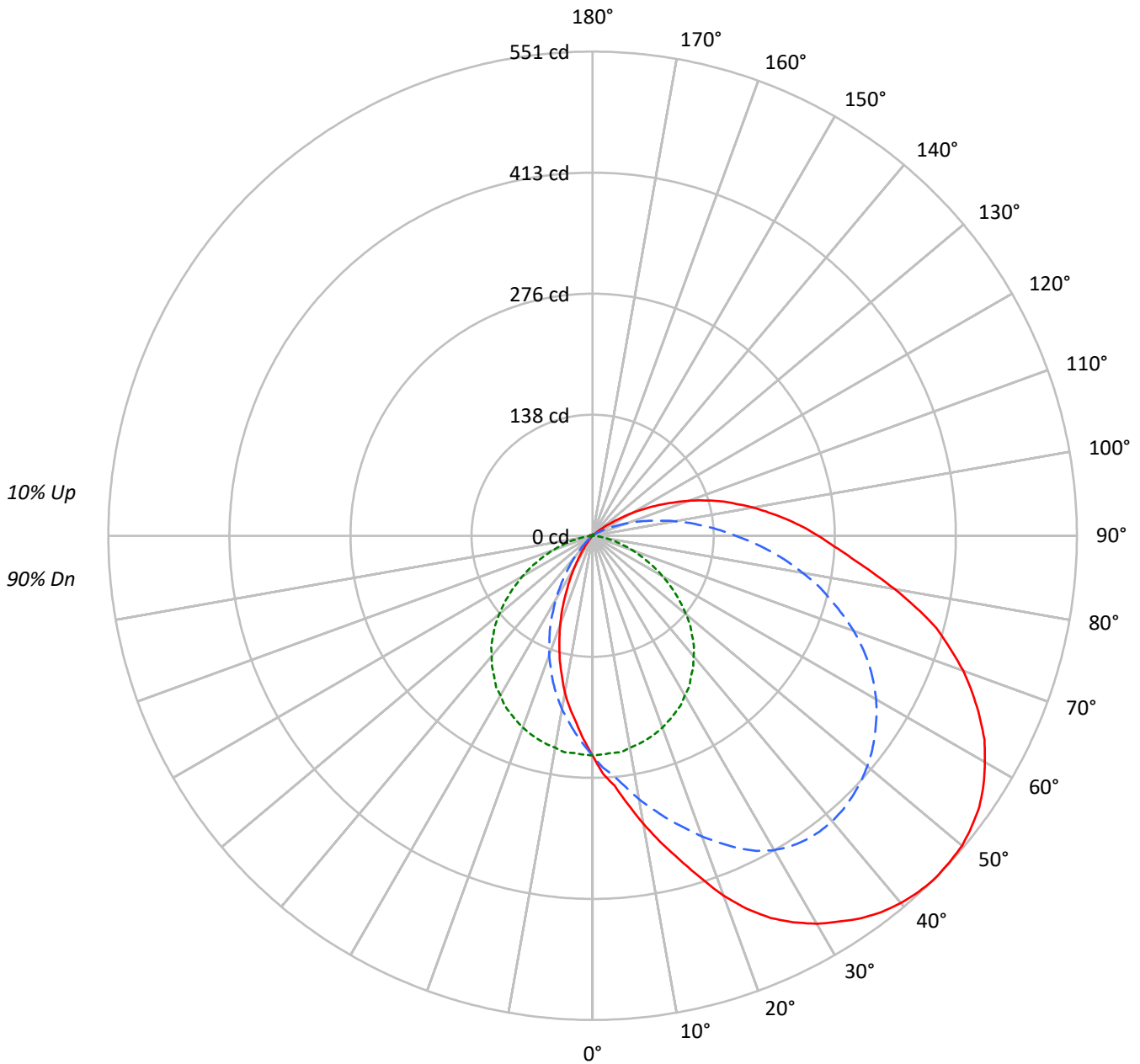
Lumens per Lamp: N/A
Luminaire Lumens: 1236.1 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	2691	2691	2691
5°	2955	2652	2212
10°	3343	2619	1823
15°	3746	2586	1421
20°	4225	2544	1047
25°	4623	2495	687
30°	4918	2430	387
35°	5174	2359	170
40°	5401	2273	41
45°	5595	2164	0
50°	5759	2019	0
55°	5883	1836	0
60°	5945	1623	0
65°	5970	1382	0
70°	5949	1127	0
75°	5874	831	4
80°	5635	508	26
85°	5448	244	35



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.9	1.9
10°-20°	71.7	5.8
20°-30°	116.1	9.4
30°-40°	149.2	12.1
40°-50°	168.8	13.7
50°-60°	174.9	14.2
60°-70°	165.0	13.3
70°-80°	138.3	11.2
80°-90°	100.2	8.1
90°-100°	65.9	5.3
100°-110°	38.0	3.1
110°-120°	16.8	1.4
120°-130°	4.6	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	211.8	17.1
0°-40°	360.9	29.2
0°-60°	704.7	57.0
0°-90°	1108.2	89.7
90°-120°	120.7	9.8
90°-150°	127.0	10.3
90°-180°	128.0	10.4
0°-180°	1236.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	250	250	250	250	250	
5°	285	274	248	225	214	29
15°	381	334	240	173	145	110
25°	480	392	222	114	71	222
35°	532	423	195	55	18	333
45°	551	419	160	13	0	426
55°	537	392	115	0	0	480
65°	486	347	69	0	0	481
75°	405	280	29	0	0	425
85°	296	203	5	1	2	253
90°	257	163	1	2	2	141
95°	220	127	1	2	3	173
105°	152	66	1	2	2	160
115°	82	22	1	1	2	83
125°	24	3	1	1	1	24
135°	1	1	2	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	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°	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
2.5°	271.0	270.7	269.8	268.2	265.9	262.1	258.9	256.1	252.2	249.1	243.0
5°	285.4	283.8	282.5	280.9	275.8	272.3	266.6	260.2	254.2	248.1	236.0
7.5°	308.3	305.7	303.8	299.4	292.4	284.4	275.5	269.4	265.3	248.4	227.7
10°	332.8	330.6	326.8	318.8	310.2	298.7	286.0	271.7	258.9	244.9	220.4
12.5°	357.0	353.8	348.4	338.2	326.1	311.8	294.3	277.4	259.2	242.7	211.8
15°	381.2	377.7	372.0	359.6	343.6	324.9	303.5	282.2	260.8	239.8	202.9
17.5°	407.7	402.9	394.3	380.3	360.2	337.0	311.8	286.0	260.2	236.3	193.3
