

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 FEU4C759050 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: FLDSQ4C75D010 FEU4C759050 F4LC-SQ-WLI
 Description: 4 INCH 7500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

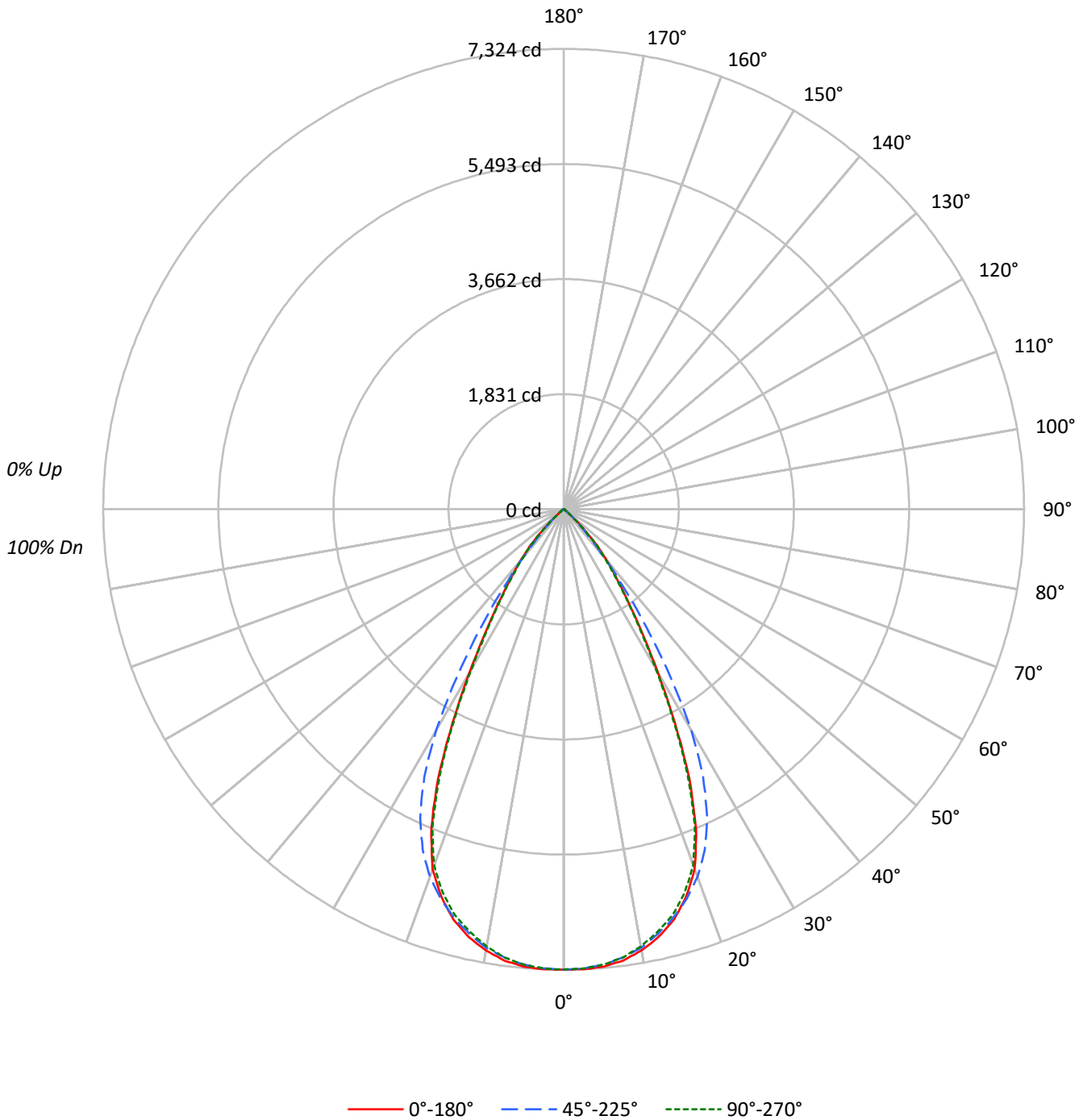
Lumens per Lamp: N/A
 Luminaire Lumens: 6555.0 lumens
 Efficiency: N/A
 Efficacy: 80.4 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94	
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	
5	93	84	79	74	91	84	78	74	82	77	73	80	76	73	79	75	72	71	71	71	71	
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	71	68	66	66	66	66	
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	59	58	58	58	58	
9	76	66	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	
10	72	63	57	53	71	62	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	706501	706501	706501
5°	707244	703979	703979
10°	697952	693827	691691
15°	675294	672108	667573
20°	625411	639058	618501
25°	502860	574840	496227
30°	331896	450721	324031
35°	207442	270649	203685
40°	135379	125428	130089
45°	65185	50038	61514
50°	16407	19950	15401
55°	9050	8209	8764
60°	6175	5191	5847
65°	4224	3836	4224
70°	3329	2849	3329
75°	2498	2498	2498
80°	1889	2778	2778
85°	1882	3764	3764

