

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: P551627

Luminaire Tested: **FCC-X-2-LD4-2LO-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: P551627
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-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

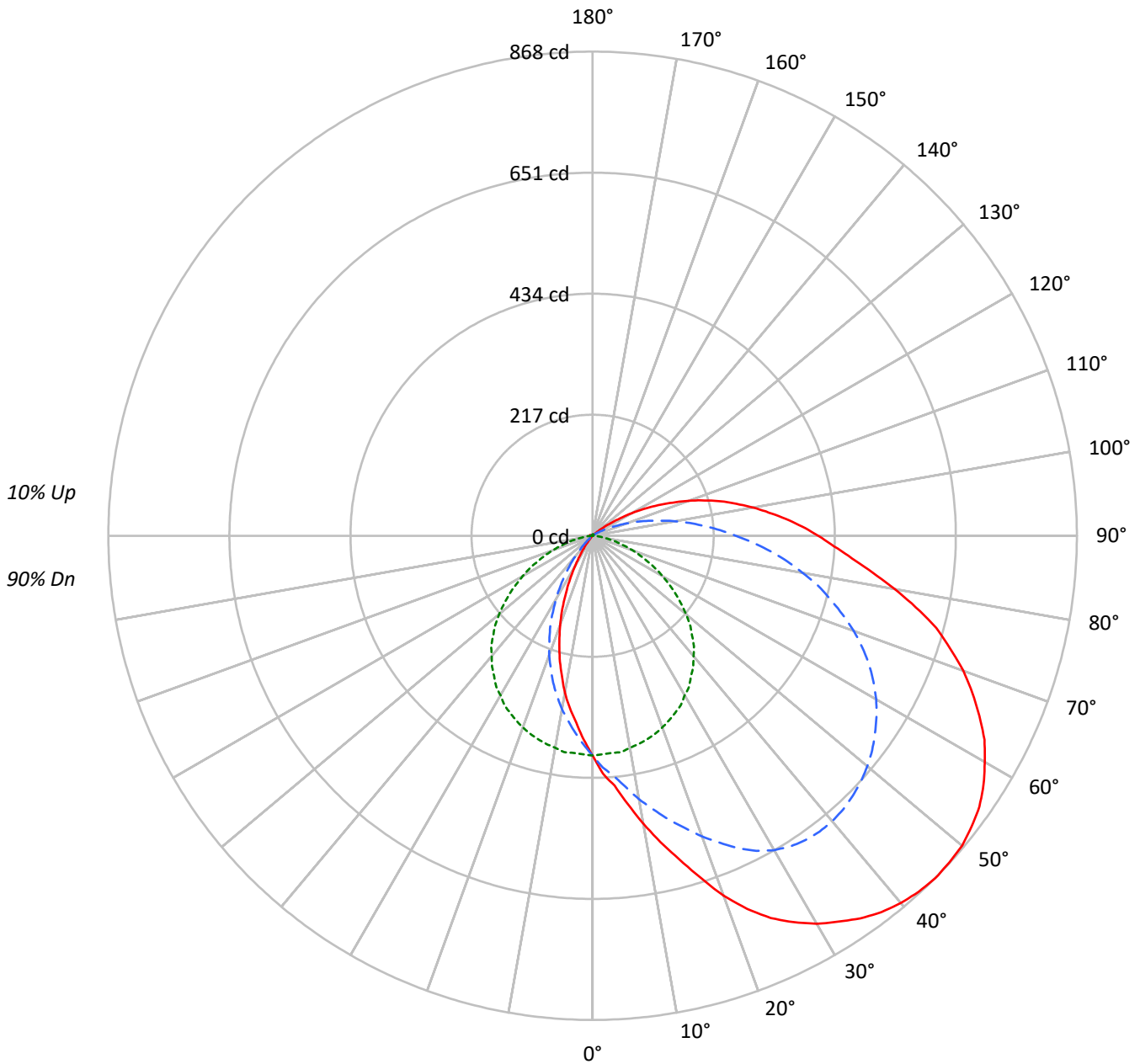
Lumens per Lamp: N/A
Luminaire Lumens: 1947.0 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4239	4239	4239
5°	4653	4177	3485
10°	5266	4126	2873
15°	5901	4074	2239
20°	6656	4007	1648
25°	7282	3930	1083
30°	7747	3827	610
35°	8149	3715	269
40°	8507	3580	64
45°	8813	3408	0
50°	9070	3180	0
55°	9267	2892	0
60°	9364	2557	0
65°	9404	2177	0
70°	9372	1776	0
75°	9254	1310	7
80°	8879	802	40
85°	8582	381	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	1.9
10°-20°	113.0	5.8
20°-30°	182.9	9.4
30°-40°	235.0	12.1
40°-50°	266.0	13.7
50°-60°	275.6	14.2
60°-70°	259.9	13.3
70°-80°	217.8	11.2
80°-90°	157.9	8.1
90°-100°	103.8	5.3
100°-110°	59.9	3.1
110°-120°	26.4	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°	333.6	17.1
0°-40°	568.6	29.2
0°-60°	1110.1	57.0
0°-90°	1745.7	89.7
90°-120°	190.1	9.8
90°-150°	200.0	10.3
90°-180°	201.0	10.3
0°-180°	1947.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	394	394	394	394	394	
5°	450	432	391	355	337	45
15°	600	526	378	273	228	173
25°	756	618	350	180	112	349
35°	837	666	308	87	28	525
45°	868	660	252	20	0	670
55°	846	618	182	0	0	756
65°	765	547	108	0	0	757
75°	638	441	46	0	0	669
85°	467	320	8	2	3	398
90°	404	257	2	3	4	222
95°	347	200	1	4	4	272
105°	239	104	1	2	4	252
115°	130	34	2	2	2	130
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°	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8
2.5°	426.9	426.4	424.9	422.4	418.9	412.9	407.9	403.4	397.3	392.3	382.8
5°	449.5	447.0	445.0	442.5	434.5	429.0	419.9	409.9	400.4	390.8	371.8
7.5°	485.6	481.6	478.6	471.6	460.6	448.0	434.0	424.4	417.9	391.3	358.7
10°	524.3	520.8	514.7	502.2	488.7	470.6	450.5	427.9	407.9	385.8	347.2
12.5°	562.4	557.4	548.9	532.8	513.7	491.2	463.6	437.0	408.4	382.3	333.6
