

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: P551559

Luminaire Tested: **FCC-X-2-LD4-2LO-35-UNV-93-84-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: P551559
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-35-UNV-93-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

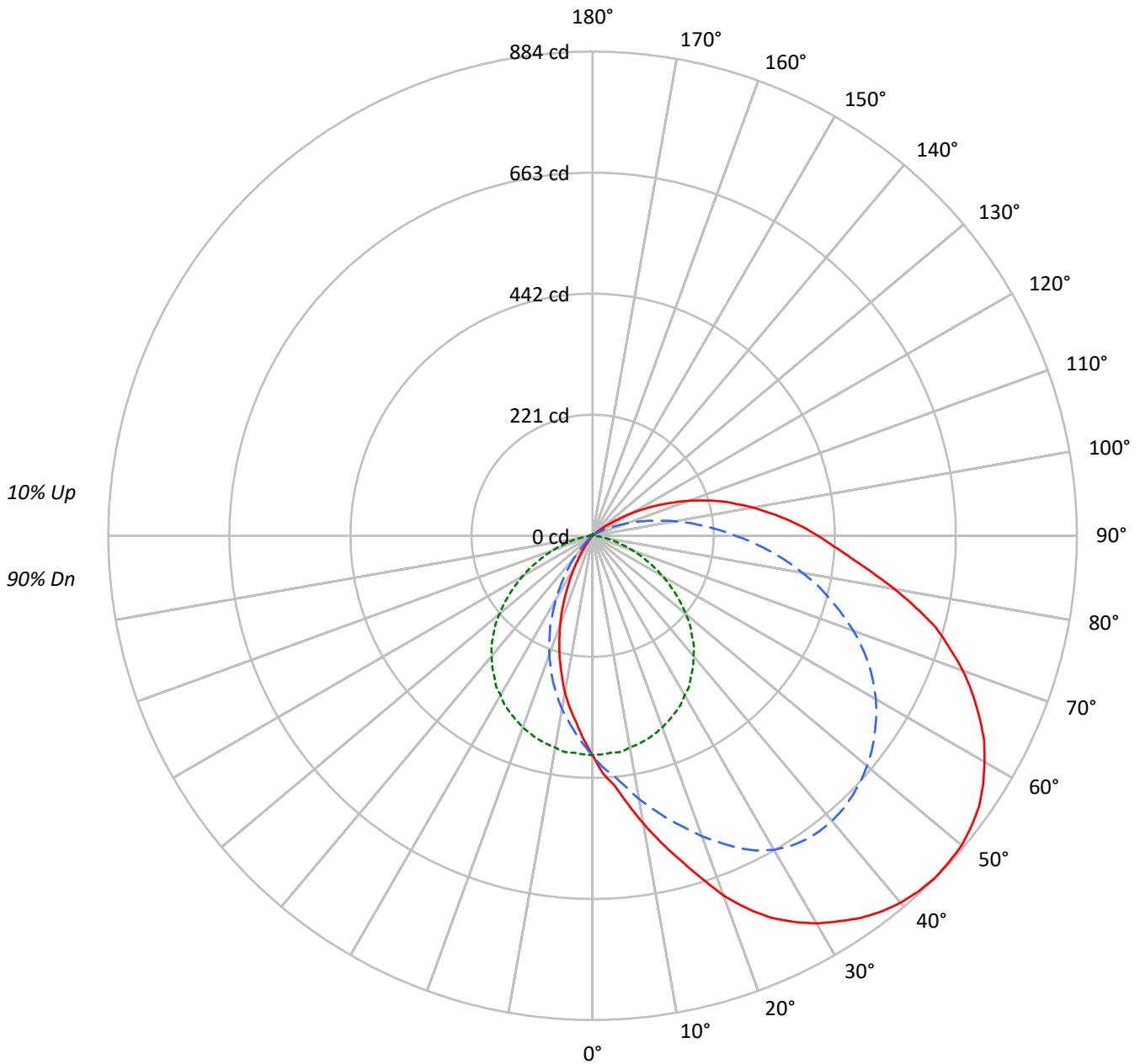
Lumens per Lamp: N/A
Luminaire Lumens: 1980.9 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4313	4313	4313
5°	4735	4250	3546
10°	5358	4197	2923
15°	6004	4145	2277
20°	6772	4077	1677
25°	7409	3999	1101
30°	7882	3894	620
35°	8292	3781	273
40°	8655	3642	65
45°	8967	3467	0
50°	9229	3236	0
55°	9428	2943	0
60°	9528	2601	0
65°	9567	2215	0
70°	9535	1806	0
75°	9415	1333	7
80°	9034	816	42
85°	8731	392	57



