

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: P551689

Luminaire Tested: **FCC-X-2-LD4-2LO-50-UNV-93-85-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: P551689
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-50-UNV-93-85-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

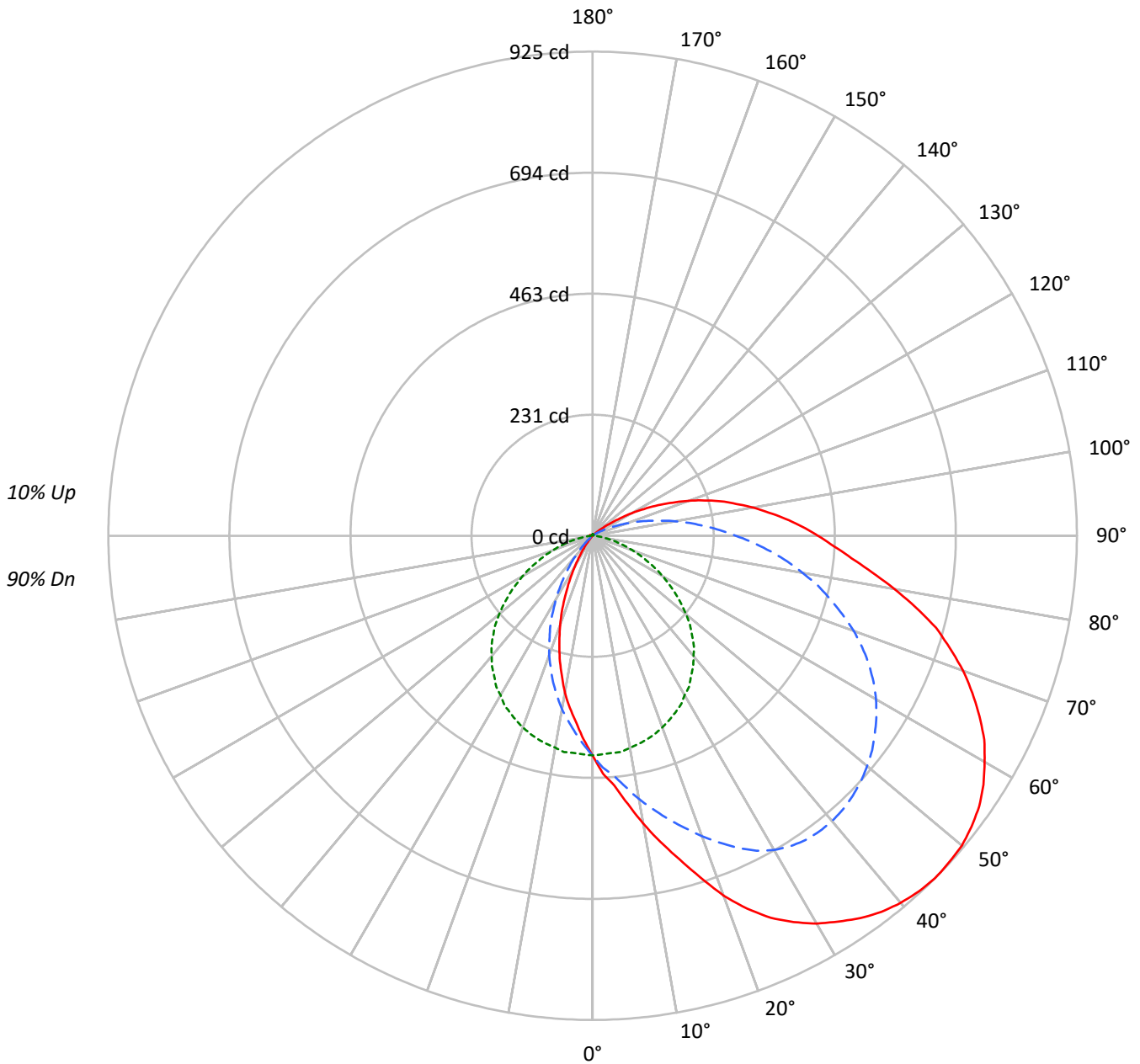
Lumens per Lamp: N/A
Luminaire Lumens: 2073.9 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

