

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: P550589

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-82-87-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: P550589
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-82-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

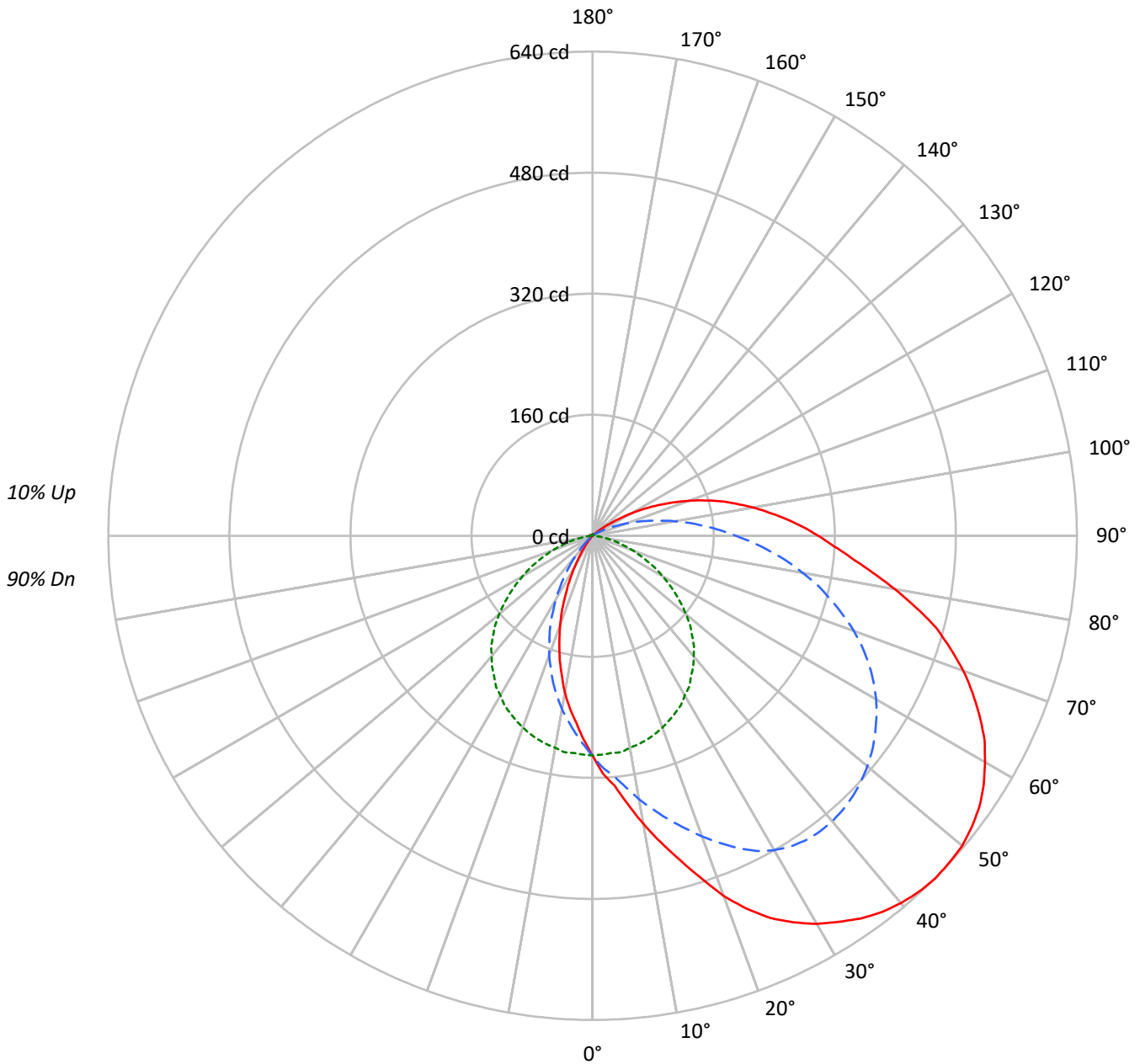
Lumens per Lamp: N/A
Luminaire Lumens: 1436.0 lumens
Efficiency: N/A
Efficacy: 66.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	3127	3127	3127
5°	3432	3080	2570
10°	3884	3043	2118
15°	4352	3004	1651
20°	4910	2955	1215
25°	5370	2899	798
30°	5714	2823	449
35°	6011	2740	199
40°	6274	2640	48
45°	6500	2514	0
50°	6690	2346	0
55°	6834	2132	0
60°	6907	1886	0
65°	6936	1605	0
70°	6913	1310	0
75°	6824	964	6
80°	6548	591	31
85°	6329	285	40



