

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: P551561

Luminaire Tested: **FCC-X-2-LD4-2LO-35-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: P551561  
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-35-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 3500K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

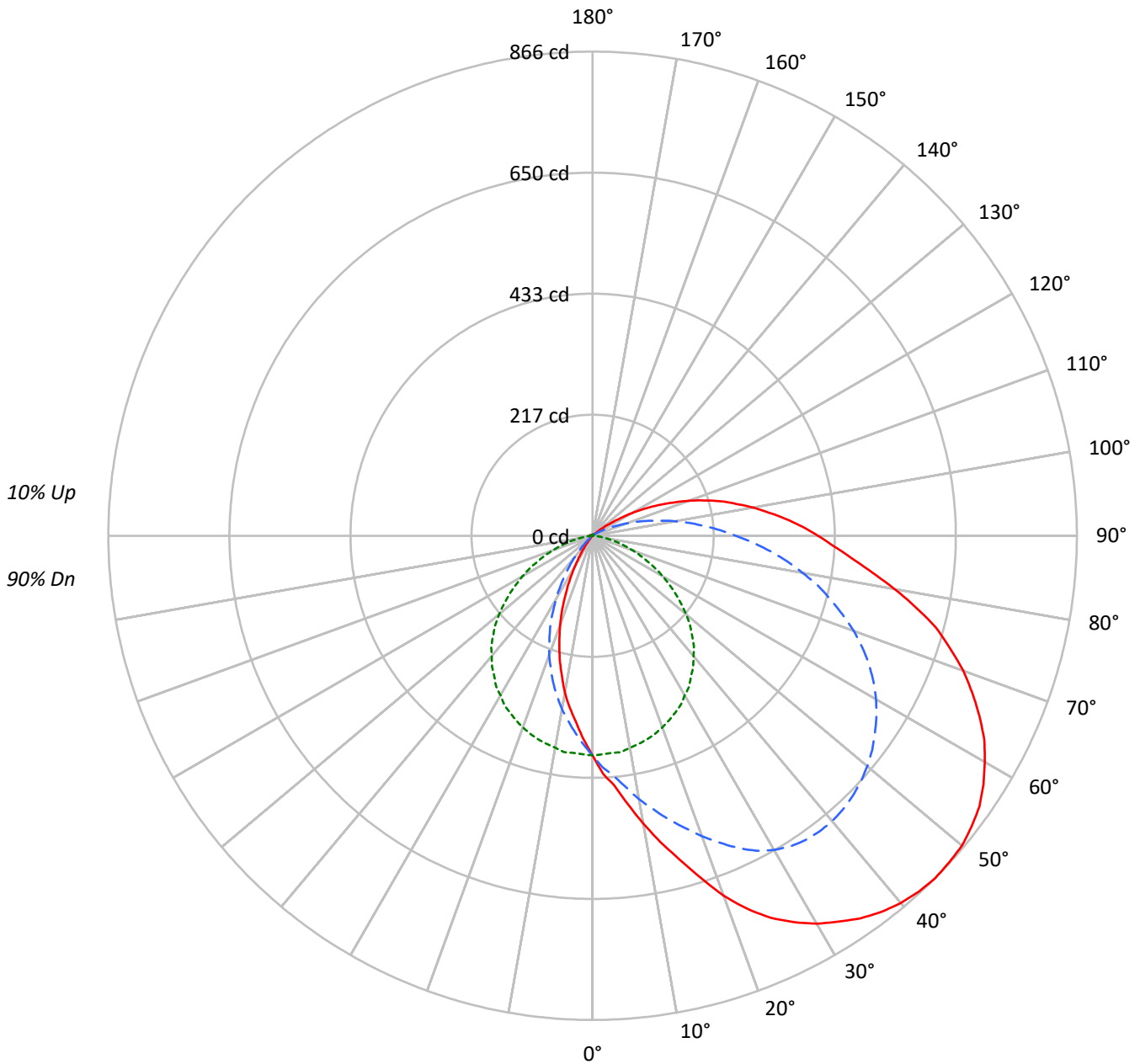
Lumens per Lamp: N/A  
Luminaire Lumens: 1942.0 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551561

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-93-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551561

