

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: P550599

Luminaire Tested: **FCC-X-2-LD4-1HI-40-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: P550599
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-93-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

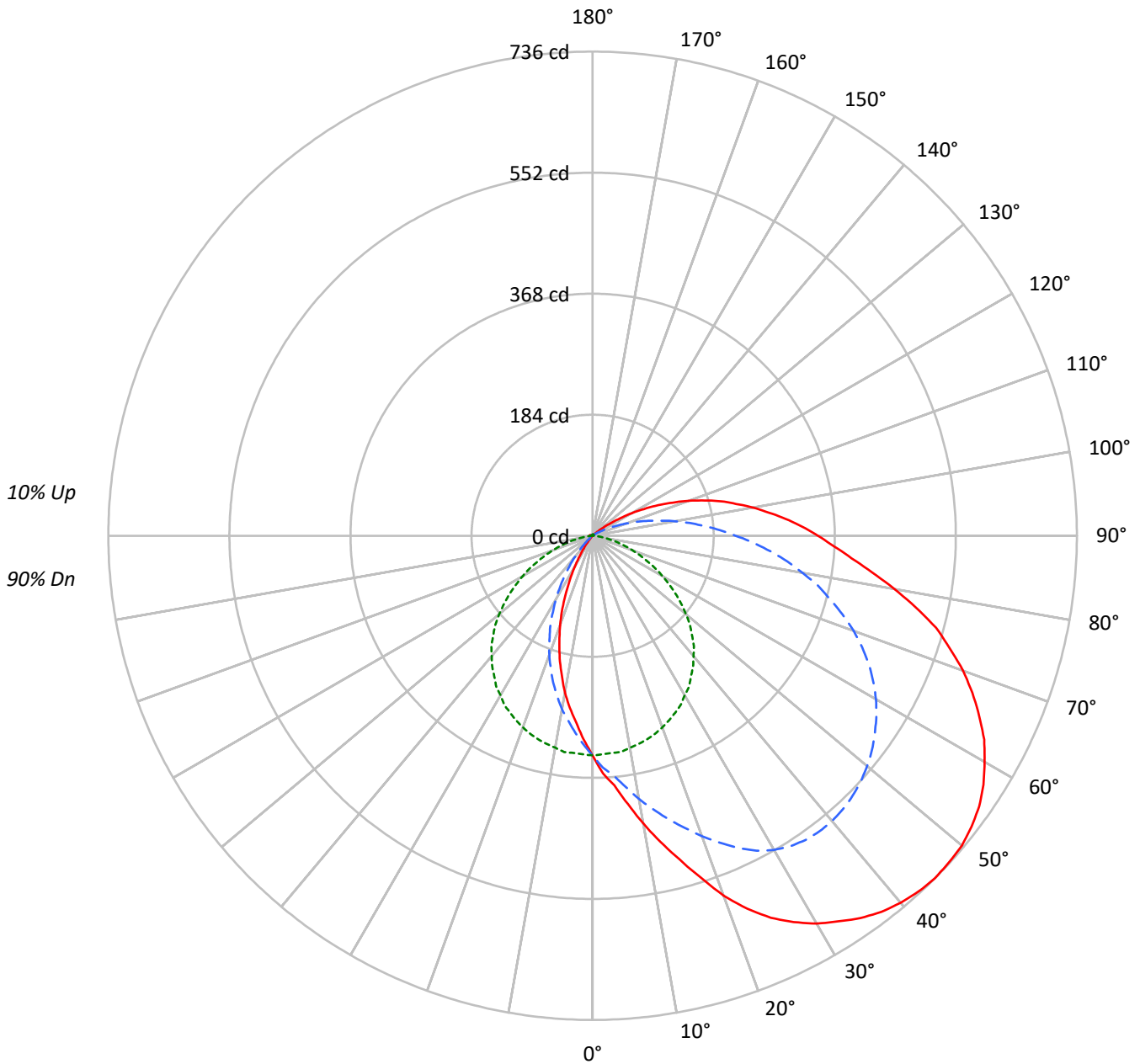
Lumens per Lamp: N/A
Luminaire Lumens: 1650.1 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	3593	3593	3593
5°	3943	3540	2953
10°	4463	3497	2434
15°	5001	3453	1897
20°	5641	3395	1396
25°	6171	3331	917
30°	6565	3244	517
35°	6906	3149	228
40°	7209	3033	54
45°	7469	2888	0
50°	7687	2695	0
55°	7853	2451	0
60°	7936	2166	0
65°	7969	1844	0
70°	7943	1504	0
75°	7842	1109	6
80°	7524	678	34
85°	7272	325	48



