

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: **FLDSQ4C35D010 FEU4C359050 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: FLDSQ4C35D010 FEU4C359050 F4LC-SQ-WLI
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND F4LC-SQW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

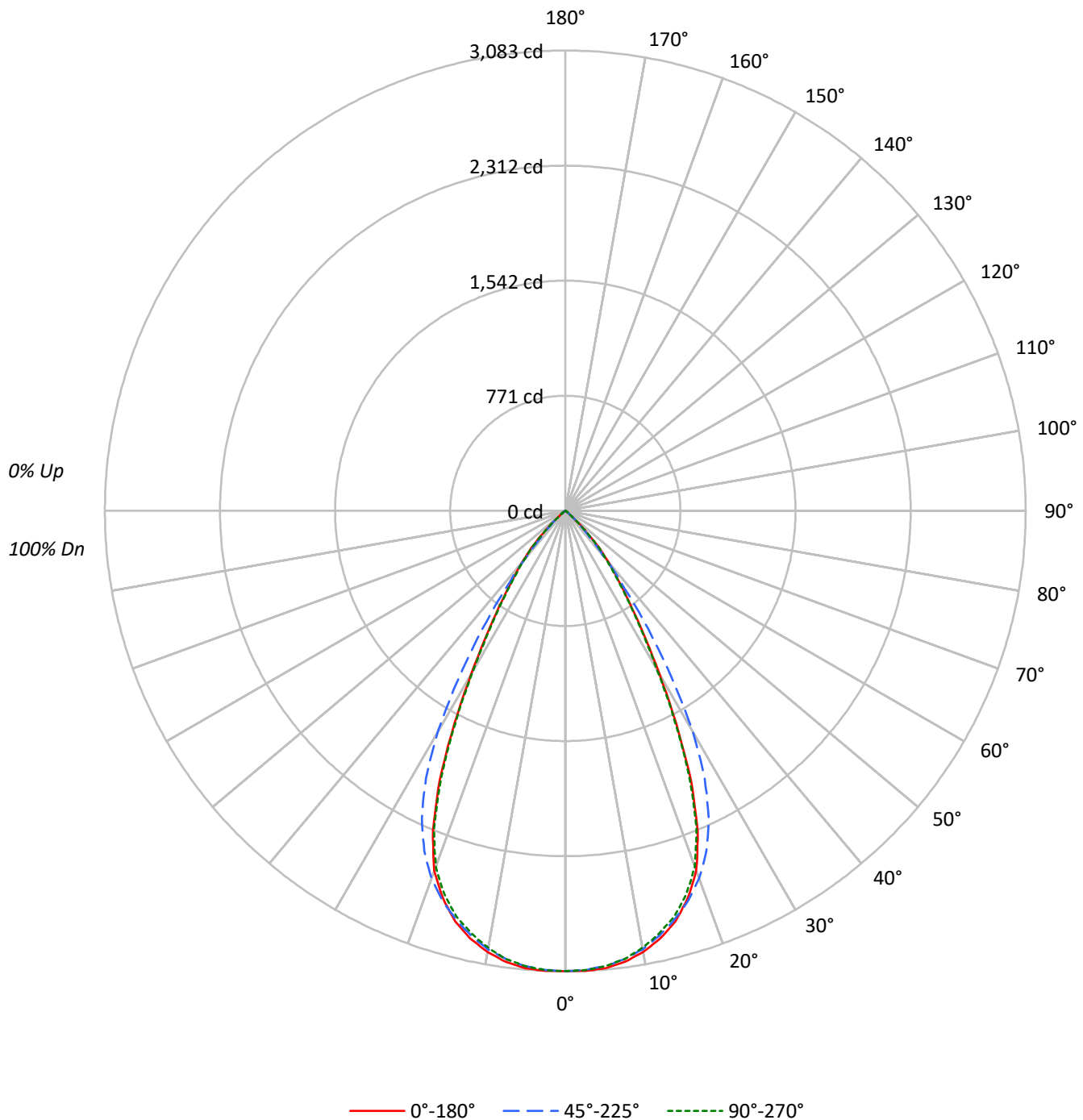
Lumens per Lamp: N/A
Luminaire Lumens: 2759.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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
RW	70	50	30	10	70	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		100
1	114	111	108	106	111	109	106	104	105	103	101		101	100	98		94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		87
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		76
5	93	84	79	74	91	84	78	74	82	77	73		80	76	73		71
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		66
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		62
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		58
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		55
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		52

