

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 FEU4C359035 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 FEU4C359035 F4LC-SQ-WLI
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND F4LC-SQW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

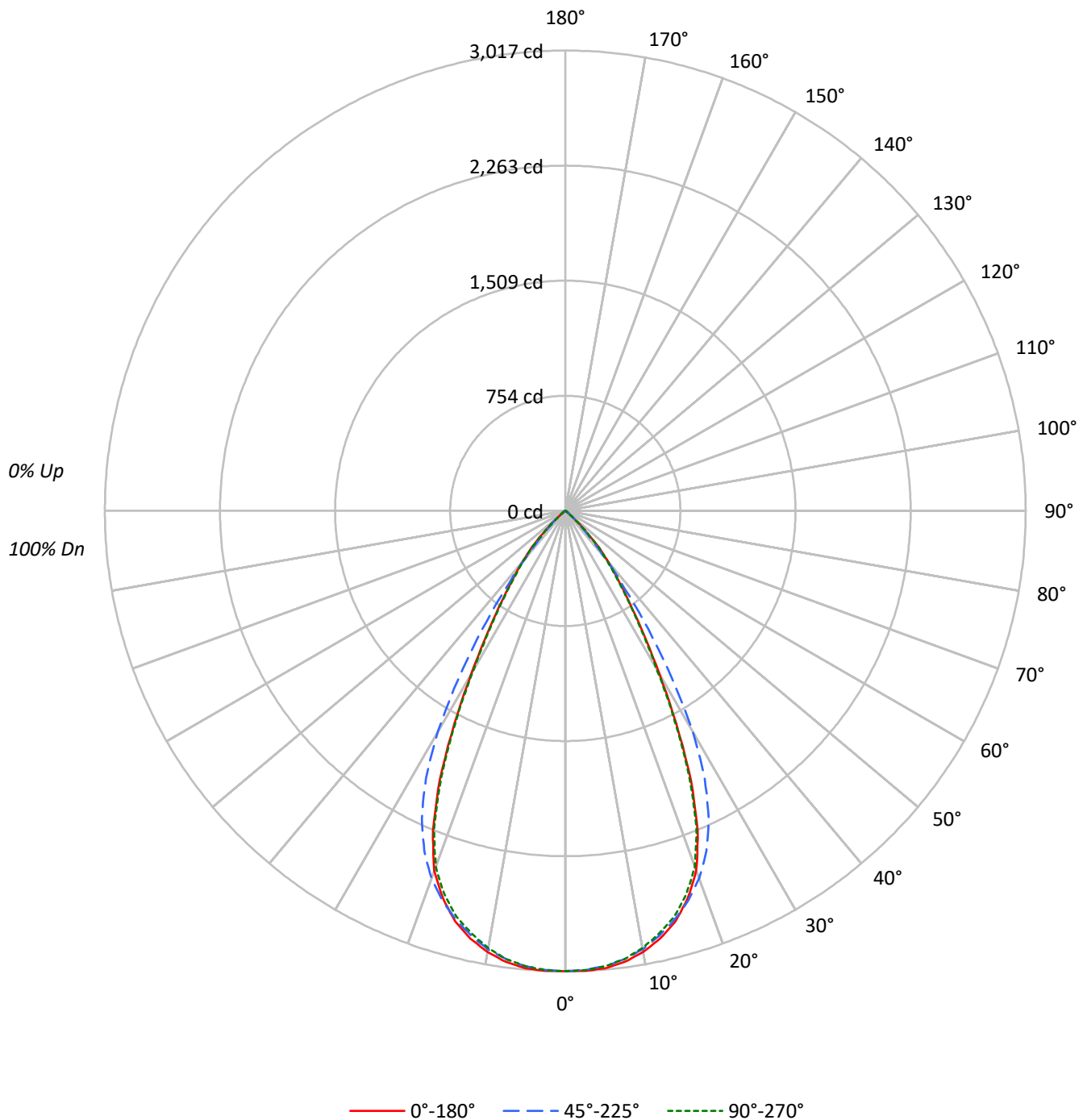
Lumens per Lamp: N/A
Luminaire Lumens: 2700.0 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	291001	291001	291001
5°	291309	289972	289972
10°	287485	285790	284908
15°	278151	276843	274975
20°	257607	263224	254763
25°	207125	236775	204400
30°	136707	185652	133465
35°	85446	111478	83891
40°	55761	51668	53582
45°	26855	20605	25340
50°	6755	8211	6350
55°	3735	3381	3617
60°	2547	2142	2412
65°	1735	1575	1735
70°	1354	1185	1354
75°	1044	1044	1044
80°	778	1167	1167
85°	775	1550	1550

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.6	10.5
10°-20°	774.6	28.7
20°-30°	923.1	34.2
30°-40°	522.7	19.4
40°-50°	161.6	6.0
50°-60°	22.5	0.8
60°-70°	7.6	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°	1981.3	73.4
0°-40°	2504.0	92.7
0°-60°	2688.0	99.6
0°-90°	2700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2700.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3016	3016	3016	3016	3016	
5°	3008	3001	2994	2992	2994	285
15°	2784	2780	2771	2760	2753	776
25°	1946	2059	2224	2063	1920	867
35°	725	791	946	793	712	472
45°	197	229	151	223	186	162
55°	22	22	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°	3015.9	3015.9	3015.9	3015.9	3015.9
2.5°	3016.6	3011.8	3010.4	3009.0	3011.8
5°	3007.6	3000.7	2993.8	2991.7	2993.8
7.5°	2982.0	2975.1	2963.3	2960.5	2962.6
10°	2934.2	2928.0	2916.9	2910.6	2907.9
12.5°	2871.1	2860.8	2850.4	2843.4	2836.5
15°	2784.5	2779.7	2771.4	2760.3	2752.7
17.5°	2664.7	2671.6	2676.5	2654.3	2634.2
20°	2508.8	2534.4	2563.5	2518.5	2481.1
22.5°	2265.6	2339.0	2413.2	2328.0	2244.8
25°	1945.5	2059.1	2224.0	2062.6	1919.9
27.5°	1572.1	1716.2	1976.0	1716.9	1551.3
30°	1227.0	1375.3	1666.3	1355.9	1197.9
32.5°	942.3	1053.1	1301.9	1036.5	922.2
35°	725.4	791.2	946.4	793.3	712.2
37.5°	564.0	597.2	636.7	585.5	547.3
40°	442.7	444.1	410.2	437.2	425.4
42.5°	328.4	327.0	252.2	318.7	320.8
45°	196.8	229.3	151.0	223.1	185.7
47.5°	93.5	129.6	90.8	122.6	86.6
50°	45.0	62.4	54.7	58.2	42.3
52.5°	30.5	31.9	31.2	30.5	29.1
55°	22.2	22.2	20.1	21.5	21.5
57.5°	16.6	16.6	14.5	15.9	15.9
60°	13.2	12.5	11.1	12.5	12.5
62.5°	9.7	9.7	8.3	9.7	9.7
65°	7.6	7.6	6.9	7.6	7.6
67.5°	6.2	6.2	4.8	6.2	5.5
70°	4.8	4.8	4.2	4.8	4.8
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)