15°	600.5	595.0	586.0	566.4	541.3	511.7	478.1	444.5	410.9	377.8	319.6
17.5°	642.2	634.6	621.1	599.0	567.4	530.8	491.2	450.5	409.9	372.3	304.5
20°	686.8	676.3	661.7	632.1	595.0	551.9	504.2	456.5	409.4	365.7	287.5
22.5°	723.9	713.4	697.4	666.8	622.1	569.4	515.2	460.6	407.4	358.2	271.4
25°	756.1	747.5	730.0	694.8	647.7	588.0	525.8	463.6	404.4	350.2	254.4
27.5°	781.1	773.1	753.5	717.4	669.3	604.5	533.8	465.1	400.4	342.2	236.8
30°	803.2	795.2	771.6	734.5	683.8	617.6	541.8	465.6	395.3	330.1	217.7
32.5°	820.3	812.7	788.7	749.0	693.8	626.6	546.3	465.1	388.8	321.6	197.2
35°	837.3	829.8	801.7	759.6	701.4	630.6	549.9	462.6	380.8	307.5	177.6
37.5°	850.4	841.8	813.2	766.6	704.9	631.6	549.4	459.1	372.3	296.0	158.0
40°	859.4	850.4	819.8	770.6	705.9	630.1	545.3	453.0	362.2	281.5	137.5
42.5°	865.4	855.4	822.8	776.6	703.9	626.1	539.3	445.5	351.2	268.9	117.9
45°	868.4	857.9	823.3	771.6	700.4	618.6	530.3	436.0	339.1	251.9	98.3
47.5°	866.9	855.4	820.8	766.1	693.8	610.6	520.3	424.4	324.6	236.8	79.8
50°	864.4	852.4	815.3	759.1	684.8	600.5	509.2	410.4	309.5	218.2	63.2
52.5°	856.4	844.4	809.2	749.0	674.3	589.0	494.2	395.8	293.5	200.2	48.2
55°	846.4	835.3	798.7	740.0	660.7	574.9	480.1	380.3	277.9	181.6	34.6
57.5°	830.8	820.8	785.7	725.5	647.2	559.4	464.6	363.2	258.4	163.1	24.1
60°	811.7	801.7	767.6	708.9	631.6	541.8	447.5	345.7	240.8	144.5	15.1
62.5°	791.7	782.1	746.5	688.3	612.1	523.3	429.0	328.1	222.3	127.4	9.0
65°	765.1	756.1	723.9	663.7	590.5	503.2	408.4	307.0	203.2	108.4	5.0
67.5°	737.0	729.0	696.4	641.2	565.4	481.1	387.3	286.5	183.1	91.8	2.5
70°	706.9	696.9	666.8	610.6	539.8	456.0	364.2	265.4	164.1	75.8	0.0
72.5°	671.8	664.2	635.1	582.0	510.2	429.5	340.7	242.3	143.0	60.2	0.5
75°	637.7	628.1	601.5	551.4	481.1	401.4	314.6	220.7	122.4	46.2	0.5
77.5°	593.5	590.5	565.4	516.7	453.5	374.3	286.0	194.7	102.8	33.1	0.5
80°	549.4	546.3	526.8	482.1	421.4	342.2	259.4	170.1	83.8	22.1	0.5
82.5°	505.7	501.7	483.1	446.0	388.8	315.1	231.8	145.5	66.2	13.5	0.5
