

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 FEU4C109035 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 FEU4C109035 F4LC-SQ-WLI
 Description: 4 INCH 1000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

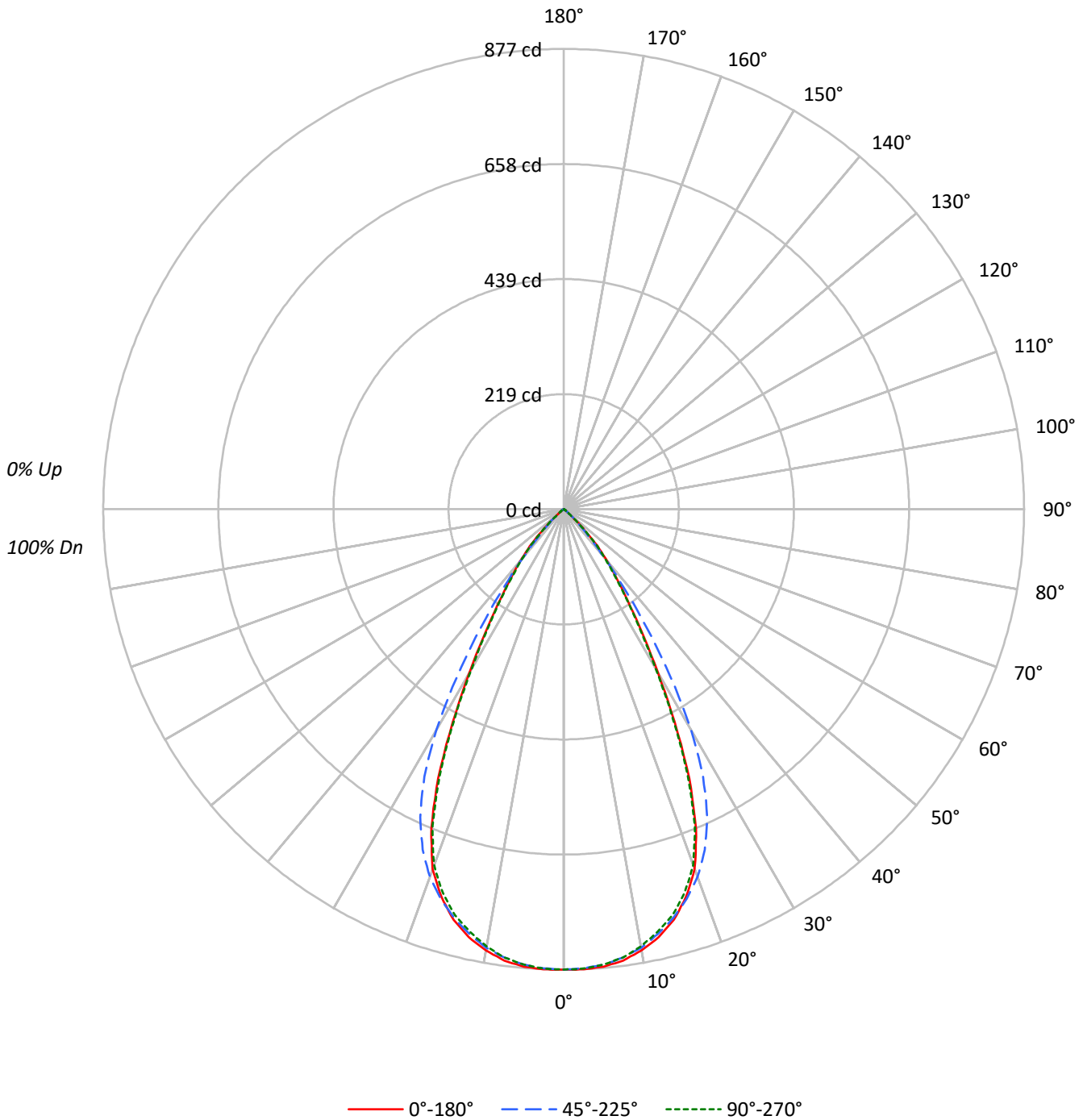
Lumens per Lamp: N/A
 Luminaire Lumens: 785.0 lumens
 Efficiency: N/A
 Efficacy: 80.1 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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°	84611	84611	84611
5°	84692	84305	84305
10°	83585	83095	82830
15°	80873	80494	79944
20°	74896	76528	74064
25°	60216	68839	59428
30°	39742	53981	38806
35°	24842	32416	24395
40°	16211	15027	15581
45°	7805	5990	7369
50°	1966	2387	1846
55°	1077	976	1043
60°	733	618	695
65°	502	457	502
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°	82.5	10.5
10°-20°	225.2	28.7
20°-30°	268.4	34.2
30°-40°	152.0	19.4
40°-50°	47.0	6.0
50°-60°	6.5	0.8
60°-70°	2.2	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°	576.0	73.4
0°-40°	728.0	92.7
0°-60°	781.5	99.6
0°-90°	785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	877	877	877	877	877	
5°	874	872	870	870	870	83
15°	810	808	806	802	800	226
25°	566	599	647	600	558	252
35°	211	230	275	231	207	137
45°	57	67	44	65	54	47
55°	6	6	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	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	876.9	876.9	876.9	876.9	876.9
2.5°	877.1	875.7	875.2	874.8	875.7
5°	874.4	872.4	870.4	869.8	870.4
7.5°	867.0	865.0	861.6	860.7	861.3
10°	853.1	851.3	848.1	846.2	845.4
12.5°	834.8	831.7	828.7	826.7	824.7
15°	809.6	808.2	805.8	802.5	800.3
17.5°	774.7	776.7	778.2	771.7	765.9
20°	729.4	736.9	745.3	732.2	721.3
22.5°	658.7	680.1	701.6	676.8	652.7
25°	565.6	598.7	646.6	599.7	558.2
27.5°	457.1	499.0	574.5	499.2	451.0
30°	356.7	399.9	484.5	394.2	348.3
32.5°	274.0	306.2	378.5	301.4	268.1
35°	210.9	230.0	275.2	230.6	207.1
37.5°	164.0	173.6	185.1	170.2	159.1
40°	128.7	129.1	119.3	127.1	123.7
42.5°	95.5	95.1	73.3	92.7	93.3
45°	57.2	66.7	43.9	64.9	54.0
47.5°	27.2	37.7	26.4	35.7	25.2
50°	13.1	18.1	15.9	16.9	12.3
52.5°	8.9	9.3	9.1	8.9	8.5
55°	6.4	6.4	5.8	6.2	6.2
57.5°	4.8	4.8	4.2	4.6	4.6
60°	3.8	3.6	3.2	3.6	3.6
62.5°	2.8	2.8	2.4	2.8	2.8
65°	2.2	2.2	2.0	2.2	2.2
67.5°	1.8	1.8	1.4	1.8	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)