

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: P550478

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-93-87-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: P550478  
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-30-UNV-93-87-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

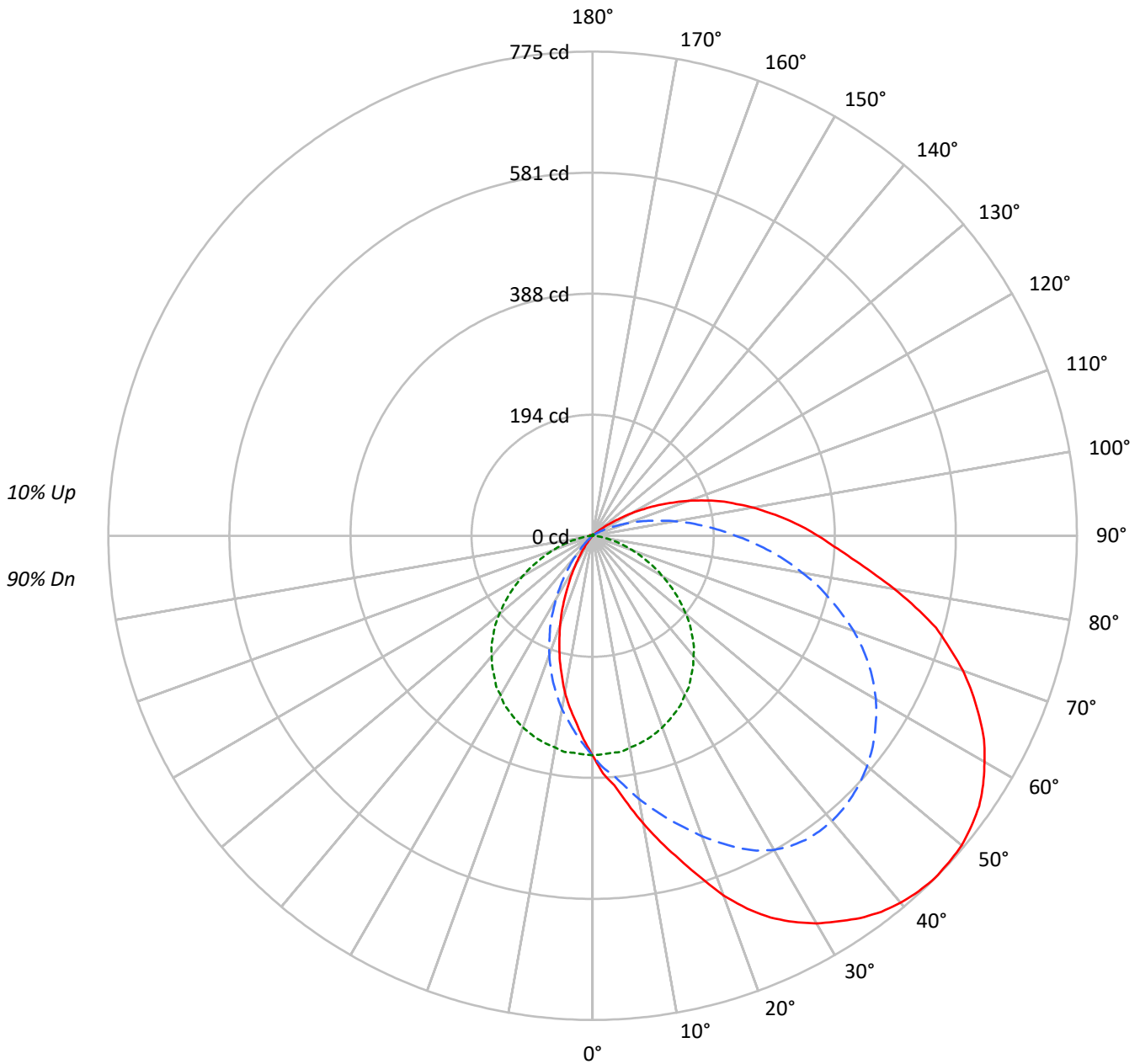
Lumens per Lamp: N/A  
Luminaire Lumens: 1736.9 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<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: P550478

CATALOG NUMBER: FCC-X-2-LD4-1HI-30-UNV-93-87-ED1D

### Luminous Intensity Polar Plot





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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°	3782	3782	3782
5°	4151	3727	3109
10°	4698	3681	2562
15°	5265	3634	1997
20°	5938	3575	1470
25°	6496	3506	966
30°	6912	3414	544
35°	7270	3316	239
40°	7589	3193	57
45°	7863	3040	0
50°	8092	2838	0
55°	8267	2580	0
60°	8355	2281	0
65°	8390	1942	0
70°	8361	1584	0
75°	8255	1168	6
80°	7920	715	36
85°	7657	341	50



