

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: P551599

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-81-88-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: P551599
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-81-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

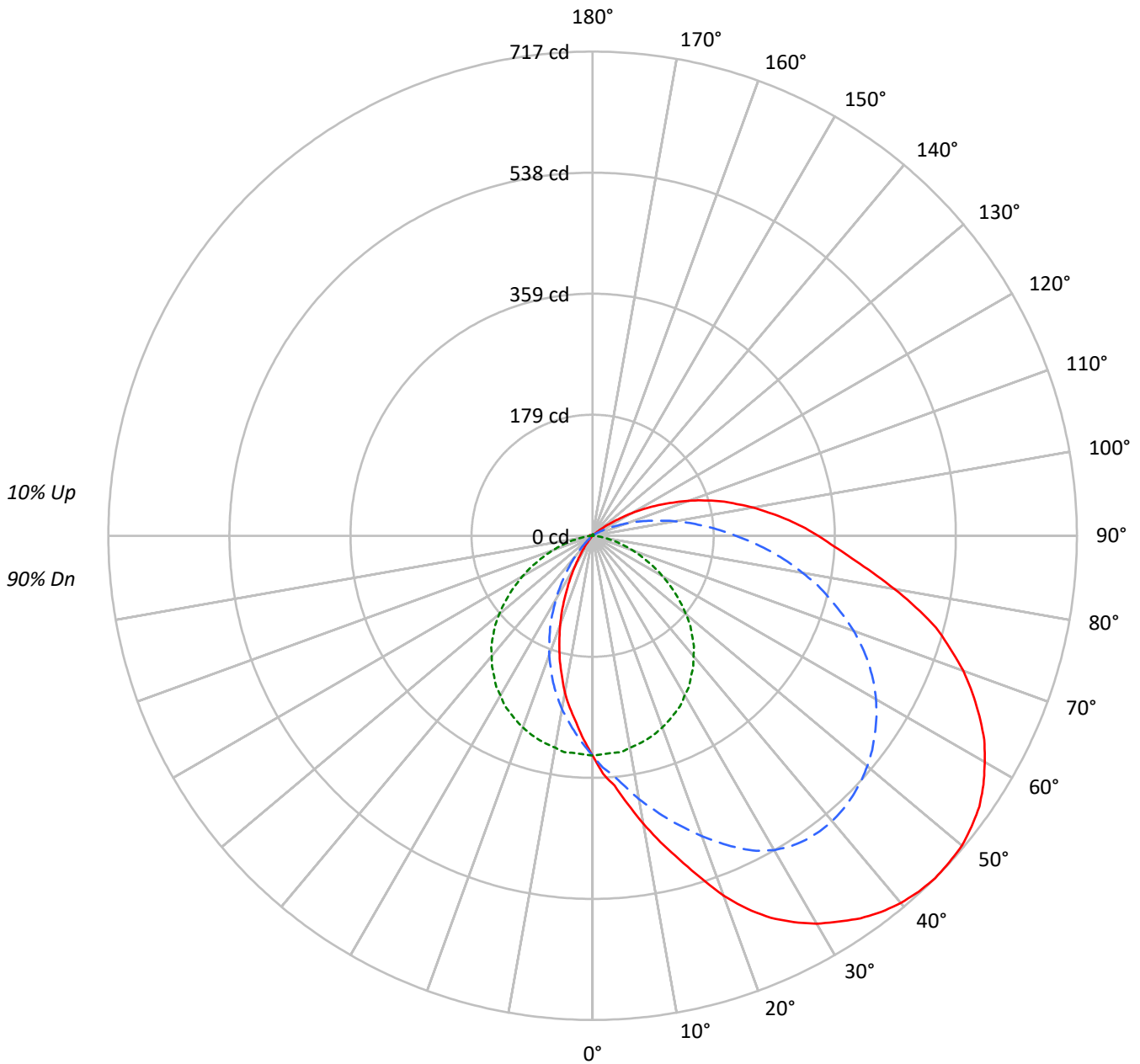
Lumens per Lamp: N/A
Luminaire Lumens: 1608.0 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
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°	3502	3502	3502
5°	3844	3450	2878
10°	4349	3407	2372
15°	4874	3364	1848
20°	5497	3310	1362
25°	6014	3246	894
30°	6398	3160	503
35°	6730	3069	222
40°	7026	2956	53
45°	7278	2814	0
50°	7491	2626	0
55°	7653	2389	0
60°	7734	2111	0
65°	7767	1798	0
70°	7740	1466	0
75°	7641	1080	6
80°	7332	660	34
85°	7086	315	46



