

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 FEU4C909035 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 FEU4C909035 F4LC-SQ-H
 Description: 4 INCH 9000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

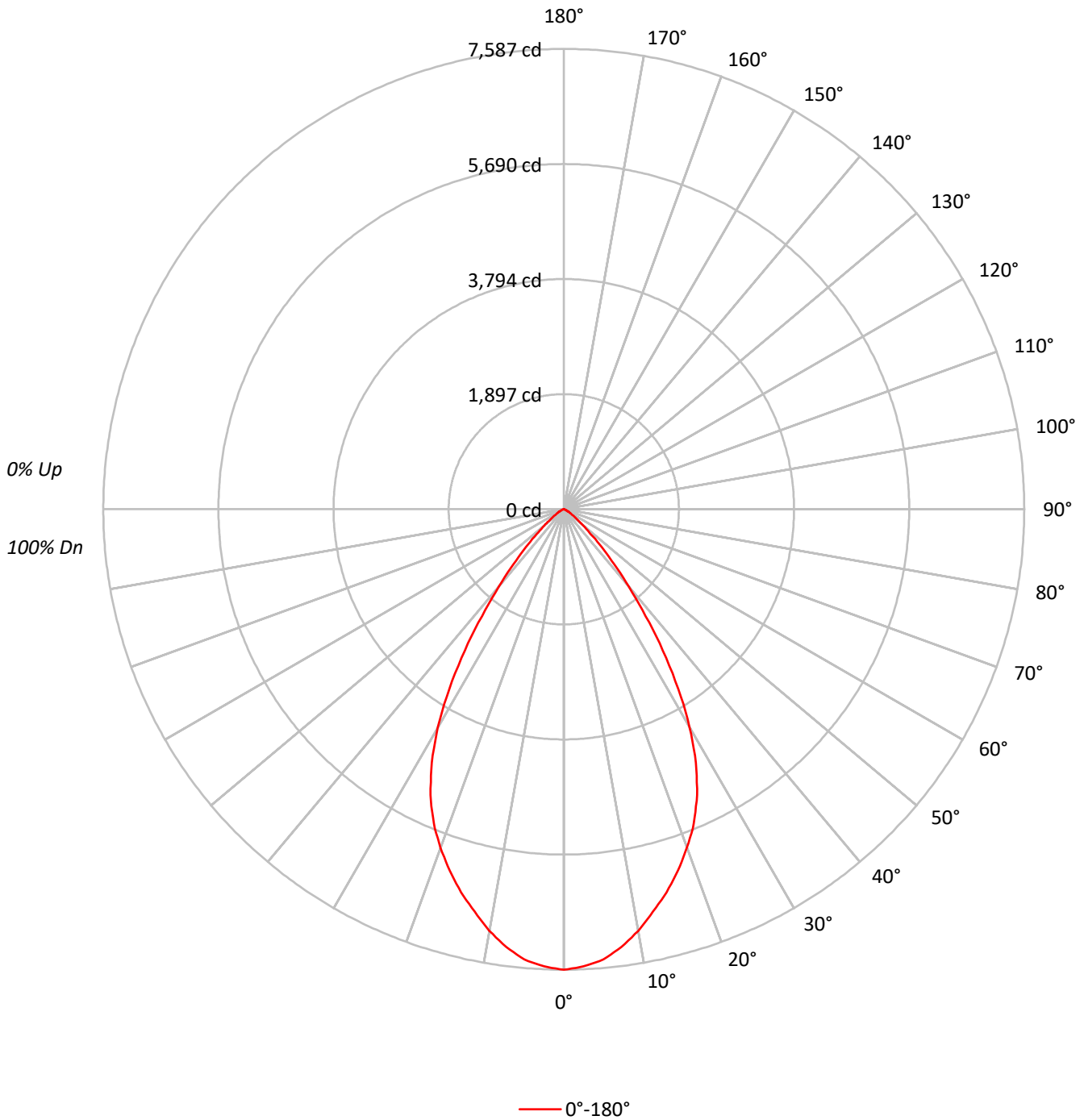
Lumens per Lamp: N/A
 Luminaire Lumens: 7652.1 lumens
 Efficiency: N/A
 Efficacy: 78.8 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 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°	732100
5°	721472
10°	691328
15°	652958
20°	609496
25°	553281
30°	461941
35°	334657
40°	209492
45°	119740
50°	62431
55°	34990
60°	22289
65°	13196
70°	9789
75°	4325
80°	6446
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	698.2	9.1
10°-20°	1831.6	23.9
20°-30°	2353.9	30.8
30°-40°	1771.0	23.1
40°-50°	711.3	9.3
50°-60°	202.2	2.6
60°-70°	64.0	0.8
70°-80°	18.3	0.2
80°-90°	1.6	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°	4883.7	63.8
0°-40°	6654.7	87.0
0°-60°	7568.2	98.9
0°-90°	7652.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7652.1	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	7587	
5°	7449	698
15°	6537	1832
25°	5197	2354
35°	2841	1771
45°	878	711
55°	208	202
65°	58	64
75°	12	18
85°	0	2
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	7587.4
2.5°	7541.2
5°	7448.8
7.5°	7275.5
10°	7056.0
12.5°	6790.8
15°	6536.6
17.5°	6247.8
20°	5935.8
22.5°	5601.3
25°	5196.9
27.5°	4711.7
30°	4146.1
32.5°	3510.7
35°	2841.1
37.5°	2217.2
40°	1663.2
42.5°	1224.1
45°	877.5
47.5°	600.8
50°	415.9
52.5°	288.8
55°	208.0
57.5°	150.2
60°	115.5
62.5°	80.9
65°	57.8
67.5°	46.2
70°	34.7
72.5°	23.1
75°	11.6
77.5°	11.6
80°	11.6
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)