

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: P550610

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-93-94-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: P550610  
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-40-UNV-93-94-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,  
AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

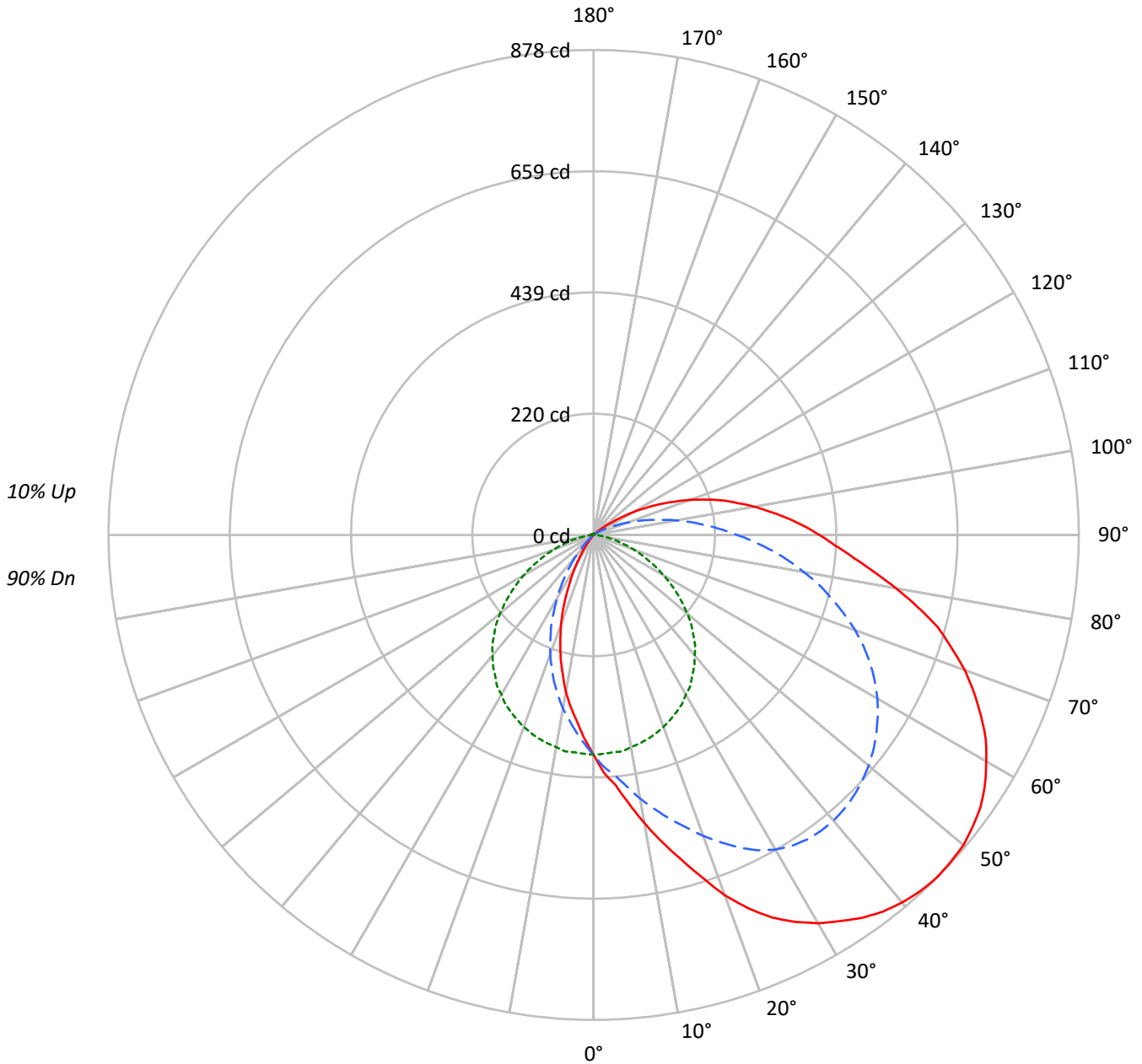
Lumens per Lamp: N/A  
Luminaire Lumens: 1967.9 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-40-UNV-93-94-ED1D