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.2	1.9
10°-20°	93.3	5.8
20°-30°	151.1	9.4
30°-40°	194.1	12.1
40°-50°	219.7	13.7
50°-60°	227.6	14.2
60°-70°	214.6	13.3
70°-80°	179.9	11.2
80°-90°	130.4	8.1
90°-100°	85.7	5.3
100°-110°	49.5	3.1
110°-120°	21.8	1.4
120°-130°	5.9	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	275.5	17.1
0°-40°	469.6	29.2
0°-60°	916.8	57.0
0°-90°	1441.7	89.7
90°-120°	157.0	9.8
90°-150°	165.1	10.3
90°-180°	166.0	10.3
0°-180°	1608.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	325	325	325	325	325	
5°	371	357	323	293	278	37
15°	496	435	312	225	188	143
25°	624	510	289	148	93	289
35°	692	550	254	72	23	434
45°	717	545	208	17	0	554
55°	699	510	150	0	0	624
65°	632	452	90	0	0	625
75°	527	364	38	0	0	552
85°	385	264	6	2	2	329
90°	334	212	2	2	3	183
95°	287	166	1	3	4	225
105°	197	86	1	2	3	208
115°	107	28	1	1	2	107
125°	32	4	2	1	2	32
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°	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3
2.5°	352.6	352.2	350.9	348.9	346.0	341.0	336.9	333.1	328.2	324.0	316.1
5°	371.3	369.2	367.5	365.5	358.8	354.3	346.8	338.5	330.6	322.8	307.0
7.5°	401.1	397.8	395.3	389.5	380.4	370.0	358.4	350.5	345.1	323.2	296.3
10°	433.0	430.1	425.1	414.8	403.6	388.7	372.1	353.4	336.9	318.6	286.7
12.5°	464.5	460.3	453.3	440.0	424.3	405.6	382.9	360.9	337.3	315.7	275.5
15°	496.0	491.4	484.0	467.8	447.1	422.6	394.9	367.1	339.3	312.0	263.9
17.5°	530.4	524.1	513.0	494.7	468.6	438.4	405.6	372.1	338.5	307.4	251.5
20°	567.2	558.5	546.5	522.1	491.4	455.8	416.4	377.1	338.1	302.1	237.4
22.5°	597.9	589.2	575.9	550.7	513.8	470.3	425.5	380.4	336.4	295.8	224.2
25°	624.4	617.4	602.9	573.9	534.9	485.6	434.2	382.9	334.0	289.2	210.1
27.5°	645.1	638.5	622.3	592.5	552.7	499.3	440.9	384.1	330.6	282.6	195.6
30°	663.4	656.7	637.3	606.6	564.8	510.1	447.5	384.5	326.5	272.6	179.8
32.5°	677.5	671.2	651.3	618.6	573.0	517.5	451.2	384.1	321.1	265.6	162.8
35°	691.5	685.3	662.1	627.3	579.3	520.8	454.1	382.0	314.5	254.0	146.7
37.5°	702.3	695.3	671.7	633.1	582.2	521.7	453.7	379.1	307.4	244.5	130.5
40°	709.8	702.3	677.0	636.4	583.0	520.4	450.4	374.2	299.2	232.4	113.5
42.5°	714.7	706.5	679.5	641.4	581.3	517.1	445.4	367.9	290.0	222.1	97.4
45°	717.2	708.5	679.9	637.3	578.4	510.9	438.0	360.1	280.1	208.0	81.2
47.5°	716.0	706.5	677.9	632.7	573.0	504.3	429.7	350.5	268.1	195.6	65.9
50°	713.9	704.0	673.3	626.9	565.6	496.0	420.6	338.9	255.7	180.2	52.2
52.5°	707.3	697.3	668.3	618.6	556.9	486.4	408.1	326.9	242.4	165.3	39.8
55°	699.0	689.9	659.6	611.2	545.7	474.8	396.5	314.1	229.5	150.0	28.6
57.5°	686.2	677.9	648.9	599.1	534.5	462.0	383.7	300.0	213.4	134.7	19.9
60°	670.4	662.1	633.9	585.5	521.7	447.5	369.6	285.5	198.9	119.3	12.4
62.5°	653.8	646.0	616.5	568.5	505.5	432.2	354.3	271.0	183.6	105.2	7.5
65°	631.9	624.4	597.9	548.2	487.7	415.6	337.3	253.6	167.8	89.5	4.1
67.5°	608.7	602.0	575.1	529.5	467.0	397.4	319.9	236.6	151.2	75.8	2.1
