

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: P551625

Luminaire Tested: **FCC-X-2-LD4-2LO-40-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: P551625  
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-93-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

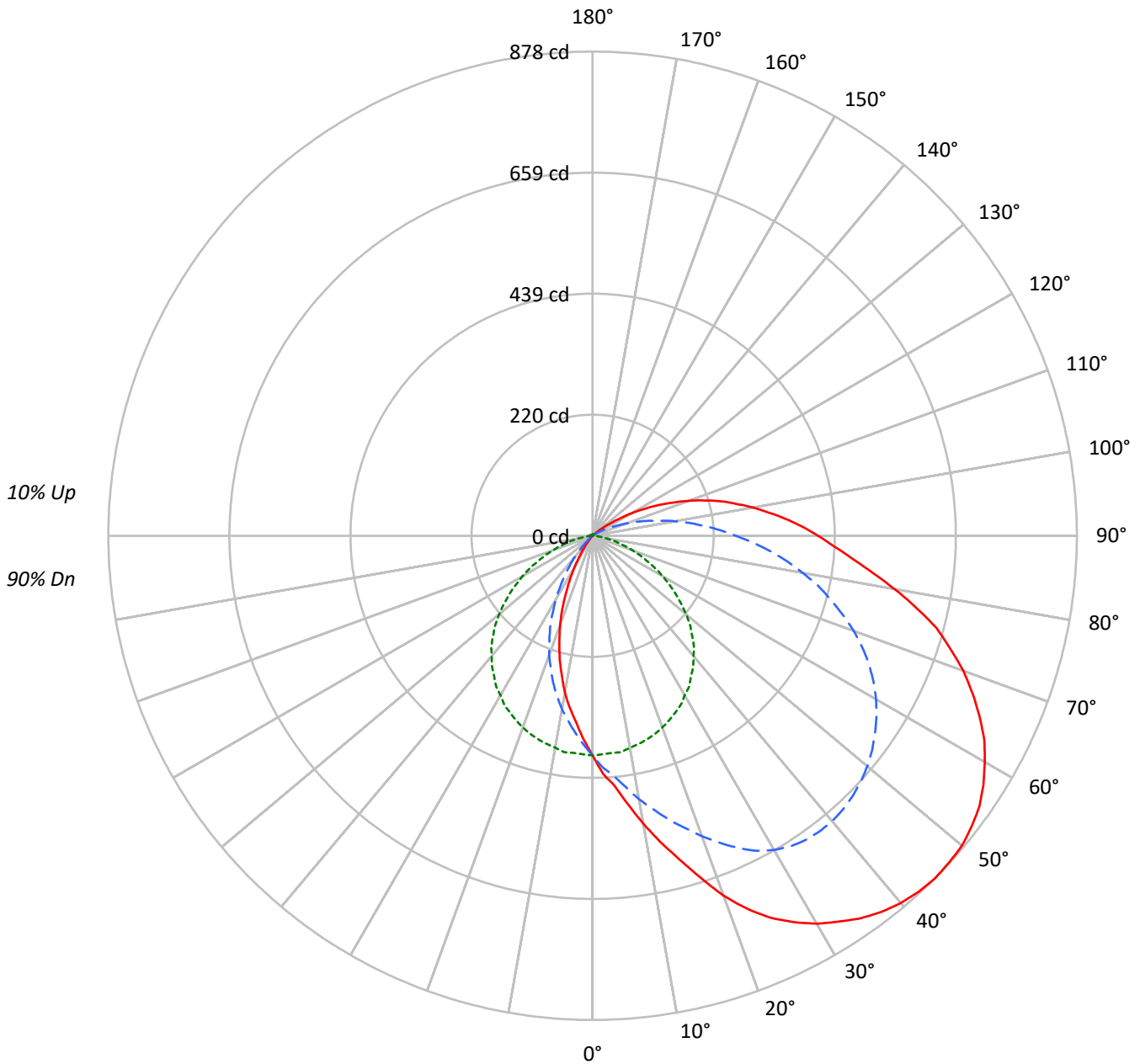
Lumens per Lamp: N/A  
Luminaire Lumens: 1968.9 lumens  
Efficiency: N/A  
Efficacy: 83.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (A<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: P551625

