

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: P551611

Luminaire Tested: **FCC-X-2-LD4-2LO-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: P551611
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-LD4-2LO-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

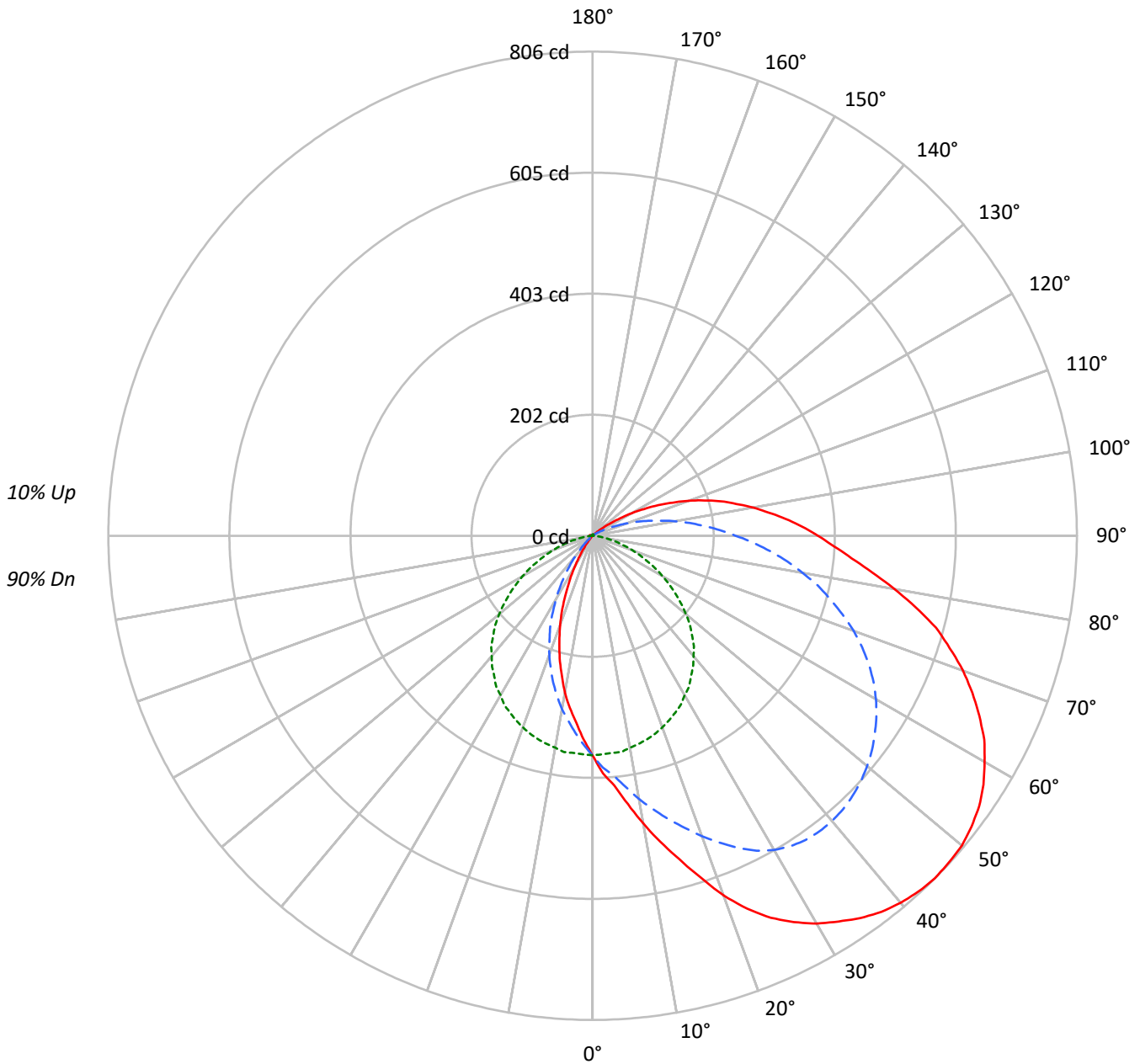
Lumens per Lamp: N/A
Luminaire Lumens: 1807.1 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
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

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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°	3934	3934	3934
5°	4319	3877	3234
10°	4888	3830	2666
15°	5477	3780	2077
20°	6177	3719	1529
25°	6758	3647	1005
30°	7190	3552	566
35°	7563	3448	249
40°	7895	3322	60
45°	8180	3162	0
50°	8419	2951	0
55°	8600	2685	0
60°	8692	2373	0
65°	8728	2021	0
70°	8699	1647	0
75°	8588	1214	7
80°	8240	744	37
85°	7964	356	51



