

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: P550859

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-93-86-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: P550859
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-93-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS 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

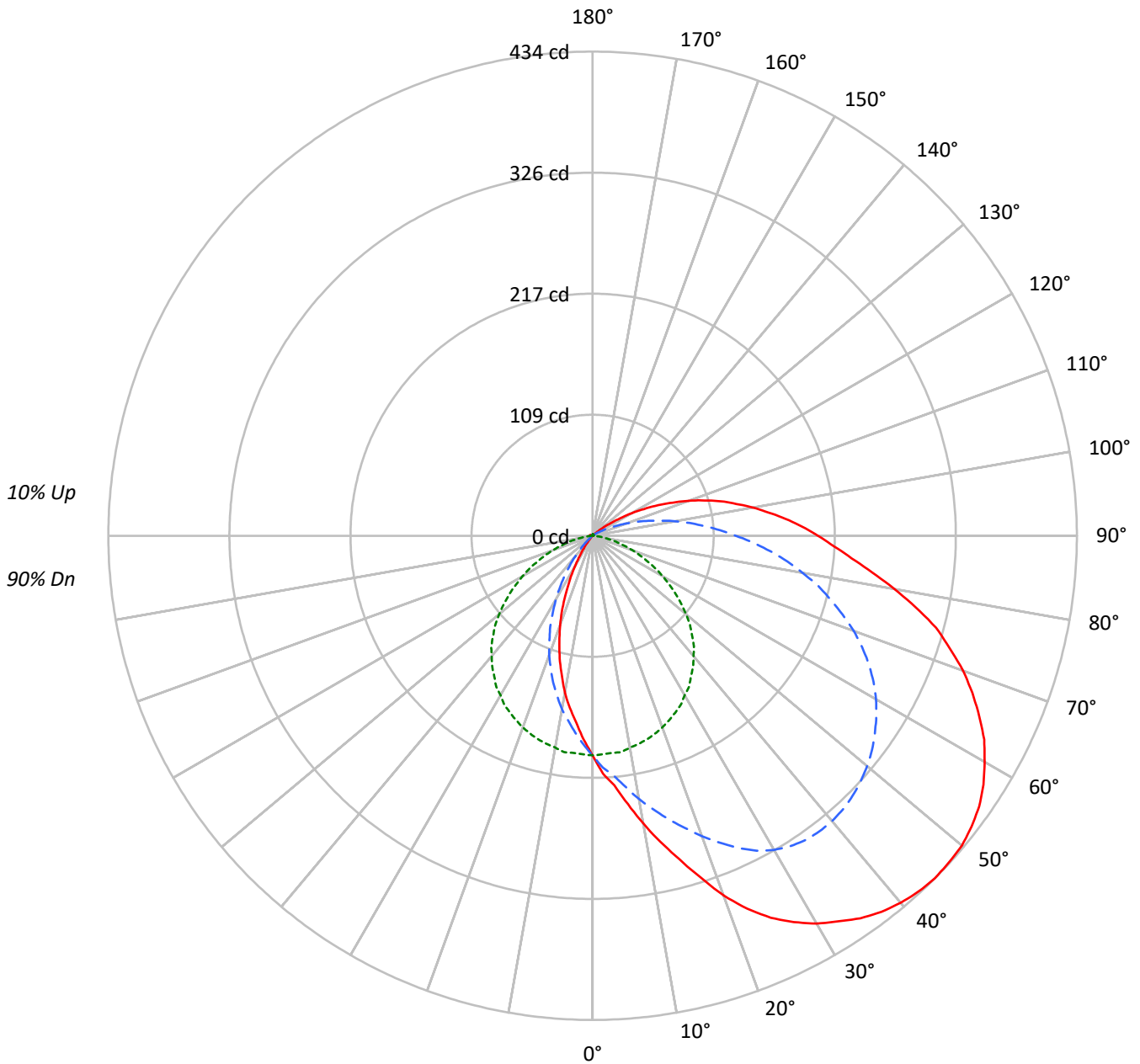
Lumens per Lamp: N/A
Luminaire Lumens: 973.1 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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									
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°	2118	2118	2118
5°	2325	2087	1741
10°	2632	2062	1435
15°	2949	2036	1118
20°	3326	2003	824
25°	3639	1964	541
30°	3871	1913	305
35°	4073	1857	134
40°	4251	1789	33
45°	4404	1704	0
50°	4533	1590	0
55°	4631	1446	0
60°	4680	1278	0
65°	4699	1089	0
70°	4684	888	0
75°	4625	655	4
80°	4436	399	21
85°	4289	193	28



