

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: P550587

Luminaire Tested: **FCC-X-2-LD4-1HI-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: P550587
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-LD4-1HI-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

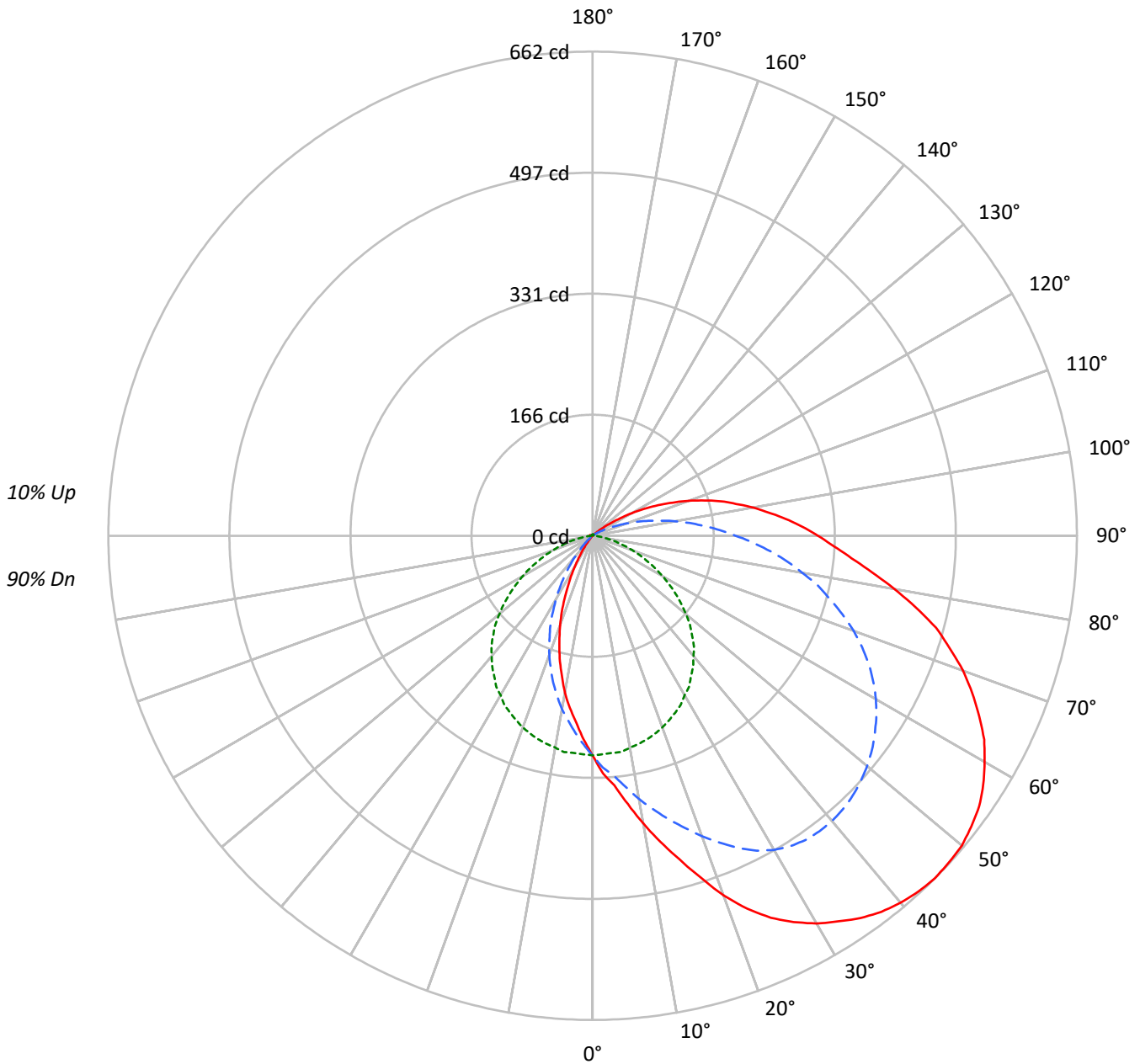
Lumens per Lamp: N/A
Luminaire Lumens: 1483.9 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
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°	3231	3231	3231
5°	3547	3184	2656
10°	4014	3145	2190
15°	4498	3104	1706
20°	5073	3055	1256
25°	5550	2995	825
30°	5905	2917	465
35°	6211	2832	204
40°	6483	2728	49
45°	6717	2598	0
50°	6914	2424	0
55°	7063	2204	0
60°	7138	1948	0
65°	7167	1659	0
70°	7144	1352	0
75°	7052	998	6
80°	6767	609	31
85°	6540	290	42



