

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: P#

Luminaire Tested: **FLDSQ4C40D010 FEU4C409027 F4LC-SQ-H**

Issue Date: 12/13/2022

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P#  
 Test Lab: INNOVATION CENTER  
 Issue Date: 12/13/2022  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: FAIL-SAFE  
 Catalog Number: FLDSQ4C40D010 FEU4C409027 F4LC-SQ-H  
 Description: 4 INCH 4000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

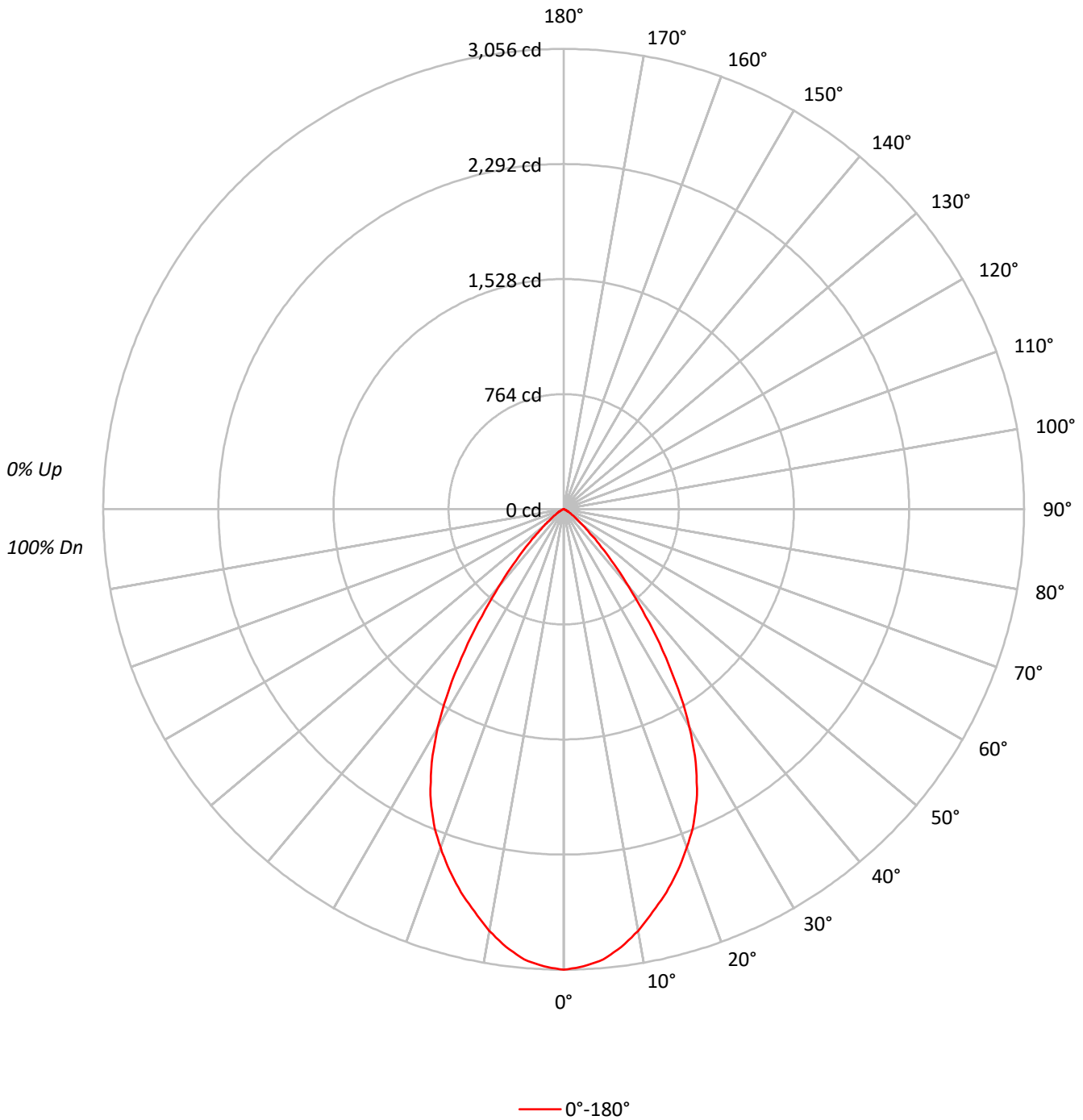
Lumens per Lamp: N/A  
 Luminaire Lumens: 3082.0 lumens  
 Efficiency: N/A  
 Efficacy: 65.6 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 47  
 Input Voltage (V):  
 Input Current (Ain): 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

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	82	86	83	80	79
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	73
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67
6	86	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	52	50
10	69	59	53	49	68	59	53	49	58	52	49	57	52	48	56	52	48	47

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	294870
5°	290592
10°	278442
15°	262987
20°	245491
25°	222850
30°	186053
35°	134788
40°	84379
45°	48224
50°	25143
55°	14097
60°	8973
65°	5320
70°	3950
75°	1752
80°	2612
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.2	9.1
10°-20°	737.7	23.9
20°-30°	948.1	30.8
30°-40°	713.3	23.1
40°-50°	286.5	9.3
50°-60°	81.4	2.6
60°-70°	25.8	0.8
70°-80°	7.4	0.2
80°-90°	0.6	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1967.0	63.8
0°-40°	2680.3	87.0
0°-60°	3048.2	98.9
0°-90°	3082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3082.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3056	
5°	3000	281
15°	2633	738
25°	2093	948
35°	1144	713
45°	353	286
55°	84	81
65°	23	26
75°	5	7
85°	0	1
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	3056.0
2.5°	3037.4
5°	3000.2
7.5°	2930.4
10°	2841.9
12.5°	2735.1
15°	2632.7
17.5°	2516.4
20°	2390.8
22.5°	2256.0
25°	2093.2
27.5°	1897.7
30°	1669.9
32.5°	1414.0
35°	1144.3
37.5°	893.0
40°	669.9
42.5°	493.0
45°	353.4
47.5°	242.0
50°	167.5
52.5°	116.3
55°	83.8
57.5°	60.5
60°	46.5
62.5°	32.6
65°	23.3
67.5°	18.6
70°	14.0
72.5°	9.3
75°	4.7
77.5°	4.7
80°	4.7
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)