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	1.9
10°-20°	95.7	5.8
20°-30°	155.0	9.4
30°-40°	199.1	12.1
40°-50°	225.4	13.7
50°-60°	233.5	14.2
60°-70°	220.2	13.3
70°-80°	184.6	11.2
80°-90°	133.8	8.1
90°-100°	87.9	5.3
100°-110°	50.8	3.1
110°-120°	22.4	1.4
120°-130°	6.1	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°	282.7	17.1
0°-40°	481.8	29.2
0°-60°	940.8	57.0
0°-90°	1479.4	89.7
90°-120°	161.1	9.8
90°-150°	169.5	10.3
90°-180°	171.0	10.4
0°-180°	1650.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	334	334	334	334	334	
5°	381	366	331	301	285	38
15°	509	446	320	231	193	147
25°	641	524	297	152	95	296
35°	710	564	261	74	23	445
45°	736	559	213	17	0	568
55°	717	524	154	0	0	641
65°	648	463	92	0	0	642
75°	540	374	39	0	0	567
85°	395	271	6	2	3	338
90°	343	217	2	3	3	188
95°	294	170	1	3	4	231
105°	202	88	1	2	3	214
115°	110	29	1	1	2	110
125°	33	4	2	1	2	33
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	333.8	333.8	333.8	333.8	333.8	333.8	333.8	333.8	333.8	333.8	333.8
2.5°	361.8	361.4	360.1	358.0	355.0	349.9	345.7	341.8	336.7	332.5	324.4
5°	380.9	378.8	377.1	375.0	368.2	363.5	355.9	347.4	339.3	331.2	315.0
7.5°	411.6	408.2	405.6	399.7	390.3	379.7	367.8	359.7	354.2	331.6	304.0
10°	444.3	441.3	436.2	425.6	414.1	398.8	381.8	362.7	345.7	327.0	294.2
12.5°	476.6	472.4	465.1	451.5	435.4	416.2	392.9	370.3	346.1	324.0	282.7
15°	508.9	504.2	496.6	480.0	458.8	433.7	405.2	376.7	348.2	320.2	270.8
17.5°	544.2	537.8	526.4	507.6	480.9	449.8	416.2	381.8	347.4	315.5	258.1
20°	582.1	573.1	560.8	535.7	504.2	467.7	427.3	386.9	346.9	309.9	243.6
22.5°	613.5	604.6	591.0	565.0	527.2	482.6	436.6	390.3	345.2	303.6	230.0
25°	640.7	633.5	618.6	588.9	548.9	498.3	445.6	392.9	342.7	296.8	215.6
27.5°	662.0	655.2	638.6	608.0	567.2	512.3	452.4	394.1	339.3	290.0	200.7
30°	680.7	673.9	653.9	622.4	579.5	523.4	459.2	394.6	335.0	279.8	184.5
32.5°	695.1	688.8	668.4	634.8	588.0	531.0	463.0	394.1	329.5	272.5	167.1
35°	709.6	703.2	679.4	643.7	594.4	534.4	466.0	392.0	322.7	260.6	150.5
37.5°	720.7	713.4	689.2	649.7	597.4	535.3	465.6	389.0	315.5	250.8	133.9
40°	728.3	720.7	694.7	653.1	598.2	534.0	462.2	383.9	307.0	238.5	116.5
42.5°	733.4	724.9	697.3	658.2	596.5	530.6	457.1	377.5	297.6	227.9	99.9
45°	736.0	727.0	697.7	653.9	593.5	524.2	449.4	369.5	287.4	213.4	83.3
47.5°	734.7	724.9	695.6	649.2	588.0	517.4	440.9	359.7	275.1	200.7	67.6
50°	732.6	722.4	690.9	643.3	580.4	508.9	431.5	347.8	262.3	184.9	53.6
52.5°	725.8	715.6	685.8	634.8	571.4	499.1	418.8	335.5	248.7	169.6	40.8
55°	717.3	707.9	676.9	627.1	559.9	487.2	406.9	322.3	235.5	153.9	29.3
57.5°	704.1	695.6	665.8	614.8	548.5	474.1	393.7	307.8	219.0	138.2	20.4
60°	687.9	679.4	650.5	600.8	535.3	459.2	379.2	292.9	204.1	122.4	12.8
62.5°	670.9	662.8	632.6	583.3	518.7	443.4	363.5	278.1	188.3	108.0	7.7
