

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: P551620

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-82-96-ED1D**

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: P551620  
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-82-96-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

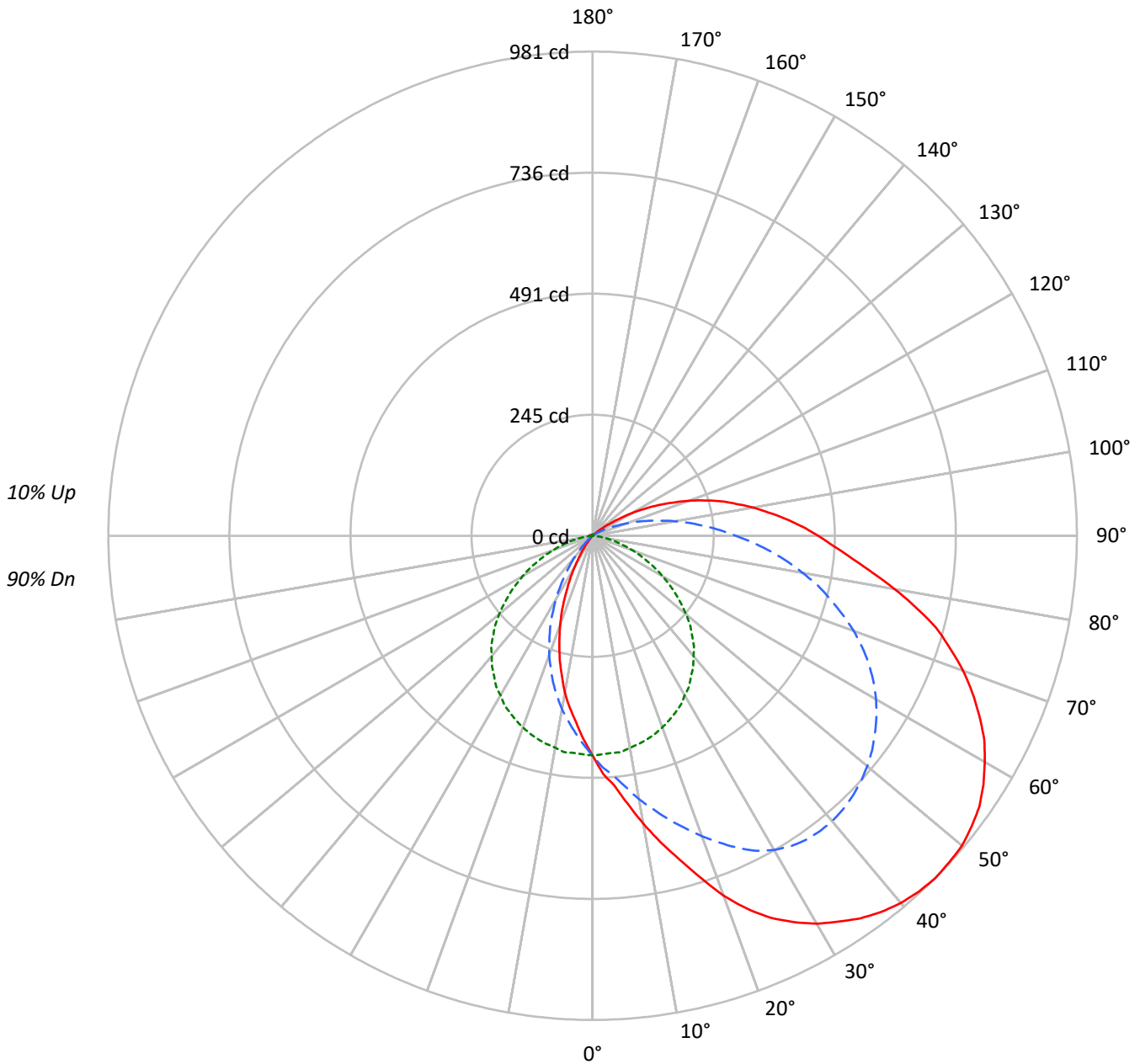
Lumens per Lamp: N/A  
Luminaire Lumens: 2200.0 lumens  
Efficiency: N/A  
Efficacy: 93.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P551620

