

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: P551099

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-82-86-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: P551099
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-82-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 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

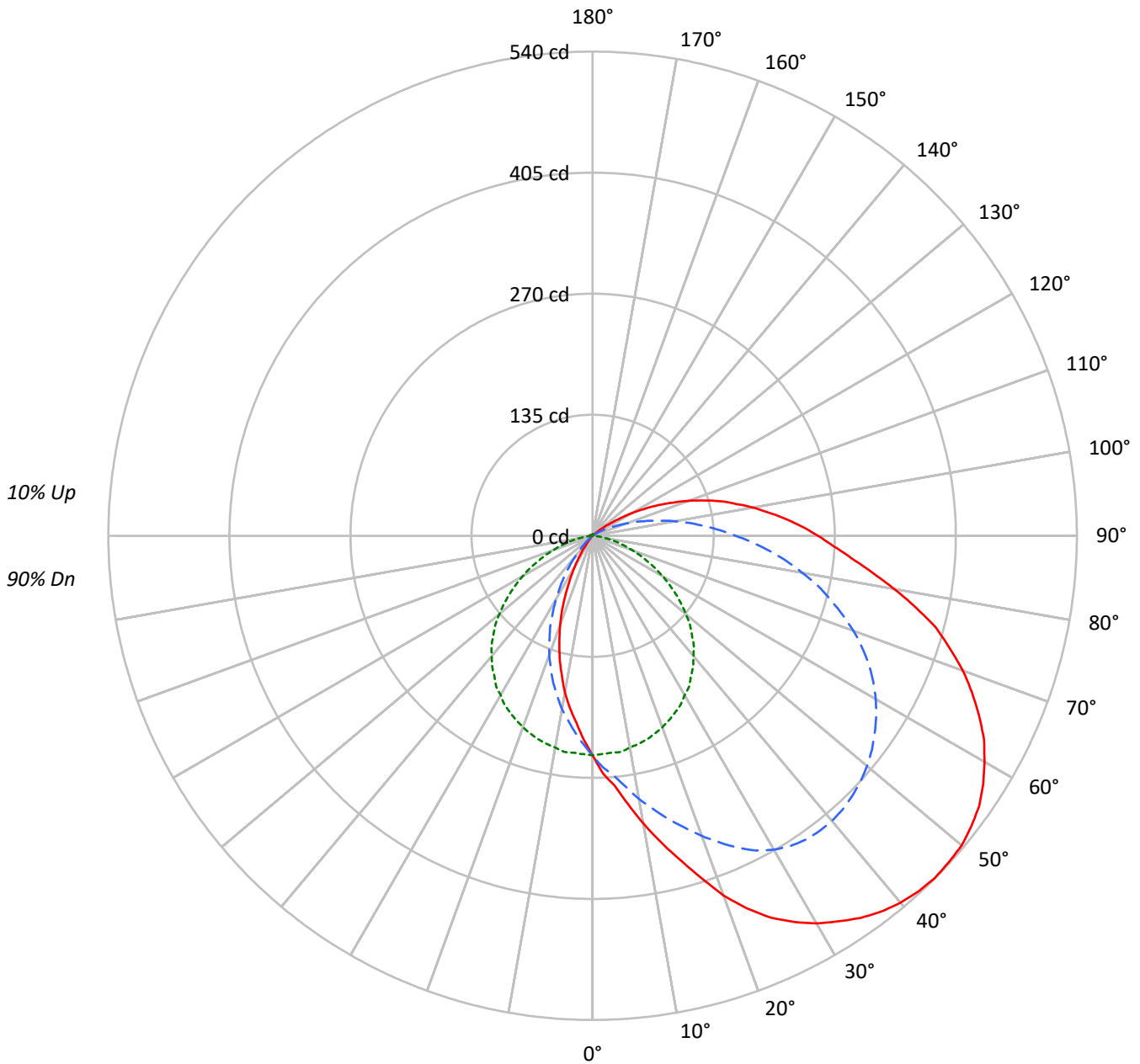
Lumens per Lamp: N/A
Luminaire Lumens: 1209.9 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (Ain): 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

TEST NUMBER: P551099

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-86-ED1D-90

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°	2635	2635	2635
5°	2892	2596	2166
10°	3272	2564	1785
15°	3667	2532	1392
20°	4136	2490	1024
25°	4526	2442	672
30°	4815	2379	379
35°	5065	2309	166
40°	5287	2224	41
45°	5477	2118	0
50°	5637	1976	0
55°	5759	1798	0
60°	5820	1589	0
65°	5844	1352	0
70°	5824	1103	0
75°	5751	814	4
80°	5517	497	26
85°	5334	239	35



