

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 FEU4C1009050 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 FEU4C1009050 F4LC-SQ-WLI
 Description: 4 INCH 10000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

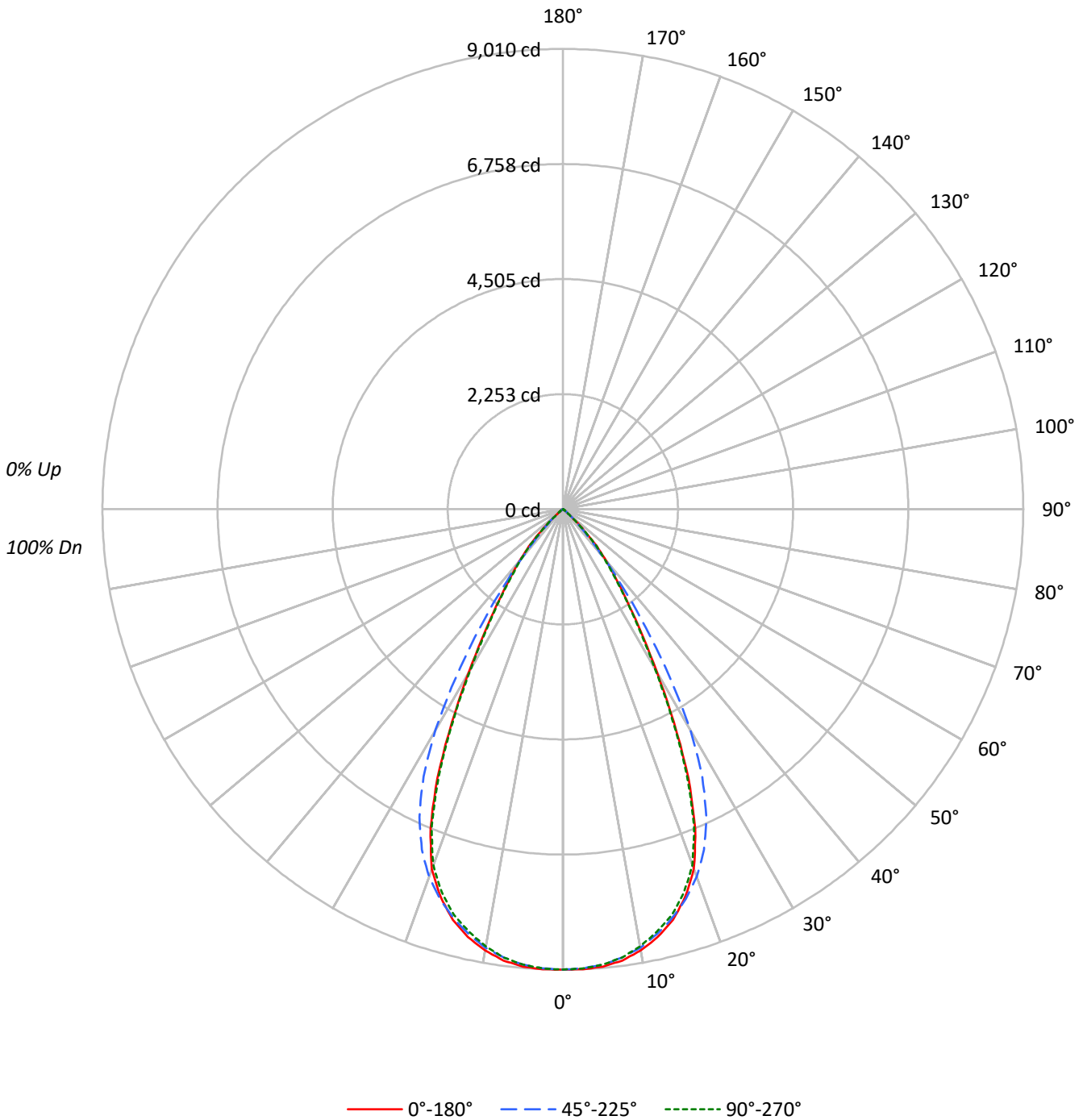
Lumens per Lamp: N/A
 Luminaire Lumens: 8064.0 lumens
 Efficiency: N/A
 Efficacy: 70.5 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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°	869133	869133	869133
5°	870051	866041	866041
10°	858625	853550	850914
15°	830757	826831	821247
20°	769381	786169	760879
25°	618618	707175	610463
30°	408305	554483	398623
35°	255206	332960	250565
40°	166553	154298	160029
45°	80195	61555	75678
50°	20190	24543	18944
55°	11136	10093	10783
60°	7584	6388	7179
65°	5206	4726	5206
70°	4091	3498	4091
75°	3094	3094	3094
80°	2278	3445	3445
85°	2325	4539	4539

