

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: P550603

Luminaire Tested: **FCC-X-2-LD4-1HI-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: P550603
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-LD4-1HI-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

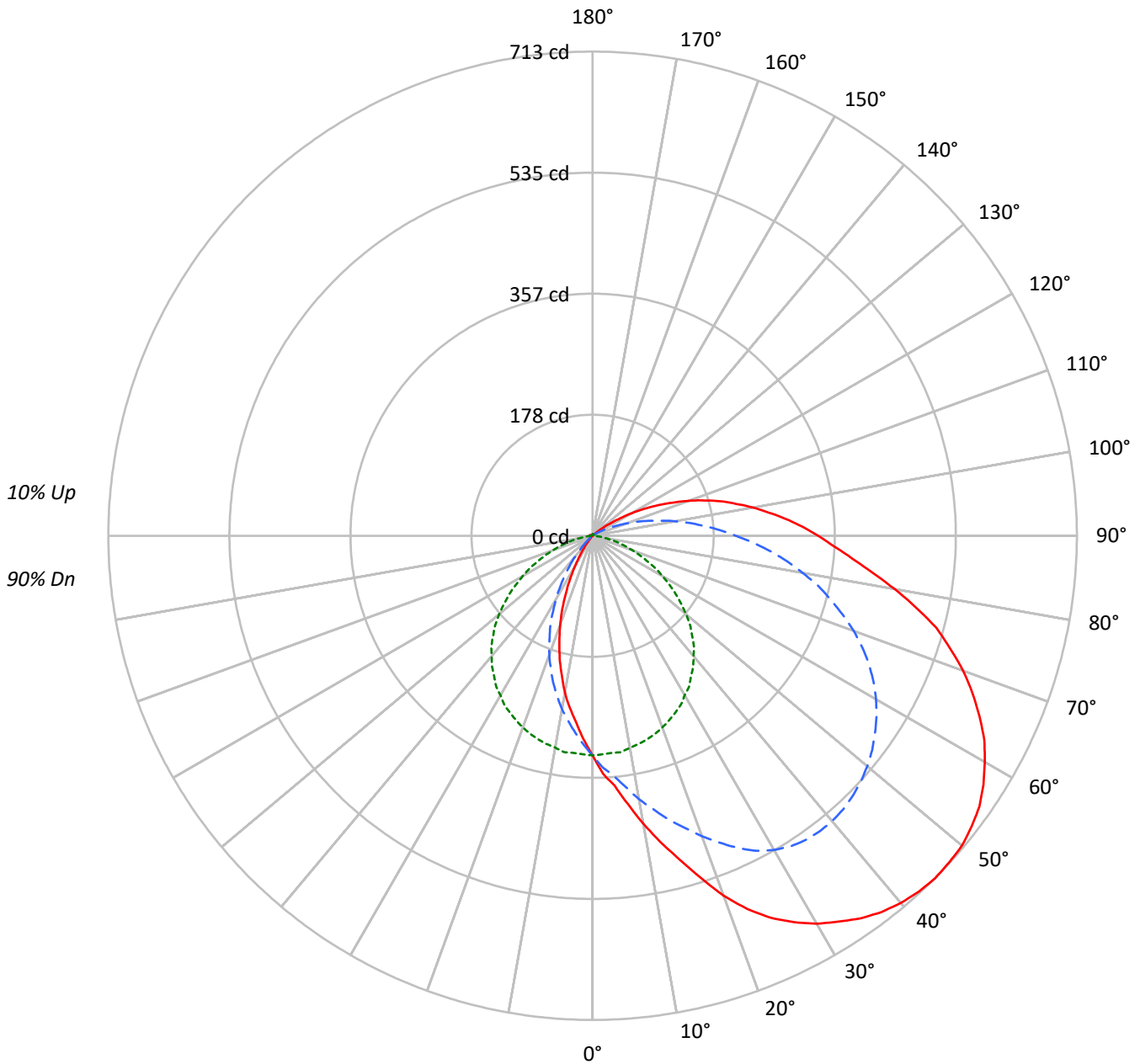
Lumens per Lamp: N/A
Luminaire Lumens: 1598.9 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
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°	3481	3481	3481
5°	3822	3431	2862
10°	4325	3388	2359
15°	4847	3346	1839
20°	5467	3291	1354
25°	5980	3228	889
30°	6363	3143	501
35°	6693	3052	221
40°	6986	2939	53
45°	7238	2798	0
50°	7449	2612	0
55°	7610	2376	0
60°	7692	2101	0
65°	7722	1788	0
70°	7696	1457	0
75°	7599	1075	6
80°	7292	657	34
85°	7048	315	46



