

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: P550449

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-94-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: P550449  
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-81-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

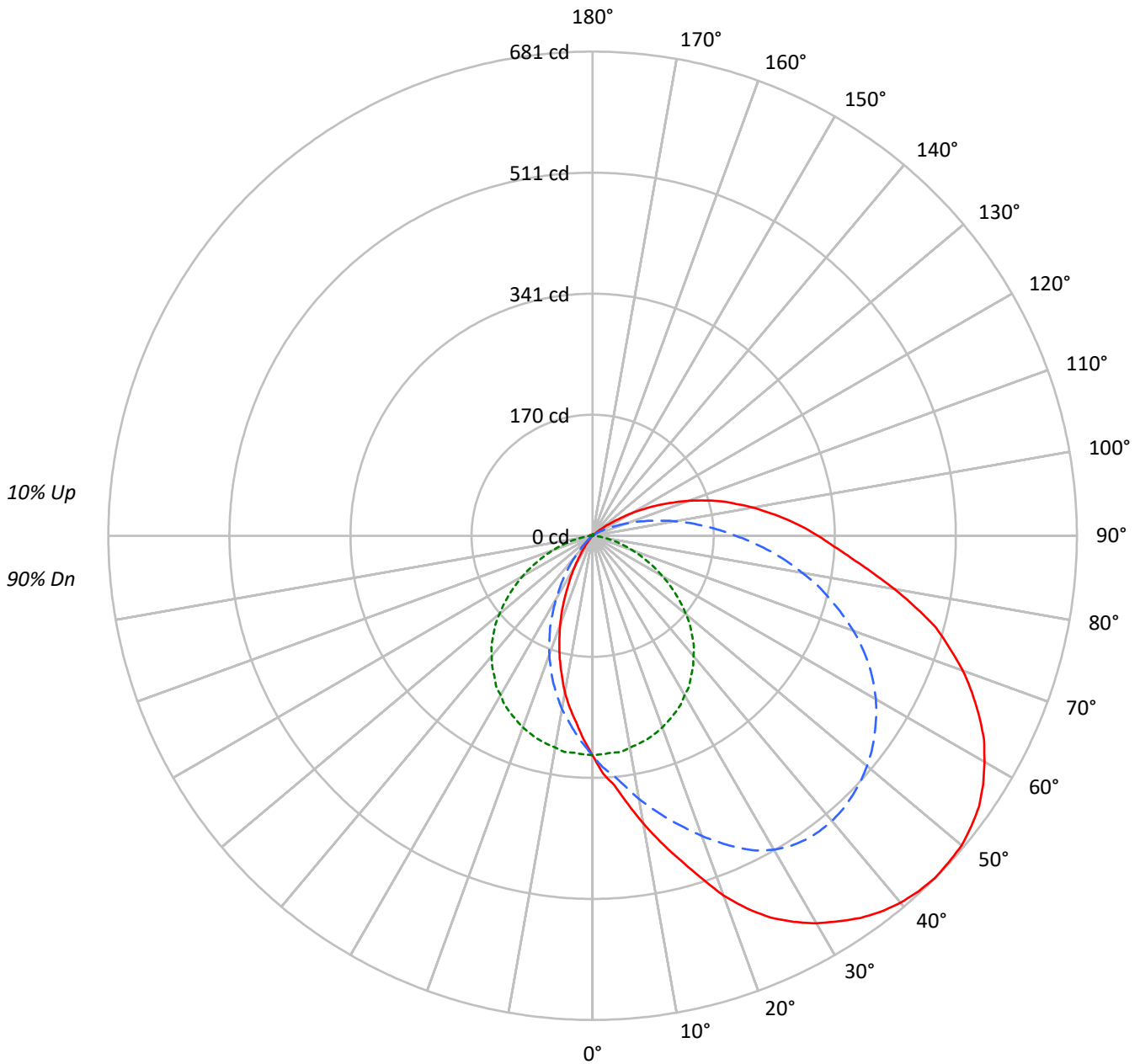
Lumens per Lamp: N/A  
Luminaire Lumens: 1526.1 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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

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CATALOG NUMBER: FCC-X-2-LD4-1HI-30-UNV-81-94-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°	3323	3323	3323
5°	3647	3274	2731
10°	4127	3234	2251
15°	4626	3193	1754
20°	5217	3141	1292
25°	5707	3081	849
30°	6071	2999	477
35°	6388	2912	210
40°	6668	2805	50
45°	6908	2671	0
50°	7109	2492	0
55°	7263	2266	0
60°	7340	2003	0
65°	7371	1705	0
70°	7345	1392	0
75°	7253	1027	6
80°	6959	628	32
85°	6726	300	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.6	1.9
10°-20°	88.5	5.8
20°-30°	143.4	9.4
30°-40°	184.2	12.1
40°-50°	208.5	13.7
50°-60°	216.0	14.2
60°-70°	203.7	13.3
70°-80°	170.7	11.2
80°-90°	123.7	8.1
90°-100°	81.3	5.3
100°-110°	47.0	3.1
110°-120°	20.7	1.4
120°-130°	5.6	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	261.5	17.1
0°-40°	445.6	29.2
0°-60°	870.1	57.0
0°-90°	1368.2	89.7
90°-120°	149.0	9.8
90°-150°	156.8	10.3
90°-180°	158.0	10.4
0°-180°	1526.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	309	309	309	309	309	
5°	352	338	306	278	264	36
15°	471	413	296	214	178	136
25°	593	484	274	141	88	274
35°	656	522	241	68	22	412
45°	681	517	197	16	0	526
55°	663	484	142	0	0	592
65°	600	429	85	0	0	593
75°	500	346	36	0	0	524
85°	366	251	6	2	2	312
90°	317	201	2	2	3	174
95°	272	157	1	3	4	213
105°	187	81	1	2	3	197
115°	102	27	1	1	2	102
125°	30	4	2	1	2	30
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	1	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°	308.7	308.7	308.7	308.7	308.7	308.7	308.7	308.7	308.7	308.7	308.7
2.5°	334.6	334.2	333.1	331.1	328.3	323.6	319.7	316.1	311.4	307.5	300.0
5°	352.3	350.4	348.8	346.8	340.5	336.2	329.1	321.3	313.8	306.3	291.4
