

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 FEU4C359030 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 FEU4C359030 F4LC-SQ-WLI
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND F4LC-SQW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

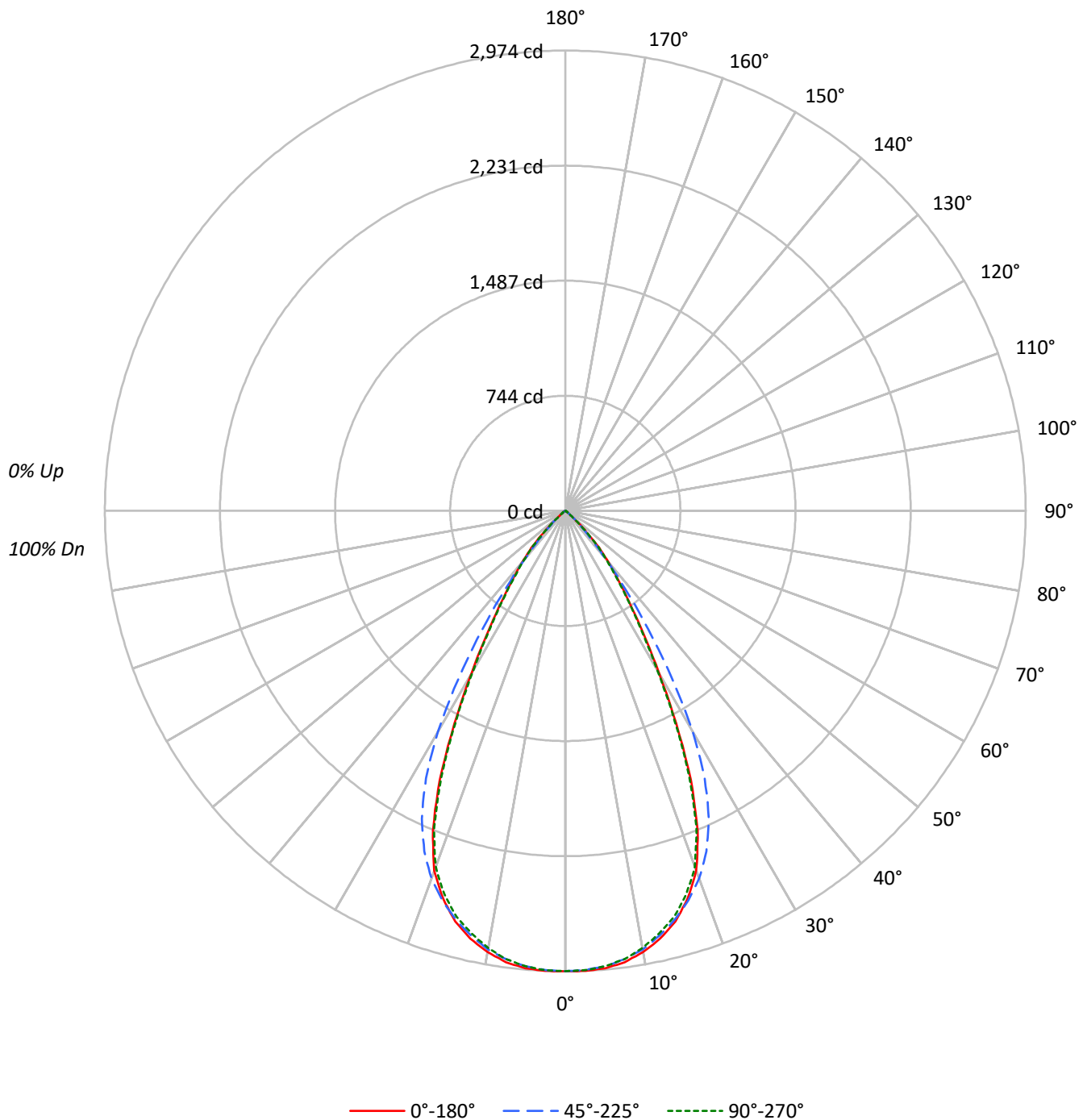
Lumens per Lamp: N/A
Luminaire Lumens: 2662.0 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		88
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83
5	93	84	79	74	91	84	78	74	82	77	73		80	76	73		79
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		74
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		70
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		67
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		63
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		60

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	286910	286910	286910
5°	287211	285884	285884
10°	283439	281763	280891
15°	274245	272947	271099
20°	253982	259517	251179
25°	204208	233443	201525
30°	134791	183034	131593
35°	84244	109911	82713
40°	54980	50937	52826
45°	26472	20318	24985
50°	6665	8106	6260
55°	3684	3331	3566
60°	2509	2103	2374
65°	1712	1553	1712
70°	1354	1157	1354
75°	1007	1007	1007
80°	778	1111	1111
85°	775	1550	1550

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.6	10.5
10°-20°	763.7	28.7
20°-30°	910.1	34.2
30°-40°	515.3	19.4
40°-50°	159.3	6.0
50°-60°	22.1	0.8
60°-70°	7.5	0.3
70°-80°	3.0	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°	1953.4	73.4
0°-40°	2468.7	92.7
0°-60°	2650.2	99.6
0°-90°	2662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2974	2974	2974	2974	2974	
5°	2965	2958	2952	2950	2952	281
15°	2745	2741	2732	2721	2714	766
25°	1918	2030	2193	2034	1893	855
35°	715	780	933	782	702	465
45°	194	226	149	220	183	160
55°	22	22	20	21	21	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°	2973.5	2973.5	2973.5	2973.5	2973.5
2.5°	2974.2	2969.4	2968.0	2966.7	2969.4
5°	2965.3	2958.5	2951.6	2949.6	2951.6
7.5°	2940.0	2933.2	2921.6	2918.9	2920.9
10°	2892.9	2886.8	2875.8	2869.7	2866.9
12.5°	2830.7	2820.5	2810.2	2803.4	2796.6
15°	2745.4	2740.6	2732.4	2721.4	2713.9
17.5°	2627.2	2634.0	2638.8	2616.9	2597.1
20°	2473.5	2498.8	2527.4	2483.0	2446.2
22.5°	2233.7	2306.1	2379.2	2295.2	2213.2
25°	1918.1	2030.2	2192.7	2033.6	1892.9
27.5°	1549.9	1692.0	1948.2	1692.7	1529.4
30°	1209.8	1355.9	1642.8	1336.8	1181.1
32.5°	929.0	1038.3	1283.5	1021.9	909.2
35°	715.2	780.1	933.1	782.1	702.2
37.5°	556.0	588.8	627.8	577.2	539.6
40°	436.5	437.9	404.4	431.0	419.4
42.5°	323.8	322.4	248.6	314.2	316.3
45°	194.0	226.1	148.9	220.0	183.1
47.5°	92.2	127.7	89.5	120.9	85.4
50°	44.4	61.5	54.0	57.4	41.7
52.5°	30.1	31.4	30.7	30.1	28.7
55°	21.9	21.9	19.8	21.2	21.2
57.5°	16.4	16.4	14.3	15.7	15.7
60°	13.0	12.3	10.9	12.3	12.3
62.5°	9.6	9.6	8.2	9.6	9.6
65°	7.5	7.5	6.8	7.5	7.5
67.5°	6.1	6.1	4.8	6.1	5.5
70°	4.8	4.8	4.1	4.8	4.8
72.5°	3.4	3.4	3.4	3.4	3.4
75°	2.7	2.7	2.7	2.7	2.7
77.5°	2.0	2.0	2.0	2.0	2.0
80°	1.4	1.4	2.0	2.0	2.0
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)