

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: P550669

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-93-87-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: P550669
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-50-UNV-93-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

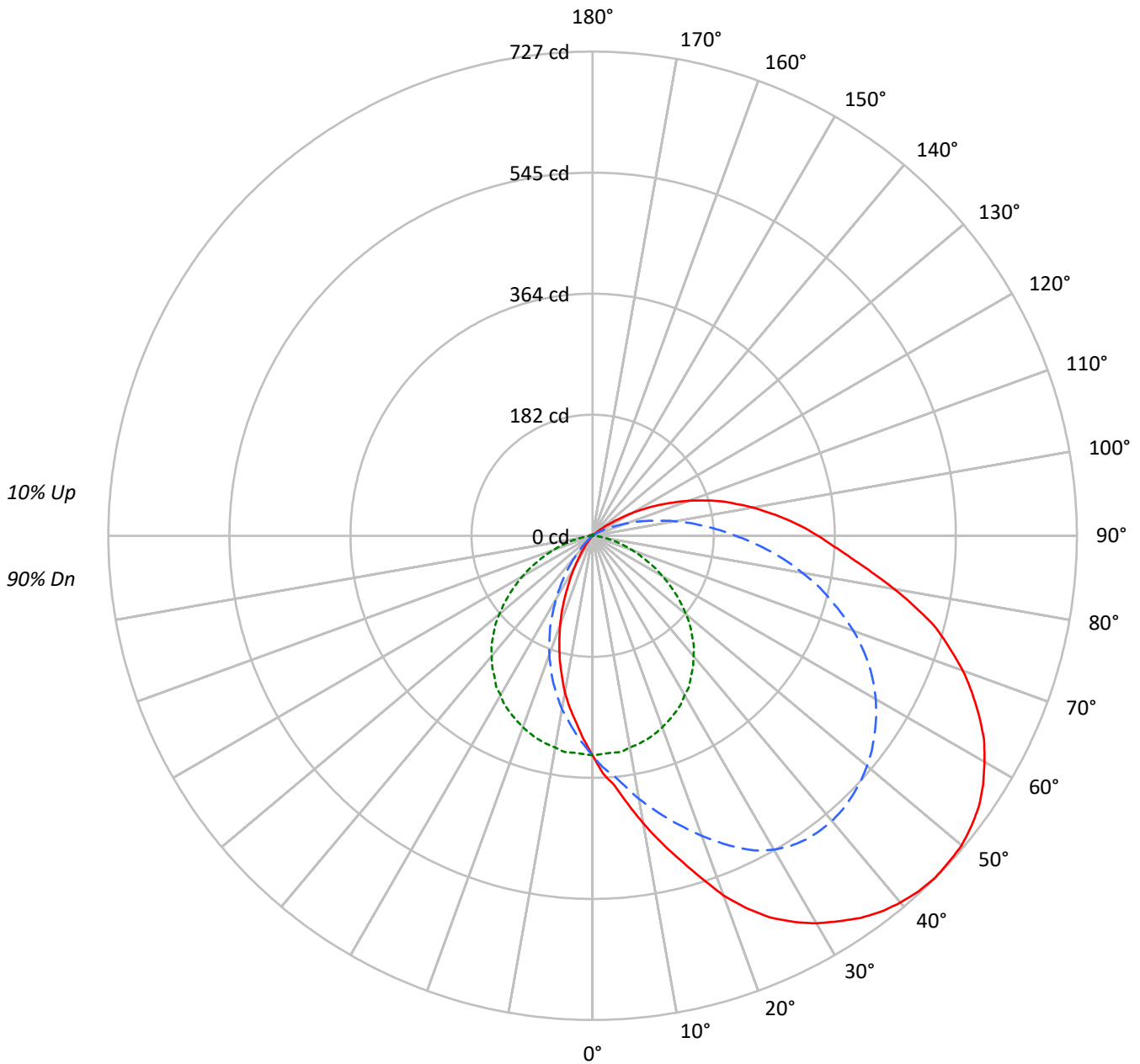
Lumens per Lamp: N/A
Luminaire Lumens: 1629.1 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	3547	3547	3547
5°	3893	3495	2916
10°	4405	3452	2404
15°	4937	3408	1873
20°	5568	3353	1379
25°	6093	3288	905
30°	6481	3202	510
35°	6819	3109	225
40°	7117	2995	54
45°	7374	2851	0
50°	7589	2661	0
55°	7753	2420	0
60°	7836	2139	0
65°	7867	1822	0
70°	7841	1485	0
75°	7742	1095	6
80°	7427	671	34
85°	7180	320	46