7.5°	380.6	377.5	375.1	369.6	361.0	351.1	340.1	332.7	327.5	306.7	281.1
10°	410.9	408.2	403.4	393.6	383.0	368.8	353.1	335.4	319.7	302.4	272.1
12.5°	440.8	436.9	430.2	417.6	402.7	385.0	363.3	342.5	320.1	299.6	261.5
15°	470.7	466.4	459.3	443.9	424.3	401.1	374.7	348.4	322.0	296.1	250.5
17.5°	503.3	497.4	486.8	469.5	444.7	416.0	385.0	353.1	321.3	291.8	238.7
20°	538.3	530.1	518.6	495.4	466.4	432.5	395.2	357.8	320.9	286.7	225.3
22.5°	567.4	559.2	546.6	522.6	487.6	446.3	403.8	361.0	319.3	280.8	212.7
25°	592.6	585.9	572.1	544.6	507.6	460.8	412.1	363.3	316.9	274.5	199.4
27.5°	612.2	605.9	590.6	562.3	524.5	473.8	418.4	364.5	313.8	268.2	185.6
30°	629.5	623.2	604.8	575.7	536.0	484.0	424.7	364.9	309.9	258.7	170.7
32.5°	642.9	637.0	618.1	587.1	543.8	491.1	428.2	364.5	304.7	252.1	154.5
35°	656.3	650.4	628.4	595.3	549.7	494.3	431.0	362.5	298.4	241.0	139.2
37.5°	666.5	659.8	637.4	600.8	552.5	495.1	430.6	359.8	291.8	232.0	123.9
40°	673.6	666.5	642.5	604.0	553.3	493.9	427.4	355.1	283.9	220.6	107.7
42.5°	678.3	670.4	644.9	608.7	551.7	490.7	422.7	349.2	275.2	210.8	92.4
45°	680.7	672.4	645.3	604.8	548.9	484.8	415.6	341.7	265.8	197.4	77.1
47.5°	679.5	670.4	643.3	600.4	543.8	478.5	407.8	332.7	254.4	185.6	62.5
50°	677.5	668.1	639.0	594.9	536.7	470.7	399.1	321.6	242.6	171.0	49.5
52.5°	671.2	661.8	634.3	587.1	528.5	461.6	387.3	310.2	230.0	156.9	37.7
55°	663.4	654.7	626.0	580.0	517.9	450.6	376.3	298.1	217.8	142.3	27.1
57.5°	651.2	643.3	615.8	568.6	507.2	438.4	364.1	284.7	202.5	127.8	18.9
60°	636.2	628.4	601.6	555.6	495.1	424.7	350.7	270.9	188.7	113.2	11.8
62.5°	620.5	613.0	585.1	539.5	479.7	410.1	336.2	257.2	174.2	99.9	7.1
65°	599.7	592.6	567.4	520.2	462.8	394.4	320.1	240.6	159.3	84.9	3.9
67.5°	577.6	571.3	545.8	502.5	443.2	377.1	303.6	224.5	143.5	72.0	2.0
70°	554.0	546.2	522.6	478.5	423.1	357.4	285.5	208.0	128.6	59.4	0.0
72.5°	526.5	520.6	497.8	456.1	399.9	336.6	267.0	189.9	112.1	47.2	0.4
75°	499.8	492.3	471.5	432.1	377.1	314.6	246.5	173.0	95.9	36.2	0.4
77.5°	465.2	462.8	443.2	405.0	355.5	293.3	224.1	152.6	80.6	26.0	0.4
80°	430.6	428.2	412.9	377.9	330.3	268.2	203.3	133.3	65.7	17.3	0.4
