

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: **FLDSQ4C90D010 FEU4C909027 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: FLDSQ4C90D010 FEU4C909027 F4LC-SQ-H
 Description: 4 INCH 9000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

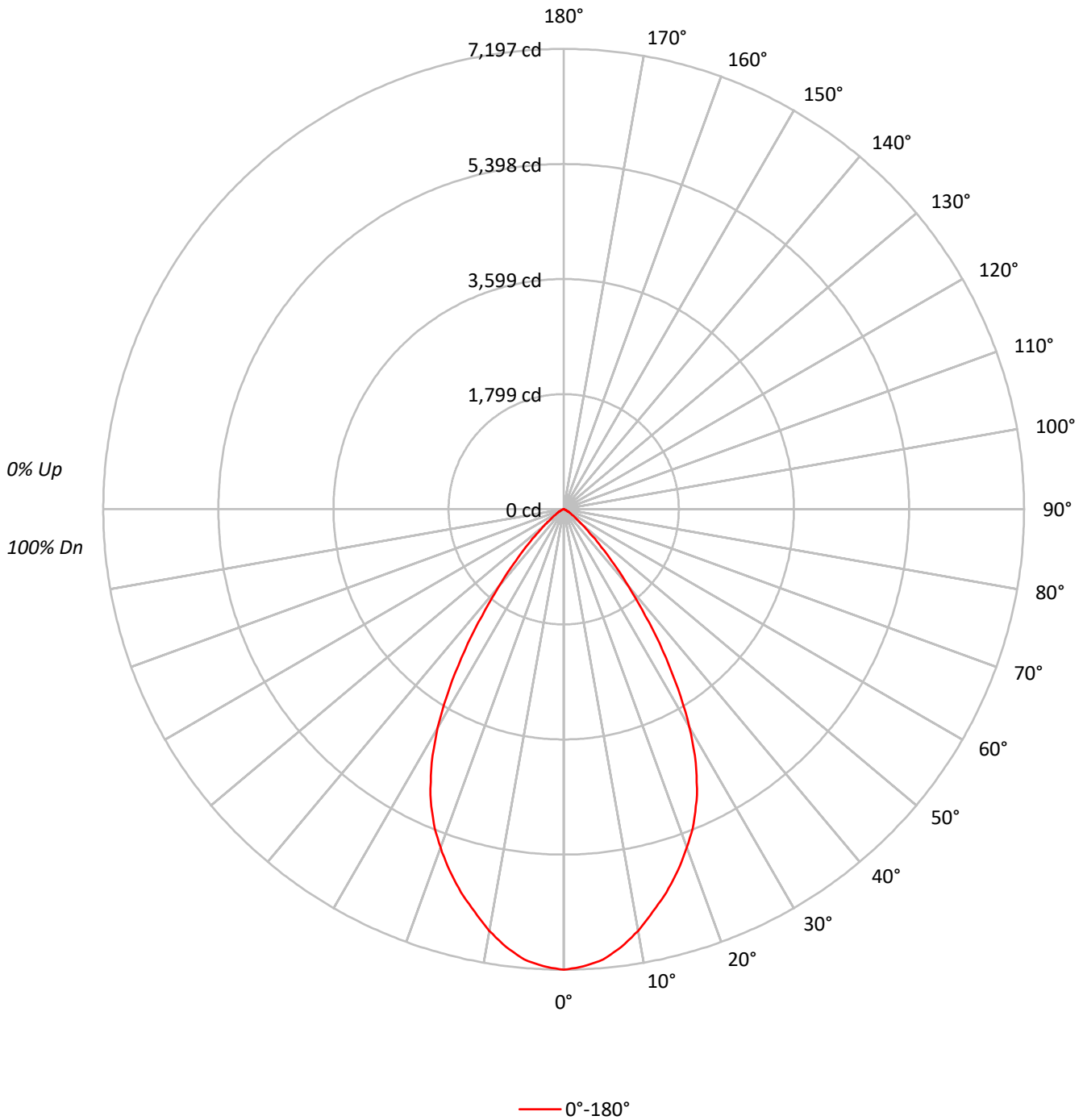
Lumens per Lamp: N/A
 Luminaire Lumens: 7258.0 lumens
 Efficiency: N/A
 Efficacy: 74.7 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 97.1
 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°	694411
5°	684327
10°	655733
15°	619334
20°	578116
25°	524792
30°	438154
35°	317424
40°	198698
45°	113572
50°	59218
55°	33190
60°	21150
65°	12512
70°	9282
75°	4101
80°	6112
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	662.2	9.1
10°-20°	1737.3	23.9
20°-30°	2232.7	30.8
30°-40°	1679.8	23.1
40°-50°	674.6	9.3
50°-60°	191.8	2.6
60°-70°	60.7	0.8
70°-80°	17.3	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°	4632.2	63.8
0°-40°	6312.0	87.0
0°-60°	7178.5	98.9
0°-90°	7258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7258.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	7197	
5°	7065	662
15°	6200	1737
25°	4929	2233
35°	2695	1680
45°	832	675
55°	197	192
65°	55	61
75°	11	17
85°	0	1
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	7196.8
2.5°	7152.9
5°	7065.3
7.5°	6900.9
10°	6692.7
12.5°	6441.1
15°	6200.0
17.5°	5926.1
20°	5630.2
22.5°	5312.9
25°	4929.3
27.5°	4469.1
30°	3932.6
32.5°	3329.9
35°	2694.8
37.5°	2103.0
40°	1577.5
42.5°	1161.1
45°	832.3
47.5°	569.8
50°	394.5
52.5°	274.0
55°	197.3
57.5°	142.5
60°	109.6
62.5°	76.7
65°	54.8
67.5°	43.8
70°	32.9
72.5°	21.9
75°	11.0
77.5°	11.0
80°	11.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)