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.7	1.9
10°-20°	100.8	5.8
20°-30°	163.2	9.4
30°-40°	209.6	12.1
40°-50°	237.3	13.7
50°-60°	245.8	14.2
60°-70°	231.9	13.3
70°-80°	194.3	11.2
80°-90°	140.8	8.1
90°-100°	92.6	5.3
100°-110°	53.4	3.1
110°-120°	23.6	1.4
120°-130°	6.4	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	297.6	17.1
0°-40°	507.2	29.2
0°-60°	990.4	57.0
0°-90°	1557.4	89.7
90°-120°	169.6	9.8
90°-150°	178.4	10.3
90°-180°	180.0	10.4
0°-180°	1736.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	351	351	351	351	351	
5°	401	385	349	316	300	40
15°	536	470	337	244	203	154
25°	674	551	312	160	100	312
35°	747	594	274	78	25	469
45°	775	588	225	18	0	598
55°	755	551	162	0	0	674
65°	683	488	97	0	0	675
75°	569	394	41	0	0	597
85°	416	285	7	2	3	355
90°	361	229	2	3	3	198
95°	310	179	1	3	4	243
105°	213	92	1	2	4	225
115°	116	31	1	1	2	116
125°	34	4	2	1	2	34
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°	351.4	351.4	351.4	351.4	351.4	351.4	351.4	351.4	351.4	351.4	351.4
2.5°	380.9	380.4	379.1	376.9	373.7	368.4	363.9	359.9	354.5	350.0	341.5
5°	401.0	398.8	397.0	394.8	387.6	382.7	374.6	365.7	357.2	348.7	331.7
7.5°	433.3	429.7	427.0	420.7	410.9	399.7	387.2	378.7	372.8	349.1	320.0
10°	467.7	464.6	459.2	448.0	435.9	419.8	401.9	381.8	363.9	344.2	309.7
12.5°	501.7	497.3	489.7	475.3	458.3	438.2	413.6	389.8	364.3	341.1	297.6
15°	535.8	530.8	522.8	505.3	482.9	456.5	426.5	396.6	366.6	337.0	285.1
17.5°	572.9	566.2	554.1	534.4	506.2	473.5	438.2	401.9	365.7	332.1	271.7
20°	612.7	603.3	590.4	564.0	530.8	492.3	449.8	407.3	365.2	326.3	256.5
22.5°	645.9	636.5	622.1	594.8	555.0	508.0	459.7	410.9	363.4	319.6	242.1
25°	674.5	666.9	651.2	619.9	577.8	524.6	469.1	413.6	360.8	312.4	226.9
27.5°	696.9	689.7	672.3	640.0	597.1	539.3	476.2	414.9	357.2	305.3	211.3
30°	716.6	709.4	688.4	655.3	610.1	551.0	483.4	415.4	352.7	294.5	194.3
32.5°	731.8	725.1	703.6	668.2	619.0	559.0	487.4	414.9	346.9	286.9	175.9
35°	747.0	740.3	715.2	677.6	625.7	562.6	490.6	412.7	339.7	274.4	158.4
37.5°	758.7	751.0	725.5	683.9	628.9	563.5	490.1	409.5	332.1	264.1	141.0
40°	766.7	758.7	731.4	687.5	629.8	562.2	486.5	404.2	323.2	251.1	122.6
42.5°	772.1	763.1	734.0	692.9	628.0	558.6	481.2	397.5	313.3	239.9	105.2
45°	774.8	765.4	734.5	688.4	624.8	551.9	473.1	389.0	302.6	224.7	87.7
47.5°	773.4	763.1	732.2	683.5	619.0	544.7	464.1	378.7	289.6	211.3	71.2
50°	771.2	760.4	727.3	677.2	611.0	535.8	454.3	366.1	276.2	194.7	56.4
52.5°	764.0	753.3	722.0	668.2	601.6	525.5	440.9	353.1	261.8	178.6	43.0
55°	755.1	745.2	712.6	660.2	589.5	512.9	428.3	339.3	248.0	162.0	30.9
57.5°	741.2	732.2	700.9	647.2	577.4	499.1	414.5	324.1	230.5	145.5	21.5
60°	724.2	715.2	684.8	632.4	563.5	483.4	399.2	308.4	214.8	128.9	13.4
62.5°	706.3	697.8	666.0	614.1	546.1	466.8	382.7	292.7	198.3	113.7	8.1
65°	682.6	674.5	645.9	592.2	526.8	448.9	364.3	273.9	181.3	96.7	4.5
67.5°	657.5	650.3	621.2	572.0	504.4	429.2	345.5	255.6	163.4	81.9	2.2
70°	630.6	621.7	594.8	544.7	481.6	406.9	324.9	236.8	146.4	67.6	0.0
72.5°	599.3	592.6	566.6	519.2	455.2	383.1	303.9	216.2	127.6	53.7	0.4
75°	568.9	560.4	536.7	491.9	429.2	358.1	280.6	196.9	109.2	41.2	0.4
77.5°	529.5	526.8	504.4	461.0	404.6	333.9	255.1	173.7	91.8	29.5	0.4
80°	490.1	487.4	470.0	430.1	376.0	305.3	231.4	151.7	74.7	19.7	0.4