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551625

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-85-ED1D-90

**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°	4287	4287	4287
5°	4706	4224	3524
10°	5326	4173	2905
15°	5968	4119	2263
20°	6731	4053	1667
25°	7364	3974	1094
30°	7835	3870	616
35°	8242	3758	272
40°	8603	3619	65
45°	8912	3446	0
50°	9173	3217	0
55°	9371	2925	0
60°	9471	2585	0
65°	9509	2201	0
70°	9478	1794	0
75°	9358	1324	7
80°	8979	809	40
85°	8677	386	55



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.1	1.9
10°-20°	114.2	5.8
20°-30°	185.0	9.4
30°-40°	237.6	12.1
40°-50°	269.0	13.7
50°-60°	278.7	14.2
60°-70°	262.8	13.3
70°-80°	220.2	11.2
80°-90°	159.6	8.1
90°-100°	104.9	5.3
100°-110°	60.6	3.1
110°-120°	26.7	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°	337.4	17.1
0°-40°	575.0	29.2
0°-60°	1122.7	57.0
0°-90°	1765.4	89.7
90°-120°	192.3	9.8
90°-150°	202.2	10.3
90°-180°	204.0	10.4
0°-180°	1968.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	398	398	398	398	398	
5°	455	437	395	359	340	46
15°	607	532	382	276	230	175
25°	765	625	354	182	114	353
35°	847	674	311	88	28	531
45°	878	667	255	20	0	678
55°	856	625	184	0	0	764
65°	774	553	110	0	0	765
75°	645	446	47	0	0	676
85°	472	323	8	2	3	403
90°	409	260	2	3	4	224
95°	351	203	1	4	5	275
105°	242	105	1	2	4	255
115°	131	35	2	2	2	132
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°	398.3	398.3	398.3	398.3	398.3	398.3	398.3	398.3	398.3	398.3	398.3
2.5°	431.8	431.3	429.7	427.2	423.6	417.6	412.5	407.9	401.8	396.8	387.1
5°	454.6	452.1	450.0	447.5	439.4	433.8	424.7	414.5	404.9	395.2	376.0
7.5°	491.1	487.1	484.0	476.9	465.8	453.1	438.9	429.2	422.6	395.7	362.8
10°	530.2	526.6	520.6	507.9	494.2	475.9	455.6	432.8	412.5	390.2	351.1
12.5°	568.8	563.7	555.1	538.8	519.5	496.7	468.8	441.9	413.0	386.6	337.4
15°	607.3	601.7	592.6	572.8	547.4	517.5	483.5	449.5	415.5	382.0	323.2
17.5°	649.4	641.8	628.1	605.8	573.8	536.8	496.7	455.6	414.5	376.5	308.0
20°	694.6	683.9	669.2	639.3	601.7	558.1	509.9	461.7	414.0	369.9	290.7
22.5°	732.1	721.5	705.2	674.3	629.1	575.9	521.1	465.8	412.0	362.3	274.5
25°	764.6	756.0	738.2	702.7	655.0	594.6	531.7	468.8	408.9	354.1	257.2
27.5°	790.0	781.8	762.1	725.5	676.8	611.4	539.8	470.3	404.9	346.0	239.5
30°	812.3	804.2	780.3	742.8	691.5	624.6	548.0	470.8	399.8	333.8	220.2
32.5°	829.5	821.9	797.6	757.5	701.7	633.7	552.5	470.3	393.2	325.2	199.4
35°	846.8	839.2	810.8	768.2	709.3	637.8	556.1	467.8	385.1	311.0	179.6
37.5°	860.0	851.4	822.4	775.3	712.8	638.8	555.6	464.2	376.5	299.3	159.8
40°	869.1	860.0	829.0	779.3	713.9	637.3	551.5	458.2	366.3	284.6	139.0
42.5°	875.2	865.1	832.1	785.4	711.8	633.2	545.4	450.5	355.2	271.9	119.2
45°	878.2	867.6	832.6	780.3	708.3	625.6	536.3	440.9	343.0	254.7	99.4
47.5°	876.7	865.1	830.0	774.7	701.7	617.5	526.1	429.2	328.3	239.5	80.7
50°	874.2	862.0	824.5	767.6	692.6	607.3	515.0	415.0	313.0	220.7	63.9
52.5°	866.1	853.9	818.4	757.5	681.9	595.6	499.8	400.3	296.8	202.4	48.7
