

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 FEU4C359040 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 FEU4C359040 F4LC-SQ-WLI
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND F4LC-SQW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

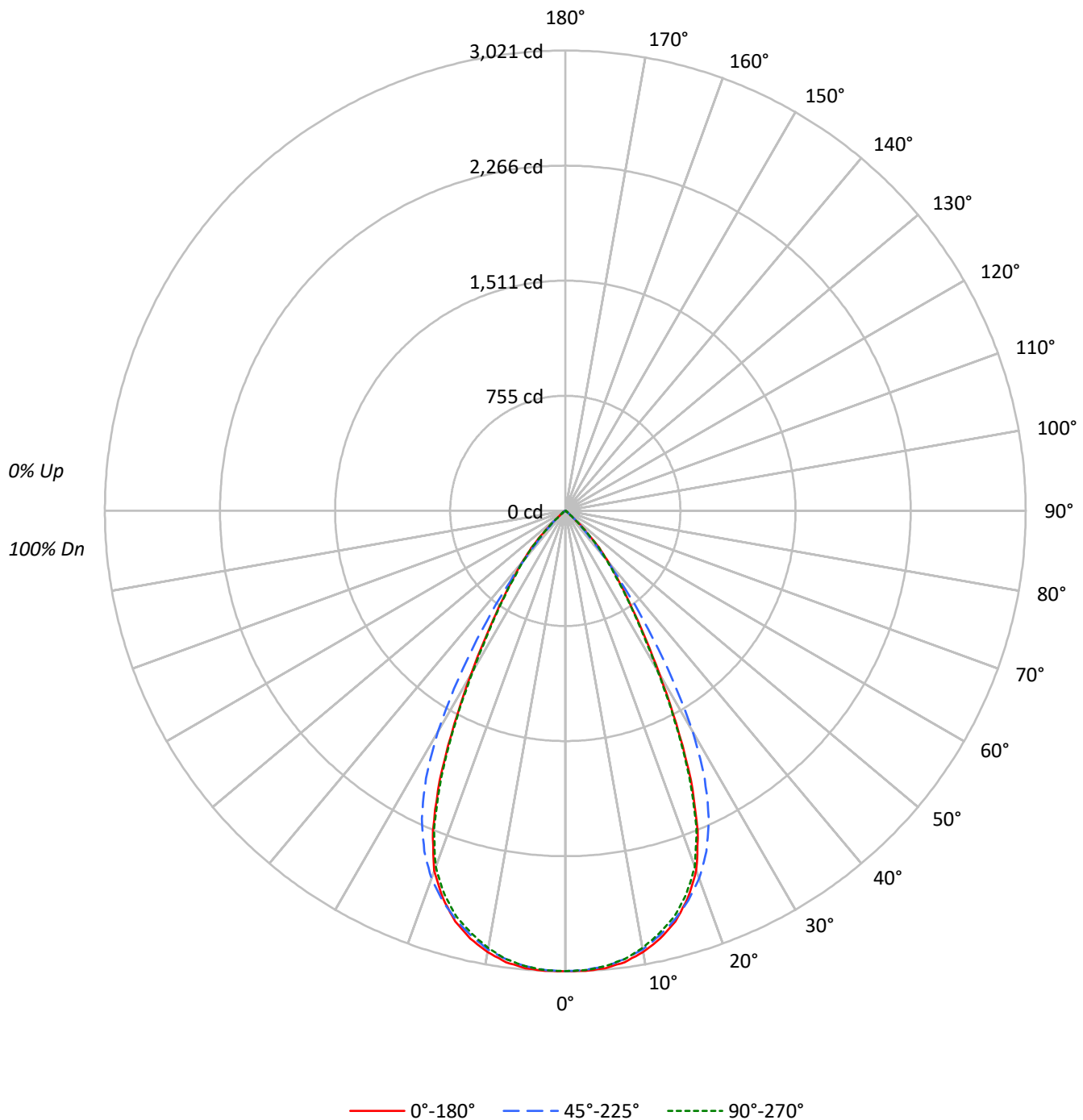
Lumens per Lamp: N/A
Luminaire Lumens: 2704.0 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	291435	291435	291435
5°	291744	290398	290398
10°	287907	286212	285330
15°	278571	277252	275374
20°	257987	263614	255132
25°	207434	237127	204698
30°	136908	185931	133666
35°	85575	111642	84020
40°	55849	51743	53658
45°	26895	20646	25381
50°	6770	8226	6350
55°	3735	3381	3617
60°	2547	2142	2412
65°	1735	1575	1735
70°	1382	1185	1382
75°	1044	1044	1044
80°	778	1167	1167
85°	775	1550	1550

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.1	10.5
10°-20°	775.7	28.7
20°-30°	924.4	34.2
30°-40°	523.5	19.4
40°-50°	161.8	6.0
50°-60°	22.5	0.8
60°-70°	7.7	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°	1984.2	73.4
0°-40°	2507.7	92.7
0°-60°	2692.0	99.6
0°-90°	2704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3020	3020	3020	3020	3020	
5°	3012	3005	2998	2996	2998	285
15°	2789	2784	2776	2764	2757	778
25°	1948	2062	2227	2066	1923	869
35°	726	792	948	794	713	473
45°	197	230	151	223	186	163
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°	3020.4	3020.4	3020.4	3020.4	3020.4
2.5°	3021.1	3016.3	3014.9	3013.5	3016.3
5°	3012.1	3005.2	2998.2	2996.1	2998.2
7.5°	2986.4	2979.5	2967.7	2964.9	2967.0
10°	2938.5	2932.3	2921.2	2914.9	2912.2
12.5°	2875.4	2865.0	2854.6	2847.6	2840.7
15°	2788.7	2783.8	2775.5	2764.4	2756.7
17.5°	2668.6	2675.6	2680.4	2658.2	2638.1
20°	2512.5	2538.2	2567.3	2522.2	2484.7
22.5°	2269.0	2342.5	2416.8	2331.4	2248.1
25°	1948.4	2062.2	2227.3	2065.7	1922.7
27.5°	1574.4	1718.7	1978.9	1719.4	1553.6
30°	1228.8	1377.3	1668.8	1357.9	1199.7
32.5°	943.7	1054.7	1303.8	1038.0	923.5
35°	726.5	792.4	947.8	794.5	713.3
37.5°	564.8	598.1	637.7	586.3	548.2
40°	443.4	444.8	410.8	437.8	426.0
42.5°	328.9	327.5	252.6	319.2	321.3
45°	197.1	229.7	151.3	223.4	186.0
47.5°	93.7	129.8	90.9	122.8	86.7
50°	45.1	62.4	54.8	58.3	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°	16.7	16.7	14.6	16.0	16.0
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	4.9	6.2	5.6
70°	4.9	4.9	4.2	4.9	4.9
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)