82.5°	451.2	447.6	431.0	397.9	346.9	281.1	206.8	129.8	59.1	12.1	0.4
85°	416.3	411.8	393.9	363.4	316.9	253.8	181.3	108.3	43.9	6.7	0.9
87.5°	386.3	383.1	363.4	332.1	286.5	228.3	158.9	87.7	30.9	3.1	1.3
90°	360.8	354.0	336.6	303.5	257.8	200.1	135.2	70.3	20.6	1.8	1.8
92.5°	335.7	329.9	310.6	276.6	232.3	175.9	112.3	53.7	13.0	0.9	2.2
95°	309.7	303.5	284.7	253.3	206.3	151.3	92.2	39.4	7.2	0.9	2.2
97.5°	284.2	278.4	258.7	227.4	183.1	129.8	73.0	27.8	3.6	0.9	1.8
100°	260.5	253.8	235.9	204.5	159.8	108.3	56.4	17.9	2.2	0.9	1.8
102.5°	235.4	230.1	211.7	181.3	135.6	88.2	42.1	11.2	0.9	0.9	1.3
105°	213.0	206.3	188.4	157.1	115.5	69.4	29.5	6.7	0.9	0.9	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	138.8	133.4	117.7	91.3	58.6	27.3	8.1	1.3	1.3	1.3	1.3
115°	115.9	107.9	94.0	70.7	43.4	17.9	4.0	1.3	1.3	1.3	1.3
117.5°	92.6	85.9	76.1	53.7	28.6	11.6	2.2	1.3	1.3	1.3	1.3
120°	72.5	66.2	55.1	37.1	19.2	6.7	0.9	1.3	1.3	1.3	1.3
122.5°	51.9	47.0	37.1	24.2	11.6	3.1	1.3	1.3	1.8	1.8	1.3
125°	34.5	31.8	24.6	14.8	7.2	1.3	1.3	1.3	1.8	1.8	1.3
127.5°	22.4	20.1	14.3	8.5	3.1	1.3	1.3	1.8	1.8	1.8	1.3
130°	12.5	11.2	8.5	4.9	1.3	1.3	1.3	1.8	1.8	1.8	1.3
132.5°	7.2	6.7	4.5	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8
135°	1.8	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.8	2.2	2.2	2.2	1.8
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	1.8
142.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
145°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	1.8	1.8	1.8
147.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
150°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
152.5°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
155°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
157.5°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8	1.8
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	1.8
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°	351.4	351.4	351.4
2.5°	334.3	328.1	326.3
5°	316.4	306.1	300.3
7.5°	298.5	284.7	277.9
10°	282.0	262.3	255.1
12.5°	262.3	239.5	228.3
15°	243.5	213.9	203.2
17.5°	222.4	189.3	176.8
20°	202.8	164.7	151.7
22.5°	180.4	140.5	126.2
25°	160.2	116.4	100.3
27.5°	137.9	91.8	77.9
30°	116.8	70.3	56.4
32.5°	96.7	51.5	38.9
35°	77.9	34.9	24.6
37.5°	60.0	21.5	12.5
40°	43.4	11.2	5.8
42.5°	29.1	5.4	3.1
45°	17.9	2.7	0.0
47.5°	10.3	0.0	0.0
50°	5.4	0.0	0.0
52.5°	2.2	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	0.9	1.3
80°	0.9	1.8	2.2
82.5°	1.8	2.2	2.2
85°	1.8	2.2	2.7
87.5°	2.2	2.7	3.1
90°	2.7	3.1	3.1
92.5°	2.7	3.6	3.6
95°	3.1	3.6	4.0
97.5°	3.6	4.0	4.0
100°	3.1	4.0	4.5
102.5°	2.7	4.0	4.0
105°	2.2	3.1	3.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.8	2.2	2.2
115°	1.3	1.8	2.2
117.5°	1.3	1.8	1.8
120°	1.3	1.3	1.8
122.5°	1.3	1.3	1.8
125°	1.3	1.3	1.8
127.5°	1.8	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.8	1.3	1.3
135°	1.8	1.3	1.3
137.5°	1.8	1.3	1.3
140°	1.8	1.3	1.3
142.5°	1.8	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.8	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	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°	188.0	182.6	164.7	135.2	94.4	52.8	19.7	3.6	0.9	1.3	1.3
110°	163.8	159.3	141.0	112.3	76.1	39.4	13.0	2.2	1.3	1.3	1.3







107.5°	1.8	2.7	3.1
110°	1.8	2.2	2.7



(END OF REPORT)