

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: **FLDSQ4C75D010 FEU4C759030 F4LC-SQ-WH**

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: FLDSQ4C75D010 FEU4C759030 F4LC-SQ-WH  
 Description: 4 INCH 7500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

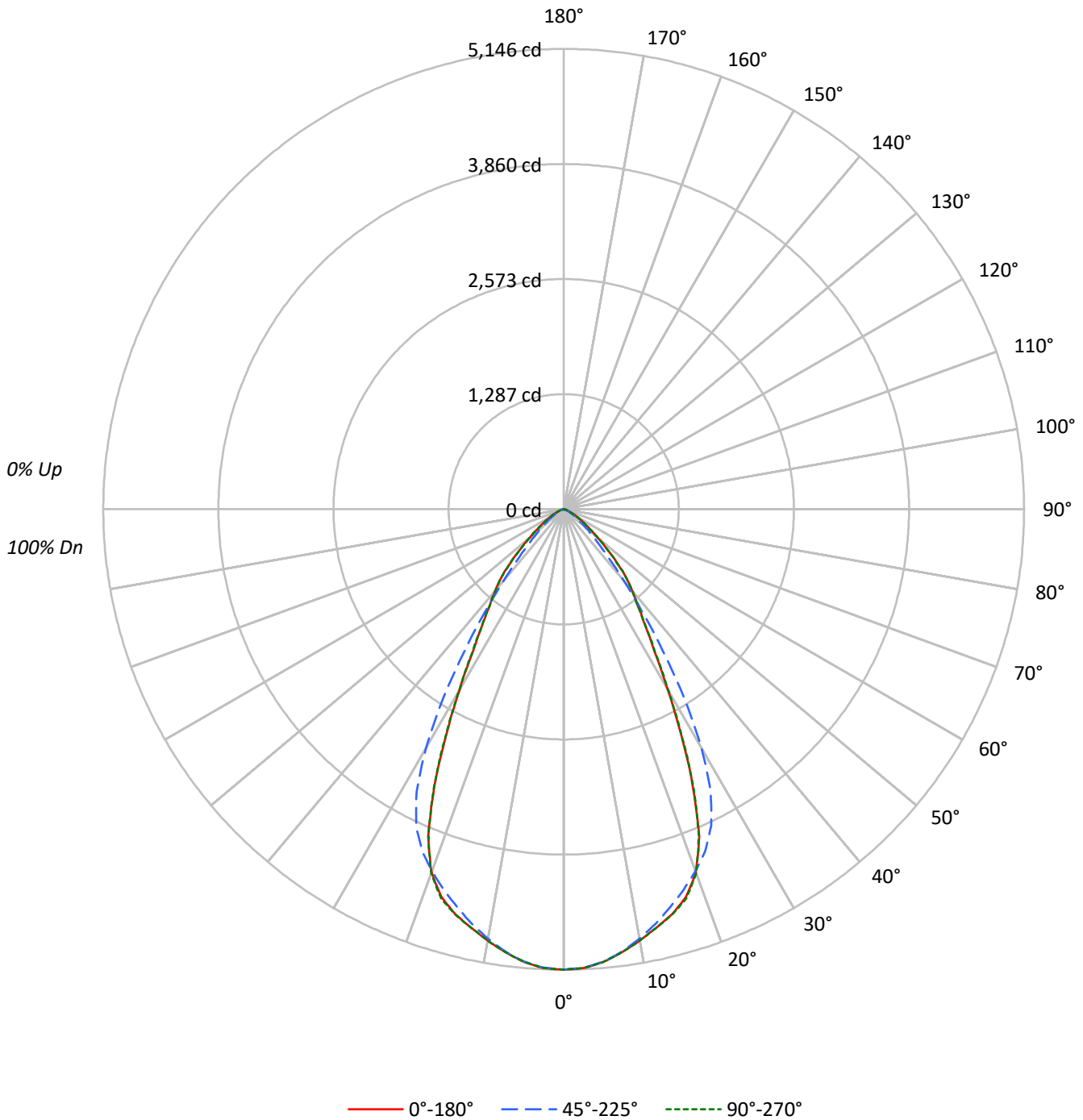
Lumens per Lamp: N/A  
 Luminaire Lumens: 5447.0 lumens  
 Efficiency: N/A  
 Efficacy: 66.8 lumens/watt  
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 81.5  
 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	113	110	107	105	110	108	105	103	104	102	100		100	98	97		96	95	94	92
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		90	88	86	84
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		85	82	79	77
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		79	76	73	71
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		74	70	67	66
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		70	65	62	61
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		65	61	58	56
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		62	57	54	52
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		58	54	50	49
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		55	50	47	46