70°	583.8	575.5	550.7	504.3	445.8	376.6	300.8	219.2	135.5	62.6	0.0
72.5°	554.8	548.6	524.6	480.6	421.4	354.7	281.3	200.1	118.1	49.7	0.4
75°	526.6	518.8	496.8	455.4	397.4	331.5	259.8	182.3	101.1	38.1	0.4
77.5°	490.2	487.7	467.0	426.8	374.6	309.1	236.2	160.8	84.9	27.3	0.4
80°	453.7	451.2	435.1	398.2	348.0	282.6	214.2	140.5	69.2	18.2	0.4
82.5°	417.7	414.3	399.0	368.4	321.1	260.2	191.4	120.2	54.7	11.2	0.4
85°	385.3	381.2	364.6	336.4	293.4	234.9	167.8	100.3	40.6	6.2	0.8
87.5°	357.6	354.7	336.4	307.4	265.2	211.3	147.1	81.2	28.6	2.9	1.2
90°	334.0	327.7	311.6	280.9	238.7	185.2	125.1	65.1	19.1	1.7	1.7
92.5°	310.8	305.4	287.6	256.1	215.0	162.8	104.0	49.7	12.0	0.8	2.1
95°	286.7	280.9	263.5	234.5	191.0	140.0	85.4	36.5	6.6	0.8	2.1
97.5°	263.1	257.7	239.5	210.5	169.5	120.2	67.5	25.7	3.3	0.8	1.7
100°	241.1	234.9	218.4	189.4	147.9	100.3	52.2	16.6	2.1	0.8	1.7
102.5°	217.9	213.0	196.0	167.8	125.5	81.6	38.9	10.4	0.8	0.8	1.2
105°	197.2	191.0	174.4	145.4	106.9	64.2	27.3	6.2	0.8	0.8	1.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	128.4	123.5	109.0	84.5	54.3	25.3	7.5	1.2	1.2	1.2	1.2
115°	107.3	99.9	87.0	65.5	40.2	16.6	3.7	1.2	1.2	1.2	1.2
117.5°	85.8	79.6	70.4	49.7	26.5	10.8	2.1	1.2	1.2	1.2	1.2
120°	67.1	61.3	51.0	34.4	17.8	6.2	0.8	1.2	1.2	1.2	1.2
122.5°	48.1	43.5	34.4	22.4	10.8	2.9	1.2	1.2	1.7	1.7	1.2
125°	31.9	29.4	22.8	13.7	6.6	1.2	1.2	1.2	1.7	1.7	1.2
127.5°	20.7	18.6	13.3	7.9	2.9	1.2	1.2	1.7	1.7	1.7	1.2
130°	11.6	10.4	7.9	4.6	1.2	1.2	1.2	1.7	1.7	1.7	1.2
132.5°	6.6	6.2	4.1	0.8	1.2	1.2	1.2	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.2	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.2	1.2	1.7	1.7	2.1	2.1	2.1	1.7
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	325.3	325.3	325.3
2.5°	309.5	303.7	302.1
5°	292.9	283.4	278.0
7.5°	276.4	263.5	257.3
10°	261.0	242.8	236.2
12.5°	242.8	221.7	211.3
15°	225.4	198.1	188.1
17.5°	205.9	175.3	163.7
20°	187.7	152.5	140.5
22.5°	167.0	130.1	116.8
25°	148.3	107.7	92.8
27.5°	127.6	84.9	72.1
30°	108.1	65.1	52.2
32.5°	89.5	47.6	36.0
35°	72.1	32.3	22.8
37.5°	55.5	19.9	11.6
40°	40.2	10.4	5.4
42.5°	26.9	5.0	2.9
45°	16.6	2.5	0.0
47.5°	9.5	0.0	0.0
50°	5.0	0.0	0.0
52.5°	2.1	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	0.8	1.2
80°	0.8	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	2.9
90°	2.5	2.9	2.9
92.5°	2.5	3.3	3.3
95°	2.9	3.3	3.7
97.5°	3.3	3.7	3.7
100°	2.9	3.7	4.1
102.5°	2.5	3.7	3.7
105°	2.1	2.9	3.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.2	1.7	2.1
117.5°	1.2	1.7	1.7
120°	1.2	1.2	1.7
122.5°	1.2	1.2	1.7
125°	1.2	1.2	1.7
127.5°	1.7	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.7	1.2	1.2
135°	1.7	1.2	1.2
137.5°	1.7	1.2	1.2
140°	1.7	1.2	1.2
142.5°	1.7	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.7	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	174.0	169.1	152.5	125.1	87.4	48.9	18.2	3.3	0.8	1.2	1.2
110°	151.6	147.5	130.5	104.0	70.4	36.5	12.0	2.1	1.2	1.2	1.2





107.5°	1.7	2.5	2.9
110°	1.7	2.1	2.5



(END OF REPORT)