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.4	1.9
10°-20°	114.9	5.8
20°-30°	186.1	9.4
30°-40°	239.1	12.1
40°-50°	270.6	13.7
50°-60°	280.4	14.2
60°-70°	264.4	13.3
70°-80°	221.6	11.2
80°-90°	160.6	8.1
90°-100°	105.6	5.3
100°-110°	61.0	3.1
110°-120°	26.9	1.4
120°-130°	7.3	0.4
130°-140°	1.7	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	339.4	17.1
0°-40°	578.5	29.2
0°-60°	1129.5	57.0
0°-90°	1776.1	89.7
90°-120°	193.4	9.8
90°-150°	203.4	10.3
90°-180°	205.0	10.3
0°-180°	1980.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	401	401	401	401	401	
5°	457	439	398	361	342	46
15°	611	536	384	278	232	176
25°	769	629	356	183	114	356
35°	852	678	313	89	28	534
45°	884	671	256	20	0	682
55°	861	629	185	0	0	769
65°	778	556	110	0	0	770
75°	649	449	47	0	0	680
85°	475	325	8	2	3	405
90°	411	261	2	3	4	226
95°	353	204	1	4	5	277
105°	243	105	1	3	4	256
115°	132	35	2	2	3	132
125°	39	5	2	2	2	39
135°	2	2	3	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	3	2	0	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	400.7	400.7	400.7	400.7	400.7	400.7	400.7	400.7	400.7	400.7	400.7
2.5°	434.4	433.9	432.4	429.8	426.2	420.1	415.0	410.4	404.3	399.2	389.5
5°	457.4	454.8	452.8	450.2	442.1	436.4	427.3	417.0	407.3	397.6	378.2
7.5°	494.1	490.0	487.0	479.8	468.6	455.8	441.5	431.8	425.2	398.2	365.0
10°	533.4	529.9	523.7	511.0	497.2	478.8	458.4	435.4	415.0	392.5	353.2
12.5°	572.2	567.1	558.4	542.1	522.7	499.7	471.7	444.6	415.5	389.0	339.5
15°	611.0	605.4	596.2	576.3	550.8	520.7	486.5	452.3	418.1	384.4	325.2
17.5°	653.4	645.7	631.9	609.5	577.3	540.1	499.7	458.4	417.0	378.8	309.8
20°	698.8	688.1	673.3	643.2	605.4	561.5	513.0	464.5	416.5	372.1	292.5
22.5°	736.6	725.9	709.5	678.4	633.0	579.4	524.2	468.6	414.5	364.5	276.2
25°	769.3	760.6	742.7	707.0	659.0	598.3	535.0	471.7	411.4	356.3	258.8
27.5°	794.8	786.6	766.7	730.0	680.9	615.1	543.1	473.2	407.3	348.1	240.9
30°	817.2	809.1	785.1	747.3	695.8	628.4	551.3	473.7	402.2	335.9	221.5
32.5°	834.6	826.9	802.4	762.1	706.0	637.6	555.9	473.2	395.6	327.2	200.6
35°	852.0	844.3	815.7	772.8	713.6	641.6	559.5	470.6	387.4	312.9	180.7
37.5°	865.2	856.5	827.5	780.0	717.2	642.7	559.0	467.1	378.8	301.2	160.8
40°	874.4	865.2	834.1	784.1	718.2	641.1	554.9	460.9	368.5	286.4	139.9
42.5°	880.5	870.3	837.1	790.2	716.2	637.1	548.7	453.3	357.3	273.6	120.0
45°	883.6	872.9	837.7	785.1	712.6	629.4	539.6	443.6	345.1	256.2	100.0
47.5°	882.1	870.3	835.1	779.5	706.0	621.2	529.3	431.8	330.3	240.9	81.2
50°	879.5	867.3	829.5	772.3	696.8	611.0	518.1	417.6	315.0	222.0	64.3
52.5°	871.4	859.1	823.4	762.1	686.1	599.3	502.8	402.8	298.6	203.7	49.0
55°	861.1	849.9	812.6	752.9	672.3	585.0	488.5	386.9	282.8	184.8	35.2
57.5°	845.3	835.1	799.4	738.1	658.5	569.2	472.7	369.6	262.9	165.9	24.5
60°	825.9	815.7	781.0	721.3	642.7	551.3	455.3	351.7	245.0	147.0	15.3
62.5°	805.5	795.8	759.6	700.3	622.8	532.4	436.4	333.8	226.1	129.7	9.2
65°	778.4	769.3	736.6	675.3	600.8	512.0	415.5	312.4	206.7	110.3	5.1
67.5°	749.9	741.7	708.5	652.4	575.3	489.5	394.1	291.5	186.3	93.4	2.6
