

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: **FLDSQ4C100D010 FEU4C1009035 F4LC-SQ-WLI**

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: FLDSQ4C100D010 FEU4C1009035 F4LC-SQ-WLI
 Description: 4 INCH 10000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

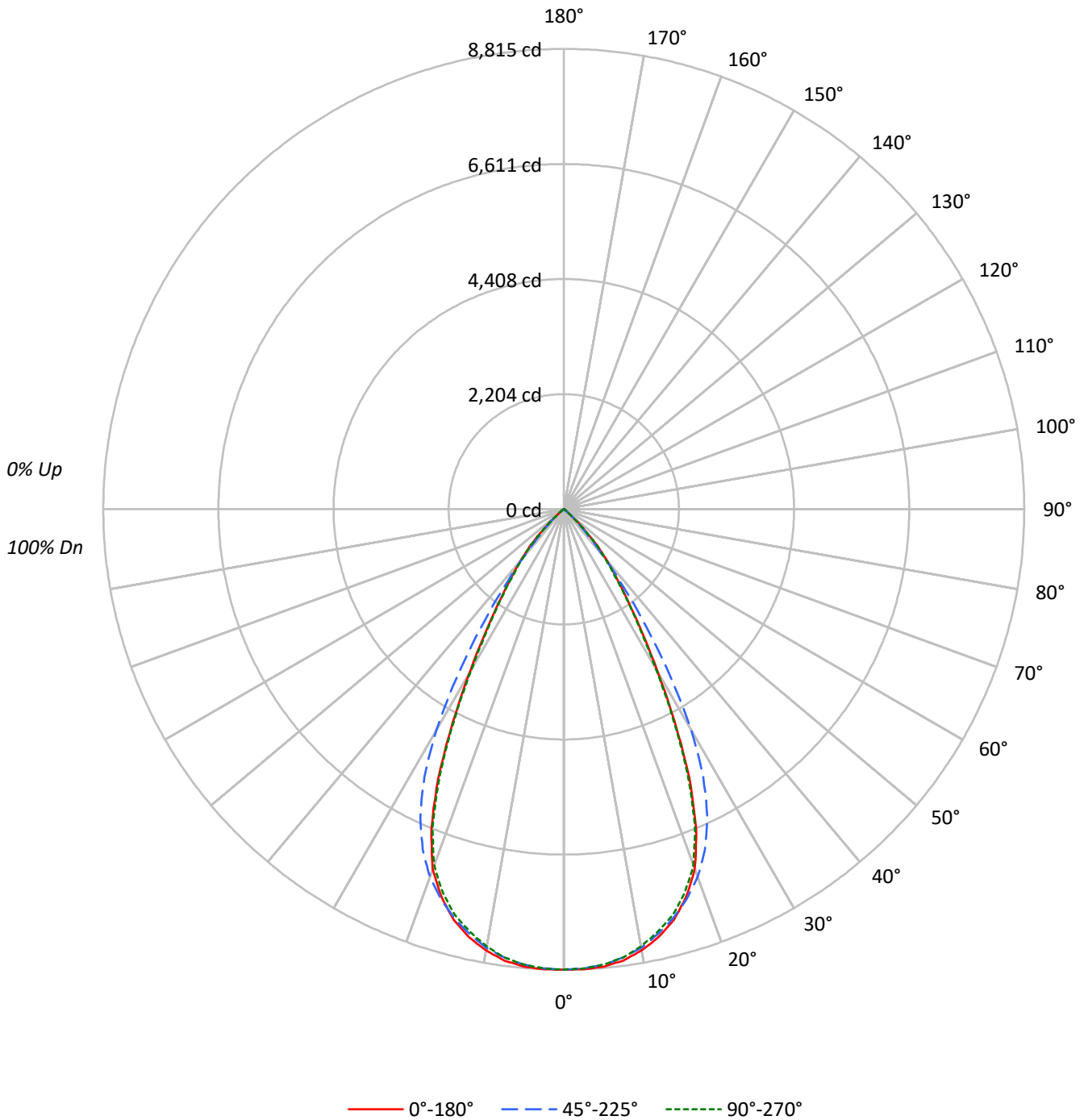
Lumens per Lamp: N/A
 Luminaire Lumens: 7890.0 lumens
 Efficiency: N/A
 Efficacy: 69.0 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 114.4
 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	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97	96	95	94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93	91	89	87
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		88	85	83	81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83	80	77	76
5	93	84	79	74	91	84	78	74	82	77	73		80	76	73		79	75	72	71
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		74	71	68	66
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		70	66	63	62
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		67	63	59	58
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		63	59	56	55
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		60	56	53	52

