

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: P551495

Luminaire Tested: **FCC-X-2-LD4-2LO-30-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: P551495
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-30-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 3000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

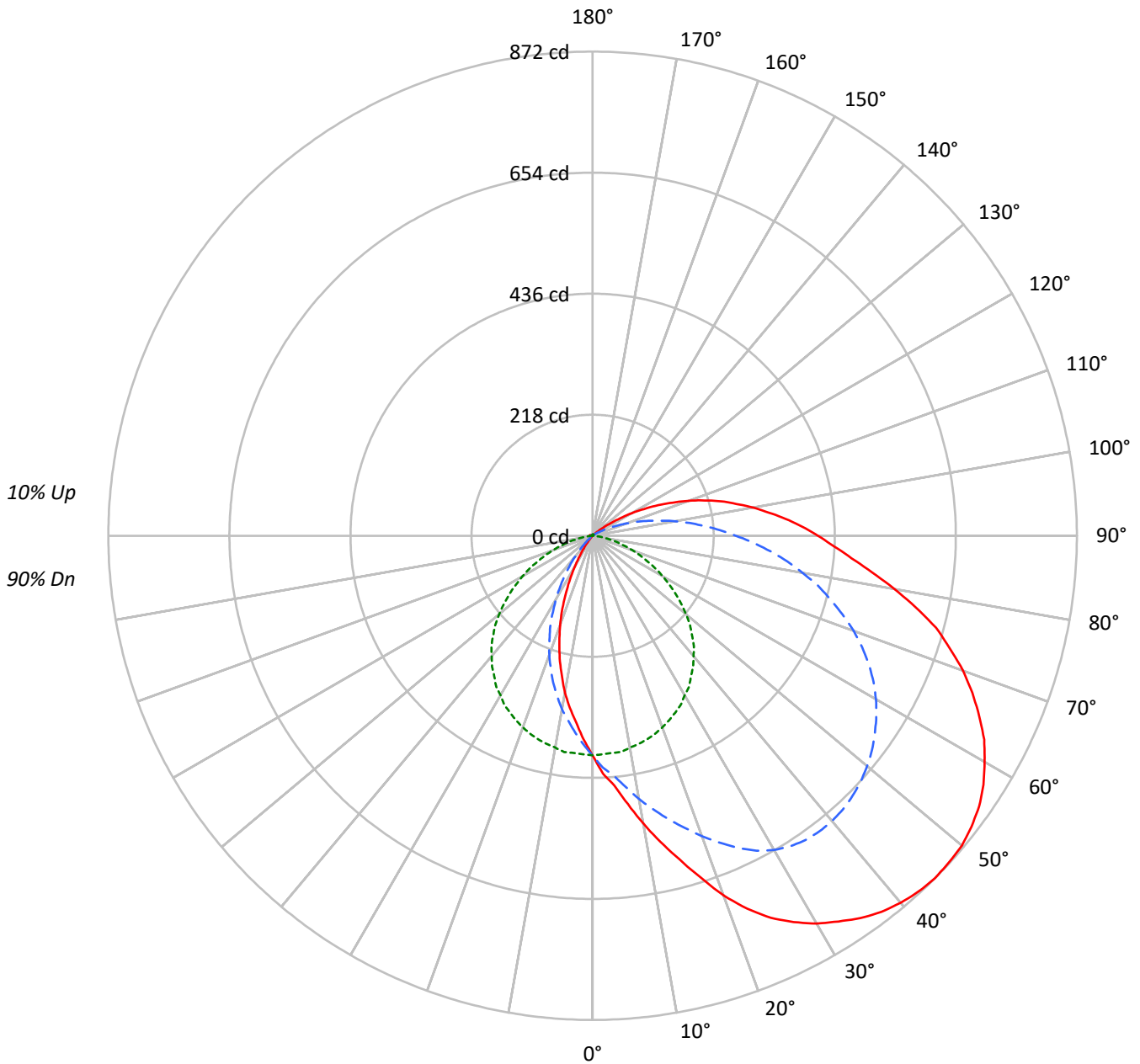
Lumens per Lamp: N/A
Luminaire Lumens: 1954.9 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4256	4256	4256
5°	4673	4194	3499
10°	5287	4143	2884
15°	5926	4090	2247
20°	6683	4023	1655
25°	7312	3946	1086
30°	7779	3843	612
35°	8183	3731	270
40°	8541	3594	64
45°	8849	3422	0
50°	9108	3193	0
55°	9304	2904	0
60°	9404	2568	0
65°	9442	2185	0
70°	9411	1783	0
75°	9291	1313	7
80°	8914	805	40
85°	8617	386	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	1.9
10°-20°	113.4	5.8
20°-30°	183.7	9.4
30°-40°	235.9	12.1
40°-50°	267.1	13.7
50°-60°	276.7	14.2
60°-70°	261.0	13.3
70°-80°	218.7	11.2
80°-90°	158.5	8.1
90°-100°	104.2	5.3
100°-110°	60.2	3.1
110°-120°	26.5	1.4
120°-130°	7.2	0.4
130°-140°	1.6	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°	335.0	17.1
0°-40°	570.9	29.2
0°-60°	1114.7	57.0
0°-90°	1752.8	89.7
90°-120°	190.9	9.8
90°-150°	200.8	10.3
90°-180°	202.0	10.3
0°-180°	1954.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	395	395	395	395	395	
5°	451	434	392	356	338	46
15°	603	529	379	274	229	174
25°	759	620	352	180	113	351
35°	841	669	309	88	28	527
45°	872	662	253	20	0	673
55°	850	620	182	0	0	759
65°	768	549	109	0	0	760
75°	640	443	46	0	0	672
85°	468	321	8	2	3	400
90°	406	258	2	3	4	223
95°	349	201	1	4	4	273
105°	240	104	1	2	4	253
115°	130	35	2	2	2	131
125°	39	5	2	2	2	39
135°	2	2	2	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	2	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°	395.4	395.4	395.4	395.4	395.4	395.4	395.4	395.4	395.4	395.4	395.4
2.5°	428.7	428.2	426.7	424.2	420.6	414.6	409.6	405.0	399.0	393.9	384.4
5°	451.4	448.8	446.8	444.3	436.3	430.7	421.6	411.6	402.0	392.4	373.3
7.5°	487.6	483.6	480.6	473.5	462.4	449.9	435.8	426.2	419.6	392.9	360.2
10°	526.4	522.9	516.9	504.3	490.7	472.5	452.4	429.7	409.6	387.4	348.6
12.5°	564.7	559.7	551.1	535.0	515.8	493.2	465.5	438.8	410.1	383.9	335.0
15°	603.0	597.5	588.4	568.7	543.6	513.8	480.1	446.3	412.6	379.3	320.9
17.5°	644.8	637.3	623.7	601.5	569.7	533.0	493.2	452.4	411.6	373.8	305.8
20°	689.6	679.1	664.5	634.7	597.5	554.1	506.3	458.4	411.1	367.2	288.7
22.5°	726.9	716.3	700.2	669.5	624.7	571.8	517.4	462.4	409.1	359.7	272.5
25°	759.2	750.6	733.0	697.7	650.4	590.4	527.9	465.5	406.0	351.6	255.4
27.5°	784.4	776.3	756.6	720.4	672.0	607.0	536.0	467.0	402.0	343.6	237.8
30°	806.5	798.5	774.8	737.5	686.6	620.1	544.1	467.5	397.0	331.5	218.6
32.5°	823.6	816.1	791.9	752.1	696.7	629.2	548.6	467.0	390.4	322.9	198.0