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.6	1.9
10°-20°	94.5	5.8
20°-30°	153.0	9.4
30°-40°	196.6	12.1
40°-50°	222.5	13.7
50°-60°	230.6	14.2
60°-70°	217.4	13.3
70°-80°	182.2	11.2
80°-90°	132.1	8.1
90°-100°	86.8	5.3
100°-110°	50.1	3.1
110°-120°	22.1	1.4
120°-130°	6.0	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°	279.1	17.1
0°-40°	475.7	29.2
0°-60°	928.8	57.0
0°-90°	1460.5	89.7
90°-120°	159.1	9.8
90°-150°	167.4	10.3
90°-180°	169.0	10.4
0°-180°	1629.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	330	330	330	330	330	
5°	376	361	327	297	282	38
15°	502	440	316	228	191	145
25°	633	517	293	150	94	292
35°	701	557	257	73	23	439
45°	727	552	211	17	0	561
55°	708	517	152	0	0	632
65°	640	458	91	0	0	633
75°	534	369	39	0	0	560
85°	390	268	6	2	2	333
90°	338	215	2	2	3	185
95°	290	168	1	3	4	228
105°	200	87	1	2	3	211
115°	109	29	1	1	2	109
125°	32	4	2	1	2	32
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°	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5
2.5°	357.2	356.8	355.5	353.4	350.5	345.5	341.3	337.5	332.4	328.2	320.3
5°	376.1	374.0	372.3	370.2	363.5	358.9	351.3	342.9	335.0	327.0	311.0
7.5°	406.3	403.0	400.4	394.6	385.3	374.8	363.1	355.1	349.7	327.4	300.1
10°	438.6	435.7	430.7	420.2	408.8	393.7	376.9	358.1	341.3	322.8	290.5
12.5°	470.5	466.3	459.2	445.8	429.8	410.9	387.9	365.6	341.7	319.9	279.1
15°	502.4	497.8	490.3	473.9	452.9	428.1	400.0	371.9	343.8	316.1	267.4
17.5°	537.3	531.0	519.7	501.2	474.7	444.1	410.9	376.9	342.9	311.5	254.8
20°	574.6	565.8	553.7	528.9	497.8	461.7	421.9	382.0	342.5	306.0	240.5
22.5°	605.7	596.9	583.5	557.9	520.5	476.4	431.1	385.3	340.8	299.7	227.1
25°	632.6	625.4	610.7	581.4	541.9	492.0	439.9	387.9	338.3	293.0	212.8
27.5°	653.6	646.8	630.5	600.2	560.0	505.8	446.6	389.1	335.0	286.3	198.1
30°	672.0	665.3	645.6	614.5	572.1	516.7	453.3	389.5	330.8	276.2	182.2
32.5°	686.3	680.0	659.9	626.7	580.5	524.3	457.1	389.1	325.3	269.1	165.0
35°	700.6	694.3	670.8	635.5	586.8	527.6	460.1	387.0	318.6	257.3	148.6
37.5°	711.5	704.3	680.4	641.4	589.8	528.5	459.6	384.1	311.5	247.7	132.2
40°	719.0	711.5	685.9	644.7	590.6	527.2	456.3	379.0	303.1	235.5	115.0
42.5°	724.1	715.7	688.4	649.8	588.9	523.9	451.2	372.7	293.8	225.0	98.6
45°	726.6	717.8	688.8	645.6	586.0	517.6	443.7	364.8	283.8	210.7	82.3
47.5°	725.3	715.7	686.7	641.0	580.5	510.8	435.3	355.1	271.6	198.1	66.7
50°	723.2	713.2	682.1	635.1	573.0	502.4	426.1	343.4	259.0	182.6	52.9
52.5°	716.5	706.4	677.1	626.7	564.2	492.8	413.5	331.2	245.6	167.5	40.3
55°	708.1	698.9	668.2	619.1	552.8	481.0	401.7	318.2	232.5	152.0	29.0
57.5°	695.1	686.7	657.3	607.0	541.5	468.0	388.7	303.9	216.2	136.4	20.1
60°	679.2	670.8	642.2	593.1	528.5	453.3	374.4	289.2	201.5	120.9	12.6
62.5°	662.4	654.4	624.6	575.9	512.1	437.8	358.9	274.5	186.0	106.6	7.6
65°	640.1	632.6	605.7	555.3	494.1	421.0	341.7	256.9	170.0	90.7	4.2
67.5°	616.6	609.9	582.6	536.4	473.1	402.5	324.1	239.7	153.2	76.8	2.1
70°	591.4	583.0	557.9	510.8	451.7	381.6	304.7	222.1	137.3	63.4	0.0
72.5°	562.1	555.8	531.4	486.9	426.9	359.3	285.0	202.7	119.6	50.4	0.4
75°	533.5	525.5	503.3	461.3	402.5	335.8	263.2	184.7	102.4	38.6	0.4
77.5°	496.6	494.1	473.1	432.3	379.5	313.1	239.3	162.9	86.0	27.7	0.4
80°	459.6	457.1	440.7	403.4	352.6	286.3	217.0	142.3	70.1	18.5	0.4
82.5°	423.1	419.8	404.2	373.2	325.3	263.6	193.9	121.7	55.4	11.3	0.4
85°	390.4	386.2	369.4	340.8	297.2	238.0	170.0	101.6	41.1	6.3	0.8
87.5°	362.2	359.3	340.8	311.5	268.6	214.1	149.0	82.3	29.0	2.9	1.3
90°	338.3	332.0	315.7	284.6	241.8	187.6	126.8	65.9	19.3	1.7	1.7
92.5°	314.8	309.4	291.3	259.4	217.9	165.0	105.4	50.4	12.2	0.8	2.1
95°	290.5	284.6	267.0	237.6	193.5	141.9	86.5	36.9	6.7	0.8	2.1
97.5°	266.5	261.1	242.6	213.2	171.7	121.7	68.4	26.0	3.4	0.8	1.7
100°	244.3	238.0	221.2	191.8	149.9	101.6	52.9	16.8	2.1	0.8	1.7
102.5°	220.8	215.8	198.5	170.0	127.2	82.7	39.5	10.5	0.8	0.8	1.3
105°	199.8	193.5	176.7	147.3	108.3	65.1	27.7	6.3	0.8	0.8	1.3



