

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: **FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI**

Issue Date: 12/13/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

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: FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI
 Description: 4 INCH 6500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

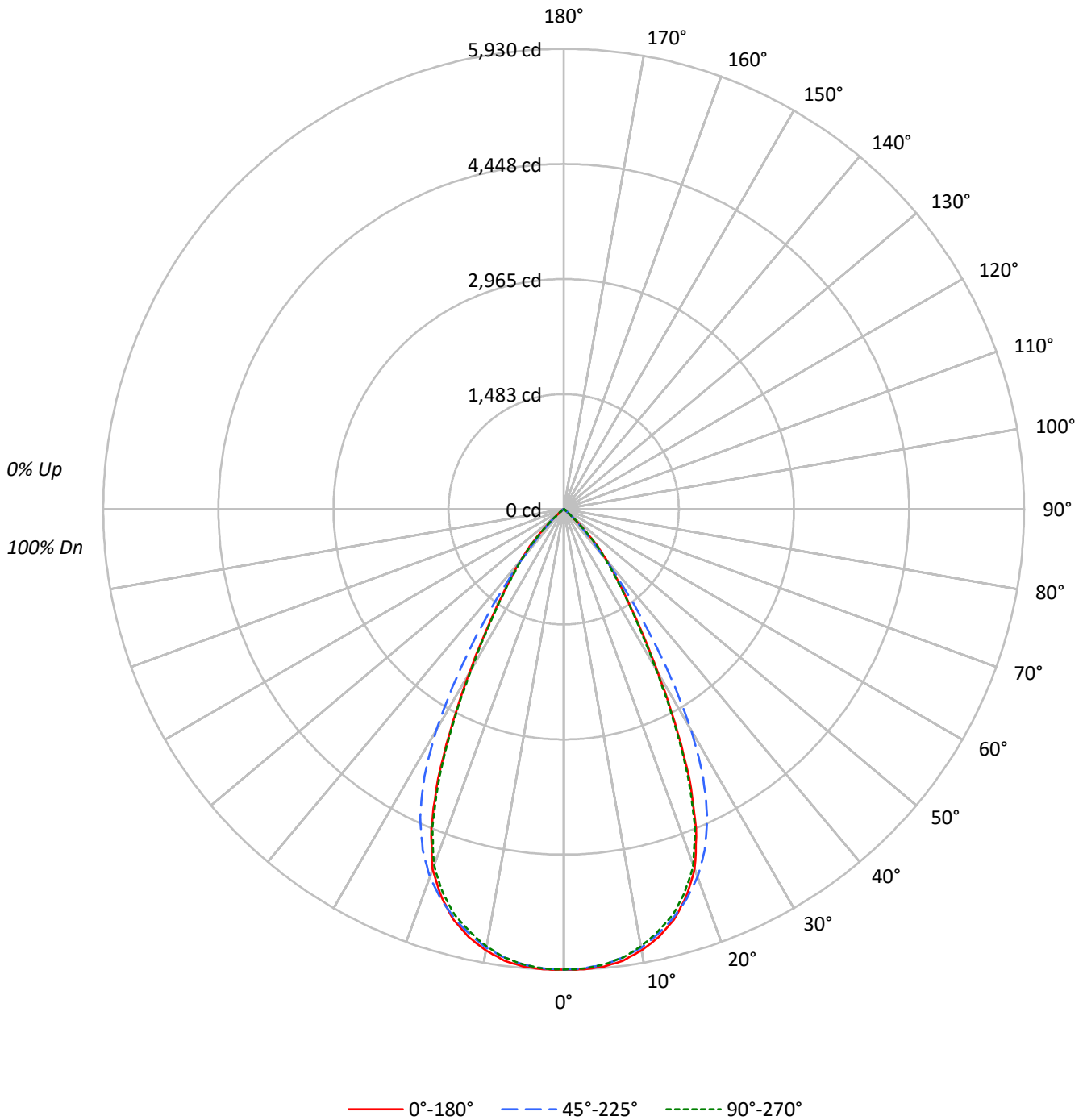
Lumens per Lamp: N/A
 Luminaire Lumens: 5308.0 lumens
 Efficiency: N/A
 Efficacy: 73.3 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 72.4
 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

