

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: **FLDSQ4C45D010 FEU4C459030 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: FLDSQ4C45D010 FEU4C459030 F4LC-SQ-H
 Description: 4 INCH 4500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQ TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

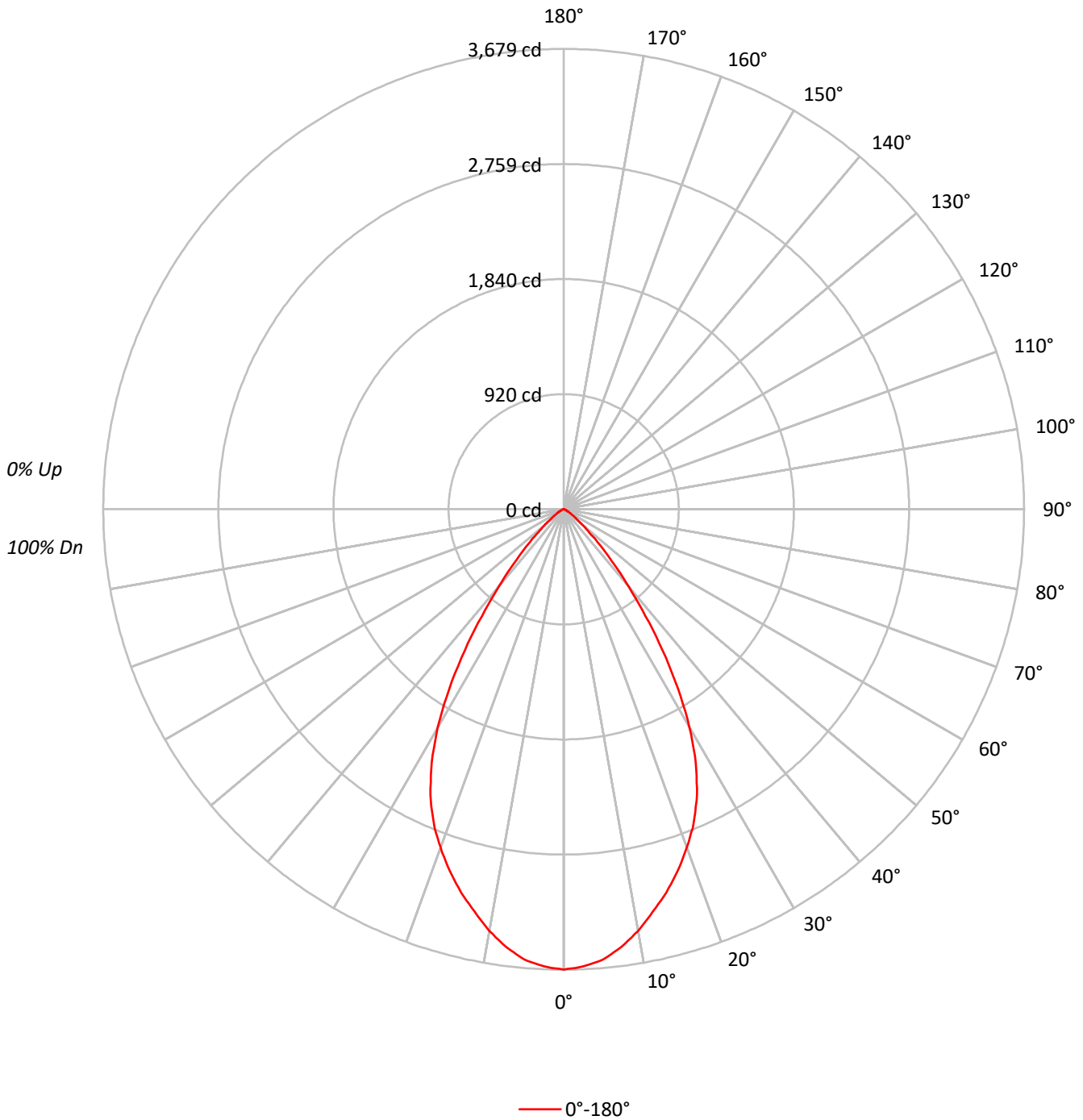
Lumens per Lamp: N/A
 Luminaire Lumens: 3710.0 lumens
 Efficiency: N/A
 Efficacy: 74.8 lumens/watt
 Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 49.6
 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°	354954
5°	349801
10°	335181
15°	316580
20°	295507
25°	268257
30°	223968
35°	162257
40°	101572
45°	58062
50°	30277
55°	16957
60°	10807
65°	6393
70°	4740
75°	2088
80°	3112
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.5	9.1
10°-20°	888.0	23.9
20°-30°	1141.3	30.8
30°-40°	858.7	23.1
40°-50°	344.9	9.3
50°-60°	98.0	2.6
60°-70°	31.0	0.8
70°-80°	8.8	0.2
80°-90°	0.8	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°	2367.8	63.8
0°-40°	3226.5	87.0
0°-60°	3669.4	98.9
0°-90°	3710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3710.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	3679	
5°	3612	338
15°	3169	888
25°	2520	1141
35°	1378	859
45°	426	345
55°	101	98
65°	28	31
75°	6	9
85°	0	1
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	3678.7
2.5°	3656.3
5°	3611.5
7.5°	3527.5
10°	3421.0
12.5°	3292.4
15°	3169.2
17.5°	3029.2
20°	2877.9
22.5°	2715.7
25°	2519.7
27.5°	2284.4
30°	2010.2
32.5°	1702.1
35°	1377.5
37.5°	1075.0
40°	806.4
42.5°	593.5
45°	425.5
47.5°	291.3
50°	201.7
52.5°	140.0
55°	100.8
57.5°	72.8
60°	56.0
62.5°	39.2
65°	28.0
67.5°	22.4
70°	16.8
72.5°	11.2
75°	5.6
77.5°	5.6
80°	5.6
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)