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.4	1.9
10°-20°	70.2	5.8
20°-30°	113.7	9.4
30°-40°	146.0	12.1
40°-50°	165.3	13.7
50°-60°	171.3	14.2
60°-70°	161.5	13.3
70°-80°	135.3	11.2
80°-90°	98.1	8.1
90°-100°	64.5	5.3
100°-110°	37.2	3.1
110°-120°	16.4	1.4
120°-130°	4.4	0.4
130°-140°	1.0	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°	207.3	17.1
0°-40°	353.3	29.2
0°-60°	689.9	57.0
0°-90°	1084.9	89.7
90°-120°	118.1	9.8
90°-150°	124.2	10.3
90°-180°	125.0	10.3
0°-180°	1209.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	245	245	245	245	245	
5°	279	268	243	220	209	28
15°	373	327	235	170	142	108
25°	470	384	218	112	70	217
35°	520	414	191	54	17	326
45°	540	410	156	12	0	417
55°	526	384	113	0	0	470
65°	476	340	67	0	0	470
75°	396	274	29	0	0	416
85°	290	199	5	1	2	248
90°	251	160	1	2	2	138
95°	216	125	1	2	3	169
105°	148	64	1	2	2	157
115°	81	21	1	1	2	81
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°	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8
2.5°	265.3	265.0	264.1	262.5	260.3	256.6	253.5	250.7	246.9	243.8	237.9
5°	279.4	277.8	276.6	275.0	270.0	266.6	261.0	254.7	248.8	242.9	231.0
7.5°	301.8	299.3	297.4	293.1	286.2	278.4	269.7	263.8	259.7	243.2	222.9
10°	325.8	323.6	319.9	312.1	303.7	292.5	280.0	266.0	253.5	239.8	215.8
12.5°	349.5	346.4	341.1	331.1	319.3	305.2	288.1	271.6	253.8	237.6	207.3
15°	373.2	369.8	364.2	352.0	336.4	318.0	297.1	276.2	255.4	234.8	198.6
17.5°	399.1	394.4	386.0	372.3	352.6	329.9	305.2	280.0	254.7	231.3	189.3
20°	426.8	420.3	411.2	392.9	369.8	343.0	313.3	283.7	254.4	227.3	178.7
22.5°	449.9	443.4	433.4	414.4	386.6	353.9	320.2	286.2	253.2	222.6	168.7
25°	469.9	464.6	453.7	431.8	402.5	365.4	326.8	288.1	251.3	217.6	158.1
27.5°	485.5	480.5	468.3	445.9	415.9	375.7	331.7	289.0	248.8	212.6	147.2
30°	499.2	494.2	479.5	456.5	425.0	383.8	336.7	289.3	245.7	205.2	135.3
32.5°	509.8	505.1	490.1	465.5	431.2	389.4	339.5	289.0	241.6	199.9	122.5
35°	520.4	515.7	498.2	472.0	435.9	391.9	341.7	287.5	236.6	191.1	110.4
37.5°	528.5	523.2	505.4	476.4	438.1	392.5	341.4	285.3	231.3	184.0	98.2
40°	534.1	528.5	509.5	478.9	438.7	391.6	338.9	281.5	225.1	174.9	85.4
42.5°	537.8	531.6	511.3	482.6	437.4	389.1	335.2	276.9	218.3	167.1	73.3
45°	539.7	533.2	511.6	479.5	435.3	384.4	329.6	270.9	210.8	156.5	61.1
47.5°	538.8	531.6	510.1	476.1	431.2	379.4	323.3	263.8	201.7	147.2	49.6
50°	537.2	529.7	506.7	471.7	425.6	373.2	316.5	255.0	192.4	135.6	39.3
52.5°	532.2	524.7	502.9	465.5	419.0	366.0	307.1	246.0	182.4	124.4	29.9
55°	526.0	519.1	496.4	459.9	410.6	357.3	298.4	236.3	172.7	112.9	21.5
57.5°	516.3	510.1	488.3	450.8	402.2	347.6	288.7	225.7	160.6	101.3	15.0
60°	504.5	498.2	477.0	440.6	392.5	336.7	278.1	214.8	149.7	89.8	9.4
62.5°	492.0	486.1	463.9	427.8	380.4	325.2	266.6	203.9	138.1	79.2	5.6
65°	475.5	469.9	449.9	412.5	367.0	312.7	253.8	190.8	126.3	67.3	3.1
67.5°	458.0	453.0	432.8	398.5	351.4	299.0	240.7	178.0	113.8	57.1	1.6
70°	439.3	433.1	414.4	379.4	335.5	283.4	226.4	164.9	102.0	47.1	0.0