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	847.1	10.5
10°-20°	2313.4	28.7
20°-30°	2756.9	34.2
30°-40°	1561.1	19.4
40°-50°	482.6	6.0
50°-60°	67.0	0.8
60°-70°	22.9	0.3
70°-80°	9.1	0.1
80°-90°	3.8	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°	5917.4	73.4
0°-40°	7478.5	92.7
0°-60°	8028.2	99.6
0°-90°	8064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9008	9008	9008	9008	9008	
5°	8983	8962	8941	8935	8941	851
15°	8316	8302	8277	8244	8221	2319
25°	5811	6150	6642	6160	5734	2591
35°	2167	2363	2827	2369	2127	1410
45°	588	685	451	666	555	485
55°	66	66	60	64	64	65
65°	23	23	21	23	23	24
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°	9007.6	9007.6	9007.6	9007.6	9007.6
2.5°	9009.7	8995.2	8991.1	8986.9	8995.2
5°	8982.8	8962.1	8941.4	8935.2	8941.4
7.5°	8906.2	8885.5	8850.4	8842.1	8848.3
10°	8763.5	8744.8	8711.7	8693.1	8684.8
12.5°	8575.2	8544.1	8513.1	8492.4	8471.7
15°	8316.5	8302.0	8277.2	8244.1	8221.3
17.5°	7958.5	7979.2	7993.7	7927.5	7867.5
20°	7492.9	7569.5	7656.4	7521.9	7410.1
22.5°	6766.6	6985.9	7207.4	6952.8	6704.5
25°	5810.6	6149.9	6642.4	6160.3	5734.0
27.5°	4695.2	5125.6	5901.6	5127.7	4633.1
30°	3664.7	4107.5	4976.7	4049.6	3577.8
32.5°	2814.2	3145.3	3888.2	3095.7	2754.2
35°	2166.6	2363.1	2826.7	2369.3	2127.2
37.5°	1684.4	1783.7	1901.7	1748.6	1634.7
40°	1322.3	1326.4	1225.0	1305.7	1270.5
42.5°	980.8	976.7	753.2	951.9	958.1
45°	587.7	684.9	451.1	666.3	554.6
47.5°	279.4	387.0	271.1	366.3	258.7
50°	134.5	186.2	163.5	173.8	126.2
52.5°	91.0	95.2	93.1	91.0	86.9
55°	66.2	66.2	60.0	64.1	64.1
57.5°	49.7	49.7	43.5	47.6	47.6
60°	39.3	37.2	33.1	37.2	37.2
62.5°	29.0	29.0	24.8	29.0	29.0
65°	22.8	22.8	20.7	22.8	22.8
67.5°	18.6	18.6	14.5	18.6	16.6
70°	14.5	14.5	12.4	14.5	14.5
72.5°	10.3	10.3	10.3	10.3	10.3
75°	8.3	8.3	8.3	8.3	8.3
77.5°	6.2	6.2	6.2	6.2	6.2
80°	4.1	4.1	6.2	6.2	6.2
82.5°	4.1	4.1	4.1	4.1	4.1
85°	2.1	4.1	4.1	4.1	4.1
87.5°	2.1	2.1	4.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)