

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: **FLDSQ4C20D010 FEU4C209030 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: FLDSQ4C20D010 FEU4C209030 F4LC-SQ-H  
 Description: 4 INCH 2000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

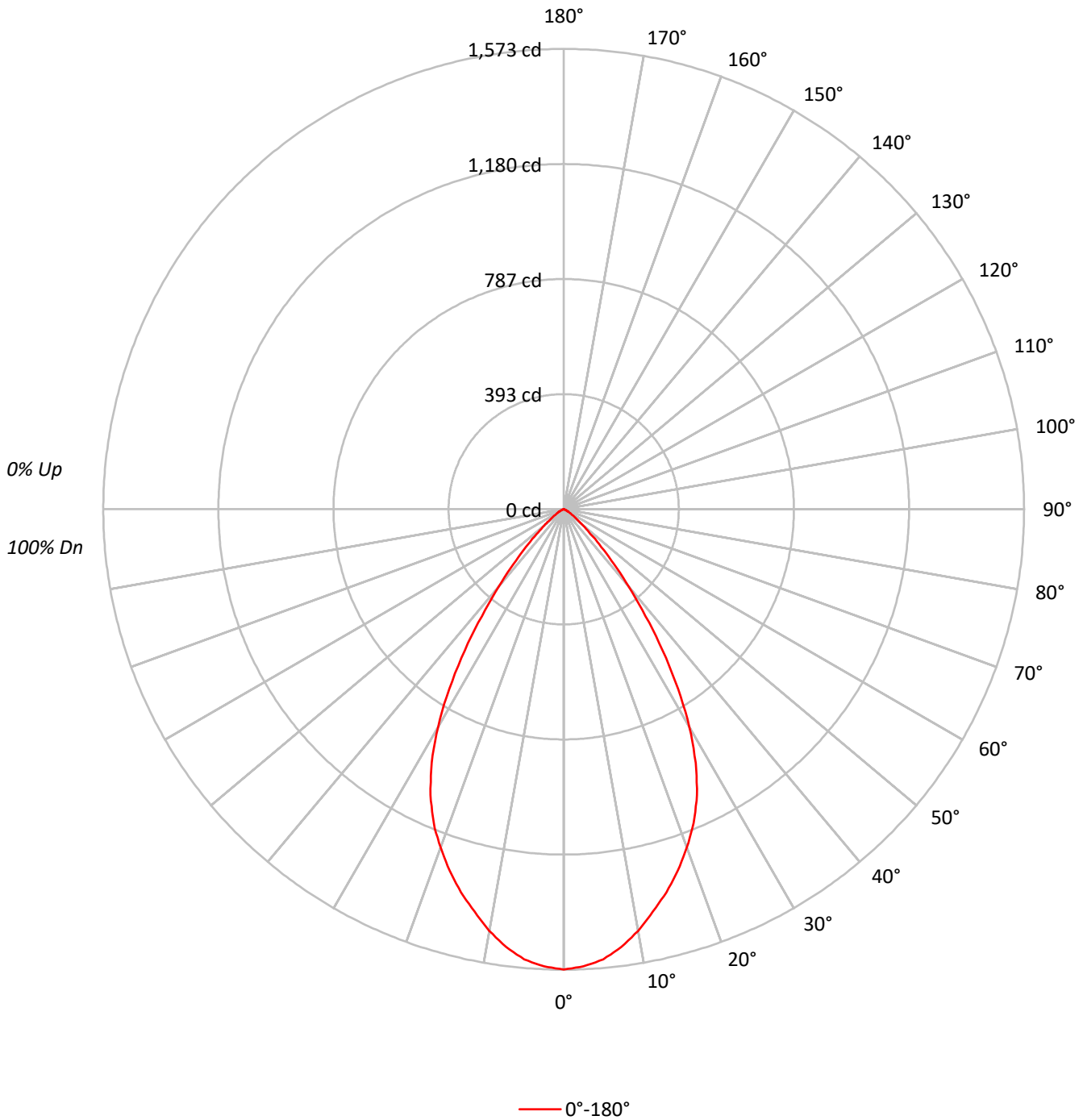
Lumens per Lamp: N/A  
 Luminaire Lumens: 1586.0 lumens  
 Efficiency: N/A  
 Efficacy: 72.8 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 21.8  
 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°	151738
5°	149538
10°	143292
15°	135335
20°	126329
25°	114672
30°	95740
35°	69367
40°	43417
45°	24821
50°	12939
55°	7250
60°	4612
65°	2740
70°	2031
75°	895
80°	1334
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.7	9.1
10°-20°	379.6	23.9
20°-30°	487.9	30.8
30°-40°	367.1	23.1
40°-50°	147.4	9.3
50°-60°	41.9	2.6
60°-70°	13.3	0.8
70°-80°	3.8	0.2
80°-90°	0.3	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°	1012.2	63.8
0°-40°	1379.3	87.0
0°-60°	1568.6	98.9
0°-90°	1586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1586.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1573	
5°	1544	145
15°	1355	380
25°	1077	488
35°	589	367
45°	182	147
55°	43	42
65°	12	13
75°	2	4
85°	0	0
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1572.6
2.5°	1563.0
5°	1543.9
7.5°	1508.0
10°	1462.5
12.5°	1407.5
15°	1354.8
17.5°	1294.9
20°	1230.3
22.5°	1161.0
25°	1077.1
27.5°	976.6
30°	859.3
32.5°	727.6
35°	588.9
37.5°	459.6
40°	344.7
42.5°	253.7
45°	181.9
47.5°	124.5
50°	86.2
52.5°	59.9
55°	43.1
57.5°	31.1
60°	23.9
62.5°	16.8
65°	12.0
67.5°	9.6
70°	7.2
72.5°	4.8
75°	2.4
77.5°	2.4
80°	2.4
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)