

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: P551040

Luminaire Tested: **FCC-X-2-LD4-1STD-35-UNV-82-88-ED1D**

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: P551040
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-LD4-1STD-35-UNV-82-88-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

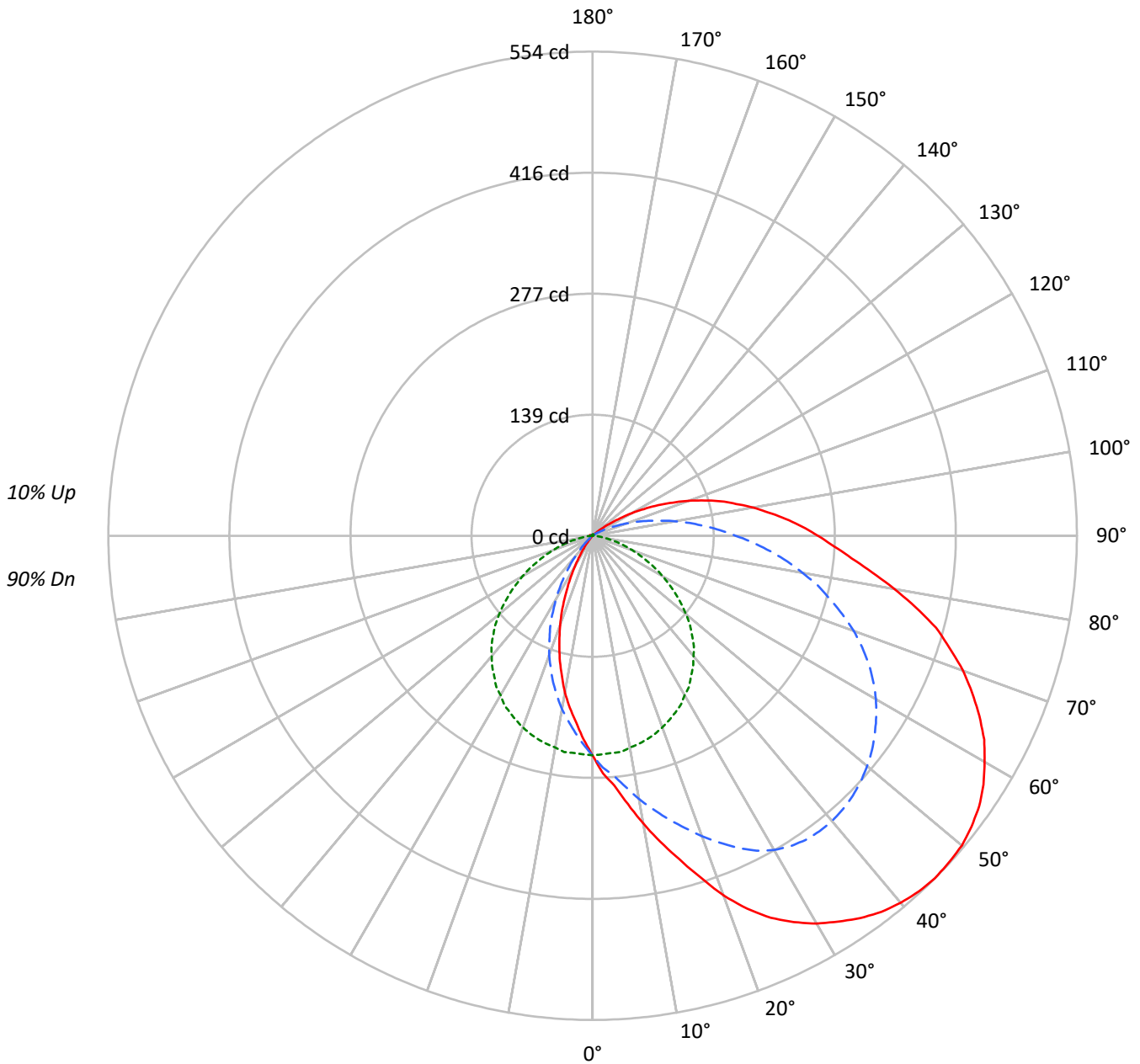
Lumens per Lamp: N/A
Luminaire Lumens: 1242.1 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
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°	2704	2704	2704
5°	2969	2665	2223
10°	3359	2632	1832
15°	3765	2599	1428
20°	4246	2556	1051
25°	4645	2507	691
30°	4942	2441	389
35°	5198	2371	171
40°	5426	2283	42
45°	5622	2174	0
50°	5786	2029	0
55°	5911	1846	0
60°	5974	1632	0
65°	5999	1388	0
70°	5978	1131	0
75°	5903	834	4
80°	5663	511	26
85°	5473	244	35