72.5°	417.5	412.8	394.7	361.7	317.1	266.9	211.7	150.6	88.9	37.4	0.3
75°	396.3	390.4	373.8	342.7	299.0	249.4	195.5	137.2	76.1	28.7	0.3
77.5°	368.8	367.0	351.4	321.1	281.9	232.6	177.7	121.0	63.9	20.6	0.3
80°	341.4	339.5	327.4	299.6	261.9	212.6	161.2	105.7	52.1	13.7	0.3
82.5°	314.3	311.8	300.3	277.2	241.6	195.8	144.0	90.4	41.2	8.4	0.3
85°	290.0	286.8	274.4	253.2	220.7	176.8	126.3	75.5	30.6	4.7	0.6
87.5°	269.1	266.9	253.2	231.3	199.5	159.0	110.7	61.1	21.5	2.2	0.9
90°	251.3	246.6	234.5	211.4	179.6	139.4	94.2	49.0	14.3	1.2	1.2
92.5°	233.8	229.8	216.4	192.7	161.8	122.5	78.3	37.4	9.0	0.6	1.6
95°	215.8	211.4	198.3	176.5	143.7	105.4	64.2	27.4	5.0	0.6	1.6
97.5°	198.0	193.9	180.2	158.4	127.5	90.4	50.8	19.3	2.5	0.6	1.2
100°	181.5	176.8	164.3	142.5	111.3	75.5	39.3	12.5	1.6	0.6	1.2
102.5°	164.0	160.3	147.5	126.3	94.5	61.4	29.3	7.8	0.6	0.6	0.9
105°	148.4	143.7	131.3	109.4	80.4	48.3	20.6	4.7	0.6	0.6	0.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	96.7	92.9	82.0	63.6	40.8	19.0	5.6	0.9	0.9	0.9	0.9
115°	80.8	75.1	65.5	49.3	30.2	12.5	2.8	0.9	0.9	0.9	0.9
117.5°	64.5	59.9	53.0	37.4	20.0	8.1	1.6	0.9	0.9	0.9	0.9
120°	50.5	46.1	38.3	25.9	13.4	4.7	0.6	0.9	0.9	0.9	0.9
122.5°	36.2	32.7	25.9	16.8	8.1	2.2	0.9	0.9	1.2	1.2	0.9
125°	24.0	22.1	17.1	10.3	5.0	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.6	14.0	10.0	5.9	2.2	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.7	7.8	5.9	3.4	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	5.0	4.7	3.1	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.6	1.6	1.6	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.6	1.6	1.6	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.6	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.6	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.6	1.2	1.2	1.6
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.6	1.2	1.2	1.6
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.6	1.6	1.6	1.2
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	244.8	244.8	244.8
2.5°	232.9	228.5	227.3
5°	220.4	213.3	209.2
7.5°	208.0	198.3	193.6
10°	196.4	182.7	177.7
12.5°	182.7	166.8	159.0
15°	169.6	149.0	141.6
17.5°	155.0	131.9	123.2
20°	141.2	114.7	105.7
22.5°	125.7	97.9	87.9
25°	111.6	81.1	69.8
27.5°	96.0	63.9	54.3
30°	81.4	49.0	39.3
32.5°	67.3	35.9	27.1
35°	54.3	24.3	17.1
37.5°	41.8	15.0	8.7
40°	30.2	7.8	4.1
42.5°	20.3	3.7	2.2
45°	12.5	1.9	0.0
47.5°	7.2	0.0	0.0
50°	3.7	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	0.9
80°	0.6	1.2	1.6
82.5°	1.2	1.6	1.6
85°	1.2	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	2.8
97.5°	2.5	2.8	2.8
100°	2.2	2.8	3.1
102.5°	1.9	2.8	2.8
105°	1.6	2.2	2.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.2	1.6	1.6
115°	0.9	1.2	1.6
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.2	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	131.0	127.2	114.7	94.2	65.8	36.8	13.7	2.5	0.6	0.9	0.9
110°	114.1	111.0	98.2	78.3	53.0	27.4	9.0	1.6	0.9	0.9	0.9





107.5°	1.2	1.9	2.2
110°	1.2	1.6	1.9



(END OF REPORT)