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.9	1.9
10°-20°	56.4	5.8
20°-30°	91.4	9.4
30°-40°	117.4	12.1
40°-50°	132.9	13.7
50°-60°	137.7	14.2
60°-70°	129.9	13.3
70°-80°	108.9	11.2
80°-90°	78.9	8.1
90°-100°	51.9	5.3
100°-110°	30.0	3.1
110°-120°	13.2	1.4
120°-130°	3.6	0.4
130°-140°	0.8	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	166.7	17.1
0°-40°	284.1	29.2
0°-60°	554.8	57.0
0°-90°	872.4	89.6
90°-120°	95.1	9.8
90°-150°	100.0	10.3
90°-180°	101.0	10.4
0°-180°	973.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	197	197	197	197	197	
5°	225	216	195	177	168	23
15°	300	263	189	136	114	87
25°	378	309	175	90	56	175
35°	418	333	154	44	14	262
45°	434	330	126	10	0	335
55°	423	309	91	0	0	378
65°	382	273	54	0	0	378
75°	319	220	23	0	0	334
85°	233	160	4	1	2	199
90°	202	128	1	2	2	111
95°	174	100	0	2	2	136
105°	119	52	0	1	2	126
115°	65	17	1	1	1	65
125°	19	2	1	1	1	19
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°	196.8	196.8	196.8	196.8	196.8	196.8	196.8	196.8	196.8	196.8	196.8
2.5°	213.4	213.1	212.4	211.1	209.4	206.3	203.8	201.6	198.6	196.1	191.3
5°	224.6	223.4	222.4	221.1	217.1	214.4	209.9	204.8	200.1	195.3	185.8
7.5°	242.7	240.7	239.2	235.7	230.2	223.9	216.9	212.1	208.8	195.6	179.3
10°	262.0	260.2	257.2	251.0	244.2	235.2	225.1	213.9	203.8	192.8	173.5
12.5°	281.1	278.5	274.3	266.3	256.7	245.5	231.7	218.4	204.1	191.0	166.7
15°	300.1	297.4	292.8	283.1	270.5	255.7	238.9	222.1	205.3	188.8	159.7
17.5°	320.9	317.2	310.4	299.4	283.6	265.3	245.5	225.1	204.8	186.0	152.2
20°	343.2	338.0	330.7	315.9	297.4	275.8	252.0	228.2	204.6	182.8	143.7
22.5°	361.8	356.5	348.5	333.2	310.9	284.6	257.5	230.2	203.6	179.0	135.6
25°	377.8	373.6	364.8	347.2	323.7	293.8	262.8	231.7	202.1	175.0	127.1
27.5°	390.4	386.4	376.6	358.5	334.5	302.1	266.8	232.4	200.1	171.0	118.3
30°	401.4	397.4	385.6	367.1	341.7	308.6	270.8	232.7	197.6	165.0	108.8
32.5°	409.9	406.2	394.1	374.3	346.7	313.1	273.0	232.4	194.3	160.7	98.5
35°	418.5	414.7	400.6	379.6	350.5	315.2	274.8	231.2	190.3	153.7	88.8
37.5°	425.0	420.7	406.4	383.1	352.3	315.7	274.5	229.4	186.0	147.9	79.0
40°	429.5	425.0	409.7	385.1	352.8	314.9	272.5	226.4	181.0	140.7	68.7
42.5°	432.5	427.5	411.2	388.1	351.8	312.9	269.5	222.6	175.5	134.4	58.9
45°	434.0	428.7	411.4	385.6	350.0	309.1	265.0	217.9	169.5	125.9	49.1
47.5°	433.2	427.5	410.2	382.8	346.7	305.1	260.0	212.1	162.2	118.3	39.9
50°	432.0	426.0	407.4	379.3	342.2	300.1	254.5	205.1	154.7	109.1	31.6
52.5°	428.0	422.0	404.4	374.3	337.0	294.3	247.0	197.8	146.7	100.0	24.1
55°	423.0	417.4	399.1	369.8	330.2	287.3	239.9	190.0	138.9	90.8	17.3
57.5°	415.2	410.2	392.6	362.5	323.4	279.6	232.2	181.5	129.1	81.5	12.0
60°	405.7	400.6	383.6	354.3	315.7	270.8	223.6	172.7	120.3	72.2	7.5
62.5°	395.6	390.9	373.1	344.0	305.9	261.5	214.4	164.0	111.1	63.7	4.5
65°	382.3	377.8	361.8	331.7	295.1	251.5	204.1	153.4	101.5	54.2	2.5
67.5°	368.3	364.3	348.0	320.4	282.6	240.4	193.6	143.2	91.5	45.9	1.3
70°	353.3	348.2	333.2	305.1	269.8	227.9	182.0	132.6	82.0	37.9	0.0
72.5°	335.7	332.0	317.4	290.8	255.0	214.6	170.2	121.1	71.5	30.1	0.3
75°	318.7	313.9	300.6	275.5	240.4	200.6	157.2	110.3	61.2	23.1	0.3
77.5°	296.6	295.1	282.6	258.2	226.7	187.0	142.9	97.3	51.4	16.5	0.3
