

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 FEU4C209040 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 FEU4C209040 F4LC-SQ-H
 Description: 4 INCH 2000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

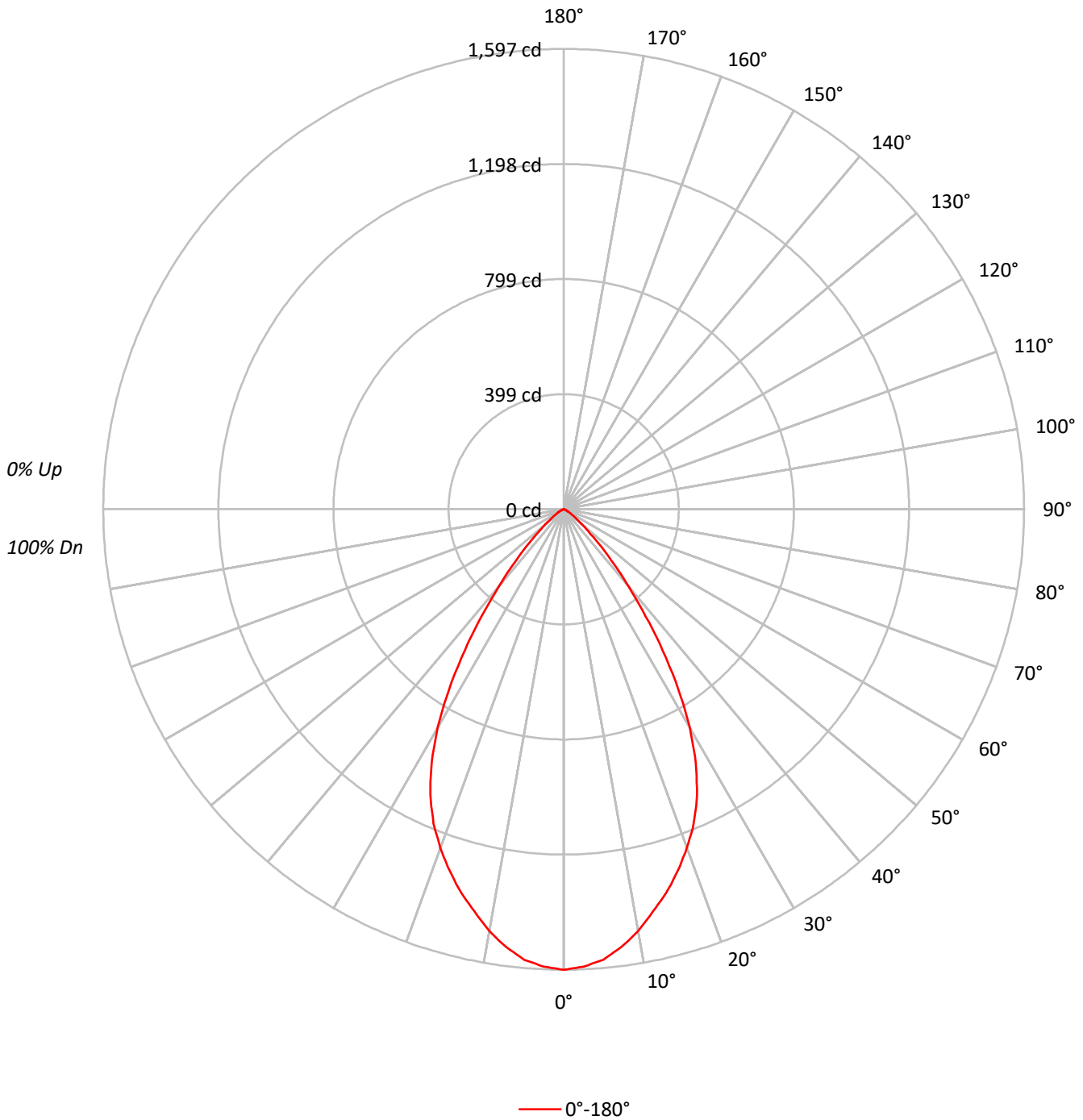
Lumens per Lamp: N/A
 Luminaire Lumens: 1611.0 lumens
 Efficiency: N/A
 Efficacy: 73.9 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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°	154131
5°	151892
10°	145545
15°	137472
20°	128321
25°	116482
30°	97255
35°	70451
40°	44110
45°	25203
50°	13150
55°	7368
60°	4689
65°	2785
70°	2059
75°	895
80°	1334
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.0	9.1
10°-20°	385.6	23.9
20°-30°	495.6	30.8
30°-40°	372.9	23.1
40°-50°	149.7	9.3
50°-60°	42.6	2.6
60°-70°	13.5	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°	1028.2	63.8
0°-40°	1401.0	87.0
0°-60°	1593.4	98.9
0°-90°	1611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1611.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1597	
5°	1568	147
15°	1376	386
25°	1094	496
35°	598	373
45°	185	150
55°	44	43
65°	12	13
75°	2	4
85°	0	0
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	1597.4
2.5°	1587.7
5°	1568.2
7.5°	1531.7
10°	1485.5
12.5°	1429.7
15°	1376.2
17.5°	1315.4
20°	1249.7
22.5°	1179.3
25°	1094.1
27.5°	992.0
30°	872.9
32.5°	739.1
35°	598.1
37.5°	466.8
40°	350.2
42.5°	257.7
45°	184.7
47.5°	126.5
50°	87.6
52.5°	60.8
55°	43.8
57.5°	31.6
60°	24.3
62.5°	17.0
65°	12.2
67.5°	9.7
70°	7.3
72.5°	4.9
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)