82.5°	396.4	393.2	378.7	349.6	304.7	246.9	181.7	114.0	51.9	10.6	0.4
85°	365.7	361.8	346.0	319.3	278.4	223.0	159.3	95.2	38.5	5.9	0.8
87.5°	339.3	336.6	319.3	291.8	251.7	200.5	139.6	77.1	27.1	2.8	1.2
90°	316.9	311.0	295.7	266.6	226.5	175.8	118.8	61.7	18.1	1.6	1.6
92.5°	294.9	289.8	272.9	243.0	204.1	154.5	98.7	47.2	11.4	0.8	2.0
95°	272.1	266.6	250.1	222.6	181.3	132.9	81.0	34.6	6.3	0.8	2.0
97.5°	249.7	244.6	227.3	199.8	160.8	114.0	64.1	24.4	3.1	0.8	1.6
100°	228.9	223.0	207.2	179.7	140.4	95.2	49.5	15.7	2.0	0.8	1.6
102.5°	206.8	202.1	186.0	159.3	119.1	77.5	37.0	9.8	0.8	0.8	1.2
105°	187.2	181.3	165.5	138.0	101.4	60.9	26.0	5.9	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	121.9	117.2	103.4	80.2	51.5	24.0	7.1	1.2	1.2	1.2	1.2
115°	101.8	94.8	82.6	62.1	38.1	15.7	3.5	1.2	1.2	1.2	1.2
117.5°	81.4	75.5	66.8	47.2	25.2	10.2	2.0	1.2	1.2	1.2	1.2
120°	63.7	58.2	48.4	32.6	16.9	5.9	0.8	1.2	1.2	1.2	1.2
122.5°	45.6	41.3	32.6	21.2	10.2	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.3	27.9	21.6	13.0	6.3	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.7	17.7	12.6	7.5	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.0	9.8	7.5	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.3	5.9	3.9	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	308.7	308.7	308.7
2.5°	293.7	288.2	286.7
5°	278.0	269.0	263.8
7.5°	262.3	250.1	244.2
10°	247.7	230.4	224.1
12.5°	230.4	210.4	200.5
15°	213.9	188.0	178.5
17.5°	195.4	166.3	155.3
20°	178.1	144.7	133.3
22.5°	158.5	123.5	110.9
25°	140.8	102.2	88.1
27.5°	121.1	80.6	68.4
30°	102.6	61.7	49.5
32.5°	84.9	45.2	34.2
35°	68.4	30.7	21.6
37.5°	52.7	18.9	11.0
40°	38.1	9.8	5.1
42.5°	25.6	4.7	2.8
45°	15.7	2.4	0.0
47.5°	9.0	0.0	0.0
50°	4.7	0.0	0.0
52.5°	2.0	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	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.1	3.1
95°	2.8	3.1	3.5
97.5°	3.1	3.5	3.5
100°	2.8	3.5	3.9
102.5°	2.4	3.5	3.5
105°	2.0	2.8	3.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	165.1	160.4	144.7	118.8	83.0	46.4	17.3	3.1	0.8	1.2	1.2
110°	143.9	140.0	123.9	98.7	66.8	34.6	11.4	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)