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-96-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551620

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	4790	4790	4790
5°	5258	4720	3938
10°	5950	4662	3245
15°	6669	4603	2529
20°	7521	4528	1863
25°	8228	4441	1223
30°	8754	4324	689
35°	9208	4199	304
40°	9612	4044	73
45°	9959	3851	0
50°	10249	3594	0
55°	10470	3268	0
60°	10581	2890	0
65°	10625	2458	0
70°	10589	2005	0
75°	10455	1480	9
80°	10031	903	45
85°	9696	432	63



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	1.9
10°-20°	127.6	5.8
20°-30°	206.7	9.4
30°-40°	265.5	12.1
40°-50°	300.5	13.7
50°-60°	311.4	14.2
60°-70°	293.7	13.3
70°-80°	246.1	11.2
80°-90°	178.4	8.1
90°-100°	117.2	5.3
100°-110°	67.7	3.1
110°-120°	29.9	1.4
120°-130°	8.1	0.4
130°-140°	1.9	0.1
140°-150°	1.2	0.1
150°-160°	0.9	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	376.9	17.1
0°-40°	642.4	29.2
0°-60°	1254.4	57.0
0°-90°	1972.5	89.7
90°-120°	214.8	9.8
90°-150°	226.0	10.3
90°-180°	228.0	10.4
0°-180°	2200.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	445	445	445	445	445	
5°	508	488	442	401	380	51
15°	679	595	427	308	257	196
25°	854	698	396	203	127	395
35°	946	753	348	99	31	593
45°	981	745	285	23	0	758
55°	956	698	205	0	0	854
65°	864	618	122	0	0	855
75°	720	499	52	1	1	756
85°	527	361	8	2	3	450
90°	457	290	2	3	4	251
95°	392	226	1	4	5	308
105°	270	117	1	3	4	285
115°	147	39	2	2	3	147
125°	44	5	2	2	2	44
135°	2	2	3	2	2	4
145°	1	2	2	2	2	0
155°	1	2	2	2	1	0
165°	1	2	2	2	0	0
175°	1	2	3	2	1	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°	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0
2.5°	482.4	481.9	480.2	477.3	473.4	466.5	460.9	455.8	449.0	443.3	432.5
5°	507.9	505.1	502.8	500.0	490.9	484.7	474.5	463.1	452.4	441.6	420.1
7.5°	548.7	544.2	540.8	532.9	520.4	506.2	490.4	479.6	472.2	442.2	405.3
10°	592.4	588.4	581.6	567.5	552.1	531.7	509.1	483.6	460.9	435.9	392.3
12.5°	635.5	629.8	620.2	602.0	580.5	555.0	523.8	493.8	461.4	432.0	377.0
15°	678.6	672.3	662.1	640.0	611.7	578.2	540.2	502.3	464.3	426.9	361.1
17.5°	725.6	717.1	701.8	676.9	641.2	599.8	555.0	509.1	463.1	420.6	344.1
20°	776.1	764.2	747.7	714.3	672.3	623.6	569.7	515.9	462.6	413.3	324.8
22.5°	818.0	806.1	788.0	753.4	702.9	643.4	582.2	520.4	460.3	404.8	306.7
