

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 FEU4C809035 F4LC-SQ-H**

Issue Date: 12/13/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.



**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 FEU4C809035 F4LC-SQ-H  
 Description: 4 INCH 8000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

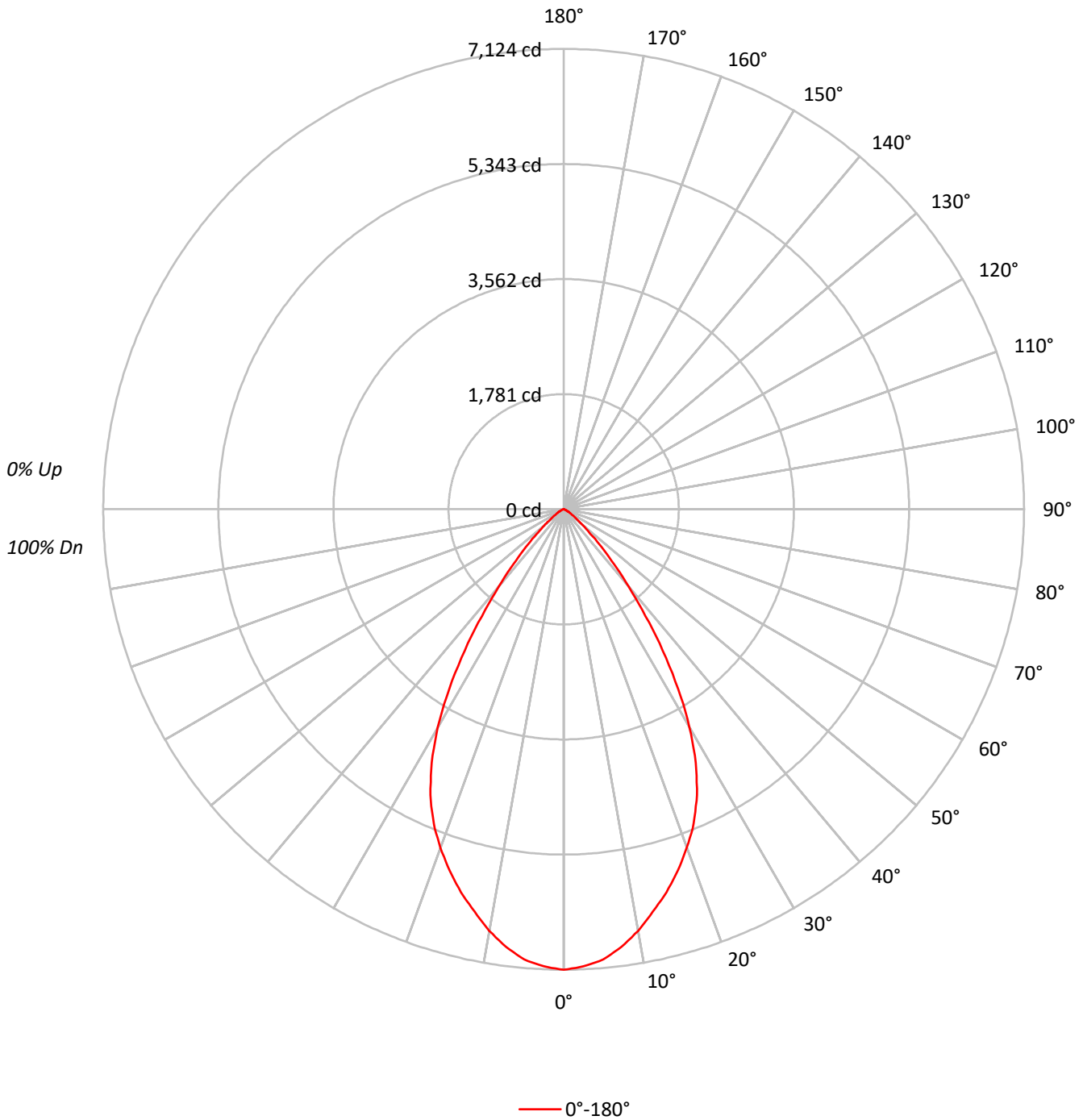
Lumens per Lamp: N/A  
 Luminaire Lumens: 7185.0 lumens  
 Efficiency: N/A  
 Efficacy: 80.3 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

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

TEST NUMBER: P#  
CATALOG NUMBER: FLDSQ4C80D010 FEU4C809035 F4LC-SQ-H

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: FLDSQ4C80D010 FEU4C809035 F4LC-SQ-H

**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°	687425
5°	677440
10°	649139
15°	613111
20°	572305
25°	519522
30°	433753
35°	314232
40°	196708
45°	112440
50°	58618
55°	32854
60°	20938
65°	12375
70°	9169
75°	4026
80°	6001
85°	0

TEST NUMBER: P#  
 CATALOG NUMBER: FLDSQ4C80D010 FEU4C809035 F4LC-SQ-H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	655.6	9.1
10°-20°	1719.8	23.9
20°-30°	2210.3	30.8
30°-40°	1662.9	23.1
40°-50°	667.9	9.3
50°-60°	189.9	2.6
60°-70°	60.1	0.8
70°-80°	17.1	0.2
80°-90°	1.5	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°	4585.6	63.8
0°-40°	6248.6	87.0
0°-60°	7106.3	98.9
0°-90°	7185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7185.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	7124	
5°	6994	656
15°	6138	1720
25°	4880	2210
35°	2668	1663
45°	824	668
55°	195	190
65°	54	60
75°	11	17
85°	0	1
90°	0	

TEST NUMBER: P#  
CATALOG NUMBER: FLDSQ4C80D010 FEU4C809035 F4LC-SQ-H

**CANDELA DISTRIBUTION (FULL):**

0°	
0°	7124.4
2.5°	7081.0
5°	6994.2
7.5°	6831.5
10°	6625.4
12.5°	6376.3
15°	6137.7
17.5°	5866.5
20°	5573.6
22.5°	5259.5
25°	4879.8
27.5°	4424.1
30°	3893.1
32.5°	3296.4
35°	2667.7
37.5°	2081.9
40°	1561.7
42.5°	1149.4
45°	824.0
47.5°	564.1
50°	390.5
52.5°	271.2
55°	195.3
57.5°	141.0
60°	108.5
62.5°	75.9
65°	54.2
67.5°	43.4
70°	32.5
72.5°	21.7
75°	10.8
77.5°	10.8
80°	10.8
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)