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.1	1.9
10°-20°	72.1	5.8
20°-30°	116.7	9.4
30°-40°	149.9	12.1
40°-50°	169.7	13.7
50°-60°	175.8	14.2
60°-70°	165.8	13.3
70°-80°	138.9	11.2
80°-90°	100.7	8.1
90°-100°	66.2	5.3
100°-110°	38.2	3.1
110°-120°	16.9	1.4
120°-130°	4.6	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	212.8	17.1
0°-40°	362.7	29.2
0°-60°	708.2	57.0
0°-90°	1113.6	89.7
90°-120°	121.3	9.8
90°-150°	127.6	10.3
90°-180°	129.0	10.4
0°-180°	1242.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	251	251	251	251	251	
5°	287	275	249	226	215	29
15°	383	336	241	174	145	110
25°	482	394	223	115	72	223
35°	534	425	196	56	18	335
45°	554	421	161	13	0	428
55°	540	394	116	0	0	482
65°	488	349	69	0	0	483
75°	407	281	29	0	0	427
85°	298	204	5	1	2	254
90°	258	164	1	2	2	141
95°	222	128	1	2	3	174
105°	152	66	1	2	3	161
115°	83	22	1	1	2	83
125°	25	3	1	1	1	25
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	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°	251.2	251.2	251.2	251.2	251.2	251.2	251.2	251.2	251.2	251.2	251.2
2.5°	272.3	272.0	271.1	269.5	267.2	263.4	260.2	257.3	253.5	250.3	244.2
5°	286.8	285.2	283.9	282.3	277.1	273.6	267.9	261.5	255.4	249.3	237.1
7.5°	309.8	307.2	305.3	300.8	293.8	285.8	276.8	270.7	266.6	249.6	228.8
10°	334.4	332.2	328.4	320.4	311.7	300.2	287.4	273.0	260.2	246.1	221.5
12.5°	358.8	355.6	350.1	339.9	327.7	313.3	295.7	278.7	260.5	243.9	212.8
15°	383.1	379.6	373.8	361.3	345.3	326.4	305.0	283.6	262.1	241.0	203.9
17.5°	409.6	404.8	396.2	382.1	362.0	338.6	313.3	287.4	261.5	237.5	194.3
20°	438.1	431.4	422.1	403.2	379.6	352.0	321.6	291.2	261.1	233.3	183.4
22.5°	461.8	455.1	444.8	425.3	396.8	363.2	328.7	293.8	259.9	228.5	173.1
25°	482.3	476.9	465.6	443.2	413.2	375.1	335.4	295.7	257.9	223.4	162.3
27.5°	498.3	493.2	480.7	457.6	426.9	385.6	340.5	296.7	255.4	218.3	151.1
30°	512.4	507.3	492.2	468.5	436.2	394.0	345.6	297.0	252.2	210.6	138.9
32.5°	523.3	518.5	503.1	477.8	442.6	399.7	348.5	296.7	248.0	205.1	125.8
35°	534.1	529.3	511.4	484.5	447.4	402.3	350.8	295.1	242.9	196.2	113.3
37.5°	542.5	537.0	518.8	489.0	449.6	402.9	350.4	292.8	237.5	188.8	100.8
40°	548.2	542.5	522.9	491.6	450.3	402.0	347.9	289.0	231.1	179.5	87.7
42.5°	552.1	545.7	524.9	495.4	449.0	399.4	344.0	284.2	224.0	171.5	75.2
45°	554.0	547.3	525.2	492.2	446.8	394.6	338.3	278.1	216.3	160.7	62.7
47.5°	553.0	545.7	523.6	488.7	442.6	389.5	331.9	270.7	207.1	151.1	50.9
50°	551.4	543.7	520.1	484.2	436.8	383.1	324.8	261.8	197.5	139.2	40.3
52.5°	546.3	538.6	516.2	477.8	430.1	375.7	315.2	252.5	187.2	127.7	30.7
55°	539.9	532.9	509.5	472.1	421.5	366.8	306.3	242.6	177.3	115.9	22.1
57.5°	530.0	523.6	501.2	462.8	412.8	356.8	296.4	231.7	164.8	104.0	15.4
60°	517.8	511.4	489.7	452.2	402.9	345.6	285.5	220.5	153.6	92.2	9.6
62.5°	505.0	498.9	476.2	439.1	390.4	333.8	273.6	209.3	141.8	81.3	5.8
65°	488.1	482.3	461.8	423.4	376.7	321.0	260.5	195.9	129.6	69.1	3.2
