

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: **FLDSQ4C70D010 FEU4C709035 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: FLDSQ4C70D010 FEU4C709035 F4LC-SQ-H  
 Description: 4 INCH 7000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

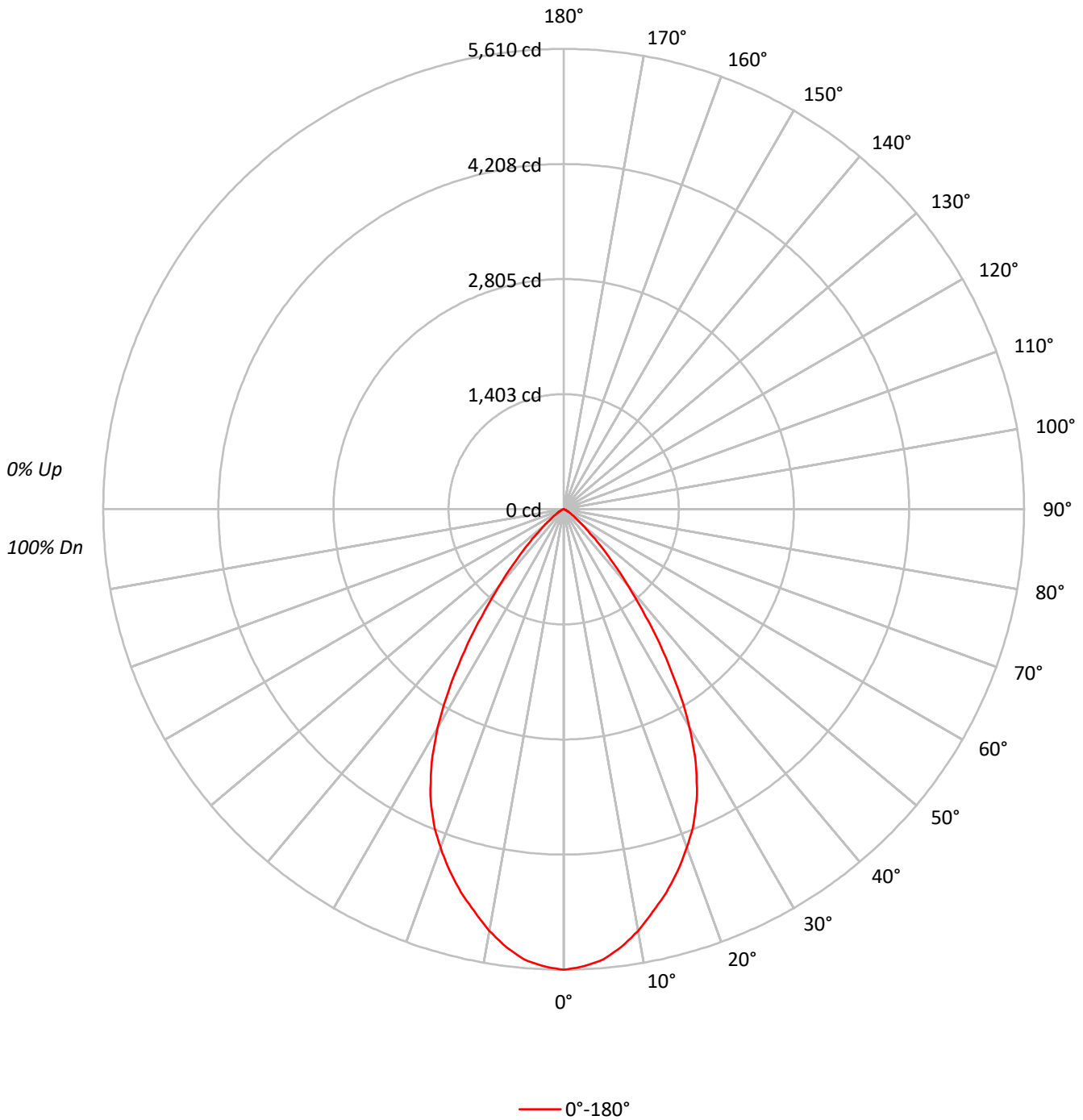
Lumens per Lamp: N/A  
 Luminaire Lumens: 5658.0 lumens  
 Efficiency: N/A  
 Efficacy: 72.5 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 78  
 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	50	30	10
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°	541332
5°	533462
10°	511177
15°	482811
20°	450668
25°	409108
30°	341567
35°	247444
40°	154902
45°	88546
50°	46159
55°	25873
60°	16480
65°	9749
70°	7222
75°	3169
80°	4723
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	516.2	9.1
10°-20°	1354.3	23.9
20°-30°	1740.5	30.8
30°-40°	1309.5	23.1
40°-50°	525.9	9.3
50°-60°	149.5	2.6
60°-70°	47.3	0.8
70°-80°	13.5	0.2
80°-90°	1.2	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°	3611.1	63.8
0°-40°	4920.6	87.0
0°-60°	5596.0	98.9
0°-90°	5658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5658.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	5610	
5°	5508	516
15°	4833	1354
25°	3843	1741
35°	2101	1310
45°	649	526
55°	154	150
65°	43	47
75°	8	13
85°	0	1
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	5610.3
2.5°	5576.1
5°	5507.7
7.5°	5379.6
10°	5217.3
12.5°	5021.2
15°	4833.3
17.5°	4619.7
20°	4389.0
22.5°	4141.7
25°	3842.7
27.5°	3483.9
30°	3065.7
32.5°	2595.8
35°	2100.7
37.5°	1639.4
40°	1229.8
42.5°	905.1
45°	648.9
47.5°	444.2
50°	307.5
52.5°	213.6
55°	153.8
57.5°	111.1
60°	85.4
62.5°	59.8
65°	42.7
67.5°	34.2
70°	25.6
72.5°	17.1
75°	8.5
77.5°	8.5
80°	8.5
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)