

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 FEU4C709040 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 FEU4C709040 F4LC-SQ-H  
 Description: 4 INCH 7000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

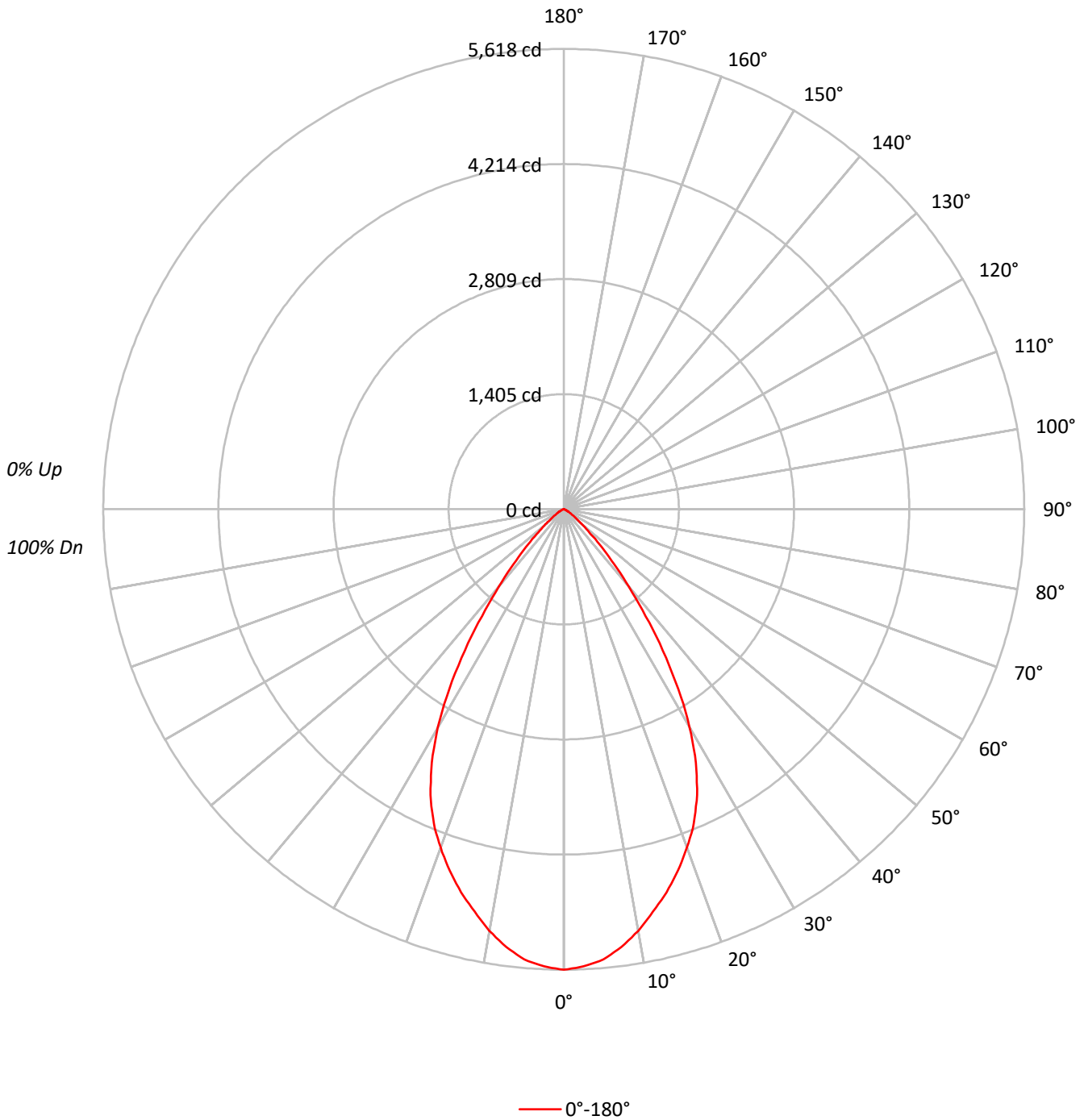
Lumens per Lamp: N/A  
 Luminaire Lumens: 5666.0 lumens  
 Efficiency: N/A  
 Efficacy: 72.6 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 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	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°	542094
5°	534217
10°	511902
15°	483490
20°	451305
25°	409683
30°	342046
35°	247797
40°	155116
45°	88669
50°	46234
55°	25906
60°	16500
65°	9772
70°	7250
75°	3206
80°	4779
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	517.0	9.1
10°-20°	1356.2	23.9
20°-30°	1743.0	30.8
30°-40°	1311.4	23.1
40°-50°	526.7	9.3
50°-60°	149.7	2.6
60°-70°	47.4	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°	3616.1	63.8
0°-40°	4927.5	87.0
0°-60°	5603.9	98.9
0°-90°	5666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5666.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	5618	
5°	5516	517
15°	4840	1356
25°	3848	1743
35°	2104	1311
45°	650	527
55°	154	150
65°	43	47
75°	9	14
85°	0	1
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	5618.2
2.5°	5584.0
5°	5515.5
7.5°	5387.2
10°	5224.7
12.5°	5028.3
15°	4840.1
17.5°	4626.2
20°	4395.2
22.5°	4147.5
25°	3848.1
27.5°	3488.8
30°	3070.0
32.5°	2599.5
35°	2103.7
37.5°	1641.7
40°	1231.5
42.5°	906.4
45°	649.8
47.5°	444.9
50°	308.0
52.5°	213.9
55°	154.0
57.5°	111.2
60°	85.5
62.5°	59.9
65°	42.8
67.5°	34.2
70°	25.7
72.5°	17.1
75°	8.6
77.5°	8.6
80°	8.6
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)