25°	854.3	844.7	824.8	785.1	731.9	664.4	594.1	523.8	456.9	395.7	287.4
27.5°	882.6	873.6	851.5	810.7	756.2	683.1	603.2	525.5	452.4	386.6	267.6
30°	907.6	898.5	871.9	829.9	772.7	697.8	612.2	526.1	446.7	373.0	246.0
32.5°	926.9	918.4	891.1	846.4	784.0	708.0	617.3	525.5	439.3	363.4	222.8
35°	946.1	937.6	905.9	858.3	792.5	712.6	621.3	522.7	430.3	347.5	200.7
37.5°	960.9	951.2	918.9	866.2	796.5	713.7	620.7	518.7	420.6	334.5	178.6
40°	971.1	960.9	926.3	870.7	797.6	712.0	616.2	511.9	409.3	318.0	155.3
42.5°	977.9	966.5	929.7	877.5	795.3	707.5	609.4	503.4	396.8	303.9	133.2
45°	981.3	969.4	930.3	871.9	791.4	699.0	599.2	492.6	383.2	284.6	111.1
47.5°	979.6	966.5	927.4	865.6	784.0	689.9	587.9	479.6	366.8	267.6	90.1
50°	976.7	963.1	921.2	857.7	773.8	678.6	575.4	463.7	349.8	246.6	71.4
52.5°	967.7	954.1	914.4	846.4	761.9	665.5	558.4	447.3	331.6	226.2	54.4
55°	956.3	943.9	902.5	836.2	746.6	649.7	542.5	429.7	314.1	205.2	39.1
57.5°	938.8	927.4	887.7	819.7	731.3	632.1	524.9	410.4	291.9	184.2	27.2
60°	917.2	905.9	867.3	801.0	713.7	612.2	505.7	390.6	272.1	163.3	17.0
62.5°	894.5	883.8	843.5	777.8	691.6	591.3	484.7	370.7	251.1	144.0	10.2
65°	864.5	854.3	818.0	750.0	667.2	568.6	461.4	346.9	229.6	122.4	5.7
67.5°	832.8	823.7	786.8	724.5	638.9	543.6	437.6	323.7	206.9	103.7	2.8
70°	798.7	787.4	753.4	689.9	610.0	515.3	411.6	299.9	185.4	85.6	0.0
72.5°	759.1	750.6	717.7	657.6	576.5	485.3	384.9	273.8	161.6	68.0	0.6
75°	720.5	709.7	679.7	623.0	543.6	453.5	355.4	249.4	138.3	52.2	0.6
77.5°	670.6	667.2	638.9	583.9	512.5	422.9	323.1	220.0	116.2	37.4	0.6
80°	620.7	617.3	595.2	544.8	476.2	386.6	293.1	192.2	94.7	24.9	0.6
82.5°	571.4	566.9	545.9	504.0	439.3	356.0	261.9	164.4	74.8	15.3	0.6
85°	527.2	521.5	498.9	460.3	401.4	321.4	229.6	137.2	55.6	8.5	1.1
87.5°	489.2	485.3	460.3	420.6	362.8	289.1	201.2	111.1	39.1	4.0	1.7
90°	456.9	448.4	426.3	384.4	326.5	253.4	171.2	89.0	26.1	2.3	2.3
92.5°	425.2	417.8	393.4	350.3	294.2	222.8	142.3	68.0	16.4	1.1	2.8
95°	392.3	384.4	360.5	320.9	261.3	191.6	116.8	49.9	9.1	1.1	2.8
97.5°	360.0	352.6	327.7	288.0	231.9	164.4	92.4	35.1	4.5	1.1	2.3
100°	329.9	321.4	298.8	259.1	202.4	137.2	71.4	22.7	2.8	1.1	2.3
102.5°	298.2	291.4	268.1	229.6	171.8	111.7	53.3	14.2	1.1	1.1	1.7
105°	269.8	261.3	238.7	199.0	146.3	87.9	37.4	8.5	1.1	1.1	1.7



