

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: **FLDSQ4C10D010 FEU4C109050 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: FLDSQ4C10D010 FEU4C109050 F4LC-SQ-WLI
 Description: 4 INCH 1000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

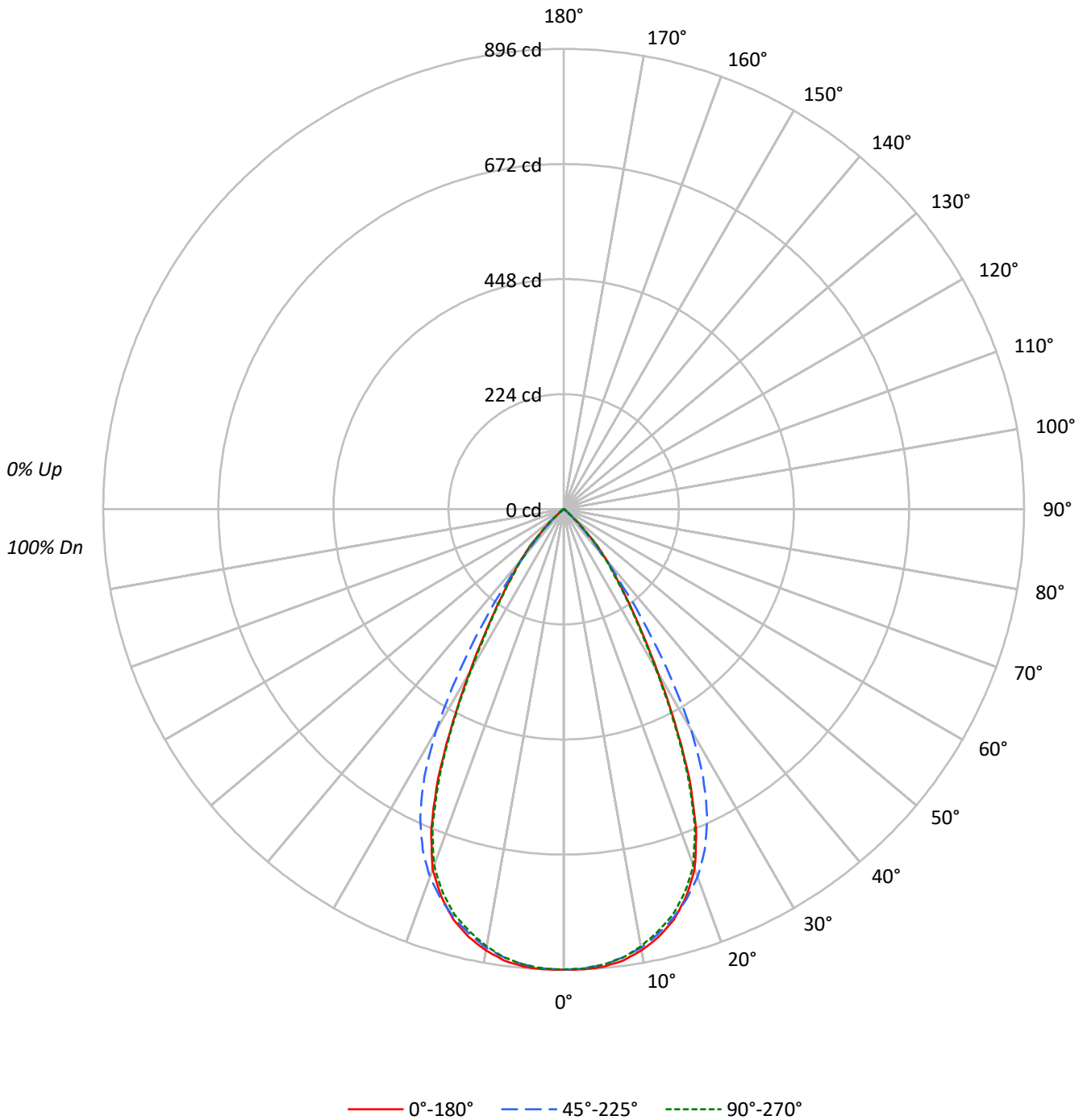
Lumens per Lamp: N/A
 Luminaire Lumens: 802.0 lumens
 Efficiency: N/A
 Efficacy: 81.8 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.8
 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94	
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	
5	93	84	79	74	91	84	78	74	82	77	73	80	76	73	79	75	72	71	71	71	71	
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	71	68	66	66	66	66	
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	59	58	58	58	58	
9	76	66	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	
10	72	63	57	53	71	62	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	86435	86435	86435
5°	86532	86135	86135
10°	85397	84888	84623
15°	82621	82232	81672
20°	76518	78192	75676
25°	61525	70330	60716
30°	40611	55140	39642
35°	25384	33111	24925
40°	16563	15342	15921
45°	7969	6127	7532
50°	2011	2447	1891
55°	1110	1009	1077
60°	753	637	714
65°	525	479	525
70°	395	339	395
75°	298	298	298
80°	222	333	333
85°	221	443	443

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	10.5
10°-20°	230.1	28.7
20°-30°	274.2	34.2
30°-40°	155.3	19.4
40°-50°	48.0	6.0
50°-60°	6.7	0.8
60°-70°	2.3	0.3
70°-80°	0.9	0.1
80°-90°	0.4	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°	588.5	73.4
0°-40°	743.8	92.7
0°-60°	798.4	99.6
0°-90°	802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	893	891	889	889	889	85
15°	827	826	823	820	818	231
25°	578	612	661	613	570	258
35°	216	235	281	236	212	140
45°	58	68	45	66	55	48
55°	7	7	6	6	6	6
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.8	895.8	895.8	895.8	895.8
2.5°	896.1	894.6	894.2	893.8	894.6
5°	893.4	891.3	889.3	888.6	889.3
7.5°	885.8	883.7	880.2	879.4	880.0
10°	871.6	869.7	866.4	864.6	863.7
12.5°	852.8	849.7	846.7	844.6	842.5
15°	827.1	825.7	823.2	819.9	817.6
17.5°	791.5	793.6	795.0	788.4	782.5
20°	745.2	752.8	761.5	748.1	737.0
22.5°	673.0	694.8	716.8	691.5	666.8
25°	577.9	611.6	660.6	612.7	570.3
27.5°	467.0	509.8	586.9	510.0	460.8
30°	364.5	408.5	494.9	402.8	355.8
32.5°	279.9	312.8	386.7	307.9	273.9
35°	215.5	235.0	281.1	235.6	211.6
37.5°	167.5	177.4	189.1	173.9	162.6
40°	131.5	131.9	121.8	129.9	126.4
42.5°	97.5	97.1	74.9	94.7	95.3
45°	58.4	68.1	44.9	66.3	55.2
47.5°	27.8	38.5	27.0	36.4	25.7
50°	13.4	18.5	16.3	17.3	12.6
52.5°	9.1	9.5	9.3	9.1	8.6
55°	6.6	6.6	6.0	6.4	6.4
57.5°	4.9	4.9	4.3	4.7	4.7
60°	3.9	3.7	3.3	3.7	3.7
62.5°	2.9	2.9	2.5	2.9	2.9
65°	2.3	2.3	2.1	2.3	2.3
67.5°	1.9	1.9	1.4	1.9	1.6
70°	1.4	1.4	1.2	1.4	1.4
72.5°	1.0	1.0	1.0	1.0	1.0
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.4	0.4	0.6	0.6	0.6
82.5°	0.4	0.4	0.4	0.4	0.4
85°	0.2	0.4	0.4	0.4	0.4
87.5°	0.2	0.2	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)