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	850386	850386	850386
5°	851280	847358	847358
10°	840097	835140	832553
15°	812827	808991	803527
20°	752777	769206	744470
25°	605268	691918	597293
30°	399492	542517	390022
35°	249694	325775	245159
40°	162951	150972	156578
45°	78462	60232	74041
50°	19754	24003	18539
55°	10901	9875	10564
60°	7430	6252	7024
65°	5091	4612	5091
70°	4006	3414	4006
75°	3020	3020	3020
80°	2223	3390	3390
85°	2214	4428	4428

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	828.8	10.5
10°-20°	2263.5	28.7
20°-30°	2697.4	34.2
30°-40°	1527.4	19.4
40°-50°	472.2	6.0
50°-60°	65.6	0.8
60°-70°	22.4	0.3
70°-80°	8.9	0.1
80°-90°	3.7	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°	5789.7	73.4
0°-40°	7317.1	92.7
0°-60°	7855.0	99.6
0°-90°	7890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7890.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8813	8813	8813	8813	8813	
5°	8789	8769	8748	8742	8748	832
15°	8137	8123	8099	8066	8044	2269
25°	5685	6017	6499	6027	5610	2535
35°	2120	2312	2766	2318	2081	1380
45°	575	670	441	652	543	475
55°	65	65	59	63	63	64
65°	22	22	20	22	22	23
75°	8	8	8	8	8	9
85°	2	4	4	4	4	3
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8813.3	8813.3	8813.3	8813.3	8813.3
2.5°	8815.3	8801.1	8797.1	8793.0	8801.1
5°	8789.0	8768.7	8748.5	8742.4	8748.5
7.5°	8714.1	8693.8	8659.4	8651.3	8657.4
10°	8574.4	8556.1	8523.8	8505.5	8497.4
12.5°	8390.1	8359.8	8329.4	8309.1	8288.9
15°	8137.0	8122.9	8098.6	8066.2	8043.9
17.5°	7786.8	7807.0	7821.2	7756.4	7697.7
20°	7331.2	7406.1	7491.2	7359.6	7250.3
22.5°	6620.6	6835.2	7051.8	6802.8	6559.8
25°	5685.2	6017.2	6499.1	6027.4	5610.3
27.5°	4593.9	5015.0	5774.3	5017.1	4533.2
30°	3585.6	4018.9	4869.3	3962.2	3500.6
32.5°	2753.5	3077.5	3804.3	3028.9	2694.8
35°	2119.8	2312.1	2765.7	2318.2	2081.3
37.5°	1648.1	1745.2	1860.6	1710.8	1599.5
40°	1293.7	1297.8	1198.6	1277.6	1243.1
42.5°	959.7	955.6	737.0	931.3	937.4
45°	575.0	670.2	441.4	651.9	542.6
47.5°	273.3	378.6	265.2	358.4	253.1
50°	131.6	182.2	159.9	170.1	123.5
52.5°	89.1	93.1	91.1	89.1	85.0
55°	64.8	64.8	58.7	62.8	62.8
57.5°	48.6	48.6	42.5	46.6	46.6
60°	38.5	36.4	32.4	36.4	36.4
62.5°	28.3	28.3	24.3	28.3	28.3
65°	22.3	22.3	20.2	22.3	22.3
67.5°	18.2	18.2	14.2	18.2	16.2
70°	14.2	14.2	12.1	14.2	14.2
72.5°	10.1	10.1	10.1	10.1	10.1
75°	8.1	8.1	8.1	8.1	8.1
77.5°	6.1	6.1	6.1	6.1	6.1
80°	4.0	4.0	6.1	6.1	6.1
82.5°	4.0	4.0	4.0	4.0	4.0
85°	2.0	4.0	4.0	4.0	4.0
87.5°	2.0	2.0	4.0	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)