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.8	1.9
10°-20°	86.1	5.8
20°-30°	139.4	9.4
30°-40°	179.1	12.1
40°-50°	202.7	13.7
50°-60°	210.0	14.2
60°-70°	198.1	13.3
70°-80°	166.0	11.2
80°-90°	120.3	8.1
90°-100°	79.1	5.3
100°-110°	45.7	3.1
110°-120°	20.1	1.4
120°-130°	5.4	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°	254.3	17.1
0°-40°	433.4	29.2
0°-60°	846.1	57.0
0°-90°	1330.5	89.7
90°-120°	144.9	9.8
90°-150°	152.3	10.3
90°-180°	153.0	10.3
0°-180°	1483.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	300	300	300	300	300	
5°	343	329	298	270	257	35
15°	458	401	288	208	174	132
25°	576	471	267	137	86	266
35°	638	508	234	66	21	400
45°	662	503	192	15	0	511
55°	645	471	138	0	0	576
65°	583	417	83	0	0	577
75°	486	336	35	0	0	510
85°	356	244	6	2	2	304
90°	308	196	2	2	3	169
95°	265	153	1	3	3	208
105°	182	79	1	2	3	192
115°	99	26	1	1	2	99
125°	29	4	2	1	2	29
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°	300.2	300.2	300.2	300.2	300.2	300.2	300.2	300.2	300.2	300.2	300.2
2.5°	325.4	325.0	323.9	322.0	319.3	314.7	310.9	307.4	302.9	299.0	291.8
5°	342.6	340.7	339.2	337.3	331.2	326.9	320.1	312.4	305.1	297.9	283.4
7.5°	370.2	367.1	364.8	359.4	351.0	341.5	330.8	323.5	318.5	298.3	273.4
10°	399.6	396.9	392.3	382.8	372.4	358.7	343.4	326.2	310.9	294.1	264.6
12.5°	428.7	424.8	418.3	406.1	391.6	374.4	353.3	333.1	311.3	291.4	254.3
15°	457.7	453.5	446.6	431.7	412.6	390.0	364.4	338.8	313.2	287.9	243.6
17.5°	489.5	483.7	473.4	456.6	432.5	404.6	374.4	343.4	312.4	283.7	232.1
20°	523.5	515.5	504.4	481.8	453.5	420.6	384.3	348.0	312.0	278.8	219.1
22.5°	551.8	543.8	531.5	508.2	474.2	434.0	392.7	351.0	310.5	273.0	206.9
25°	576.3	569.8	556.4	529.6	493.7	448.2	400.7	353.3	308.2	266.9	193.9
27.5°	595.4	589.3	574.4	546.8	510.1	460.8	406.9	354.5	305.1	260.8	180.5
30°	612.2	606.1	588.1	559.8	521.2	470.7	413.0	354.9	301.3	251.6	166.0
32.5°	625.2	619.5	601.1	570.9	528.8	477.6	416.4	354.5	296.4	245.1	150.3
35°	638.2	632.5	611.1	578.9	534.6	480.7	419.1	352.6	290.2	234.4	135.4
37.5°	648.2	641.7	619.9	584.3	537.3	481.4	418.7	349.9	283.7	225.6	120.5
40°	655.0	648.2	624.8	587.4	538.0	480.3	415.7	345.3	276.1	214.5	104.8
42.5°	659.6	652.0	627.1	591.9	536.5	477.2	411.1	339.6	267.7	205.0	89.9
45°	661.9	653.9	627.5	588.1	533.8	471.5	404.2	332.3	258.5	192.0	74.9
47.5°	660.8	652.0	625.6	583.9	528.8	465.4	396.5	323.5	247.4	180.5	60.8
50°	658.9	649.7	621.4	578.6	522.0	457.7	388.1	312.8	235.9	166.3	48.2
52.5°	652.7	643.6	616.8	570.9	513.9	448.9	376.7	301.7	223.7	152.6	36.7
55°	645.1	636.7	608.8	564.0	503.6	438.2	365.9	289.9	211.8	138.4	26.4
57.5°	633.2	625.6	598.8	552.9	493.3	426.4	354.1	276.9	196.9	124.3	18.4
60°	618.7	611.1	585.1	540.3	481.4	413.0	341.1	263.5	183.5	110.1	11.5
62.5°	603.4	596.1	569.0	524.6	466.5	398.8	326.9	250.1	169.4	97.1	6.9
65°	583.1	576.3	551.8	505.9	450.1	383.5	311.3	234.0	154.9	82.6	3.8
67.5°	561.7	555.6	530.8	488.7	431.0	366.7	295.2	218.3	139.6	70.0	1.9
70°	538.8	531.1	508.2	465.4	411.5	347.6	277.6	202.3	125.0	57.7	0.0
72.5°	512.0	506.3	484.1	443.6	388.9	327.3	259.6	184.7	109.0	45.9	0.4
75°	486.0	478.8	458.5	420.2	366.7	305.9	239.8	168.3	93.3	35.2	0.4
77.5°	452.4	450.1	431.0	393.9	345.7	285.3	218.0	148.4	78.4	25.2	0.4
80°	418.7	416.4	401.5	367.5	321.2	260.8	197.7	129.6	63.9	16.8	0.4
82.5°	385.5	382.4	368.2	339.9	296.4	240.1	176.7	110.9	50.5	10.3	0.4
85°	355.6	351.8	336.5	310.5	270.7	216.8	154.9	92.5	37.5	5.7	0.8
87.5°	330.0	327.3	310.5	283.7	244.7	195.0	135.7	74.9	26.4	2.7	1.1
90°	308.2	302.5	287.6	259.3	220.3	170.9	115.5	60.0	17.6	1.5	1.5
92.5°	286.8	281.8	265.4	236.3	198.5	150.3	96.0	45.9	11.1	0.8	1.9
95°	264.6	259.3	243.2	216.4	176.3	129.2	78.8	33.7	6.1	0.8	1.9
97.5°	242.8	237.8	221.0	194.3	156.4	110.9	62.3	23.7	3.1	0.8	1.5
100°	222.6	216.8	201.5	174.8	136.5	92.5	48.2	15.3	1.9	0.8	1.5
102.5°	201.1	196.5	180.9	154.9	115.9	75.3	35.9	9.6	0.8	0.8	1.1
105°	182.0	176.3	161.0	134.2	98.7	59.3	25.2	5.7	0.8	0.8	1.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	118.5	114.0	100.6	78.0	50.1	23.3	6.9	1.1	1.1	1.1	1.1
115°	99.0	92.2	80.3	60.4	37.1	15.3	3.4	1.1	1.1	1.1	1.1
117.5°	79.2	73.4	65.0	45.9	24.5	9.9	1.9	1.1	1.1	1.1	1.1
120°	61.9	56.6	47.0	31.7	16.4	5.7	0.8	1.1	1.1	1.1	1.1
122.5°	44.4	40.2	31.7	20.6	9.9	2.7	1.1	1.1	1.5	1.5	1.1
125°	29.4	27.1	21.0	12.6	6.1	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	19.1	17.2	12.2	7.3	2.7	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.7	9.6	7.3	4.2	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.1	5.7	3.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.8	0.8	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.8	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	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