85°	466.6	461.6	441.5	407.4	355.2	284.5	203.2	121.4	49.2	7.5	1.0
87.5°	433.0	429.5	407.4	372.3	321.1	255.9	178.1	98.3	34.6	3.5	1.5
90°	404.4	396.8	377.3	340.1	289.0	224.3	151.5	78.8	23.1	2.0	2.0
92.5°	376.3	369.7	348.2	310.0	260.4	197.2	125.9	60.2	14.5	1.0	2.5
95°	347.2	340.1	319.1	284.0	231.3	169.6	103.3	44.1	8.0	1.0	2.5
97.5°	318.6	312.1	290.0	254.9	205.2	145.5	81.8	31.1	4.0	1.0	2.0
100°	292.0	284.5	264.4	229.3	179.1	121.4	63.2	20.1	2.5	1.0	2.0
102.5°	263.9	257.9	237.3	203.2	152.0	98.8	47.2	12.5	1.0	1.0	1.5
105°	238.8	231.3	211.2	176.1	129.4	77.8	33.1	7.5	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°	155.5	149.5	131.9	102.3	65.7	30.6	9.0	1.5	1.5	1.5	1.5
115°	129.9	120.9	105.4	79.3	48.7	20.1	4.5	1.5	1.5	1.5	1.5
117.5°	103.9	96.3	85.3	60.2	32.1	13.0	2.5	1.5	1.5	1.5	1.5
120°	81.3	74.3	61.7	41.6	21.6	7.5	1.0	1.5	1.5	1.5	1.5
122.5°	58.2	52.7	41.6	27.1	13.0	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.6	35.6	27.6	16.6	8.0	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.1	22.6	16.1	9.5	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.0	12.5	9.5	5.5	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.0	7.5	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



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	393.8	393.8	393.8
2.5°	374.8	367.7	365.7
5°	354.7	343.2	336.6
7.5°	334.6	319.1	311.6
10°	316.1	294.0	286.0
12.5°	294.0	268.4	255.9
15°	272.9	239.8	227.8
17.5°	249.3	212.2	198.2
20°	227.3	184.6	170.1
22.5°	202.2	157.5	141.5
25°	179.6	130.4	112.4
27.5°	154.5	102.8	87.3
30°	130.9	78.8	63.2
32.5°	108.4	57.7	43.6
35°	87.3	39.1	27.6
37.5°	67.2	24.1	14.0
40°	48.7	12.5	6.5
42.5°	32.6	6.0	3.5
45°	20.1	3.0	0.0
47.5°	11.5	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



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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°	210.7	204.7	184.6	151.5	105.9	59.2	22.1	4.0	1.0	1.5	1.5
110°	183.6	178.6	158.0	125.9	85.3	44.1	14.5	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)