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.0	1.9
10°-20°	92.8	5.8
20°-30°	150.2	9.4
30°-40°	193.0	12.1
40°-50°	218.4	13.7
50°-60°	226.3	14.2
60°-70°	213.4	13.3
70°-80°	178.9	11.2
80°-90°	129.7	8.1
90°-100°	85.2	5.3
100°-110°	49.2	3.1
110°-120°	21.7	1.4
120°-130°	5.9	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	274.0	17.1
0°-40°	466.9	29.2
0°-60°	911.7	57.0
0°-90°	1433.6	89.7
90°-120°	156.1	9.8
90°-150°	164.2	10.3
90°-180°	165.0	10.3
0°-180°	1598.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	323	323	323	323	323	
5°	369	355	321	291	276	37
15°	493	432	310	224	187	142
25°	621	507	288	148	92	287
35°	688	547	253	72	23	431
45°	713	542	207	16	0	551
55°	695	507	149	0	0	621
65°	628	449	89	0	0	622
75°	524	362	38	0	0	549
85°	383	263	6	2	2	327
90°	332	211	2	2	3	182
95°	285	165	1	3	4	224
105°	196	85	1	2	3	207
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°	323.4	323.4	323.4	323.4	323.4	323.4	323.4	323.4	323.4	323.4	323.4
2.5°	350.6	350.2	349.0	346.9	344.0	339.1	335.0	331.3	326.3	322.2	314.4
5°	369.2	367.1	365.5	363.4	356.8	352.3	344.9	336.6	328.8	321.0	305.3
7.5°	398.8	395.5	393.1	387.3	378.2	367.9	356.4	348.6	343.2	321.4	294.6
10°	430.6	427.7	422.7	412.4	401.3	386.5	370.0	351.5	335.0	316.8	285.1
12.5°	461.9	457.8	450.8	437.6	421.9	403.4	380.7	358.9	335.4	314.0	274.0
15°	493.2	488.7	481.2	465.2	444.6	420.3	392.7	365.1	337.4	310.3	262.5
17.5°	527.4	521.2	510.1	492.0	466.0	435.9	403.4	370.0	336.6	305.7	250.1
20°	564.1	555.4	543.5	519.2	488.7	453.2	414.1	374.9	336.2	300.4	236.1
22.5°	594.6	585.9	572.7	547.6	510.9	467.6	423.1	378.2	334.6	294.2	222.9
25°	620.9	613.9	599.5	570.7	531.9	482.9	431.8	380.7	332.1	287.6	208.9
27.5°	641.5	634.9	618.9	589.2	549.6	496.5	438.4	381.9	328.8	281.0	194.5
30°	659.7	653.1	633.7	603.2	561.6	507.2	445.0	382.4	324.7	271.1	178.8
32.5°	673.7	667.5	647.7	615.2	569.8	514.6	448.7	381.9	319.3	264.1	161.9
35°	687.7	681.5	658.4	623.8	576.0	517.9	451.6	379.9	312.7	252.6	145.9
37.5°	698.4	691.4	667.9	629.6	578.9	518.7	451.2	377.0	305.7	243.1	129.8
40°	705.8	698.4	673.2	632.9	579.7	517.5	447.9	372.1	297.5	231.1	112.9
42.5°	710.7	702.5	675.7	637.8	578.1	514.2	442.9	365.9	288.4	220.8	96.8
45°	713.2	704.6	676.1	633.7	575.2	508.0	435.5	358.0	278.5	206.8	80.8
47.5°	712.0	702.5	674.1	629.2	569.8	501.4	427.3	348.6	266.6	194.5	65.5
50°	709.9	700.0	669.5	623.4	562.4	493.2	418.2	337.0	254.2	179.2	51.9
52.5°	703.3	693.4	664.6	615.2	553.8	483.7	405.8	325.1	241.0	164.4	39.6
55°	695.1	686.0	655.9	607.7	542.6	472.2	394.3	312.3	228.3	149.2	28.4
57.5°	682.3	674.1	645.2	595.8	531.5	459.4	381.5	298.3	212.2	133.9	19.8
60°	666.7	658.4	630.4	582.2	518.7	445.0	367.5	283.9	197.8	118.7	12.4
62.5°	650.2	642.3	613.1	565.3	502.7	429.7	352.3	269.5	182.5	104.7	7.4
65°	628.3	620.9	594.6	545.1	485.0	413.3	335.4	252.2	166.9	89.0	4.1
67.5°	605.3	598.7	571.9	526.6	464.4	395.1	318.1	235.3	150.4	75.4	2.1
70°	580.5	572.3	547.6	501.4	443.3	374.5	299.1	218.0	134.7	62.2	0.0