TEST NUMBER: P551689

CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-93-85-ED1D-90

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°	4515	4515	4515
5°	4957	4449	3712
10°	5610	4395	3060
15°	6286	4339	2384
20°	7090	4269	1756
25°	7757	4186	1153
30°	8252	4076	649
35°	8681	3958	286
40°	9062	3813	68
45°	9388	3630	0
50°	9662	3389	0
55°	9871	3081	0
60°	9976	2723	0
65°	10017	2318	0
70°	9983	1890	0
75°	9856	1395	7
80°	9457	852	44
85°	9141	407	59



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.2	1.9
10°-20°	120.3	5.8
20°-30°	194.8	9.4
30°-40°	250.3	12.1
40°-50°	283.3	13.7
50°-60°	293.5	14.2
60°-70°	276.8	13.3
70°-80°	232.0	11.2
80°-90°	168.2	8.1
90°-100°	110.5	5.3
100°-110°	63.8	3.1
110°-120°	28.2	1.4
120°-130°	7.6	0.4
130°-140°	1.7	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	355.4	17.1
0°-40°	605.6	29.2
0°-60°	1182.5	57.0
0°-90°	1859.5	89.7
90°-120°	202.5	9.8
90°-150°	213.0	10.3
90°-180°	214.0	10.3
0°-180°	2073.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	420	420	420	420	420	
5°	479	460	416	378	359	48
15°	640	561	402	291	243	184
25°	805	658	373	191	120	372
35°	892	709	328	93	29	559
45°	925	702	268	21	0	714
55°	902	658	194	0	0	805
65°	815	582	115	0	0	806
75°	679	470	49	0	0	712
85°	497	341	8	2	3	424
90°	431	273	2	3	4	236
95°	370	214	1	4	5	290
105°	254	110	1	3	4	268
115°	138	37	2	2	3	139
125°	41	5	2	2	2	41
135°	2	2	3	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	3	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°	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5
2.5°	454.8	454.3	452.7	450.0	446.2	439.8	434.5	429.7	423.3	417.9	407.8
5°	478.8	476.2	474.0	471.4	462.8	456.9	447.3	436.6	426.5	416.3	396.0
7.5°	517.3	513.0	509.8	502.4	490.6	477.2	462.3	452.1	445.2	416.8	382.1
10°	558.5	554.7	548.3	535.0	520.5	501.3	479.9	455.9	434.5	411.0	369.8
12.5°	599.1	593.7	584.7	567.6	547.2	523.2	493.8	465.5	435.0	407.2	355.4
15°	639.7	633.8	624.2	603.4	576.6	545.1	509.3	473.5	437.7	402.4	340.4
17.5°	684.1	676.0	661.6	638.1	604.4	565.4	523.2	479.9	436.6	396.5	324.4
20°	731.6	720.4	704.9	673.4	633.8	587.9	537.1	486.3	436.1	389.6	306.2
22.5°	771.2	759.9	742.8	710.2	662.7	606.6	548.9	490.6	433.9	381.6	289.1
25°	805.4	796.3	777.6	740.2	689.9	626.3	560.1	493.8	430.7	373.0	271.0
27.5°	832.1	823.5	802.7	764.2	712.9	644.0	568.6	495.4	426.5	364.5	252.2
30°	855.6	847.1	821.9	782.4	728.4	657.9	577.2	495.9	421.1	351.6	231.9
32.5°	873.8	865.8	840.1	797.9	739.1	667.5	582.0	495.4	414.2	342.6	210.0
35°	891.9	883.9	854.0	809.1	747.1	671.8	585.7	492.7	405.6	327.6	189.2
37.5°	905.8	896.8	866.3	816.6	750.9	672.8	585.2	489.0	396.5	315.3	168.3
40°	915.5	905.8	873.2	820.9	751.9	671.2	580.9	482.6	385.9	299.8	146.4
42.5°	921.9	911.2	876.5	827.3	749.8	667.0	574.5	474.6	374.1	286.4	125.6
45°	925.1	913.9	877.0	821.9	746.1	658.9	564.9	464.4	361.3	268.3	104.7
47.5°	923.5	911.2	874.3	816.1	739.1	650.4	554.2	452.1	345.8	252.2	85.0
50°	920.8	908.0	868.4	808.6	729.5	639.7	542.4	437.2	329.7	232.5	67.3
52.5°	912.3	899.4	862.0	797.9	718.3	627.4	526.4	421.7	312.6	213.2	51.3
