

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: P550839

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-82-84-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: P550839
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-LD4-1LO-40-UNV-82-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

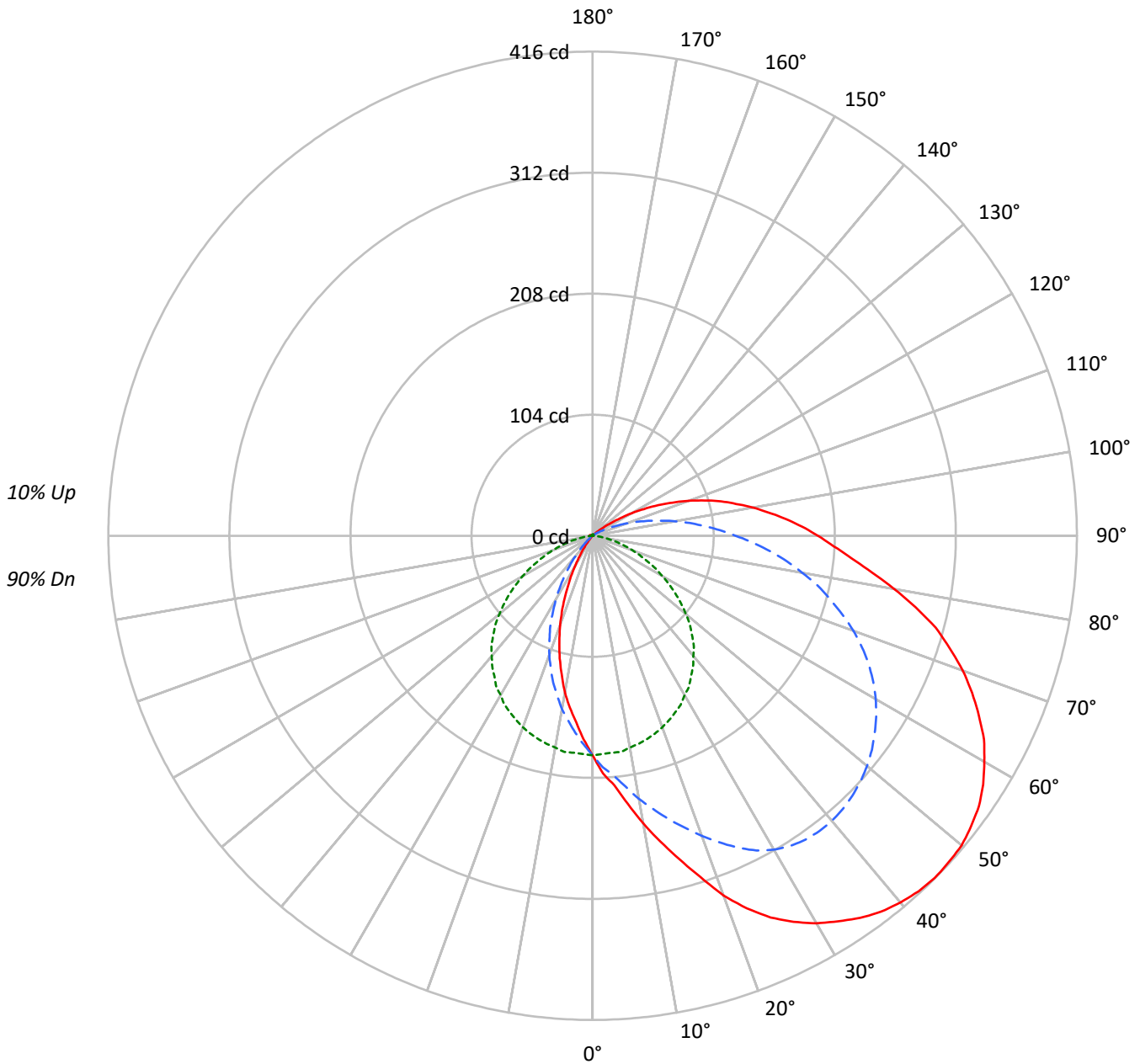
Lumens per Lamp: N/A
Luminaire Lumens: 932.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 11.7
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				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2029	2029	2029
5°	2228	2000	1668
10°	2521	1975	1375
15°	2825	1949	1071
20°	3186	1918	789
25°	3486	1881	518
30°	3708	1832	292
35°	3901	1779	128
40°	4072	1713	31
45°	4219	1632	0
50°	4342	1523	0
55°	4435	1384	0
60°	4483	1225	0
65°	4501	1042	0
70°	4487	850	0
75°	4429	627	3
80°	4250	384	19
85°	4107	183	26