70°	719.2	709.0	678.4	621.2	549.3	464.0	370.6	270.0	166.9	77.1	0.0
72.5°	683.5	675.8	646.2	592.1	519.1	437.0	346.6	246.6	145.5	61.3	0.5
75°	648.8	639.1	612.0	561.0	489.5	408.4	320.1	224.6	124.6	47.0	0.5
77.5°	603.9	600.8	575.3	525.8	461.5	380.8	291.0	198.1	104.6	33.7	0.5
80°	559.0	555.9	536.0	490.5	428.8	348.1	263.9	173.0	85.2	22.5	0.5
82.5°	514.5	510.5	491.6	453.8	395.6	320.6	235.8	148.0	67.4	13.8	0.5
85°	474.7	469.6	449.2	414.5	361.4	289.4	206.7	123.5	50.0	7.7	1.0
87.5°	440.5	437.0	414.5	378.8	326.7	260.3	181.2	100.0	35.2	3.6	1.5
90°	411.4	403.8	383.9	346.1	294.0	228.2	154.2	80.1	23.5	2.0	2.0
92.5°	382.8	376.2	354.3	315.5	264.9	200.6	128.1	61.3	14.8	1.0	2.6
95°	353.2	346.1	324.7	288.9	235.3	172.5	105.2	44.9	8.2	1.0	2.6
97.5°	324.1	317.5	295.0	259.3	208.8	148.0	83.2	31.6	4.1	1.0	2.0
100°	297.1	289.4	269.0	233.3	182.2	123.5	64.3	20.4	2.6	1.0	2.0
102.5°	268.5	262.4	241.4	206.7	154.7	100.6	48.0	12.8	1.0	1.0	1.5
105°	243.0	235.3	214.9	179.2	131.7	79.1	33.7	7.7	1.0	1.0	1.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	158.2	152.1	134.3	104.1	66.9	31.1	9.2	1.5	1.5	1.5	1.5
115°	132.2	123.0	107.2	80.7	49.5	20.4	4.6	1.5	1.5	1.5	1.5
117.5°	105.7	98.0	86.8	61.3	32.7	13.3	2.6	1.5	1.5	1.5	1.5
120°	82.7	75.5	62.8	42.4	21.9	7.7	1.0	1.5	1.5	1.5	1.5
122.5°	59.2	53.6	42.4	27.6	13.3	3.6	1.5	1.5	2.0	2.0	1.5
125°	39.3	36.2	28.1	16.8	8.2	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.5	23.0	16.3	9.7	3.6	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.3	12.8	9.7	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.2	7.7	5.1	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.6	2.6	2.6	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.6	2.6	2.6	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.6
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.6
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.6	2.6	2.6	2.6
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	2.6
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	2.6
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	400.7	400.7	400.7
2.5°	381.3	374.2	372.1
5°	360.9	349.2	342.5
7.5°	340.5	324.7	317.0
10°	321.6	299.1	291.0
12.5°	299.1	273.1	260.3
15°	277.7	244.0	231.7
17.5°	253.7	215.9	201.6
20°	231.2	187.8	173.0
22.5°	205.7	160.3	143.9
25°	182.7	132.7	114.3
27.5°	157.2	104.6	88.8
30°	133.2	80.1	64.3
32.5°	110.3	58.7	44.4
35°	88.8	39.8	28.1
37.5°	68.4	24.5	14.3
40°	49.5	12.8	6.6
42.5°	33.2	6.1	3.6
45°	20.4	3.1	0.0
47.5°	11.7	0.0	0.0
50°	6.1	0.0	0.0
52.5°	2.6	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°	0.5	0.5	0.5
77.5°	0.5	1.0	1.5
80°	1.0	2.0	2.6
82.5°	2.0	2.6	2.6
85°	2.0	2.6	3.1
87.5°	2.6	3.1	3.6
90°	3.1	3.6	3.6
92.5°	3.1	4.1	4.1
95°	3.6	4.1	4.6
97.5°	4.1	4.6	4.6
100°	3.6	4.6	5.1
102.5°	3.1	4.6	4.6
105°	2.6	3.6	4.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.6	2.6
115°	1.5	2.0	2.6
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	214.4	208.3	187.8	154.2	107.7	60.2	22.5	4.1	1.0	1.5	1.5
110°	186.8	181.7	160.8	128.1	86.8	44.9	14.8	2.6	1.5	1.5	1.5





107.5°	2.0	3.1	3.6
110°	2.0	2.6	3.1



(END OF REPORT)