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-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°	4228	4228	4228
5°	4642	4166	3476
10°	5252	4115	2865
15°	5886	4063	2233
20°	6639	3997	1644
25°	7263	3920	1080
30°	7727	3817	609
35°	8129	3706	268
40°	8485	3570	64
45°	8790	3399	0
50°	9047	3173	0
55°	9243	2884	0
60°	9341	2550	0
65°	9379	2171	0
70°	9348	1771	0
75°	9229	1305	7
80°	8854	798	40
85°	8560	381	55



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CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-93-85-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.6	1.9
10°-20°	112.7	5.8
20°-30°	182.4	9.4
30°-40°	234.4	12.1
40°-50°	265.3	13.7
50°-60°	274.9	14.2
60°-70°	259.2	13.3
70°-80°	217.2	11.2
80°-90°	157.5	8.1
90°-100°	103.5	5.3
100°-110°	59.8	3.1
110°-120°	26.4	1.4
120°-130°	7.1	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°	332.7	17.1
0°-40°	567.1	29.2
0°-60°	1107.3	57.0
0°-90°	1741.2	89.7
90°-120°	189.6	9.8
90°-150°	199.5	10.3
90°-180°	201.0	10.4
0°-180°	1942.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	393	393	393	393	393	
5°	448	431	390	354	336	45
15°	599	525	377	272	227	173
25°	754	616	349	179	112	349
35°	835	664	307	87	28	524
45°	866	658	251	20	0	669
55°	844	616	181	0	0	754
65°	763	545	108	0	0	755
75°	636	440	46	0	0	667
85°	465	319	8	2	3	397
90°	403	256	2	3	4	221
95°	346	200	1	4	4	272
105°	238	103	1	2	4	251
115°	130	34	2	2	2	130
125°	38	5	2	2	2	38
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°	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8
2.5°	425.8	425.3	423.8	421.3	417.8	411.8	406.8	402.3	396.3	391.3	381.8
5°	448.4	445.9	443.9	441.4	433.4	427.8	418.8	408.8	399.3	389.8	370.8
7.5°	484.4	480.4	477.4	470.4	459.4	446.9	432.9	423.3	416.8	390.3	357.8
10°	522.9	519.4	513.4	500.9	487.4	469.4	449.4	426.8	406.8	384.8	346.3
12.5°	561.0	556.0	547.4	531.4	512.4	489.9	462.4	435.9	407.3	381.3	332.8
15°	599.0	593.5	584.5	565.0	539.9	510.4	476.9	443.4	409.8	376.8	318.8
17.5°	640.5	633.0	619.5	597.5	566.0	529.4	489.9	449.4	408.8	371.3	303.7
20°	685.1	674.5	660.0	630.5	593.5	550.4	502.9	455.4	408.3	364.8	286.7
22.5°	722.1	711.6	695.6	665.0	620.5	568.0	513.9	459.4	406.3	357.3	270.7
25°	754.1	745.6	728.1	693.1	646.0	586.5	524.4	462.4	403.3	349.3	253.7
27.5°	779.1	771.1	751.6	715.6	667.5	603.0	532.4	463.9	399.3	341.3	236.2
30°	801.2	793.1	769.6	732.6	682.1	616.0	540.4	464.4	394.3	329.3	217.2
32.5°	818.2	810.7	786.6	747.1	692.1	625.0	544.9	463.9	387.8	320.8	196.7
35°	835.2	827.7	799.7	757.6	699.6	629.0	548.4	461.4	379.8	306.7	177.1
37.5°	848.2	839.7	811.2	764.6	703.1	630.0	547.9	457.9	371.3	295.2	157.6
40°	857.2	848.2	817.7	768.6	704.1	628.5	543.9	451.9	361.3	280.7	137.1
42.5°	863.2	853.2	820.7	774.6	702.1	624.5	537.9	444.4	350.3	268.2	117.6
45°	866.2	855.7	821.2	769.6	698.6	617.0	528.9	434.9	338.3	251.2	98.1
47.5°	864.7	853.2	818.7	764.1	692.1	609.0	518.9	423.3	323.8	236.2	79.6
50°	862.2	850.2	813.2	757.1	683.1	599.0	507.9	409.3	308.8	217.7	63.1
52.5°	854.2	842.2	807.2	747.1	672.5	587.5	492.9	394.8	292.7	199.7	48.0
55°	844.2	833.2	796.6	738.1	659.0	573.5	478.9	379.3	277.2	181.1	34.5
57.5°	828.7	818.7	783.6	723.6	645.5	558.0	463.4	362.3	257.7	162.6	24.0
60°	809.7	799.7	765.6	707.1	630.0	540.4	446.4	344.8	240.2	144.1	15.0
62.5°	789.6	780.1	744.6	686.6	610.5	521.9	427.8	327.3	221.7	127.1	9.0
65°	763.1	754.1	722.1	662.0	589.0	501.9	407.3	306.2	202.7	108.1	5.0
67.5°	735.1	727.1	694.6	639.5	564.0	479.9	386.3	285.7	182.6	91.6	2.5
70°	705.1	695.1	665.0	609.0	538.4	454.9	363.3	264.7	163.6	75.6	0.0
72.5°	670.0	662.5	633.5	580.5	508.9	428.3	339.8	241.7	142.6	60.0	0.5
75°	636.0	626.5	600.0	549.9	479.9	400.3	313.8	220.2	122.1	46.0	0.5
77.5°	592.0	589.0	564.0	515.4	452.4	373.3	285.2	194.2	102.6	33.0	0.5
80°	547.9	544.9	525.4	480.9	420.3	341.3	258.7	169.6	83.6	22.0	0.5
82.5°	504.4	500.4	481.9	444.9	387.8	314.3	231.2	145.1	66.1	13.5	0.5
85°	465.4	460.4	440.4	406.3	354.3	283.7	202.7	121.1	49.0	7.5	1.0
87.5°	431.9	428.3	406.3	371.3	320.3	255.2	177.6	98.1	34.5	3.5	1.5
90°	403.3	395.8	376.3	339.3	288.2	223.7	151.1	78.6	23.0	2.0	2.0
92.5°	375.3	368.8	347.3	309.3	259.7	196.7	125.6	60.0	14.5	1.0	2.5
95°	346.3	339.3	318.3	283.2	230.7	169.1	103.1	44.0	8.0	1.0	2.5
97.5°	317.8	311.3	289.2	254.2	204.7	145.1	81.6	31.0	4.0	1.0	2.0
100°	291.2	283.7	263.7	228.7	178.6	121.1	63.1	20.0	2.5	1.0	2.0
102.5°	263.2	257.2	236.7	202.7	151.6	98.6	47.0	12.5	1.0	1.0	1.5
105°	238.2	230.7	210.7	175.6	129.1	77.6	33.0	7.5	1.0	1.0	1.5