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	297369	297369	297369
5°	297682	296306	296306
10°	293766	292031	291130
15°	284235	282886	280978
20°	263234	268974	260328
25°	211650	241949	208861
30°	139693	189708	136384
35°	87319	113916	85728
40°	56983	52789	54754
45°	27441	21055	25886
50°	6905	8391	6485
55°	3819	3449	3684
60°	2605	2181	2451
65°	1781	1621	1781
70°	1411	1185	1411
75°	1044	1044	1044
80°	778	1167	1167
85°	775	1550	1550

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.8	10.5
10°-20°	791.5	28.7
20°-30°	943.2	34.2
30°-40°	534.1	19.4
40°-50°	165.1	6.0
50°-60°	22.9	0.8
60°-70°	7.8	0.3
70°-80°	3.1	0.1
80°-90°	1.3	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°	2024.6	73.4
0°-40°	2558.7	92.7
0°-60°	2746.7	99.6
0°-90°	2759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3082	3082	3082	3082	3082	
5°	3073	3066	3059	3057	3059	291
15°	2845	2840	2832	2821	2813	793
25°	1988	2104	2273	2108	1962	886
35°	741	808	967	811	728	482
45°	201	234	154	228	190	166
55°	23	23	20	22	22	22
65°	8	8	7	8	8	8
75°	3	3	3	3	3	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3081.9	3081.9	3081.9	3081.9	3081.9
2.5°	3082.6	3077.6	3076.2	3074.8	3077.6
5°	3073.4	3066.3	3059.2	3057.1	3059.2
7.5°	3047.2	3040.1	3028.0	3025.2	3027.3
10°	2998.3	2991.9	2980.6	2974.2	2971.4
12.5°	2933.9	2923.3	2912.6	2905.6	2898.5
15°	2845.4	2840.4	2831.9	2820.6	2812.8
17.5°	2722.9	2730.0	2734.9	2712.3	2691.8
20°	2563.6	2589.8	2619.5	2573.5	2535.3
22.5°	2315.1	2390.2	2465.9	2378.8	2293.9
25°	1988.0	2104.1	2272.6	2107.7	1961.8
27.5°	1606.4	1753.7	2019.2	1754.4	1585.2
30°	1253.8	1405.3	1702.7	1385.5	1224.1
32.5°	962.9	1076.1	1330.3	1059.1	942.3
35°	741.3	808.5	967.1	810.6	727.8
37.5°	576.3	610.3	650.6	598.2	559.3
40°	452.4	453.8	419.1	446.7	434.7
42.5°	335.6	334.2	257.7	325.7	327.8
45°	201.1	234.3	154.3	228.0	189.7
47.5°	95.6	132.4	92.7	125.3	88.5
50°	46.0	63.7	55.9	59.5	43.2
52.5°	31.2	32.6	31.9	31.2	29.7
55°	22.7	22.7	20.5	21.9	21.9
57.5°	17.0	17.0	14.9	16.3	16.3
60°	13.5	12.7	11.3	12.7	12.7
62.5°	9.9	9.9	8.5	9.9	9.9
65°	7.8	7.8	7.1	7.8	7.8
67.5°	6.4	6.4	5.0	6.4	5.7
70°	5.0	5.0	4.2	5.0	5.0
72.5°	3.5	3.5	3.5	3.5	3.5
75°	2.8	2.8	2.8	2.8	2.8
77.5°	2.1	2.1	2.1	2.1	2.1
80°	1.4	1.4	2.1	2.1	2.1
82.5°	1.4	1.4	1.4	1.4	1.4
85°	0.7	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)