35°	840.8	833.2	805.0	762.7	704.3	633.2	552.1	464.5	382.4	308.8	178.3
37.5°	853.9	845.3	816.6	769.7	707.8	634.2	551.6	460.9	373.8	297.2	158.7
40°	862.9	853.9	823.1	773.8	708.8	632.7	547.6	454.9	363.7	282.6	138.0
42.5°	869.0	858.9	826.2	779.8	706.8	628.7	541.5	447.3	352.6	270.0	118.4
45°	872.0	861.4	826.7	774.8	703.2	621.1	532.5	437.8	340.5	252.9	98.7
47.5°	870.5	858.9	824.1	769.2	696.7	613.1	522.4	426.2	325.9	237.8	80.1
50°	868.0	855.9	818.6	762.2	687.6	603.0	511.3	412.1	310.8	219.1	63.5
52.5°	859.9	847.8	812.6	752.1	677.0	591.4	496.2	397.5	294.7	201.0	48.4
55°	849.8	838.8	802.0	743.0	663.4	577.3	482.1	381.8	279.1	182.4	34.8
57.5°	834.2	824.1	788.9	728.4	649.8	561.7	466.5	364.7	259.4	163.7	24.2
60°	815.1	805.0	770.7	711.8	634.2	544.1	449.4	347.1	241.8	145.1	15.1
62.5°	794.9	785.4	749.6	691.2	614.6	525.4	430.7	329.5	223.2	128.0	9.1
65°	768.2	759.2	726.9	666.5	592.9	505.3	410.1	308.3	204.0	108.8	5.0
67.5°	740.0	732.0	699.2	643.8	567.7	483.1	388.9	287.6	183.9	92.2	2.5
70°	709.8	699.7	669.5	613.1	542.0	457.9	365.7	266.5	164.7	76.1	0.0
72.5°	674.5	667.0	637.8	584.4	512.3	431.2	342.1	243.3	143.6	60.5	0.5
75°	640.3	630.7	604.0	553.6	483.1	403.0	315.9	221.7	122.9	46.3	0.5
77.5°	595.9	592.9	567.7	518.9	455.4	375.8	287.1	195.5	103.3	33.2	0.5
80°	551.6	548.6	528.9	484.1	423.2	343.6	260.4	170.8	84.1	22.2	0.5
82.5°	507.8	503.8	485.1	447.8	390.4	316.4	232.7	146.1	66.5	13.6	0.5
85°	468.5	463.5	443.3	409.1	356.7	285.6	204.0	121.9	49.4	7.6	1.0
87.5°	434.7	431.2	409.1	373.8	322.4	256.9	178.8	98.7	34.8	3.5	1.5
90°	406.0	398.5	378.8	341.5	290.2	225.2	152.1	79.1	23.2	2.0	2.0
92.5°	377.8	371.3	349.6	311.3	261.5	198.0	126.4	60.5	14.6	1.0	2.5
95°	348.6	341.5	320.4	285.1	232.2	170.3	103.8	44.3	8.1	1.0	2.5
97.5°	319.9	313.3	291.2	255.9	206.0	146.1	82.1	31.2	4.0	1.0	2.0
100°	293.2	285.6	265.5	230.2	179.8	121.9	63.5	20.2	2.5	1.0	2.0
102.5°	265.0	258.9	238.3	204.0	152.6	99.2	47.4	12.6	1.0	1.0	1.5
105°	239.8	232.2	212.1	176.8	130.0	78.1	33.2	7.6	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°	156.2	150.1	132.5	102.8	66.0	30.7	9.1	1.5	1.5	1.5	1.5
115°	130.5	121.4	105.8	79.6	48.9	20.2	4.5	1.5	1.5	1.5	1.5
117.5°	104.3	96.7	85.6	60.5	32.2	13.1	2.5	1.5	1.5	1.5	1.5
120°	81.6	74.6	62.0	41.8	21.7	7.6	1.0	1.5	1.5	1.5	1.5
122.5°	58.4	52.9	41.8	27.2	13.1	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.8	35.8	27.7	16.6	8.1	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.2	22.7	16.1	9.6	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.1	12.6	9.6	5.5	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.1	7.6	5.0	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	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
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	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	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