TEST NUMBER: P551561

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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	155.1	149.1	131.6	102.1	65.6	30.5	9.0	1.5	1.5	1.5	1.5
115°	129.6	120.6	105.1	79.1	48.5	20.0	4.5	1.5	1.5	1.5	1.5
117.5°	103.6	96.1	85.1	60.0	32.0	13.0	2.5	1.5	1.5	1.5	1.5
120°	81.1	74.1	61.6	41.5	21.5	7.5	1.0	1.5	1.5	1.5	1.5
122.5°	58.0	52.5	41.5	27.0	13.0	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.5	35.5	27.5	16.5	8.0	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.0	22.5	16.0	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



TEST NUMBER: P551561

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-93-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	392.8	392.8	392.8
2.5°	373.8	366.8	364.8
5°	353.8	342.3	335.8
7.5°	333.8	318.3	310.8
10°	315.3	293.2	285.2
12.5°	293.2	267.7	255.2
15°	272.2	239.2	227.2
17.5°	248.7	211.7	197.7
20°	226.7	184.1	169.6
22.5°	201.7	157.1	141.1
25°	179.1	130.1	112.1
27.5°	154.1	102.6	87.1
30°	130.6	78.6	63.1
32.5°	108.1	57.5	43.5
35°	87.1	39.0	27.5
37.5°	67.1	24.0	14.0
40°	48.5	12.5	6.5
42.5°	32.5	6.0	3.5
45°	20.0	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





TEST NUMBER: P551561

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-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°	210.2	204.2	184.1	151.1	105.6	59.0	22.0	4.0	1.0	1.5	1.5
110°	183.1	178.1	157.6	125.6	85.1	44.0	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)