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	496570	496570	496570
5°	492017	491707	491862
10°	479423	477512	479423
15°	467877	459456	468367
20°	443614	441951	444446
25°	363882	415208	365788
30°	259476	343016	259844
35°	187158	227302	187724
40°	150040	132054	150040
45°	114500	77070	113613
50°	75520	49206	75280
55°	50787	33039	50231
60°	34138	22559	34447
65°	23334	15936	22968
70°	15573	11454	15573
75°	10289	8463	10289
80°	7224	6334	7224
85°	5425	5425	5425

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	478.4	8.8
10°-20°	1304.5	23.9
20°-30°	1630.8	29.9
30°-40°	1097.1	20.1
40°-50°	579.3	10.6
50°-60°	235.4	4.3
60°-70°	87.3	1.6
70°-80°	28.2	0.5
80°-90°	6.1	0.1
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°	3413.7	62.7
0°-40°	4510.7	82.8
0°-60°	5325.4	97.8
0°-90°	5447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5447.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5146	5146	5146	5146	5146	
5°	5080	5075	5077	5077	5078	479
15°	4684	4645	4600	4643	4689	1312
25°	3418	3610	3900	3616	3436	1538
35°	1589	1668	1930	1672	1594	1022
45°	839	797	565	794	833	643
55°	302	253	196	253	299	280
65°	102	83	70	83	101	105
75°	28	24	23	24	28	32
85°	5	5	5	5	5	6
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5146.4	5146.4	5146.4	5146.4	5146.4
2.5°	5133.4	5130.2	5128.5	5128.5	5130.2
5°	5079.8	5075.0	5076.6	5076.6	5078.2
7.5°	4993.8	4992.2	4987.3	4993.8	4993.8
10°	4893.2	4885.1	4873.7	4886.7	4893.2
12.5°	4789.3	4765.0	4745.5	4765.0	4789.3
15°	4683.8	4644.9	4599.5	4643.3	4688.7
17.5°	4545.9	4506.9	4456.6	4515.1	4558.9
20°	4320.3	4323.6	4304.1	4320.3	4328.4
22.5°	3958.4	4031.4	4133.7	4033.0	3947.0
25°	3417.9	3609.5	3900.0	3615.9	3435.8
27.5°	2838.5	3082.0	3557.5	3096.6	2856.4
30°	2328.9	2544.8	3078.7	2559.4	2332.2
32.5°	1885.9	2046.5	2502.6	2066.0	1907.0
35°	1588.9	1668.4	1929.7	1671.6	1593.7
37.5°	1361.7	1361.7	1433.1	1368.2	1355.2
40°	1191.2	1139.3	1048.4	1137.7	1191.2
42.5°	1032.2	954.3	761.2	951.1	1035.4
45°	839.1	796.9	564.8	793.6	832.6
47.5°	644.3	615.1	425.2	611.9	649.2
50°	503.1	457.7	327.8	454.4	501.5
52.5°	386.3	337.6	253.2	337.6	383.0
55°	301.9	253.2	196.4	253.2	298.6
57.5°	232.1	193.1	149.3	189.9	230.5
60°	176.9	144.4	116.9	144.4	178.5
62.5°	134.7	110.4	89.3	108.7	133.1
65°	102.2	82.8	69.8	82.8	100.6
67.5°	74.7	61.7	53.6	61.7	76.3
70°	55.2	47.1	40.6	45.4	55.2
72.5°	40.6	34.1	30.8	34.1	40.6
75°	27.6	24.3	22.7	24.3	27.6
77.5°	19.5	17.9	16.2	17.9	19.5
80°	13.0	11.4	11.4	13.0	13.0
82.5°	8.1	8.1	8.1	8.1	8.1
85°	4.9	4.9	4.9	4.9	4.9
87.5°	3.2	3.2	3.2	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)