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	688.6	10.5
10°-20°	1880.5	28.7
20°-30°	2241.0	34.2
30°-40°	1269.0	19.4
40°-50°	392.3	6.0
50°-60°	54.5	0.8
60°-70°	18.6	0.3
70°-80°	7.4	0.1
80°-90°	3.1	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°	4810.1	73.4
0°-40°	6079.1	92.7
0°-60°	6525.9	99.6
0°-90°	6555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7322	7322	7322	7322	7322	
5°	7302	7285	7268	7263	7268	691
15°	6760	6748	6728	6701	6683	1885
25°	4723	4999	5399	5008	4661	2106
35°	1761	1921	2298	1926	1729	1146
45°	478	557	367	542	451	394
55°	54	54	49	52	52	53
65°	18	18	17	18	18	19
75°	7	7	7	7	7	7
85°	2	3	3	3	3	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7322.1	7322.1	7322.1	7322.1	7322.1
2.5°	7323.7	7312.0	7308.6	7305.2	7312.0
5°	7301.9	7285.1	7268.2	7263.2	7268.2
7.5°	7239.6	7222.8	7194.2	7187.5	7192.5
10°	7123.6	7108.4	7081.5	7066.4	7059.7
12.5°	6970.5	6945.3	6920.0	6903.2	6886.4
15°	6760.2	6748.5	6728.3	6701.4	6682.9
17.5°	6469.2	6486.1	6497.8	6444.0	6395.2
20°	6090.8	6153.0	6223.7	6114.3	6023.5
22.5°	5500.4	5678.7	5858.7	5651.8	5449.9
25°	4723.3	4999.1	5399.4	5007.5	4661.0
27.5°	3816.6	4166.5	4797.3	4168.2	3766.2
30°	2978.9	3338.9	4045.4	3291.8	2908.3
32.5°	2287.6	2556.7	3160.6	2516.4	2238.8
35°	1761.1	1920.9	2297.7	1926.0	1729.2
37.5°	1369.2	1449.9	1545.8	1421.4	1328.8
40°	1074.8	1078.2	995.8	1061.4	1032.8
42.5°	797.3	793.9	612.3	773.8	778.8
45°	477.7	556.8	366.7	541.6	450.8
47.5°	227.1	314.5	220.4	297.7	210.3
50°	109.3	151.4	132.9	141.3	102.6
52.5°	74.0	77.4	75.7	74.0	70.6
55°	53.8	53.8	48.8	52.1	52.1
57.5°	40.4	40.4	35.3	38.7	38.7
60°	32.0	30.3	26.9	30.3	30.3
62.5°	23.5	23.5	20.2	23.5	23.5
65°	18.5	18.5	16.8	18.5	18.5
67.5°	15.1	15.1	11.8	15.1	13.5
70°	11.8	11.8	10.1	11.8	11.8
72.5°	8.4	8.4	8.4	8.4	8.4
75°	6.7	6.7	6.7	6.7	6.7
77.5°	5.0	5.0	5.0	5.0	5.0
80°	3.4	3.4	5.0	5.0	5.0
82.5°	3.4	3.4	3.4	3.4	3.4
85°	1.7	3.4	3.4	3.4	3.4
87.5°	1.7	1.7	3.4	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)