

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: P551469

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-87-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: P551469  
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-30-UNV-81-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

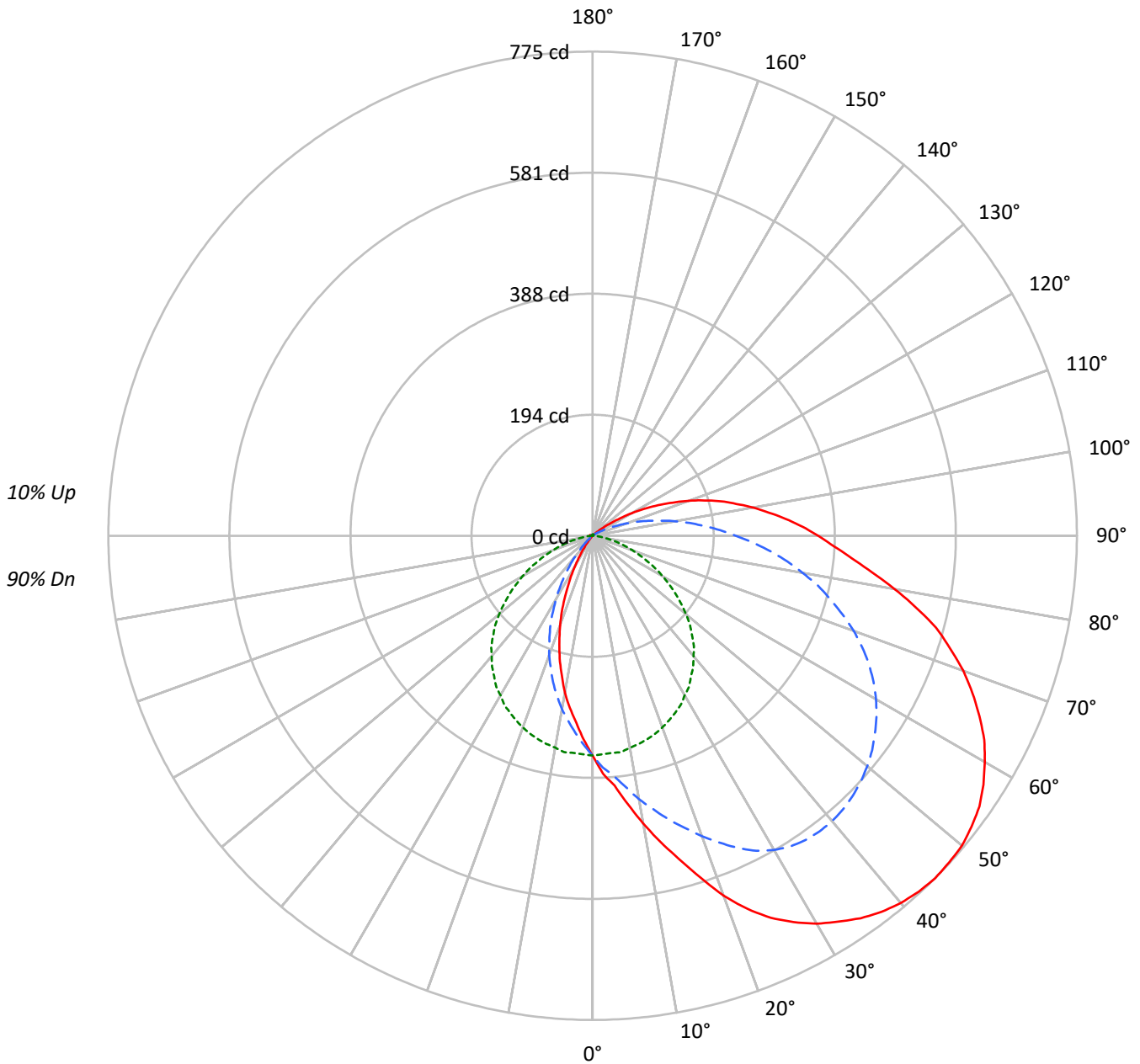
Lumens per Lamp: N/A  
Luminaire Lumens: 1737.9 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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

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CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-87-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°	3785	3785	3785
5°	4154	3729	3111
10°	4701	3683	2564
15°	5268	3636	1998
20°	5942	3577	1471
25°	6500	3508	966
30°	6915	3416	544
35°	7274	3317	239
40°	7594	3195	57
45°	7867	3042	0
50°	8096	2839	0
55°	8271	2581	0
60°	8360	2283	0
65°	8395	1942	0
70°	8366	1584	0
75°	8260	1168	6
80°	7925	715	36
85°	7660	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°	163.3	9.4
30°-40°	209.7	12.1
40°-50°	237.4	13.7
50°-60°	246.0	14.2
60°-70°	232.0	13.3
70°-80°	194.4	11.2
80°-90°	140.9	8.1
90°-100°	92.6	5.3
100°-110°	53.5	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°	297.8	17.1
0°-40°	507.5	29.2
0°-60°	990.9	57.0
0°-90°	1558.2	89.7
90°-120°	169.7	9.8
90°-150°	178.5	10.3
90°-180°	180.0	10.4
0°-180°	1737.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	352	352	352	352	352	
5°	401	385	349	317	300	40
15°	536	470	337	244	203	155
25°	675	552	313	160	100	312
35°	747	594	274	78	25	469
45°	775	589	225	18	0	598
55°	756	552	162	0	0	675
65°	683	488	97	0	0	676
75°	569	394	41	0	0	597
85°	416	286	7	2	3	356
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°	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
2.5°	381.1	380.7	379.3	377.1	373.9	368.6	364.1	360.1	354.7	350.2	341.7