TEST NUMBER: P#
CATALOG NUMBER: FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI

Luminous Intensity Polar Plot





TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	572092	572092	572092
5°	572699	570055	570055
10°	565173	561842	560098
15°	546832	544245	540569
20°	506435	517483	500838
25°	407192	465491	401826
30°	268757	364976	262384
35°	167982	219162	164931
40°	109633	101572	105338
45°	52781	40514	49806
50°	13285	16152	12474
55°	7335	6645	7099
60°	4998	4207	4728
65°	3425	3105	3425
70°	2680	2313	2680
75°	2013	2013	2013
80°	1500	2278	2278
85°	1550	2989	2989

TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	557.6	10.5
10°-20°	1522.7	28.7
20°-30°	1814.7	34.2
30°-40°	1027.6	19.4
40°-50°	317.7	6.0
50°-60°	44.1	0.8
60°-70°	15.1	0.3
70°-80°	6.0	0.1
80°-90°	2.5	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°	3895.0	73.4
0°-40°	4922.6	92.7
0°-60°	5284.4	99.6
0°-90°	5308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5929	5929	5929	5929	5929	
5°	5913	5899	5886	5882	5886	560
15°	5474	5465	5448	5426	5412	1526
25°	3825	4048	4372	4055	3774	1705
35°	1426	1556	1861	1560	1400	928
45°	387	451	297	439	365	319
55°	44	44	40	42	42	43
65°	15	15	14	15	15	16
75°	5	5	5	5	5	6
85°	1	3	3	3	3	2
90°	0	0	0	0	0	

TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C65D010 FEU4C659050 F4LC-SQ-WLI

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5929.1	5929.1	5929.1	5929.1	5929.1
2.5°	5930.5	5921.0	5918.2	5915.5	5921.0
5°	5912.8	5899.2	5885.5	5881.5	5885.5
7.5°	5862.4	5848.8	5825.6	5820.2	5824.3
10°	5768.4	5756.1	5734.4	5722.1	5716.6
12.5°	5644.5	5624.0	5603.6	5590.0	5576.4
15°	5474.2	5464.7	5448.3	5426.5	5411.5
17.5°	5238.6	5252.2	5261.7	5218.1	5178.6
20°	4932.1	4982.5	5039.7	4951.2	4877.6
22.5°	4454.0	4598.4	4744.1	4576.6	4413.1
25°	3824.7	4048.1	4372.3	4054.9	3774.3
27.5°	3090.6	3373.9	3884.7	3375.2	3049.7
30°	2412.2	2703.7	3275.8	2665.6	2355.0
32.5°	1852.4	2070.4	2559.3	2037.7	1812.9
35°	1426.1	1555.5	1860.6	1559.6	1400.2
37.5°	1108.7	1174.1	1251.8	1151.0	1076.0
40°	870.4	873.1	806.4	859.5	836.3
42.5°	645.6	642.9	495.8	626.6	630.6
45°	386.8	450.8	296.9	438.6	365.0
47.5°	183.9	254.7	178.4	241.1	170.3
50°	88.5	122.6	107.6	114.4	83.1
52.5°	59.9	62.7	61.3	59.9	57.2
55°	43.6	43.6	39.5	42.2	42.2
57.5°	32.7	32.7	28.6	31.3	31.3
60°	25.9	24.5	21.8	24.5	24.5
62.5°	19.1	19.1	16.3	19.1	19.1
65°	15.0	15.0	13.6	15.0	15.0
67.5°	12.3	12.3	9.5	12.3	10.9
70°	9.5	9.5	8.2	9.5	9.5
72.5°	6.8	6.8	6.8	6.8	6.8
75°	5.4	5.4	5.4	5.4	5.4
77.5°	4.1	4.1	4.1	4.1	4.1
80°	2.7	2.7	4.1	4.1	4.1
82.5°	2.7	2.7	2.7	2.7	2.7
85°	1.4	2.7	2.7	2.7	2.7
87.5°	1.4	1.4	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)