55°	901.6	889.8	850.8	788.3	703.8	612.4	511.4	405.1	296.1	193.5	36.9
57.5°	885.0	874.3	836.9	772.8	689.4	595.9	494.9	386.9	275.2	173.7	25.7
60°	864.7	854.0	817.7	755.1	672.8	577.2	476.7	368.2	256.5	153.9	16.0
62.5°	843.3	833.2	795.2	733.2	652.0	557.4	456.9	349.5	236.7	135.7	9.6
65°	815.0	805.4	771.2	707.0	629.0	536.0	435.0	327.1	216.4	115.4	5.3
67.5°	785.1	776.5	741.8	683.0	602.3	512.5	412.6	305.2	195.1	97.8	2.7
70°	753.0	742.3	710.2	650.4	575.0	485.8	388.0	282.7	174.8	80.7	0.0
72.5°	715.6	707.6	676.6	619.9	543.5	457.5	362.9	258.1	152.3	64.1	0.5
75°	679.2	669.1	640.8	587.3	512.5	427.5	335.1	235.1	130.4	49.2	0.5
77.5°	632.2	629.0	602.3	550.5	483.1	398.7	304.6	207.4	109.6	35.3	0.5
80°	585.2	582.0	561.1	513.6	448.9	364.5	276.3	181.2	89.2	23.5	0.5
82.5°	538.7	534.4	514.6	475.1	414.2	335.6	246.9	155.0	70.5	14.4	0.5
85°	497.0	491.7	470.3	433.9	378.4	303.0	216.4	129.3	52.4	8.0	1.1
87.5°	461.2	457.5	433.9	396.5	342.0	272.6	189.7	104.7	36.9	3.7	1.6
90°	430.7	422.7	401.9	362.3	307.8	238.9	161.4	83.9	24.6	2.1	2.1
92.5°	400.8	393.9	370.9	330.3	277.4	210.0	134.1	64.1	15.5	1.1	2.7
95°	369.8	362.3	339.9	302.5	246.4	180.6	110.1	47.0	8.6	1.1	2.7
97.5°	339.4	332.4	308.9	271.5	218.6	155.0	87.1	33.1	4.3	1.1	2.1
100°	311.0	303.0	281.6	244.2	190.8	129.3	67.3	21.4	2.7	1.1	2.1
102.5°	281.1	274.7	252.8	216.4	161.9	105.3	50.2	13.4	1.1	1.1	1.6
105°	254.4	246.4	225.0	187.6	137.9	82.8	35.3	8.0	1.1	1.1	1.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	165.7	159.3	140.6	109.0	70.0	32.6	9.6	1.6	1.6	1.6	1.6
115°	138.4	128.8	112.2	84.4	51.8	21.4	4.8	1.6	1.6	1.6	1.6
117.5°	110.6	102.6	90.9	64.1	34.2	13.9	2.7	1.6	1.6	1.6	1.6
120°	86.6	79.1	65.7	44.4	23.0	8.0	1.1	1.6	1.6	1.6	1.6
122.5°	62.0	56.1	44.4	28.9	13.9	3.7	1.6	1.6	2.1	2.1	1.6
125°	41.2	37.9	29.4	17.6	8.6	1.6	1.6	1.6	2.1	2.1	1.6
127.5°	26.7	24.0	17.1	10.2	3.7	1.6	1.6	2.1	2.1	2.1	1.6
130°	15.0	13.4	10.2	5.9	1.6	1.6	1.6	2.1	2.1	2.1	1.6
132.5°	8.6	8.0	5.3	1.1	1.6	1.6	1.6	2.1	2.1	2.1	2.1
135°	2.1	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.1
137.5°	0.5	0.5	1.1	1.1	1.6	1.6	2.1	2.7	2.7	2.7	2.1
140°	0.5	0.5	1.1	1.6	1.6	1.6	2.1	2.7	2.7	2.7	2.1
142.5°	0.5	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.1	2.1
145°	0.5	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.1	2.1	2.1
147.5°	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.1	2.1
150°	0.5	1.1	1.1	1.6	2.1	2.1	2.1	2.7	2.1	2.1	2.1
152.5°	0.5	1.1	1.1	1.6	2.1	2.1	2.1	2.7	2.1	2.1	2.1
155°	1.1	1.1	1.1	1.6	2.1	2.1	2.1	2.7	2.1	2.1	2.7
157.5°	1.1	1.1	1.1	1.6	2.1	2.1	2.1	2.7	2.1	2.1	2.7
160°	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.1	2.1	2.1	2.1
162.5°	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.1	2.1	2.1	2.1
165°	1.1	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.1	2.1	2.1
167.5°	1.1	1.1	1.1	1.6	1.6	1.6	2.1	2.1	2.1	2.1	2.1
170°	1.1	1.1	1.1	1.6	1.6	1.6	2.1	2.7	2.7	2.7	2.7
172.5°	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.7	2.7
175°	1.1	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.7	2.7
177.5°	0.5	1.1	1.1	1.6	1.6	2.1	2.1	2.7	2.7	2.7	2.1
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6