20°	436.0	429.3	420.1	401.3	377.7	350.3	320.1	289.8	259.9	232.2	182.5
22.5°	459.6	452.9	442.7	423.3	394.9	361.5	327.1	292.4	258.6	227.4	172.3
25°	480.0	474.5	463.4	441.1	411.2	373.3	333.8	294.3	256.7	222.3	161.5
27.5°	495.9	490.8	478.4	455.4	424.9	383.8	338.9	295.2	254.2	217.2	150.3
30°	509.9	504.8	489.8	466.3	434.1	392.1	344.0	295.6	251.0	209.6	138.2
32.5°	520.7	516.0	500.7	475.5	440.5	397.8	346.8	295.2	246.8	204.2	125.2
35°	531.6	526.8	508.9	482.2	445.2	400.3	349.1	293.6	241.7	195.2	112.7
37.5°	539.8	534.4	516.3	486.6	447.5	401.0	348.7	291.4	236.3	187.9	100.3
40°	545.6	539.8	520.4	489.2	448.1	400.0	346.2	287.6	229.9	178.7	87.3
42.5°	549.4	543.0	522.3	493.0	446.8	397.5	342.4	282.8	222.9	170.7	74.8
45°	551.3	544.6	522.6	489.8	444.6	392.7	336.6	276.8	215.3	159.9	62.4
47.5°	550.3	543.0	521.0	486.3	440.5	387.6	330.3	269.4	206.1	150.3	50.6
50°	548.8	541.1	517.5	481.9	434.7	381.2	323.3	260.5	196.5	138.5	40.1
52.5°	543.7	536.0	513.7	475.5	428.0	373.9	313.7	251.3	186.3	127.1	30.6
55°	537.3	530.3	507.0	469.8	419.4	365.0	304.8	241.4	176.4	115.3	22.0
57.5°	527.4	521.0	498.8	460.5	410.8	355.1	294.9	230.6	164.0	103.5	15.3
60°	515.3	508.9	487.3	450.0	401.0	344.0	284.1	219.4	152.9	91.7	9.6
62.5°	502.6	496.5	473.9	437.0	388.6	332.2	272.3	208.3	141.1	80.9	5.7
65°	485.7	480.0	459.6	421.4	374.9	319.4	259.2	194.9	129.0	68.8	3.2
67.5°	467.9	462.8	442.1	407.0	358.9	305.4	245.9	181.9	116.2	58.3	1.6
70°	448.7	442.4	423.3	387.6	342.7	289.5	231.2	168.5	104.1	48.1	0.0
72.5°	426.5	421.7	403.2	369.4	323.9	272.6	216.3	153.8	90.8	38.2	0.3
75°	404.8	398.7	381.9	350.0	305.4	254.8	199.7	140.1	77.7	29.3	0.3
77.5°	376.8	374.9	358.9	328.0	287.9	237.6	181.5	123.6	65.3	21.0	0.3
80°	348.7	346.8	334.4	306.1	267.5	217.2	164.7	108.0	53.2	14.0	0.3
82.5°	321.0	318.5	306.7	283.1	246.8	200.0	147.1	92.4	42.0	8.6	0.3
85°	296.2	293.0	280.3	258.6	225.5	180.6	129.0	77.1	31.2	4.8	0.6
87.5°	274.9	272.6	258.6	236.3	203.8	162.4	113.1	62.4	22.0	2.2	1.0
90°	256.7	251.9	239.5	215.9	183.4	142.4	96.2	50.0	14.7	1.3	1.3
92.5°	238.9	234.7	221.0	196.8	165.3	125.2	79.9	38.2	9.2	0.6	1.6