TEST NUMBER: P550587

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	300.2	300.2	300.2
2.5°	285.6	280.3	278.8
5°	270.4	261.6	256.6
7.5°	255.1	243.2	237.5
10°	240.9	224.1	218.0
12.5°	224.1	204.6	195.0
15°	208.0	182.8	173.6
17.5°	190.0	161.8	151.0
20°	173.2	140.7	129.6
22.5°	154.1	120.1	107.8
25°	136.9	99.4	85.7
27.5°	117.8	78.4	66.5
30°	99.8	60.0	48.2
32.5°	82.6	44.0	33.3
35°	66.5	29.8	21.0
37.5°	51.2	18.4	10.7
40°	37.1	9.6	5.0
42.5°	24.9	4.6	2.7
45°	15.3	2.3	0.0
47.5°	8.8	0.0	0.0
50°	4.6	0.0	0.0
52.5°	1.9	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	1.1
80°	0.8	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.3
87.5°	1.9	2.3	2.7
90°	2.3	2.7	2.7
92.5°	2.3	3.1	3.1
95°	2.7	3.1	3.4
97.5°	3.1	3.4	3.4
100°	2.7	3.4	3.8
102.5°	2.3	3.4	3.4
105°	1.9	2.7	3.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.1	1.5	1.9
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	0.8
152.5°	1.1	0.8	0.8
155°	1.1	0.8	0.4
157.5°	1.5	0.8	0.4
160°	1.1	0.8	0.4
162.5°	1.1	0.8	0.4
165°	1.1	0.8	0.0
167.5°	1.1	0.8	0.4
170°	1.1	0.8	0.4
172.5°	1.1	0.8	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°	160.6	156.0	140.7	115.5	80.7	45.1	16.8	3.1	0.8	1.1	1.1
110°	140.0	136.1	120.5	96.0	65.0	33.7	11.1	1.9	1.1	1.1	1.1





107.5°	1.5	2.3	2.7
110°	1.5	1.9	2.3



(END OF REPORT)