### 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°	4285	4285	4285
5°	4704	4222	3523
10°	5323	4171	2904
15°	5965	4118	2262
20°	6728	4051	1666
25°	7360	3973	1094
30°	7831	3868	616
35°	8238	3757	272
40°	8599	3618	65
45°	8908	3445	0
50°	9168	3215	0
55°	9366	2924	0
60°	9466	2584	0
65°	9504	2199	0
70°	9473	1794	0
75°	9352	1324	7
80°	8974	809	40
85°	8674	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°	184.9	9.4
30°-40°	237.5	12.1
40°-50°	268.9	13.7
50°-60°	278.5	14.2
60°-70°	262.7	13.3
70°-80°	220.1	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°	337.2	17.1
0°-40°	574.7	29.2
0°-60°	1122.1	57.0
0°-90°	1764.5	89.7
90°-120°	192.1	9.8
90°-150°	202.1	10.3
90°-180°	203.0	10.3
0°-180°	1967.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	398	398	398	398	398	
5°	454	436	395	358	340	46
15°	607	532	382	276	230	175
25°	764	624	354	182	114	353
35°	846	673	311	88	28	531
45°	878	667	255	20	0	678
55°	856	624	184	0	0	764
65°	773	553	110	0	0	765
75°	644	446	47	0	0	676
85°	472	323	8	2	3	403
90°	409	259	2	3	4	224
95°	351	203	1	4	5	275
105°	241	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°	398.1	398.1	398.1	398.1	398.1	398.1	398.1	398.1	398.1	398.1	398.1
2.5°	431.5	431.0	429.5	427.0	423.4	417.3	412.3	407.7	401.6	396.6	386.9
5°	454.4	451.8	449.8	447.3	439.2	433.6	424.4	414.3	404.7	395.0	375.8
7.5°	490.9	486.8	483.8	476.7	465.5	452.8	438.6	429.0	422.4	395.5	362.6
10°	529.9	526.4	520.3	507.6	493.9	475.7	455.4	432.6	412.3	390.0	350.9
12.5°	568.5	563.4	554.8	538.5	519.3	496.5	468.6	441.7	412.8	386.4	337.2
15°	607.0	601.4	592.3	572.5	547.2	517.2	483.3	449.3	415.3	381.9	323.0
17.5°	649.1	641.5	627.8	605.5	573.5	536.5	496.5	455.4	414.3	376.3	307.8
20°	694.2	683.6	668.9	639.0	601.4	557.8	509.6	461.5	413.8	369.7	290.6
22.5°	731.8	721.1	704.9	673.9	628.8	575.6	520.8	465.5	411.8	362.1	274.3
25°	764.2	755.6	737.8	702.3	654.7	594.3	531.4	468.6	408.7	354.0	257.1
27.5°	789.6	781.5	761.7	725.2	676.5	611.1	539.6	470.1	404.7	345.8	239.4
30°	811.9	803.8	779.9	742.4	691.2	624.2	547.7	470.6	399.6	333.7	220.1
32.5°	829.1	821.5	797.2	757.1	701.3	633.4	552.2	470.1	393.0	325.1	199.3
35°	846.4	838.8	810.4	767.8	708.9	637.4	555.8	467.6	384.9	310.9	179.5
37.5°	859.5	850.9	822.0	774.9	712.5	638.4	555.3	464.0	376.3	299.2	159.7
40°	868.7	859.5	828.6	778.9	713.5	636.9	551.2	457.9	366.1	284.5	138.9
42.5°	874.8	864.6	831.7	785.0	711.5	632.9	545.1	450.3	355.0	271.8	119.2
45°	877.8	867.2	832.2	779.9	707.9	625.3	536.0	440.7	342.8	254.6	99.4
47.5°	876.3	864.6	829.6	774.4	701.3	617.1	525.9	429.0	328.1	239.4	80.6
50°	873.7	861.6	824.0	767.3	692.2	607.0	514.7	414.8	312.9	220.6	63.9
52.5°	865.6	853.5	818.0	757.1	681.6	595.3	499.5	400.1	296.7	202.3	48.7