80°	274.5	273.0	263.3	240.9	210.6	171.0	129.6	85.0	41.9	11.0	0.3
82.5°	252.7	250.7	241.4	222.9	194.3	157.5	115.8	72.7	33.1	6.8	0.3
85°	233.2	230.7	220.6	203.6	177.5	142.2	101.5	60.7	24.6	3.8	0.5
87.5°	216.4	214.6	203.6	186.0	160.5	127.9	89.0	49.1	17.3	1.8	0.8
90°	202.1	198.3	188.5	170.0	144.4	112.1	75.7	39.4	11.5	1.0	1.0
92.5°	188.0	184.8	174.0	154.9	130.1	98.5	62.9	30.1	7.3	0.5	1.3
95°	173.5	170.0	159.5	141.9	115.6	84.7	51.6	22.1	4.0	0.5	1.3
97.5°	159.2	155.9	144.9	127.4	102.5	72.7	40.9	15.5	2.0	0.5	1.0
100°	145.9	142.2	132.1	114.6	89.5	60.7	31.6	10.0	1.3	0.5	1.0
102.5°	131.9	128.9	118.6	101.5	76.0	49.4	23.6	6.3	0.5	0.5	0.8
105°	119.3	115.6	105.6	88.0	64.7	38.9	16.5	3.8	0.5	0.5	0.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	77.7	74.7	65.9	51.1	32.8	15.3	4.5	0.8	0.8	0.8	0.8
115°	64.9	60.4	52.7	39.6	24.3	10.0	2.3	0.8	0.8	0.8	0.8
117.5°	51.9	48.1	42.6	30.1	16.0	6.5	1.3	0.8	0.8	0.8	0.8
120°	40.6	37.1	30.8	20.8	10.8	3.8	0.5	0.8	0.8	0.8	0.8
122.5°	29.1	26.3	20.8	13.5	6.5	1.8	0.8	0.8	1.0	1.0	0.8
125°	19.3	17.8	13.8	8.3	4.0	0.8	0.8	0.8	1.0	1.0	0.8
127.5°	12.5	11.3	8.0	4.8	1.8	0.8	0.8	1.0	1.0	1.0	0.8
130°	7.0	6.3	4.8	2.8	0.8	0.8	0.8	1.0	1.0	1.0	0.8
132.5°	4.0	3.8	2.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.0	1.3	1.3	1.3	1.0
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.0
142.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
145°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
150°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
152.5°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
157.5°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
160°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.3
172.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
175°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
177.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.0
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	196.8	196.8	196.8
2.5°	187.3	183.8	182.8
5°	177.3	171.5	168.2
7.5°	167.2	159.5	155.7
10°	158.0	146.9	142.9
12.5°	146.9	134.1	127.9
15°	136.4	119.8	113.8
17.5°	124.6	106.1	99.0
20°	113.6	92.3	85.0
22.5°	101.0	78.7	70.7
25°	89.8	65.2	56.2
27.5°	77.2	51.4	43.6
30°	65.4	39.4	31.6
32.5°	54.2	28.8	21.8
35°	43.6	19.6	13.8
37.5°	33.6	12.0	7.0
40°	24.3	6.3	3.3
42.5°	16.3	3.0	1.8
45°	10.0	1.5	0.0
47.5°	5.8	0.0	0.0
50°	3.0	0.0	0.0
52.5°	1.3	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°	0.3	0.3	0.3
77.5°	0.3	0.5	0.8
80°	0.5	1.0	1.3
82.5°	1.0	1.3	1.3
85°	1.0	1.3	1.5
87.5°	1.3	1.5	1.8
90°	1.5	1.8	1.8
92.5°	1.5	2.0	2.0
95°	1.8	2.0	2.3
97.5°	2.0	2.3	2.3
100°	1.8	2.3	2.5
102.5°	1.5	2.3	2.3
105°	1.3	1.8	2.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.0	1.3	1.3
115°	0.8	1.0	1.3
117.5°	0.8	1.0	1.0
120°	0.8	0.8	1.0
122.5°	0.8	0.8	1.0
125°	0.8	0.8	1.0
127.5°	1.0	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.0	0.8	0.8
135°	1.0	0.8	0.8
137.5°	1.0	0.8	0.8
140°	1.0	0.8	0.8
142.5°	1.0	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.0	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	105.3	102.3	92.3	75.7	52.9	29.6	11.0	2.0	0.5	0.8	0.8
110°	91.8	89.3	79.0	62.9	42.6	22.1	7.3	1.3	0.8	0.8	0.8





107.5°	1.0	1.5	1.8
110°	1.0	1.3	1.5



(END OF REPORT)