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.0	1.9
10°-20°	104.8	5.8
20°-30°	169.8	9.4
30°-40°	218.1	12.1
40°-50°	246.9	13.7
50°-60°	255.7	14.2
60°-70°	241.2	13.3
70°-80°	202.1	11.2
80°-90°	146.5	8.1
90°-100°	96.3	5.3
100°-110°	55.6	3.1
110°-120°	24.5	1.4
120°-130°	6.7	0.4
130°-140°	1.5	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	309.6	17.1
0°-40°	527.7	29.2
0°-60°	1030.3	57.0
0°-90°	1620.2	89.7
90°-120°	176.5	9.8
90°-150°	185.6	10.3
90°-180°	187.0	10.3
0°-180°	1807.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	366	366	366	366	366	
5°	417	401	363	329	312	42
15°	557	489	351	253	211	161
25°	702	573	325	167	104	324
35°	777	618	285	81	26	487
45°	806	612	234	19	0	622
55°	786	573	169	0	0	701
65°	710	508	101	0	0	703
75°	592	410	43	0	0	621
85°	433	297	7	2	3	370
90°	375	238	2	3	3	206
95°	322	186	1	3	4	253
105°	222	96	1	2	4	234
115°	121	32	1	1	2	121
125°	36	4	2	1	2	36
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5
2.5°	396.2	395.8	394.4	392.1	388.8	383.2	378.6	374.4	368.8	364.1	355.3
5°	417.2	414.9	413.0	410.7	403.2	398.1	389.7	380.4	371.6	362.7	345.0
7.5°	450.7	447.0	444.2	437.7	427.4	415.8	402.8	393.9	387.9	363.2	332.9
10°	486.6	483.3	477.7	466.1	453.5	436.8	418.1	397.2	378.6	358.1	322.2
12.5°	522.0	517.3	509.4	494.5	476.8	455.8	430.2	405.6	379.0	354.8	309.6
15°	557.3	552.2	543.8	525.7	502.4	474.9	443.7	412.5	381.3	350.6	296.6
17.5°	596.0	589.0	576.4	556.0	526.6	492.6	455.8	418.1	380.4	345.5	282.6
20°	637.4	627.7	614.2	586.7	552.2	512.2	467.9	423.7	379.9	339.4	266.8
22.5°	671.9	662.1	647.2	618.8	577.4	528.5	478.2	427.4	378.1	332.5	251.9
25°	701.7	693.8	677.5	644.9	601.1	545.7	488.0	430.2	375.3	325.0	236.1
27.5°	725.0	717.5	699.4	665.8	621.1	561.1	495.4	431.6	371.6	317.6	219.8
30°	745.5	738.0	716.1	681.7	634.6	573.2	502.9	432.1	366.9	306.4	202.1
32.5°	761.3	754.3	732.0	695.2	644.0	581.6	507.1	431.6	360.9	298.5	183.0
35°	777.1	770.1	744.1	705.0	650.9	585.3	510.3	429.3	353.4	285.4	164.8
37.5°	789.2	781.3	754.8	711.5	654.2	586.2	509.9	426.0	345.5	274.7	146.7
40°	797.6	789.2	760.8	715.2	655.1	584.8	506.1	420.5	336.2	261.2	127.6
42.5°	803.2	793.9	763.6	720.8	653.3	581.1	500.5	413.5	325.9	249.6	109.4
45°	806.0	796.2	764.1	716.1	650.0	574.1	492.2	404.6	314.8	233.7	91.3
47.5°	804.6	793.9	761.8	711.0	644.0	566.7	482.8	393.9	301.3	219.8	74.0
50°	802.3	791.1	756.6	704.5	635.6	557.3	472.6	380.9	287.3	202.5	58.7
52.5°	794.8	783.6	751.0	695.2	625.8	546.6	458.6	367.4	272.4	185.8	44.7
55°	785.5	775.3	741.3	686.8	613.2	533.6	445.6	352.9	258.0	168.6	32.1
57.5°	771.1	761.8	729.2	673.3	600.7	519.2	431.2	337.1	239.8	151.3	22.3
60°	753.4	744.1	712.4	657.9	586.2	502.9	415.3	320.8	223.5	134.1	14.0
62.5°	734.8	725.9	692.8	638.8	568.1	485.6	398.1	304.5	206.3	118.3	8.4
65°	710.1	701.7	671.9	616.0	548.0	467.0	379.0	285.0	188.6	100.6	4.7
67.5°	684.0	676.5	646.3	595.1	524.8	446.5	359.5	265.9	170.0	85.2	2.3
70°	656.1	646.7	618.8	566.7	501.0	423.2	338.0	246.3	152.3	70.3	0.0
72.5°	623.5	616.5	589.5	540.1	473.5	398.6	316.2	224.9	132.7	55.9	0.5
75°	591.8	583.0	558.3	511.7	446.5	372.5	291.9	204.9	113.6	42.8	0.5
77.5°	550.8	548.0	524.8	479.6	420.9	347.4	265.4	180.7	95.5	30.7	0.5
80°	509.9	507.1	488.9	447.5	391.1	317.6	240.7	157.8	77.8	20.5	0.5
82.5°	469.3	465.6	448.4	413.9	360.9	292.4	215.1	135.0	61.5	12.6	0.5
85°	433.0	428.4	409.7	378.1	329.7	264.0	188.6	112.7	45.6	7.0	0.9
87.5°	401.8	398.6	378.1	345.5	298.0	237.5	165.3	91.3	32.1	3.3	1.4