95°	220.4	215.9	202.6	180.3	146.8	107.6	65.6	28.0	5.1	0.6	1.6
97.5°	202.2	198.1	184.1	161.8	130.3	92.4	51.9	19.7	2.5	0.6	1.3
100°	185.4	180.6	167.8	145.5	113.7	77.1	40.1	12.7	1.6	0.6	1.3
102.5°	167.5	163.7	150.6	129.0	96.5	62.7	29.9	8.0	0.6	0.6	1.0
105°	151.6	146.8	134.1	111.8	82.2	49.4	21.0	4.8	0.6	0.6	1.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	98.7	94.9	83.8	65.0	41.7	19.4	5.7	1.0	1.0	1.0	1.0
115°	82.5	76.8	66.9	50.3	30.9	12.7	2.9	1.0	1.0	1.0	1.0
117.5°	65.9	61.1	54.1	38.2	20.4	8.3	1.6	1.0	1.0	1.0	1.0
120°	51.6	47.1	39.2	26.4	13.7	4.8	0.6	1.0	1.0	1.0	1.0
122.5°	36.9	33.4	26.4	17.2	8.3	2.2	1.0	1.0	1.3	1.3	1.0
125°	24.5	22.6	17.5	10.5	5.1	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	15.9	14.3	10.2	6.1	2.2	1.0	1.0	1.3	1.3	1.3	1.0
130°	8.9	8.0	6.1	3.5	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.1	4.8	3.2	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	250.0	250.0	250.0
2.5°	237.9	233.5	232.2
5°	225.2	217.8	213.7
7.5°	212.4	202.6	197.8
10°	200.6	186.6	181.5
12.5°	186.6	170.4	162.4
15°	173.3	152.2	144.6
17.5°	158.3	134.7	125.8
20°	144.3	117.2	108.0
22.5°	128.4	100.0	89.8
25°	114.0	82.8	71.3
27.5°	98.1	65.3	55.4
30°	83.1	50.0	40.1
32.5°	68.8	36.6	27.7
35°	55.4	24.8	17.5
37.5°	42.7	15.3	8.9
40°	30.9	8.0	4.1
42.5°	20.7	3.8	2.2
45°	12.7	1.9	0.0
47.5°	7.3	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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	1.0
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.5	2.5
95°	2.2	2.5	2.9
97.5°	2.5	2.9	2.9
100°	2.2	2.9	3.2
102.5°	1.9	2.9	2.9
105°	1.6	2.2	2.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.6
152.5°	1.0	0.6	0.6
155°	1.0	0.6	0.3
157.5°	1.3	0.6	0.3
160°	1.0	0.6	0.3
162.5°	1.0	0.6	0.3
165°	1.0	0.6	0.0
167.5°	1.0	0.6	0.3
170°	1.0	0.6	0.3
172.5°	1.0	0.6	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	133.8	129.9	117.2	96.2	67.2	37.6	14.0	2.5	0.6	1.0	1.0
110°	116.6	113.4	100.3	79.9	54.1	28.0	9.2	1.6	1.0	1.0	1.0





107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)