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.1	1.9
10°-20°	54.1	5.8
20°-30°	87.6	9.4
30°-40°	112.5	12.1
40°-50°	127.3	13.7
50°-60°	131.9	14.2
60°-70°	124.4	13.3
70°-80°	104.2	11.2
80°-90°	75.6	8.1
90°-100°	49.7	5.3
100°-110°	28.7	3.1
110°-120°	12.7	1.4
120°-130°	3.4	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	159.7	17.1
0°-40°	272.2	29.2
0°-60°	531.4	57.0
0°-90°	835.6	89.7
90°-120°	91.0	9.8
90°-150°	95.7	10.3
90°-180°	96.0	10.3
0°-180°	932.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	188	188	188	188	188	
5°	215	207	187	170	161	22
15°	288	252	181	131	109	83
25°	362	296	168	86	54	167
35°	401	319	147	42	13	251
45°	416	316	121	10	0	321
55°	405	296	87	0	0	362
65°	366	262	52	0	0	362
75°	305	211	22	0	0	320
85°	223	153	4	1	1	191
90°	194	123	1	1	2	106
95°	166	96	0	2	2	130
105°	114	50	0	1	2	121
115°	62	16	1	1	1	62
125°	18	2	1	1	1	18
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	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°	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5
2.5°	204.4	204.1	203.4	202.2	200.5	197.6	195.2	193.1	190.2	187.8	183.2
5°	215.2	214.0	213.0	211.8	208.0	205.3	201.0	196.2	191.6	187.1	178.0
7.5°	232.5	230.5	229.1	225.7	220.5	214.5	207.7	203.2	200.0	187.3	171.7
10°	251.0	249.3	246.4	240.4	233.9	225.3	215.7	204.9	195.2	184.7	166.2
12.5°	269.2	266.8	262.7	255.0	245.9	235.1	221.9	209.2	195.5	183.0	159.7
15°	287.5	284.8	280.5	271.1	259.1	245.0	228.9	212.8	196.7	180.8	153.0
17.5°	307.4	303.8	297.3	286.7	271.6	254.1	235.1	215.7	196.2	178.2	145.8
20°	328.8	323.7	316.8	302.6	284.8	264.2	241.4	218.5	196.0	175.1	137.6
22.5°	346.5	341.5	333.8	319.2	297.8	272.6	246.6	220.5	195.0	171.5	129.9
25°	361.9	357.8	349.4	332.6	310.0	281.5	251.7	221.9	193.6	167.6	121.8
27.5°	373.9	370.1	360.7	343.4	320.4	289.4	255.5	222.6	191.6	163.8	113.4
30°	384.5	380.6	369.4	351.6	327.3	295.6	259.4	222.9	189.2	158.0	104.2
32.5°	392.7	389.1	377.5	358.6	332.1	300.0	261.5	222.6	186.1	153.9	94.4
35°	400.8	397.2	383.8	363.6	335.7	301.9	263.2	221.4	182.3	147.2	85.0
37.5°	407.1	403.0	389.3	367.0	337.4	302.4	263.0	219.7	178.2	141.7	75.6
40°	411.4	407.1	392.4	368.9	337.9	301.6	261.0	216.9	173.4	134.7	65.8
42.5°	414.3	409.5	393.9	371.8	336.9	299.7	258.2	213.3	168.1	128.7	56.4
45°	415.7	410.7	394.1	369.4	335.3	296.1	253.8	208.7	162.3	120.6	47.1
47.5°	415.0	409.5	392.9	366.7	332.1	292.3	249.0	203.2	155.4	113.4	38.2
50°	413.8	408.0	390.3	363.4	327.8	287.5	243.8	196.4	148.2	104.5	30.3
52.5°	409.9	404.2	387.4	358.6	322.8	281.9	236.6	189.5	140.5	95.8	23.1
55°	405.1	399.9	382.3	354.2	316.3	275.2	229.8	182.0	133.0	86.9	16.6
57.5°	397.7	392.9	376.1	347.3	309.8	267.8	222.4	173.9	123.7	78.1	11.5
60°	388.6	383.8	367.4	339.3	302.4	259.4	214.2	165.5	115.3	69.2	7.2
62.5°	379.0	374.4	357.3	329.5	293.0	250.5	205.3	157.1	106.4	61.0	4.3
65°	366.2	361.9	346.5	317.7	282.7	240.9	195.5	147.0	97.3	51.9	2.4
67.5°	352.8	348.9	333.3	306.9	270.7	230.3	185.4	137.1	87.7	43.9	1.2
70°	338.4	333.6	319.2	292.3	258.4	218.3	174.4	127.0	78.5	36.3	0.0
72.5°	321.6	318.0	304.0	278.6	244.2	205.6	163.1	116.0	68.4	28.8	0.2
75°	305.2	300.7	287.9	263.9	230.3	192.1	150.6	105.7	58.6	22.1	0.2
77.5°	284.1	282.7	270.7	247.4	217.1	179.2	136.9	93.2	49.2	15.9	0.2
80°	263.0	261.5	252.2	230.8	201.7	163.8	124.2	81.4	40.1	10.6	0.2
82.5°	242.1	240.2	231.3	213.5	186.1	150.8	111.0	69.6	31.7	6.5	0.2
85°	223.3	220.9	211.3	195.0	170.0	136.2	97.3	58.1	23.5	3.6	0.5
87.5°	207.3	205.6	195.0	178.2	153.7	122.5	85.3	47.1	16.6	1.7	0.7
90°	193.6	190.0	180.6	162.8	138.3	107.3	72.5	37.7	11.0	1.0	1.0
92.5°	180.1	177.0	166.7	148.4	124.6	94.4	60.3	28.8	7.0	0.5	1.2
95°	166.2	162.8	152.7	135.9	110.7	81.2	49.5	21.1	3.8	0.5	1.2
97.5°	152.5	149.4	138.8	122.0	98.2	69.6	39.1	14.9	1.9	0.5	1.0
100°	139.8	136.2	126.6	109.8	85.7	58.1	30.3	9.6	1.2	0.5	1.0
102.5°	126.3	123.4	113.6	97.3	72.8	47.3	22.6	6.0	0.5	0.5	0.7
105°	114.3	110.7	101.1	84.3	62.0	37.2	15.9	3.6	0.5	0.5	0.7



