

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: **FLDSQ4C10D010 FEU4C109040 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: FLDSQ4C10D010 FEU4C109040 F4LC-SQ-H
 Description: 4 INCH 1000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

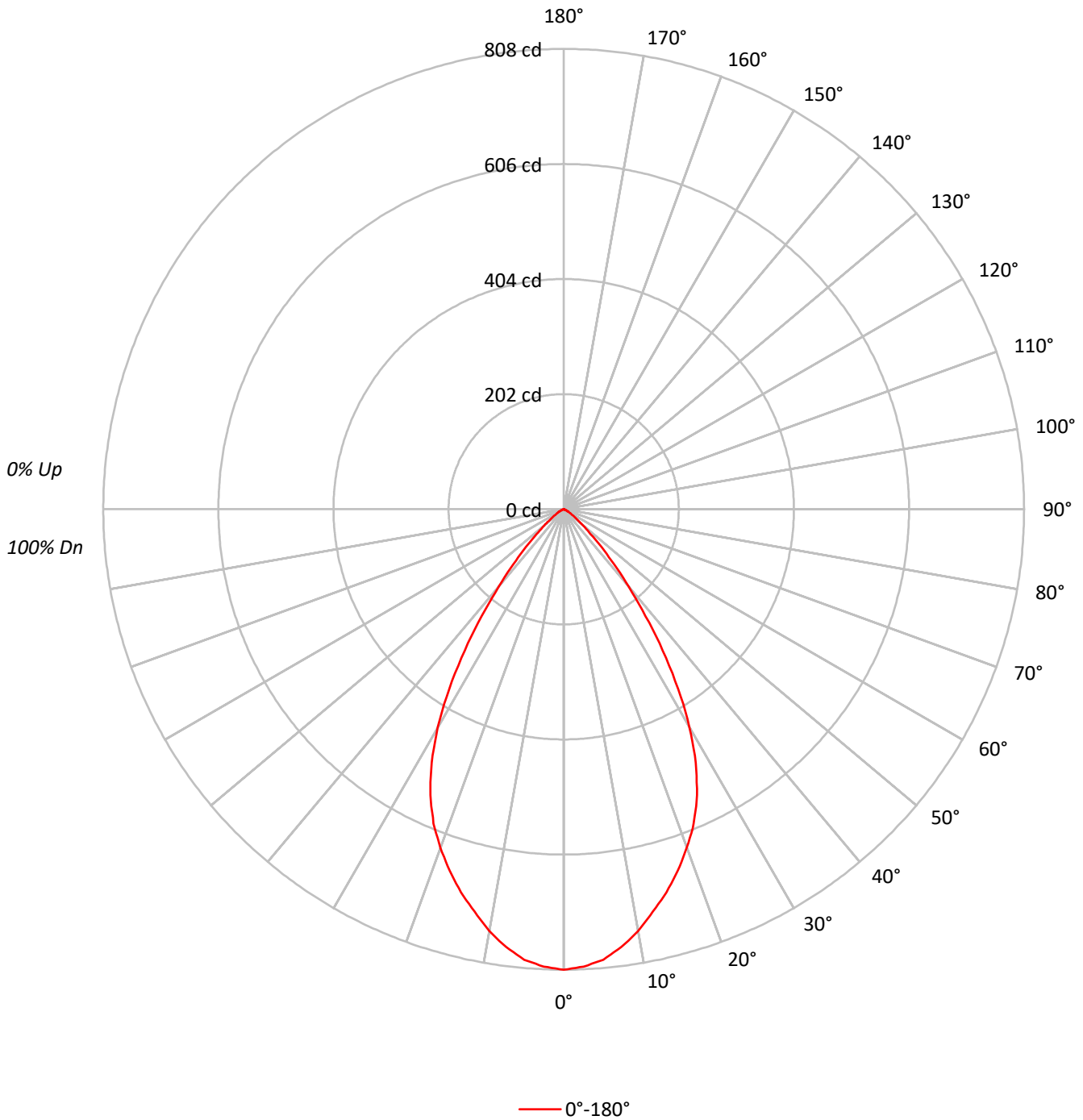
Lumens per Lamp: N/A
 Luminaire Lumens: 815.0 lumens
 Efficiency: N/A
 Efficacy: 83.2 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.8
 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93				93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85				85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	82	86	83	80	79				79
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	73				73
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67				67
6	86	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62				62
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58				58
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54				54
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	52	50				50
10	69	59	53	49	68	59	53	49	58	52	49	57	52	48	56	52	48	47				47

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	77973
5°	76847
10°	73630
15°	69545
20°	64915
25°	58928
30°	49201
35°	35644
40°	22307
45°	12759
50°	6650
55°	3718
60°	2374
65°	1416
70°	1044
75°	447
80°	667
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	9.1
10°-20°	195.1	23.9
20°-30°	250.7	30.8
30°-40°	188.6	23.1
40°-50°	75.8	9.3
50°-60°	21.5	2.6
60°-70°	6.8	0.8
70°-80°	1.9	0.2
80°-90°	0.2	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°	520.1	63.8
0°-40°	708.8	87.0
0°-60°	806.1	98.9
0°-90°	815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	815.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	808	
5°	793	74
15°	696	195
25°	554	251
35°	303	189
45°	94	76
55°	22	22
65°	6	7
75°	1	2
85°	0	0
90°	0	

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CANDELA DISTRIBUTION (FULL):

	0°
0°	808.1
2.5°	803.2
5°	793.4
7.5°	774.9
10°	751.5
12.5°	723.3
15°	696.2
17.5°	665.4
20°	632.2
22.5°	596.6
25°	553.5
27.5°	501.8
30°	441.6
32.5°	373.9
35°	302.6
37.5°	236.2
40°	177.1
42.5°	130.4
45°	93.5
47.5°	64.0
50°	44.3
52.5°	30.8
55°	22.1
57.5°	16.0
60°	12.3
62.5°	8.6
65°	6.2
67.5°	4.9
70°	3.7
72.5°	2.5
75°	1.2
77.5°	1.2
80°	1.2
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)