55°	855.5	844.3	807.3	748.0	667.9	581.1	485.3	384.4	280.9	183.6	35.0
57.5°	839.8	829.6	794.1	733.3	654.2	565.4	469.6	367.1	261.2	164.8	24.3
60°	820.5	810.4	775.9	716.5	638.4	547.7	452.3	349.4	243.4	146.0	15.2
62.5°	800.2	790.6	754.6	695.8	618.7	528.9	433.6	331.6	224.6	128.8	9.1
65°	773.3	764.2	731.8	670.9	596.9	508.6	412.8	310.3	205.4	109.5	5.1
67.5°	744.9	736.8	703.9	648.1	571.5	486.3	391.5	289.6	185.1	92.8	2.5
70°	714.5	704.4	673.9	617.1	545.6	461.0	368.2	268.3	165.8	76.6	0.0
72.5°	679.0	671.4	642.0	588.2	515.7	434.1	344.3	244.9	144.5	60.9	0.5
75°	644.5	634.9	608.0	557.3	486.3	405.7	318.0	223.1	123.7	46.7	0.5
77.5°	599.9	596.9	571.5	522.3	458.4	378.3	289.1	196.8	104.0	33.5	0.5
80°	555.3	552.2	532.5	487.3	426.0	345.8	262.2	171.9	84.7	22.3	0.5
82.5°	511.2	507.1	488.3	450.8	393.0	318.5	234.3	147.1	66.9	13.7	0.5
85°	471.6	466.5	446.3	411.8	359.0	287.5	205.4	122.7	49.7	7.6	1.0
87.5°	437.6	434.1	411.8	376.3	324.5	258.6	180.0	99.4	35.0	3.5	1.5
90°	408.7	401.1	381.3	343.8	292.1	226.7	153.1	79.6	23.3	2.0	2.0
92.5°	380.3	373.7	351.9	313.4	263.2	199.3	127.3	60.9	14.7	1.0	2.5
95°	350.9	343.8	322.5	287.0	233.8	171.4	104.5	44.6	8.1	1.0	2.5
97.5°	322.0	315.4	293.1	257.6	207.4	147.1	82.7	31.4	4.1	1.0	2.0
100°	295.1	287.5	267.2	231.7	181.0	122.7	63.9	20.3	2.5	1.0	2.0
102.5°	266.7	260.7	239.9	205.4	153.7	99.9	47.7	12.7	1.0	1.0	1.5
105°	241.4	233.8	213.5	178.0	130.8	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°	157.2	151.1	133.4	103.4	66.4	30.9	9.1	1.5	1.5	1.5	1.5
115°	131.3	122.2	106.5	80.1	49.2	20.3	4.6	1.5	1.5	1.5	1.5
117.5°	105.0	97.4	86.2	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°	58.8	53.2	42.1	27.4	13.2	3.5	1.5	1.5	2.0	2.0	1.5
125°	39.0	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	3.5	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°	398.1	398.1	398.1
2.5°	378.8	371.7	369.7
5°	358.5	346.9	340.3
7.5°	338.2	322.5	314.9
10°	319.5	297.2	289.1
12.5°	297.2	271.3	258.6
15°	275.9	242.4	230.2
17.5°	252.0	214.5	200.3
20°	229.7	186.6	171.9
22.5°	204.4	159.2	143.0
25°	181.5	131.8	113.6
27.5°	156.2	104.0	88.2
30°	132.4	79.6	63.9
32.5°	109.5	58.3	44.1
35°	88.2	39.6	27.9
37.5°	68.0	24.3	14.2
40°	49.2	12.7	6.6
42.5°	33.0	6.1	3.5
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	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.1	4.1
95°	3.5	4.1	4.6
97.5°	4.1	4.6	4.6
100°	3.5	4.6	5.1
102.5°	3.0	4.6	4.6
105°	2.5	3.5	4.1





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CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-94-ED1D

**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°	213.0	206.9	186.6	153.1	107.0	59.8	22.3	4.1	1.0	1.5	1.5
110°	185.6	180.5	159.7	127.3	86.2	44.6	14.7	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)