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CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-93-85-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	419.5	419.5	419.5
2.5°	399.2	391.7	389.6
5°	377.8	365.5	358.6
7.5°	356.5	339.9	331.9
10°	336.7	313.2	304.6
12.5°	313.2	285.9	272.6
15°	290.7	255.5	242.6
17.5°	265.6	226.1	211.1
20°	242.1	196.7	181.2
22.5°	215.4	167.8	150.7
25°	191.3	138.9	119.7
27.5°	164.6	109.6	93.0
30°	139.5	83.9	67.3
32.5°	115.4	61.5	46.5
35°	93.0	41.7	29.4
37.5°	71.6	25.7	15.0
40°	51.8	13.4	6.9
42.5°	34.7	6.4	3.7
45°	21.4	3.2	0.0
47.5°	12.3	0.0	0.0
50°	6.4	0.0	0.0
52.5°	2.7	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	1.1	1.6
80°	1.1	2.1	2.7
82.5°	2.1	2.7	2.7
85°	2.1	2.7	3.2
87.5°	2.7	3.2	3.7
90°	3.2	3.7	3.7
92.5°	3.2	4.3	4.3
95°	3.7	4.3	4.8
97.5°	4.3	4.8	4.8
100°	3.7	4.8	5.3
102.5°	3.2	4.8	4.8
105°	2.7	3.7	4.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.1	2.7	2.7
115°	1.6	2.1	2.7
117.5°	1.6	2.1	2.1
120°	1.6	1.6	2.1
122.5°	1.6	1.6	2.1
125°	1.6	1.6	2.1
127.5°	2.1	1.6	1.6
130°	1.6	1.6	1.6
132.5°	2.1	1.6	1.6
135°	2.1	1.6	1.6
137.5°	2.1	1.6	1.6
140°	2.1	1.6	1.6
142.5°	2.1	1.6	1.6
145°	1.6	1.6	1.6
147.5°	1.6	1.6	1.6
150°	1.6	1.6	1.1
152.5°	1.6	1.1	1.1
155°	1.6	1.1	0.5
157.5°	2.1	1.1	0.5
160°	1.6	1.1	0.5
162.5°	1.6	1.1	0.5
165°	1.6	1.1	0.0
167.5°	1.6	1.1	0.5
170°	1.6	1.1	0.5
172.5°	1.6	1.1	0.5
175°	1.6	0.5	0.5
177.5°	1.6	0.5	0.5
180°	1.6	1.6	1.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	224.5	218.0	196.7	161.4	112.8	63.1	23.5	4.3	1.1	1.6	1.6
110°	195.6	190.3	168.3	134.1	90.9	47.0	15.5	2.7	1.6	1.6	1.6





107.5°	2.1	3.2	3.7
110°	2.1	2.7	3.2



(END OF REPORT)