

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 FEU4C909030 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 FEU4C909030 F4LC-SQ-H
 Description: 4 INCH 9000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

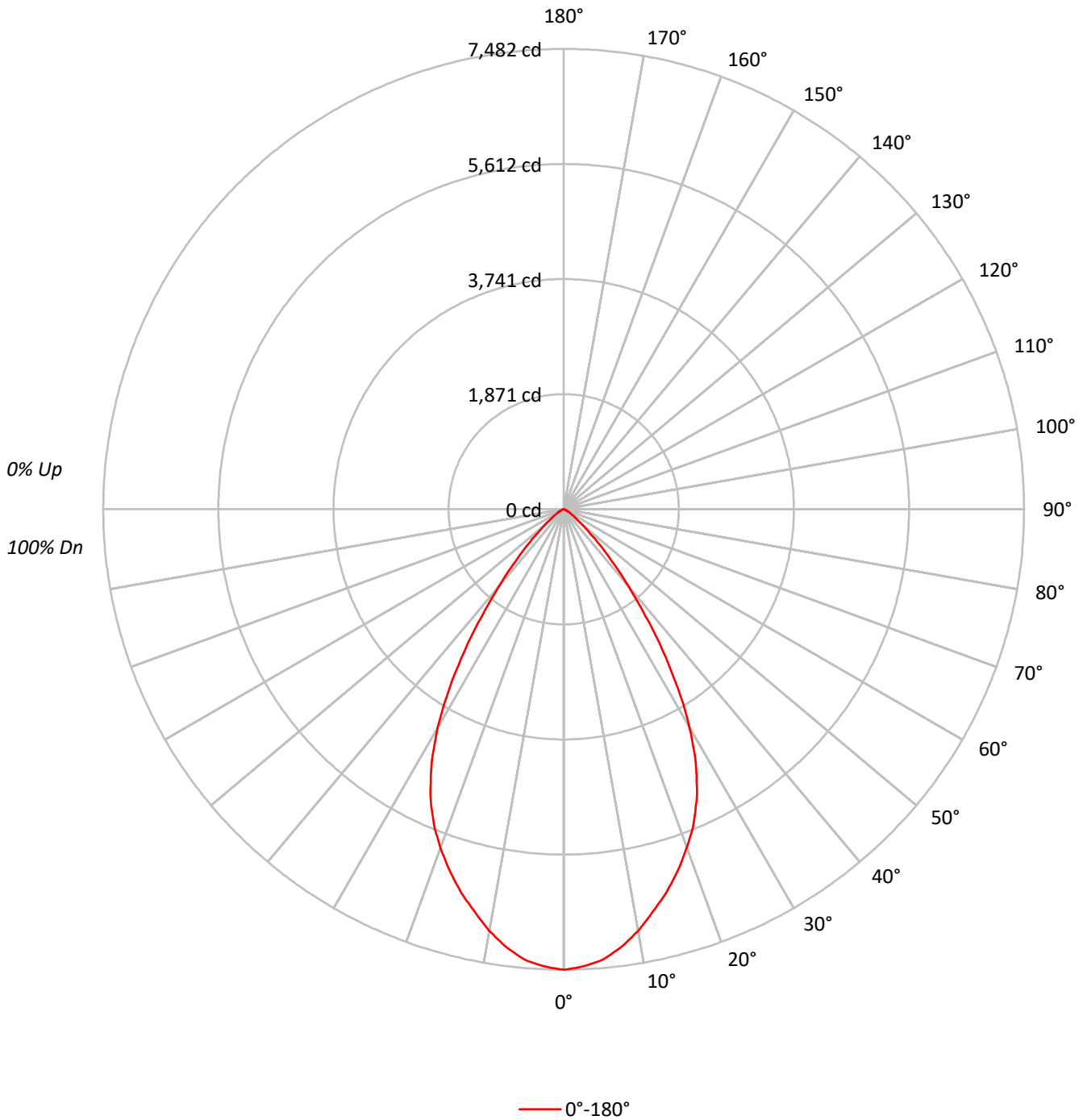
Lumens per Lamp: N/A
 Luminaire Lumens: 7546.0 lumens
 Efficiency: N/A
 Efficacy: 77.7 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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	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°	721959
5°	711476
10°	681746
15°	643908
20°	601055
25°	545616
30°	455546
35°	330016
40°	206583
45°	118089
50°	61575
55°	34503
60°	21980
65°	13014
70°	9648
75°	4250
80°	6334
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	688.5	9.1
10°-20°	1806.2	23.9
20°-30°	2321.3	30.8
30°-40°	1746.5	23.1
40°-50°	701.5	9.3
50°-60°	199.4	2.6
60°-70°	63.2	0.8
70°-80°	18.0	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°	4816.0	63.8
0°-40°	6562.5	87.0
0°-60°	7463.3	98.9
0°-90°	7546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7546.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	7482	
5°	7346	688
15°	6446	1806
25°	5125	2321
35°	2802	1746
45°	865	701
55°	205	199
65°	57	63
75°	11	18
85°	0	2
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	7482.3
2.5°	7436.8
5°	7345.6
7.5°	7174.7
10°	6958.2
12.5°	6696.7
15°	6446.0
17.5°	6161.2
20°	5853.6
22.5°	5523.7
25°	5124.9
27.5°	4646.4
30°	4088.7
32.5°	3462.0
35°	2801.7
37.5°	2186.5
40°	1640.1
42.5°	1207.2
45°	865.4
47.5°	592.5
50°	410.2
52.5°	284.8
55°	205.1
57.5°	148.1
60°	113.9
62.5°	79.8
65°	57.0
67.5°	45.6
70°	34.2
72.5°	22.8
75°	11.4
77.5°	11.4
80°	11.4
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)