

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 FEU4C209050 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 FEU4C209050 F4LC-SQ-H  
 Description: 4 INCH 2000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

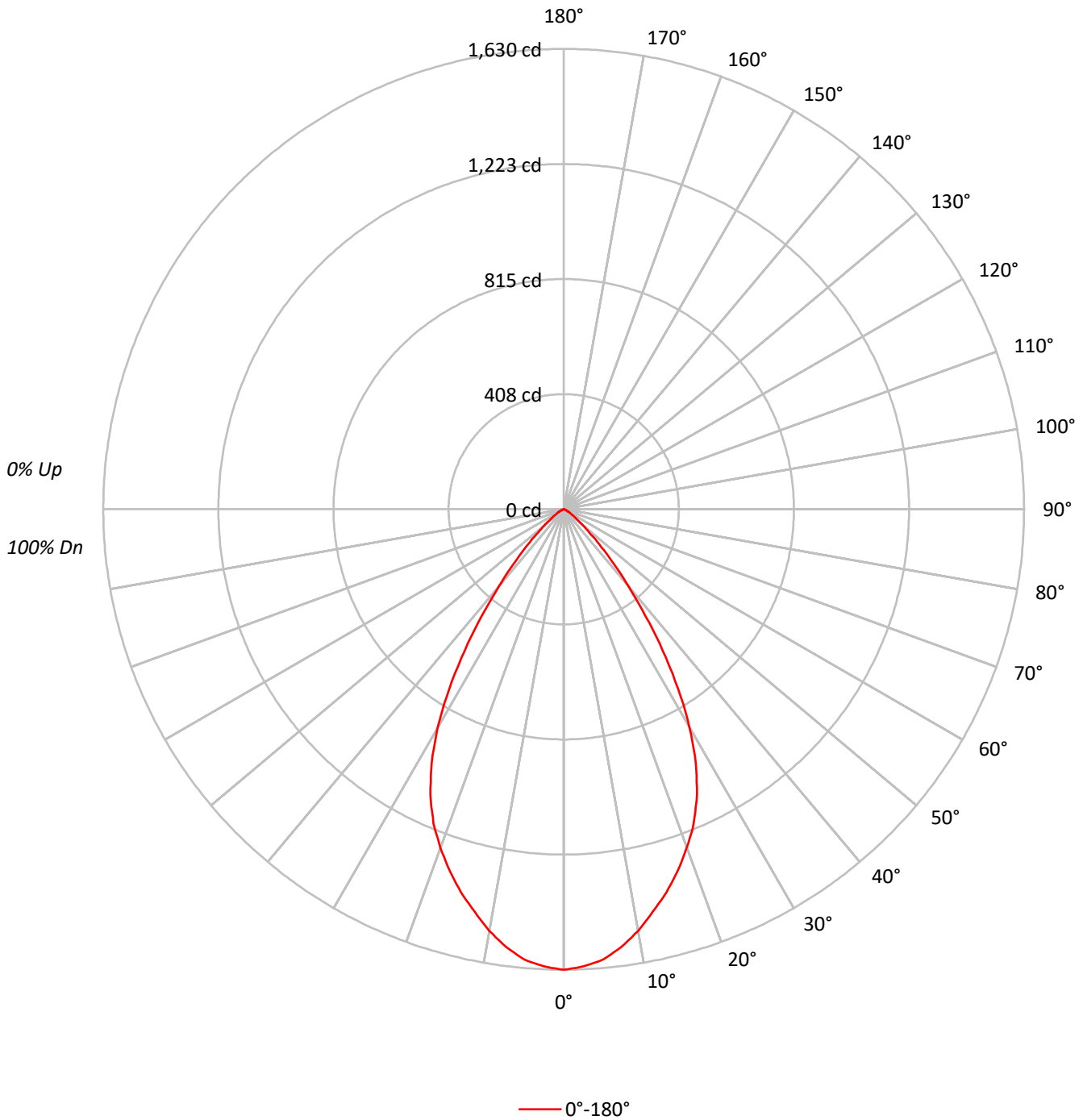
Lumens per Lamp: N/A  
 Luminaire Lumens: 1644.0 lumens  
 Efficiency: N/A  
 Efficacy: 75.4 lumens/watt  
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

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	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°	157287
5°	155001
10°	148524
15°	140289
20°	130950
25°	118867
30°	99249
35°	71900
40°	45005
45°	25722
50°	13420
55°	7520
60°	4786
65°	2831
70°	2088
75°	932
80°	1389
85°	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.0	9.1
10°-20°	393.5	23.9
20°-30°	505.7	30.8
30°-40°	380.5	23.1
40°-50°	152.8	9.3
50°-60°	43.5	2.6
60°-70°	13.7	0.8
70°-80°	3.9	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°	1049.2	63.8
0°-40°	1429.7	87.0
0°-60°	1626.0	98.9
0°-90°	1644.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1644.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1630	
5°	1600	150
15°	1404	394
25°	1116	506
35°	610	381
45°	188	153
55°	45	43
65°	12	14
75°	2	4
85°	0	0
90°	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1630.1
2.5°	1620.2
5°	1600.3
7.5°	1563.1
10°	1515.9
12.5°	1459.0
15°	1404.4
17.5°	1342.3
20°	1275.3
22.5°	1203.4
25°	1116.5
27.5°	1012.3
30°	890.8
32.5°	754.3
35°	610.4
37.5°	476.4
40°	357.3
42.5°	263.0
45°	188.5
47.5°	129.1
50°	89.4
52.5°	62.1
55°	44.7
57.5°	32.3
60°	24.8
62.5°	17.4
65°	12.4
67.5°	9.9
70°	7.4
72.5°	5.0
75°	2.5
77.5°	2.5
80°	2.5
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)