TEST NUMBER: P551495

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	395.4	395.4	395.4
2.5°	376.3	369.3	367.2
5°	356.2	344.6	338.0
7.5°	336.0	320.4	312.8
10°	317.4	295.2	287.1
12.5°	295.2	269.5	256.9
15°	274.0	240.8	228.7
17.5°	250.4	213.1	199.0
20°	228.2	185.4	170.8
22.5°	203.0	158.2	142.1
25°	180.3	131.0	112.8
27.5°	155.2	103.3	87.7
30°	131.5	79.1	63.5
32.5°	108.8	57.9	43.8
35°	87.7	39.3	27.7
37.5°	67.5	24.2	14.1
40°	48.9	12.6	6.5
42.5°	32.7	6.0	3.5
45°	20.2	3.0	0.0
47.5°	11.6	0.0	0.0
50°	6.0	0.0	0.0
52.5°	2.5	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	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.0	4.0
95°	3.5	4.0	4.5
97.5°	4.0	4.5	4.5
100°	3.5	4.5	5.0
102.5°	3.0	4.5	4.5
105°	2.5	3.5	4.0



TEST NUMBER: P551495

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-84-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
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°	211.6	205.5	185.4	152.1	106.3	59.4	22.2	4.0	1.0	1.5	1.5
110°	184.4	179.3	158.7	126.4	85.6	44.3	14.6	2.5	1.5	1.5	1.5





107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)