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.8	1.9
10°-20°	83.3	5.8
20°-30°	134.9	9.4
30°-40°	173.3	12.1
40°-50°	196.2	13.7
50°-60°	203.2	14.2
60°-70°	191.7	13.3
70°-80°	160.6	11.2
80°-90°	116.4	8.1
90°-100°	76.5	5.3
100°-110°	44.2	3.1
110°-120°	19.5	1.4
120°-130°	5.3	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°	246.0	17.1
0°-40°	419.4	29.2
0°-60°	818.8	57.0
0°-90°	1287.5	89.7
90°-120°	140.2	9.8
90°-150°	147.5	10.3
90°-180°	149.0	10.4
0°-180°	1436.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	290	290	290	290	290	
5°	332	318	288	262	248	33
15°	443	388	279	201	168	128
25°	558	456	258	132	83	258
35°	618	491	227	64	20	387
45°	640	486	186	15	0	494
55°	624	456	134	0	0	557
65°	564	403	80	0	0	558
75°	470	325	34	0	0	493
85°	344	236	6	2	2	294
90°	298	189	2	2	3	164
95°	256	148	1	3	3	201
105°	176	76	1	2	3	186
115°	96	25	1	1	2	96
125°	28	4	2	1	2	28
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°	290.5	290.5	290.5	290.5	290.5	290.5	290.5	290.5	290.5	290.5	290.5
2.5°	314.9	314.5	313.4	311.6	309.0	304.5	300.8	297.5	293.1	289.4	282.3
5°	331.5	329.7	328.2	326.4	320.4	316.4	309.7	302.3	295.3	288.2	274.2
7.5°	358.2	355.2	353.0	347.8	339.7	330.4	320.1	313.0	308.2	288.6	264.6
10°	386.7	384.1	379.6	370.4	360.4	347.1	332.3	315.6	300.8	284.5	256.1
12.5°	414.8	411.1	404.8	393.0	378.9	362.3	341.9	322.3	301.2	282.0	246.1
15°	442.9	438.8	432.2	417.8	399.3	377.4	352.6	327.8	303.0	278.6	235.7
17.5°	473.6	468.1	458.1	441.8	418.5	391.5	362.3	332.3	302.3	274.6	224.6
20°	506.6	498.8	488.1	466.2	438.8	407.0	371.9	336.7	301.9	269.7	212.0
22.5°	533.9	526.2	514.3	491.8	458.8	420.0	380.0	339.7	300.5	264.2	200.2
25°	557.6	551.3	538.4	512.5	477.7	433.7	387.8	341.9	298.2	258.3	187.6
27.5°	576.1	570.2	555.8	529.1	493.6	445.9	393.7	343.0	295.3	252.4	174.7
30°	592.4	586.5	569.1	541.7	504.3	455.5	399.6	343.4	291.6	243.5	160.6
32.5°	605.0	599.4	581.7	552.4	511.7	462.2	403.0	343.0	286.8	237.2	145.4
35°	617.6	612.0	591.3	560.2	517.3	465.1	405.5	341.2	280.8	226.8	131.0
37.5°	627.2	620.9	599.8	565.4	519.9	465.9	405.2	338.6	274.6	218.3	116.6
40°	633.8	627.2	604.6	568.4	520.6	464.7	402.2	334.1	267.2	207.6	101.4
42.5°	638.3	630.9	606.8	572.8	519.1	461.8	397.8	328.6	259.0	198.3	87.0
45°	640.5	632.7	607.2	569.1	516.6	456.2	391.1	321.6	250.1	185.8	72.5
47.5°	639.4	630.9	605.4	565.0	511.7	450.3	383.7	313.0	239.4	174.7	58.8
50°	637.6	628.7	601.3	559.8	505.1	442.9	375.6	302.7	228.3	161.0	46.6
52.5°	631.6	622.7	596.8	552.4	497.3	434.4	364.5	291.9	216.5	147.6	35.5
55°	624.2	616.1	589.1	545.8	487.3	424.0	354.1	280.5	205.0	133.9	25.5
57.5°	612.8	605.4	579.5	535.1	477.3	412.6	342.6	267.9	190.6	120.3	17.8
60°	598.7	591.3	566.1	522.8	465.9	399.6	330.1	254.9	177.6	106.6	11.1
62.5°	583.9	576.9	550.6	507.7	451.4	385.9	316.4	242.0	163.9	94.0	6.7
65°	564.3	557.6	533.9	489.5	435.5	371.1	301.2	226.5	149.9	79.9	3.7
67.5°	543.6	537.6	513.6	472.9	417.0	354.9	285.7	211.3	135.1	67.7	1.9
70°	521.4	514.0	491.8	450.3	398.1	336.4	268.6	195.7	121.0	55.9	0.0
72.5°	495.5	489.9	468.4	429.2	376.3	316.7	251.2	178.7	105.5	44.4	0.4
75°	470.3	463.3	443.7	406.7	354.9	296.0	232.0	162.8	90.3	34.0	0.4
77.5°	437.7	435.5	417.0	381.1	334.5	276.0	210.9	143.6	75.9	24.4	0.4
80°	405.2	403.0	388.5	355.6	310.8	252.4	191.3	125.4	61.8	16.3	0.4
82.5°	373.0	370.0	356.3	329.0	286.8	232.4	171.0	107.3	48.8	10.0	0.4
85°	344.1	340.4	325.6	300.5	262.0	209.8	149.9	89.5	36.3	5.6	0.7
87.5°	319.3	316.7	300.5	274.6	236.8	188.7	131.4	72.5	25.5	2.6	1.1
90°	298.2	292.7	278.3	250.9	213.1	165.4	111.7	58.1	17.0	1.5	1.5
92.5°	277.5	272.7	256.8	228.7	192.0	145.4	92.9	44.4	10.7	0.7	1.9
95°	256.1	250.9	235.3	209.4	170.6	125.1	76.2	32.6	5.9	0.7	1.9
97.5°	235.0	230.2	213.9	188.0	151.3	107.3	60.3	22.9	3.0	0.7	1.5
100°	215.4	209.8	195.0	169.1	132.1	89.5	46.6	14.8	1.9	0.7	1.5
102.5°	194.6	190.2	175.0	149.9	112.1	72.9	34.8	9.3	0.7	0.7	1.1
105°	176.1	170.6	155.8	129.9	95.5	57.4	24.4	5.6	0.7	0.7	1.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	114.7	110.3	97.3	75.5	48.5	22.6	6.7	1.1	1.1	1.1	1.1
115°	95.8	89.2	77.7	58.5	35.9	14.8	3.3	1.1	1.1	1.1	1.1
117.5°	76.6	71.0	62.9	44.4	23.7	9.6	1.9	1.1	1.1	1.1	1.1
120°	59.9	54.8	45.5	30.7	15.9	5.6	0.7	1.1	1.1	1.1	1.1
122.5°	42.9	38.9	30.7	20.0	9.6	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.5	26.3	20.4	12.2	5.9	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.5	16.7	11.8	7.0	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.4	9.3	7.0	4.1	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	5.9	5.6	3.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.7	0.7	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: P550589