90°	375.3	368.3	350.1	315.7	268.2	208.1	140.6	73.1	21.4	1.9	1.9
92.5°	349.2	343.2	323.1	287.8	241.7	183.0	116.9	55.9	13.5	0.9	2.3
95°	322.2	315.7	296.1	263.5	214.7	157.4	95.9	41.0	7.4	0.9	2.3
97.5°	295.7	289.6	269.1	236.5	190.4	135.0	75.9	28.9	3.7	0.9	1.9
100°	271.0	264.0	245.4	212.8	166.2	112.7	58.7	18.6	2.3	0.9	1.9
102.5°	244.9	239.3	220.2	188.6	141.1	91.7	43.8	11.6	0.9	0.9	1.4
105°	221.6	214.7	196.0	163.4	120.1	72.2	30.7	7.0	0.9	0.9	1.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	144.3	138.8	122.5	95.0	61.0	28.4	8.4	1.4	1.4	1.4	1.4
115°	120.6	112.2	97.8	73.6	45.2	18.6	4.2	1.4	1.4	1.4	1.4
117.5°	96.4	89.4	79.2	55.9	29.8	12.1	2.3	1.4	1.4	1.4	1.4
120°	75.4	68.9	57.3	38.6	20.0	7.0	0.9	1.4	1.4	1.4	1.4
122.5°	54.0	48.9	38.6	25.1	12.1	3.3	1.4	1.4	1.9	1.9	1.4
125°	35.9	33.1	25.6	15.4	7.4	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.3	21.0	14.9	8.8	3.3	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.0	11.6	8.8	5.1	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.4	7.0	4.7	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.9	2.3	2.3	2.3	1.9
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	1.9
142.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
145°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	1.9	1.9	1.9
147.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
150°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
152.5°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
155°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
157.5°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
160°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	0.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	2.3
172.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
175°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
177.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	1.9
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	365.5	365.5	365.5
2.5°	347.8	341.3	339.4
5°	329.2	318.5	312.4
7.5°	310.6	296.1	289.2
10°	293.3	272.9	265.4
12.5°	272.9	249.1	237.5
15°	253.3	222.6	211.4
17.5°	231.4	197.0	183.9
20°	210.9	171.3	157.8
22.5°	187.6	146.2	131.3
25°	166.7	121.1	104.3
27.5°	143.4	95.5	81.0
30°	121.5	73.1	58.7
32.5°	100.6	53.5	40.5
35°	81.0	36.3	25.6
37.5°	62.4	22.3	13.0
40°	45.2	11.6	6.1
42.5°	30.3	5.6	3.3
45°	18.6	2.8	0.0
47.5°	10.7	0.0	0.0
50°	5.6	0.0	0.0
52.5°	2.3	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°	0.5	0.5	0.5
77.5°	0.5	0.9	1.4
80°	0.9	1.9	2.3
82.5°	1.9	2.3	2.3
85°	1.9	2.3	2.8
87.5°	2.3	2.8	3.3
90°	2.8	3.3	3.3
92.5°	2.8	3.7	3.7
95°	3.3	3.7	4.2
97.5°	3.7	4.2	4.2
100°	3.3	4.2	4.7
102.5°	2.8	4.2	4.2
105°	2.3	3.3	3.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.9	2.3	2.3
115°	1.4	1.9	2.3
117.5°	1.4	1.9	1.9
120°	1.4	1.4	1.9
122.5°	1.4	1.4	1.9
125°	1.4	1.4	1.9
127.5°	1.9	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.9	1.4	1.4
135°	1.9	1.4	1.4
137.5°	1.9	1.4	1.4
140°	1.9	1.4	1.4
142.5°	1.9	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	0.9
152.5°	1.4	0.9	0.9
155°	1.4	0.9	0.5
157.5°	1.9	0.9	0.5
160°	1.4	0.9	0.5
162.5°	1.4	0.9	0.5
165°	1.4	0.9	0.0
167.5°	1.4	0.9	0.5
170°	1.4	0.9	0.5
172.5°	1.4	0.9	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	195.6	190.0	171.3	140.6	98.2	54.9	20.5	3.7	0.9	1.4	1.4
110°	170.4	165.8	146.7	116.9	79.2	41.0	13.5	2.3	1.4	1.4	1.4





107.5°	1.9	2.8	3.3
110°	1.9	2.3	2.8



(END OF REPORT)