67.5°	470.1	465.0	444.2	409.0	360.7	306.9	247.1	182.7	116.8	58.6	1.6
70°	450.9	444.5	425.3	389.5	344.4	290.9	232.3	169.3	104.7	48.3	0.0
72.5°	428.5	423.7	405.2	371.2	325.5	273.9	217.3	154.6	91.2	38.4	0.3
75°	406.8	400.7	383.7	351.7	306.9	256.0	200.7	140.8	78.1	29.4	0.3
77.5°	378.6	376.7	360.7	329.6	289.3	238.7	182.4	124.2	65.6	21.1	0.3
80°	350.4	348.5	336.0	307.6	268.8	218.3	165.5	108.5	53.4	14.1	0.3
82.5°	322.6	320.0	308.2	284.5	248.0	201.0	147.9	92.8	42.2	8.6	0.3
85°	297.6	294.4	281.6	259.9	226.6	181.5	129.6	77.4	31.4	4.8	0.6
87.5°	276.2	273.9	259.9	237.5	204.8	163.2	113.6	62.7	22.1	2.2	1.0
90°	257.9	253.1	240.7	217.0	184.3	143.1	96.7	50.2	14.7	1.3	1.3
92.5°	240.0	235.9	222.1	197.8	166.1	125.8	80.3	38.4	9.3	0.6	1.6
95°	221.5	217.0	203.5	181.1	147.5	108.2	65.9	28.2	5.1	0.6	1.6
97.5°	203.2	199.1	185.0	162.6	130.9	92.8	52.2	19.8	2.6	0.6	1.3
100°	186.3	181.5	168.7	146.3	114.3	77.4	40.3	12.8	1.6	0.6	1.3
102.5°	168.3	164.5	151.4	129.6	97.0	63.0	30.1	8.0	0.6	0.6	1.0
105°	152.3	147.5	134.7	112.3	82.6	49.6	21.1	4.8	0.6	0.6	1.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	99.2	95.4	84.2	65.3	41.9	19.5	5.8	1.0	1.0	1.0	1.0
115°	82.9	77.1	67.2	50.6	31.0	12.8	2.9	1.0	1.0	1.0	1.0
117.5°	66.2	61.4	54.4	38.4	20.5	8.3	1.6	1.0	1.0	1.0	1.0
120°	51.8	47.4	39.4	26.6	13.8	4.8	0.6	1.0	1.0	1.0	1.0
122.5°	37.1	33.6	26.6	17.3	8.3	2.2	1.0	1.0	1.3	1.3	1.0
125°	24.6	22.7	17.6	10.6	5.1	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.0	14.4	10.2	6.1	2.2	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.0	8.0	6.1	3.5	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.1	4.8	3.2	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	251.2	251.2	251.2
2.5°	239.1	234.6	233.3
5°	226.3	218.9	214.7
7.5°	213.5	203.5	198.7
10°	201.6	187.5	182.4
12.5°	187.5	171.2	163.2
15°	174.1	153.0	145.3
17.5°	159.1	135.4	126.4
20°	145.0	117.8	108.5
22.5°	129.0	100.5	90.2
25°	114.6	83.2	71.7
27.5°	98.6	65.6	55.7
30°	83.5	50.2	40.3
32.5°	69.1	36.8	27.8
35°	55.7	25.0	17.6
37.5°	42.9	15.4	9.0
40°	31.0	8.0	4.2
42.5°	20.8	3.8	2.2
45°	12.8	1.9	0.0
47.5°	7.4	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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	0.6	1.0
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.6	2.6
95°	2.2	2.6	2.9
97.5°	2.6	2.9	2.9
100°	2.2	2.9	3.2
102.5°	1.9	2.9	2.9
105°	1.6	2.2	2.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.6
152.5°	1.0	0.6	0.6
155°	1.0	0.6	0.3
157.5°	1.3	0.6	0.3
160°	1.0	0.6	0.3
162.5°	1.0	0.6	0.3
165°	1.0	0.6	0.0
167.5°	1.0	0.6	0.3
170°	1.0	0.6	0.3
172.5°	1.0	0.6	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



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







107.5°	134.4	130.6	117.8	96.7	67.5	37.8	14.1	2.6	0.6	1.0	1.0
110°	117.1	113.9	100.8	80.3	54.4	28.2	9.3	1.6	1.0	1.0	1.0





107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)