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	175.7	168.9	149.1	115.6	74.3	34.6	10.2	1.7	1.7	1.7	1.7
115°	146.8	136.6	119.0	89.6	55.0	22.7	5.1	1.7	1.7	1.7	1.7
117.5°	117.3	108.8	96.4	68.0	36.3	14.7	2.8	1.7	1.7	1.7	1.7
120°	91.8	83.9	69.7	47.1	24.4	8.5	1.1	1.7	1.7	1.7	1.7
122.5°	65.8	59.5	47.1	30.6	14.7	4.0	1.7	1.7	2.3	2.3	1.7
125°	43.7	40.2	31.2	18.7	9.1	1.7	1.7	1.7	2.3	2.3	1.7
127.5°	28.3	25.5	18.1	10.8	4.0	1.7	1.7	2.3	2.3	2.3	1.7
130°	15.9	14.2	10.8	6.2	1.7	1.7	1.7	2.3	2.3	2.3	1.7
132.5°	9.1	8.5	5.7	1.1	1.7	1.7	1.7	2.3	2.3	2.3	2.3
135°	2.3	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.3
137.5°	0.6	0.6	1.1	1.1	1.7	1.7	2.3	2.8	2.8	2.8	2.3
140°	0.6	0.6	1.1	1.7	1.7	1.7	2.3	2.8	2.8	2.8	2.3
142.5°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.3	2.3
145°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.3	2.3	2.3
147.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.3	2.3
150°	0.6	1.1	1.1	1.7	2.3	2.3	2.3	2.8	2.3	2.3	2.3
152.5°	0.6	1.1	1.1	1.7	2.3	2.3	2.3	2.8	2.3	2.3	2.3
155°	1.1	1.1	1.1	1.7	2.3	2.3	2.3	2.8	2.3	2.3	2.8
157.5°	1.1	1.1	1.1	1.7	2.3	2.3	2.3	2.8	2.3	2.3	2.8
160°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3	2.3
162.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3	2.3
165°	1.1	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3
167.5°	1.1	1.1	1.1	1.7	1.7	1.7	2.3	2.3	2.3	2.3	2.3
170°	1.1	1.1	1.1	1.7	1.7	1.7	2.3	2.8	2.8	2.8	2.8
172.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.8	2.8
175°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.8	2.8
177.5°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.8	2.8	2.8	2.3
180°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	445.0	445.0	445.0
2.5°	423.5	415.5	413.3
5°	400.8	387.8	380.4
7.5°	378.1	360.5	352.0
10°	357.1	332.2	323.1
12.5°	332.2	303.3	289.1
15°	308.4	271.0	257.4
17.5°	281.7	239.8	223.9
20°	256.8	208.6	192.2
22.5°	228.5	178.0	159.9
25°	202.9	147.4	127.0
27.5°	174.6	116.2	98.6
30°	148.0	89.0	71.4
32.5°	122.4	65.2	49.3
35°	98.6	44.2	31.2
37.5°	76.0	27.2	15.9
40°	55.0	14.2	7.4
42.5°	36.8	6.8	4.0
45°	22.7	3.4	0.0
47.5°	13.0	0.0	0.0
50°	6.8	0.0	0.0
52.5°	2.8	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°	0.6	0.6	0.6
77.5°	0.6	1.1	1.7
80°	1.1	2.3	2.8
82.5°	2.3	2.8	2.8
85°	2.3	2.8	3.4
87.5°	2.8	3.4	4.0
90°	3.4	4.0	4.0
92.5°	3.4	4.5	4.5
95°	4.0	4.5	5.1
97.5°	4.5	5.1	5.1
100°	4.0	5.1	5.7
102.5°	3.4	5.1	5.1
105°	2.8	4.0	4.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.3	2.8	2.8
115°	1.7	2.3	2.8
117.5°	1.7	2.3	2.3
120°	1.7	1.7	2.3
122.5°	1.7	1.7	2.3
125°	1.7	1.7	2.3
127.5°	2.3	1.7	1.7
130°	1.7	1.7	1.7
132.5°	2.3	1.7	1.7
135°	2.3	1.7	1.7
137.5°	2.3	1.7	1.7
140°	2.3	1.7	1.7
142.5°	2.3	1.7	1.7
145°	1.7	1.7	1.7
147.5°	1.7	1.7	1.7
150°	1.7	1.7	1.1
152.5°	1.7	1.1	1.1
155°	1.7	1.1	0.6
157.5°	2.3	1.1	0.6
160°	1.7	1.1	0.6
162.5°	1.7	1.1	0.6
165°	1.7	1.1	0.0
167.5°	1.7	1.1	0.6
170°	1.7	1.1	0.6
172.5°	1.7	1.1	0.6
175°	1.7	0.6	0.6
177.5°	1.7	0.6	0.6
180°	1.7	1.7	1.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	238.1	231.3	208.6	171.2	119.6	66.9	24.9	4.5	1.1	1.7	1.7
110°	207.5	201.8	178.6	142.3	96.4	49.9	16.4	2.8	1.7	1.7	1.7







107.5°	2.3	3.4	4.0
110°	2.3	2.8	3.4



(END OF REPORT)