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CATALOG NUMBER: FCC-X-2-LD4-1HI-50-UNV-93-87-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	130.1	125.1	110.4	85.6	55.0	25.6	7.6	1.3	1.3	1.3	1.3
115°	108.7	101.2	88.1	66.3	40.7	16.8	3.8	1.3	1.3	1.3	1.3
117.5°	86.9	80.6	71.4	50.4	26.9	10.9	2.1	1.3	1.3	1.3	1.3
120°	68.0	62.1	51.6	34.8	18.0	6.3	0.8	1.3	1.3	1.3	1.3
122.5°	48.7	44.1	34.8	22.7	10.9	2.9	1.3	1.3	1.7	1.7	1.3
125°	32.3	29.8	23.1	13.9	6.7	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.0	18.9	13.4	8.0	2.9	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.8	10.5	8.0	4.6	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.7	6.3	4.2	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	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°	329.5	329.5	329.5
2.5°	313.6	307.7	306.0
5°	296.8	287.1	281.7
7.5°	280.0	267.0	260.7
10°	264.4	246.0	239.3
12.5°	246.0	224.6	214.1
15°	228.3	200.6	190.6
17.5°	208.6	177.6	165.8
20°	190.1	154.5	142.3
22.5°	169.2	131.8	118.4
25°	150.3	109.1	94.0
27.5°	129.3	86.0	73.0
30°	109.6	65.9	52.9
32.5°	90.7	48.3	36.5
35°	73.0	32.7	23.1
37.5°	56.2	20.1	11.8
40°	40.7	10.5	5.5
42.5°	27.3	5.0	2.9
45°	16.8	2.5	0.0
47.5°	9.7	0.0	0.0
50°	5.0	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	1.3
80°	0.8	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	2.9
90°	2.5	2.9	2.9
92.5°	2.5	3.4	3.4
95°	2.9	3.4	3.8
97.5°	3.4	3.8	3.8
100°	2.9	3.8	4.2
102.5°	2.5	3.8	3.8
105°	2.1	2.9	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	0.8
152.5°	1.3	0.8	0.8
155°	1.3	0.8	0.4
157.5°	1.7	0.8	0.4
160°	1.3	0.8	0.4
162.5°	1.3	0.8	0.4
165°	1.3	0.8	0.0
167.5°	1.3	0.8	0.4
170°	1.3	0.8	0.4
172.5°	1.3	0.8	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°	176.3	171.3	154.5	126.8	88.6	49.5	18.5	3.4	0.8	1.3	1.3
110°	153.6	149.4	132.2	105.4	71.4	36.9	12.2	2.1	1.3	1.3	1.3





107.5°	1.7	2.5	2.9
110°	1.7	2.1	2.5



(END OF REPORT)