55°	855.9	844.8	807.7	748.4	668.2	581.4	485.5	384.6	281.1	183.7	35.0
57.5°	840.2	830.0	794.5	733.6	654.5	565.7	469.8	367.3	261.3	164.9	24.4
60°	820.9	810.8	776.3	716.9	638.8	548.0	452.6	349.6	243.5	146.1	15.2
62.5°	800.6	791.0	755.0	696.1	619.0	529.2	433.8	331.8	224.8	128.9	9.1
65°	773.7	764.6	732.1	671.2	597.2	508.9	413.0	310.5	205.5	109.6	5.1
67.5°	745.3	737.2	704.2	648.4	571.8	486.6	391.7	289.7	185.2	92.8	2.5
70°	714.9	704.7	674.3	617.5	545.9	461.2	368.3	268.4	165.9	76.6	0.0
72.5°	679.4	671.8	642.3	588.5	516.0	434.3	344.5	245.1	144.6	60.9	0.5
75°	644.9	635.2	608.3	557.6	486.6	405.9	318.1	223.2	123.8	46.7	0.5
77.5°	600.2	597.2	571.8	522.6	458.7	378.5	289.2	196.9	104.0	33.5	0.5
80°	555.6	552.5	532.7	487.6	426.2	346.0	262.3	172.0	84.7	22.3	0.5
82.5°	511.4	507.4	488.6	451.0	393.2	318.6	234.4	147.1	67.0	13.7	0.5
85°	471.8	466.8	446.5	412.0	359.2	287.7	205.5	122.8	49.7	7.6	1.0
87.5°	437.9	434.3	412.0	376.5	324.7	258.8	180.1	99.4	35.0	3.6	1.5
90°	408.9	401.3	381.5	344.0	292.2	226.8	153.2	79.7	23.3	2.0	2.0
92.5°	380.5	373.9	352.1	313.6	263.3	199.4	127.3	60.9	14.7	1.0	2.5
95°	351.1	344.0	322.7	287.2	233.9	171.5	104.5	44.6	8.1	1.0	2.5
97.5°	322.2	315.6	293.3	257.7	207.5	147.1	82.7	31.5	4.1	1.0	2.0
100°	295.3	287.7	267.4	231.9	181.1	122.8	63.9	20.3	2.5	1.0	2.0
102.5°	266.9	260.8	240.0	205.5	153.7	100.0	47.7	12.7	1.0	1.0	1.5
105°	241.5	233.9	213.6	178.1	130.9	78.6	33.5	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°	157.3	151.2	133.4	103.5	66.5	30.9	9.1	1.5	1.5	1.5	1.5
115°	131.4	122.3	106.5	80.2	49.2	20.3	4.6	1.5	1.5	1.5	1.5
117.5°	105.0	97.4	86.3	60.9	32.5	13.2	2.5	1.5	1.5	1.5	1.5
120°	82.2	75.1	62.4	42.1	21.8	7.6	1.0	1.5	1.5	1.5	1.5
122.5°	58.9	53.3	42.1	27.4	13.2	3.6	1.5	1.5	2.0	2.0	1.5
125°	39.1	36.0	27.9	16.7	8.1	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.4	22.8	16.2	9.6	3.6	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.2	12.7	9.6	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.1	7.6	5.1	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°	398.3	398.3	398.3
2.5°	379.0	371.9	369.9
5°	358.7	347.0	340.4
7.5°	338.4	322.7	315.1
10°	319.6	297.3	289.2
12.5°	297.3	271.4	258.8
15°	276.0	242.5	230.3
17.5°	252.2	214.6	200.4
20°	229.8	186.7	172.0
22.5°	204.5	159.3	143.1
25°	181.6	131.9	113.6
27.5°	156.3	104.0	88.3
30°	132.4	79.7	63.9
32.5°	109.6	58.3	44.1
35°	88.3	39.6	27.9
37.5°	68.0	24.4	14.2
40°	49.2	12.7	6.6
42.5°	33.0	6.1	3.6
45°	20.3	3.0	0.0
47.5°	11.7	0.0	0.0
50°	6.1	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	3.6
90°	3.0	3.6	3.6
92.5°	3.0	4.1	4.1
95°	3.6	4.1	4.6
97.5°	4.1	4.6	4.6
100°	3.6	4.6	5.1
102.5°	3.0	4.6	4.6
105°	2.5	3.6	4.1





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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-85-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°	213.1	207.0	186.7	153.2	107.1	59.9	22.3	4.1	1.0	1.5	1.5
110°	185.7	180.6	159.8	127.3	86.3	44.6	14.7	2.5	1.5	1.5	1.5







107.5°	2.0	3.0	3.6
110°	2.0	2.5	3.0



(END OF REPORT)