5°	401.3	399.0	397.2	395.0	387.8	382.9	374.8	365.9	357.4	348.9	331.9
7.5°	433.5	429.9	427.2	421.0	411.1	399.9	387.4	378.9	373.1	349.3	320.2
10°	468.0	464.9	459.5	448.3	436.2	420.1	402.2	382.0	364.1	344.4	309.9
12.5°	502.0	497.6	489.9	475.6	458.6	438.4	413.8	390.1	364.5	341.3	297.8
15°	536.1	531.1	523.1	505.6	483.2	456.8	426.8	396.8	366.8	337.2	285.3
17.5°	573.2	566.5	554.4	534.7	506.5	473.8	438.4	402.2	365.9	332.3	271.8
20°	613.1	603.7	590.7	564.3	531.1	492.6	450.1	407.5	365.4	326.5	256.6
22.5°	646.2	636.8	622.5	595.2	555.3	508.3	459.9	411.1	363.6	319.8	242.3
25°	674.9	667.3	651.6	620.3	578.2	524.9	469.3	413.8	361.0	312.6	227.1
27.5°	697.3	690.1	672.7	640.4	597.4	539.6	476.5	415.1	357.4	305.4	211.4
30°	717.0	709.8	688.8	655.6	610.4	551.3	483.7	415.6	352.9	294.7	194.4
32.5°	732.2	725.5	704.0	668.6	619.4	559.4	487.7	415.1	347.1	287.1	176.0
35°	747.4	740.7	715.7	678.0	626.1	562.9	490.8	412.9	339.9	274.5	158.5
37.5°	759.1	751.5	726.0	684.3	629.2	563.8	490.4	409.8	332.3	264.2	141.1
40°	767.2	759.1	731.8	687.9	630.1	562.5	486.8	404.4	323.3	251.2	122.7
42.5°	772.5	763.6	734.5	693.3	628.3	558.9	481.4	397.7	313.5	240.0	105.2
45°	775.2	765.8	734.9	688.8	625.2	552.2	473.4	389.2	302.7	224.8	87.8
47.5°	773.9	763.6	732.7	683.9	619.4	545.0	464.4	378.9	289.8	211.4	71.2
50°	771.6	760.9	727.7	677.6	611.3	536.1	454.6	366.3	276.3	194.8	56.4
52.5°	764.5	753.7	722.4	668.6	601.9	525.8	441.1	353.3	262.0	178.7	43.0
55°	755.5	745.7	713.0	660.6	589.8	513.2	428.6	339.5	248.1	162.1	30.9
57.5°	741.6	732.7	701.3	647.6	577.7	499.3	414.7	324.2	230.6	145.5	21.5
60°	724.6	715.7	685.2	632.8	563.8	483.7	399.5	308.6	215.0	129.0	13.4
62.5°	706.7	698.2	666.4	614.4	546.4	467.1	382.9	292.9	198.4	113.8	8.1
65°	683.0	674.9	646.2	592.5	527.1	449.2	364.5	274.1	181.4	96.7	4.5
67.5°	657.9	650.7	621.6	572.3	504.7	429.5	345.7	255.7	163.5	82.0	2.2
