

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: **FLDSQ4C05D010 FEU4C059040 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: FLDSQ4C05D010 FEU4C059040 F4LC-SQ-WLI
 Description: 4 INCH 500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

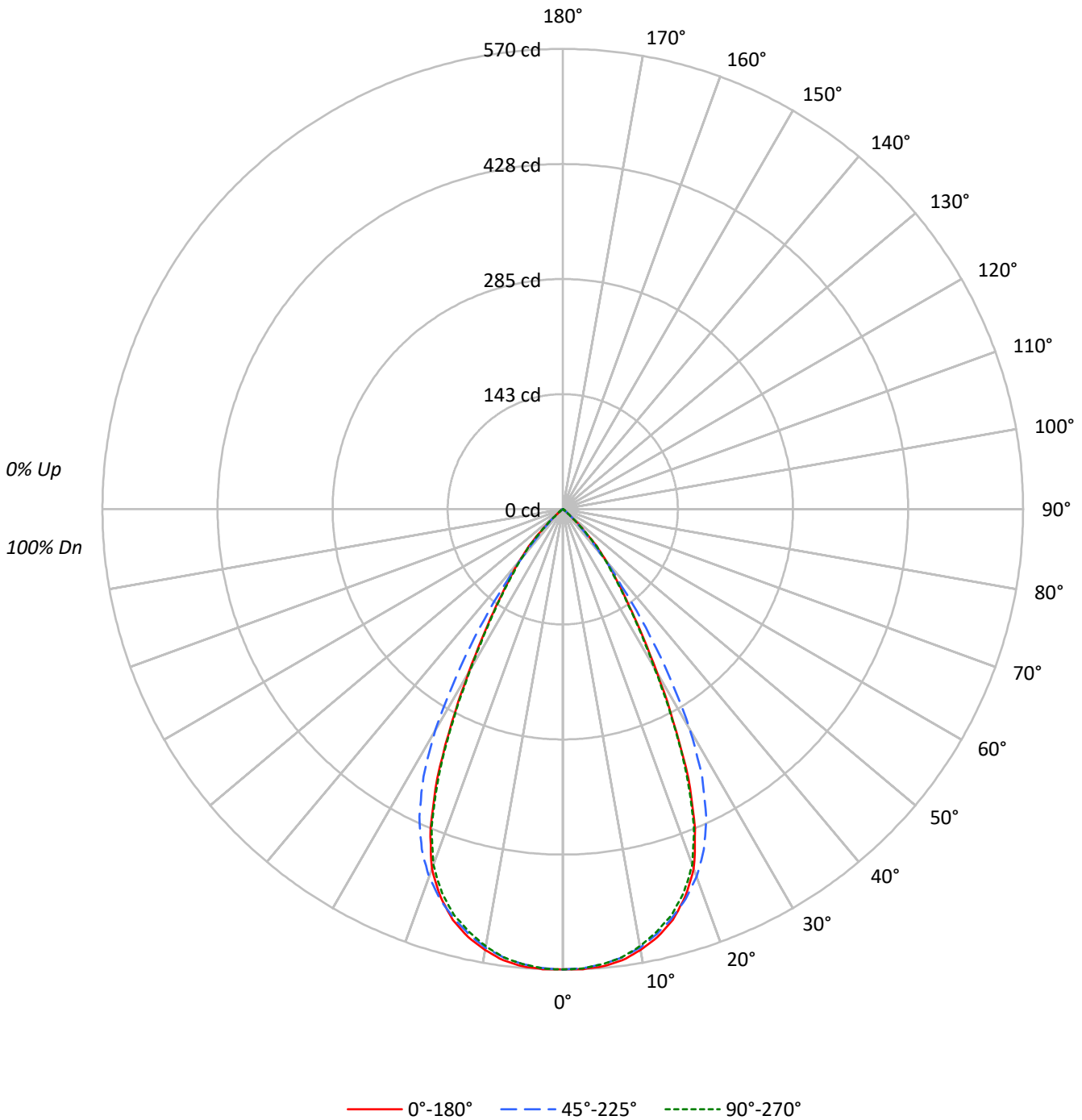
Lumens per Lamp: N/A
 Luminaire Lumens: 510.0 lumens
 Efficiency: N/A
 Efficacy: 70.8 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 7.2
 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	101	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	83	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	70	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°	54970	54970	54970
5°	55025	54773	54773
10°	54299	53986	53819
15°	52544	52294	51934
20°	48661	49718	48116
25°	39125	44725	38604
30°	25826	35063	25213
35°	16137	21061	15843
40°	10530	9762	10127
45°	5076	3889	4790
50°	1276	1546	1201
55°	707	639	690
60°	482	405	463
65°	320	297	320
70°	254	226	254
75°	186	186	186
80°	167	222	222
85°	111	332	332

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	10.5
10°-20°	146.3	28.7
20°-30°	174.4	34.2
30°-40°	98.7	19.4
40°-50°	30.5	6.0
50°-60°	4.2	0.8
60°-70°	1.4	0.3
70°-80°	0.6	0.1
80°-90°	0.3	0.1
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°	374.2	73.4
0°-40°	473.0	92.7
0°-60°	507.7	99.6
0°-90°	510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	510.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	568	567	566	565	566	54
15°	526	525	524	521	520	147
25°	368	389	420	390	363	164
35°	137	150	179	150	134	89
45°	37	43	28	42	35	31
55°	4	4	4	4	4	4
65°	1	1	1	1	1	2
75°	0	0	0	0	0	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°	569.7	569.7	569.7	569.7	569.7
2.5°	569.8	568.9	568.6	568.4	568.9
5°	568.1	566.8	565.5	565.1	565.5
7.5°	563.3	562.0	559.7	559.2	559.6
10°	554.2	553.1	551.0	549.8	549.3
12.5°	542.3	540.4	538.4	537.1	535.8
15°	526.0	525.1	523.5	521.4	519.9
17.5°	503.3	504.6	505.6	501.4	497.6
20°	473.9	478.7	484.2	475.7	468.6
22.5°	427.9	441.8	455.8	439.7	424.0
25°	367.5	388.9	420.1	389.6	362.6
27.5°	296.9	324.2	373.2	324.3	293.0
30°	231.8	259.8	314.7	256.1	226.3
32.5°	178.0	198.9	245.9	195.8	174.2
35°	137.0	149.5	178.8	149.8	134.5
37.5°	106.5	112.8	120.3	110.6	103.4
40°	83.6	83.9	77.5	82.6	80.4
42.5°	62.0	61.8	47.6	60.2	60.6
45°	37.2	43.3	28.5	42.1	35.1
47.5°	17.7	24.5	17.1	23.2	16.4
50°	8.5	11.8	10.3	11.0	8.0
52.5°	5.8	6.0	5.9	5.8	5.5
55°	4.2	4.2	3.8	4.1	4.1
57.5°	3.1	3.1	2.7	3.0	3.0
60°	2.5	2.4	2.1	2.4	2.4
62.5°	1.8	1.8	1.6	1.8	1.8
65°	1.4	1.4	1.3	1.4	1.4
67.5°	1.2	1.2	0.9	1.2	1.0
70°	0.9	0.9	0.8	0.9	0.9
72.5°	0.7	0.7	0.7	0.7	0.7
75°	0.5	0.5	0.5	0.5	0.5
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.3	0.3	0.4	0.4	0.4
82.5°	0.3	0.3	0.3	0.3	0.3
85°	0.1	0.3	0.3	0.3	0.3
87.5°	0.1	0.1	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)