65°	648.4	640.7	613.5	562.5	500.4	426.4	346.1	260.2	172.2	91.8	4.3
67.5°	624.6	617.8	590.1	543.4	479.2	407.7	328.2	242.8	155.2	77.8	2.1
70°	599.1	590.6	565.0	517.4	457.5	386.5	308.7	224.9	139.0	64.2	0.0
72.5°	569.3	562.9	538.3	493.2	432.4	363.9	288.7	205.4	121.2	51.0	0.4
75°	540.4	532.3	509.8	467.3	407.7	340.1	266.6	187.1	103.7	39.1	0.4
77.5°	503.0	500.4	479.2	437.9	384.4	317.2	242.3	165.0	87.2	28.1	0.4
80°	465.6	463.0	446.4	408.6	357.1	290.0	219.8	144.1	71.0	18.7	0.4
82.5°	428.6	425.2	409.4	378.0	329.5	267.0	196.4	123.3	56.1	11.5	0.4
85°	395.4	391.2	374.1	345.2	301.0	241.1	172.2	102.9	41.7	6.4	0.9
87.5°	366.9	363.9	345.2	315.5	272.1	216.8	150.9	83.3	29.3	3.0	1.3
90°	342.7	336.3	319.7	288.3	244.9	190.0	128.4	66.8	19.6	1.7	1.7
92.5°	318.9	313.3	295.1	262.8	220.7	167.1	106.7	51.0	12.3	0.9	2.1
95°	294.2	288.3	270.4	240.6	196.0	143.7	87.6	37.4	6.8	0.9	2.1
97.5°	270.0	264.5	245.7	216.0	173.9	123.3	69.3	26.4	3.4	0.9	1.7
100°	247.4	241.1	224.1	194.3	151.8	102.9	53.6	17.0	2.1	0.9	1.7
102.5°	223.6	218.5	201.1	172.2	128.8	83.8	40.0	10.6	0.9	0.9	1.3
105°	202.4	196.0	179.0	149.2	109.7	65.9	28.1	6.4	0.9	0.9	1.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	131.8	126.7	111.8	86.7	55.7	25.9	7.7	1.3	1.3	1.3	1.3
115°	110.1	102.5	89.3	67.2	41.2	17.0	3.8	1.3	1.3	1.3	1.3
117.5°	88.0	81.6	72.3	51.0	27.2	11.1	2.1	1.3	1.3	1.3	1.3
120°	68.9	62.9	52.3	35.3	18.3	6.4	0.9	1.3	1.3	1.3	1.3
122.5°	49.3	44.6	35.3	23.0	11.1	3.0	1.3	1.3	1.7	1.7	1.3
125°	32.7	30.2	23.4	14.0	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.3	19.1	13.6	8.1	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.9	10.6	8.1	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.8	6.4	4.3	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	333.8	333.8	333.8
2.5°	317.6	311.6	309.9
5°	300.6	290.8	285.3
7.5°	283.6	270.4	264.0
10°	267.9	249.1	242.3
12.5°	249.1	227.5	216.8
15°	231.3	203.2	193.0
17.5°	211.3	179.8	167.9
20°	192.6	156.5	144.1
22.5°	171.3	133.5	119.9
25°	152.2	110.5	95.2
27.5°	131.0	87.2	74.0
30°	111.0	66.8	53.6
32.5°	91.8	48.9	37.0
35°	74.0	33.2	23.4
37.5°	57.0	20.4	11.9
40°	41.2	10.6	5.5
42.5°	27.6	5.1	3.0
45°	17.0	2.6	0.0
47.5°	9.8	0.0	0.0
50°	5.1	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	0.9	1.3
80°	0.9	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.6
87.5°	2.1	2.6	3.0
90°	2.6	3.0	3.0
92.5°	2.6	3.4	3.4
95°	3.0	3.4	3.8
97.5°	3.4	3.8	3.8
100°	3.0	3.8	4.3
102.5°	2.6	3.8	3.8
105°	2.1	3.0	3.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.3	1.7	2.1
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.7	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	178.6	173.5	156.5	128.4	89.7	50.2	18.7	3.4	0.9	1.3	1.3
110°	155.6	151.4	133.9	106.7	72.3	37.4	12.3	2.1	1.3	1.3	1.3





107.5°	1.7	2.6	3.0
110°	1.7	2.1	2.6



(END OF REPORT)