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-82-87-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	290.5	290.5	290.5
2.5°	276.4	271.2	269.7
5°	261.6	253.1	248.3
7.5°	246.8	235.3	229.8
10°	233.1	216.8	210.9
12.5°	216.8	198.0	188.7
15°	201.3	176.9	168.0
17.5°	183.9	156.5	146.2
20°	167.6	136.2	125.4
22.5°	149.1	116.2	104.3
25°	132.5	96.2	82.9
27.5°	114.0	75.9	64.4
30°	96.6	58.1	46.6
32.5°	79.9	42.6	32.2
35°	64.4	28.9	20.4
37.5°	49.6	17.8	10.4
40°	35.9	9.3	4.8
42.5°	24.1	4.4	2.6
45°	14.8	2.2	0.0
47.5°	8.5	0.0	0.0
50°	4.4	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	0.7	1.1
80°	0.7	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.2
87.5°	1.9	2.2	2.6
90°	2.2	2.6	2.6
92.5°	2.2	3.0	3.0
95°	2.6	3.0	3.3
97.5°	3.0	3.3	3.3
100°	2.6	3.3	3.7
102.5°	2.2	3.3	3.3
105°	1.9	2.6	3.0



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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	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.5	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	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°	155.4	151.0	136.2	111.7	78.1	43.7	16.3	3.0	0.7	1.1	1.1
110°	135.4	131.7	116.6	92.9	62.9	32.6	10.7	1.9	1.1	1.1	1.1





107.5°	1.5	2.2	2.6
110°	1.5	1.9	2.2



(END OF REPORT)