72.5°	551.7	545.5	521.6	477.9	419.0	352.7	279.8	199.0	117.4	49.4	0.4
75°	523.7	515.9	494.0	452.8	395.1	329.6	258.3	181.3	100.5	37.9	0.4
77.5°	487.4	485.0	464.4	424.4	372.5	307.4	234.9	159.9	84.5	27.2	0.4
80°	451.2	448.7	432.6	396.0	346.1	281.0	213.0	139.7	68.8	18.1	0.4
82.5°	415.3	412.0	396.8	366.3	319.3	258.8	190.4	119.5	54.4	11.1	0.4
85°	383.2	379.1	362.6	334.6	291.7	233.6	166.9	99.7	40.4	6.2	0.8
87.5°	355.6	352.7	334.6	305.7	263.7	210.1	146.3	80.8	28.4	2.9	1.2
90°	332.1	325.9	309.8	279.4	237.3	184.2	124.4	64.7	19.0	1.6	1.6
92.5°	309.0	303.7	285.9	254.6	213.8	161.9	103.4	49.4	11.9	0.8	2.1
95°	285.1	279.4	262.0	233.2	189.9	139.3	84.9	36.3	6.6	0.8	2.1
97.5°	261.6	256.3	238.2	209.3	168.5	119.5	67.2	25.5	3.3	0.8	1.6
100°	239.8	233.6	217.1	188.3	147.1	99.7	51.9	16.5	2.1	0.8	1.6
102.5°	216.7	211.8	194.9	166.9	124.8	81.2	38.7	10.3	0.8	0.8	1.2
105°	196.1	189.9	173.5	144.6	106.3	63.9	27.2	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°	127.7	122.8	108.4	84.1	54.0	25.1	7.4	1.2	1.2	1.2	1.2
115°	106.7	99.3	86.5	65.1	40.0	16.5	3.7	1.2	1.2	1.2	1.2
117.5°	85.3	79.1	70.0	49.4	26.4	10.7	2.1	1.2	1.2	1.2	1.2
120°	66.7	61.0	50.7	34.2	17.7	6.2	0.8	1.2	1.2	1.2	1.2
122.5°	47.8	43.3	34.2	22.2	10.7	2.9	1.2	1.2	1.6	1.6	1.2
125°	31.7	29.3	22.7	13.6	6.6	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.6	18.5	13.2	7.8	2.9	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.5	10.3	7.8	4.5	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.6	6.2	4.1	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.1	2.1	2.1	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.1	2.1	2.1	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.1	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.1	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.1	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.1	1.6	1.6	2.1
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.1	1.6	1.6	2.1
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.1	2.1	2.1	1.6
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°	323.4	323.4	323.4
2.5°	307.8	302.0	300.4
5°	291.3	281.8	276.5
7.5°	274.8	262.0	255.9
10°	259.6	241.4	234.9
12.5°	241.4	220.4	210.1
15°	224.1	196.9	187.1
17.5°	204.8	174.3	162.7
20°	186.6	151.6	139.7
22.5°	166.0	129.4	116.2
25°	147.5	107.1	92.3
27.5°	126.9	84.5	71.7
30°	107.5	64.7	51.9
32.5°	89.0	47.4	35.8
35°	71.7	32.1	22.7
37.5°	55.2	19.8	11.5
40°	40.0	10.3	5.4
42.5°	26.8	4.9	2.9
45°	16.5	2.5	0.0
47.5°	9.5	0.0	0.0
50°	4.9	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	1.6	2.1
82.5°	1.6	2.1	2.1
85°	1.6	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°	1.6	2.1	2.1
115°	1.2	1.6	2.1
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	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°	1.6	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°	173.1	168.1	151.6	124.4	86.9	48.6	18.1	3.3	0.8	1.2	1.2
110°	150.8	146.7	129.8	103.4	70.0	36.3	11.9	2.1	1.2	1.2	1.2





107.5°	1.6	2.5	2.9
110°	1.6	2.1	2.5



(END OF REPORT)