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.4	71.6	63.2	49.0	31.5	14.6	4.3	0.7	0.7	0.7	0.7
115°	62.2	57.9	50.4	37.9	23.3	9.6	2.2	0.7	0.7	0.7	0.7
117.5°	49.7	46.1	40.8	28.8	15.4	6.2	1.2	0.7	0.7	0.7	0.7
120°	38.9	35.5	29.5	19.9	10.3	3.6	0.5	0.7	0.7	0.7	0.7
122.5°	27.9	25.2	19.9	13.0	6.2	1.7	0.7	0.7	1.0	1.0	0.7
125°	18.5	17.1	13.2	7.9	3.8	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.0	10.8	7.7	4.6	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.7	6.0	4.6	2.6	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.8	3.6	2.4	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.2	1.2	1.2	1.0
140°	0.2	0.2	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.0
142.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
145°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
150°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
152.5°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
157.5°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
160°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	188.5	188.5	188.5
2.5°	179.4	176.0	175.1
5°	169.8	164.3	161.1
7.5°	160.2	152.7	149.1
10°	151.3	140.7	136.9
12.5°	140.7	128.5	122.5
15°	130.6	114.8	109.0
17.5°	119.4	101.6	94.9
20°	108.8	88.4	81.4
22.5°	96.8	75.4	67.7
25°	86.0	62.4	53.8
27.5°	74.0	49.2	41.8
30°	62.7	37.7	30.3
32.5°	51.9	27.6	20.9
35°	41.8	18.7	13.2
37.5°	32.2	11.5	6.7
40°	23.3	6.0	3.1
42.5°	15.6	2.9	1.7
45°	9.6	1.4	0.0
47.5°	5.5	0.0	0.0
50°	2.9	0.0	0.0
52.5°	1.2	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°	0.2	0.2	0.2
77.5°	0.2	0.5	0.7
80°	0.5	1.0	1.2
82.5°	1.0	1.2	1.2
85°	1.0	1.2	1.4
87.5°	1.2	1.4	1.7
90°	1.4	1.7	1.7
92.5°	1.4	1.9	1.9
95°	1.7	1.9	2.2
97.5°	1.9	2.2	2.2
100°	1.7	2.2	2.4
102.5°	1.4	2.2	2.2
105°	1.2	1.7	1.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.0	1.2	1.2
115°	0.7	1.0	1.2
117.5°	0.7	1.0	1.0
120°	0.7	0.7	1.0
122.5°	0.7	0.7	1.0
125°	0.7	0.7	1.0
127.5°	1.0	0.7	0.7
130°	0.7	0.7	0.7
132.5°	1.0	0.7	0.7
135°	1.0	0.7	0.7
137.5°	1.0	0.7	0.7
140°	1.0	0.7	0.7
142.5°	1.0	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	1.0	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	100.9	98.0	88.4	72.5	50.7	28.3	10.6	1.9	0.5	0.7	0.7
110°	87.9	85.5	75.6	60.3	40.8	21.1	7.0	1.2	0.7	0.7	0.7





107.5°	1.0	1.4	1.7
110°	1.0	1.2	1.4



(END OF REPORT)