

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: **FLDSQ4C80D010 FEU4C809030 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: FLDSQ4C80D010 FEU4C809030 F4LC-SQ-H  
 Description: 4 INCH 8000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

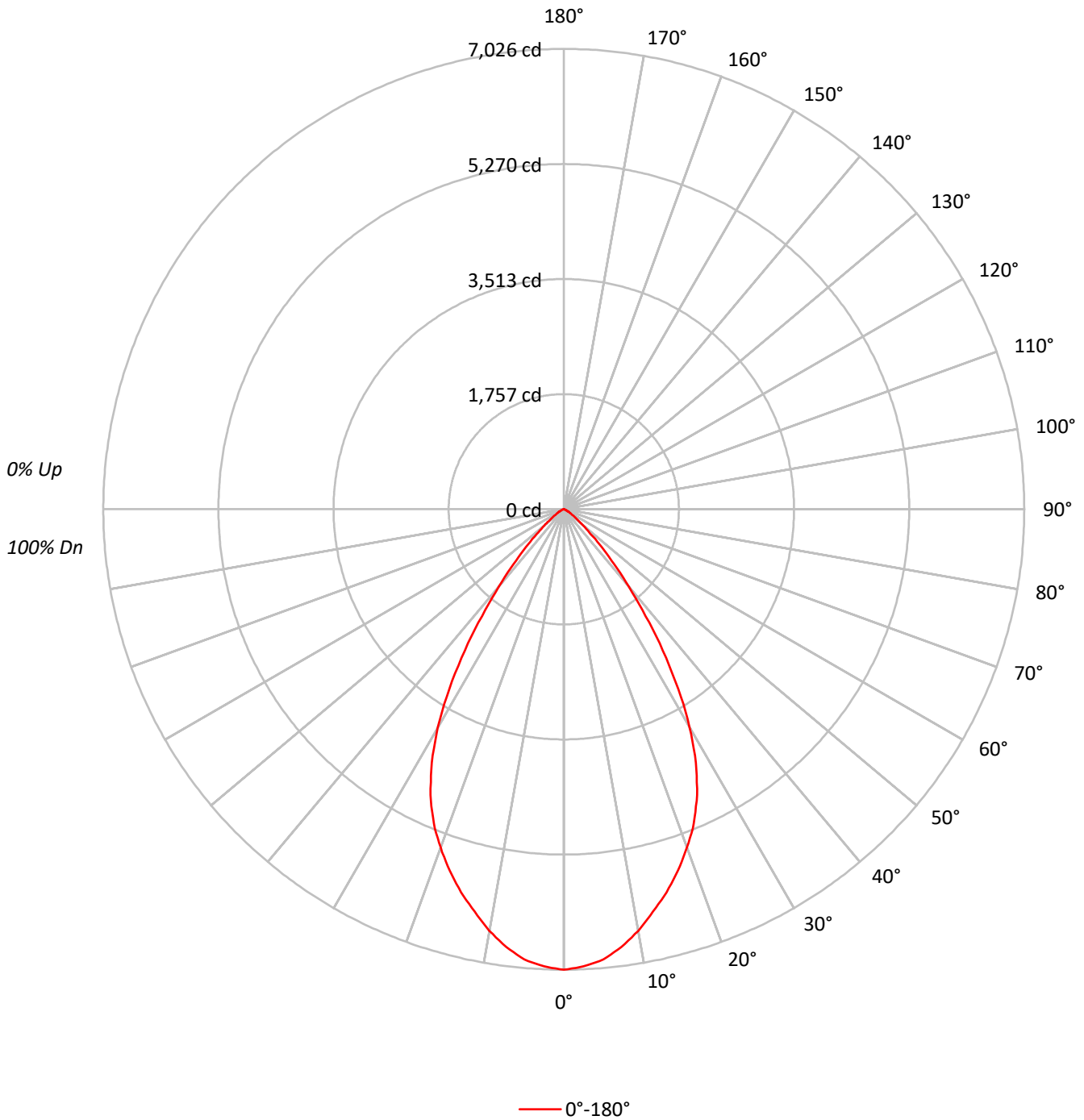
Lumens per Lamp: N/A  
 Luminaire Lumens: 7086.0 lumens  
 Efficiency: N/A  
 Efficacy: 79.2 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 89.5  
 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°	677950
5°	668103
10°	640194
15°	604660
20°	564419
25°	512357
30°	427770
35°	309897
40°	193987
45°	110884
50°	57822
55°	32400
60°	20649
65°	12215
70°	9056
75°	3989
80°	5946
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	646.5	9.1
10°-20°	1696.1	23.9
20°-30°	2179.8	30.8
30°-40°	1640.0	23.1
40°-50°	658.7	9.3
50°-60°	187.3	2.6
60°-70°	59.3	0.8
70°-80°	16.9	0.2
80°-90°	1.4	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°	4522.4	63.8
0°-40°	6162.4	87.0
0°-60°	7008.4	98.9
0°-90°	7086.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7086.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	7026	
5°	6898	647
15°	6053	1696
25°	4812	2180
35°	2631	1640
45°	813	659
55°	193	187
65°	54	59
75°	11	17
85°	0	1
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	7026.2
2.5°	6983.4
5°	6897.8
7.5°	6737.3
10°	6534.1
12.5°	6288.5
15°	6053.1
17.5°	5785.6
20°	5496.8
22.5°	5187.0
25°	4812.5
27.5°	4363.2
30°	3839.4
32.5°	3251.0
35°	2630.9
37.5°	2053.2
40°	1540.1
42.5°	1133.6
45°	812.6
47.5°	556.3
50°	385.2
52.5°	267.5
55°	192.6
57.5°	139.1
60°	107.0
62.5°	74.9
65°	53.5
67.5°	42.8
70°	32.1
72.5°	21.4
75°	10.7
77.5°	10.7
80°	10.7
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)