70°	631.0	622.1	595.2	545.0	481.9	407.1	325.1	236.9	146.4	67.6	0.0
72.5°	599.7	592.9	567.0	519.5	455.5	383.4	304.1	216.3	127.6	53.7	0.4
75°	569.2	560.7	537.0	492.2	429.5	358.3	280.8	197.1	109.3	41.2	0.4
77.5°	529.8	527.1	504.7	461.3	404.8	334.1	255.3	173.8	91.8	29.6	0.4
80°	490.4	487.7	470.2	430.4	376.2	305.4	231.5	151.8	74.8	19.7	0.4
82.5°	451.4	447.8	431.3	398.1	347.1	281.2	206.9	129.9	59.1	12.1	0.4
85°	416.5	412.0	394.1	363.6	317.1	253.9	181.4	108.4	43.9	6.7	0.9
87.5°	386.5	383.4	363.6	332.3	286.6	228.4	159.0	87.8	30.9	3.1	1.3
90°	361.0	354.2	336.8	303.6	258.0	200.2	135.2	70.3	20.6	1.8	1.8
92.5°	335.9	330.1	310.8	276.8	232.4	176.0	112.4	53.7	13.0	0.9	2.2
95°	309.9	303.6	284.8	253.5	206.5	151.4	92.3	39.4	7.2	0.9	2.2
97.5°	284.4	278.6	258.9	227.5	183.2	129.9	73.0	27.8	3.6	0.9	1.8
100°	260.6	253.9	236.0	204.7	159.9	108.4	56.4	17.9	2.2	0.9	1.8
102.5°	235.6	230.2	211.8	181.4	135.7	88.2	42.1	11.2	0.9	0.9	1.3
105°	213.2	206.5	188.5	157.2	115.5	69.4	29.6	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	133.5	117.8	91.4	58.7	27.3	8.1	1.3	1.3	1.3	1.3
115°	116.0	107.9	94.0	70.8	43.4	17.9	4.0	1.3	1.3	1.3	1.3
117.5°	92.7	86.0	76.1	53.7	28.7	11.6	2.2	1.3	1.3	1.3	1.3
120°	72.6	66.3	55.1	37.2	19.3	6.7	0.9	1.3	1.3	1.3	1.3
122.5°	51.9	47.0	37.2	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	20.2	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°	351.6	351.6	351.6
2.5°	334.5	328.3	326.5
5°	316.6	306.3	300.5
7.5°	298.7	284.8	278.1
10°	282.1	262.4	255.3
12.5°	262.4	239.6	228.4
15°	243.6	214.1	203.3
17.5°	222.6	189.4	176.9
20°	202.9	164.8	151.8
22.5°	180.5	140.6	126.3
25°	160.3	116.4	100.3
27.5°	137.9	91.8	77.9
30°	116.9	70.3	56.4
32.5°	96.7	51.5	39.0
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°	188.1	182.7	164.8	135.2	94.5	52.8	19.7	3.6	0.9	1.3	1.3
110°	163.9	159.4	141.1	112.4	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)