

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: **FLDSQ4C55D010 FEU4C559040 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: FLDSQ4C55D010 FEU4C559040 F4LC-SQ-WLI
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

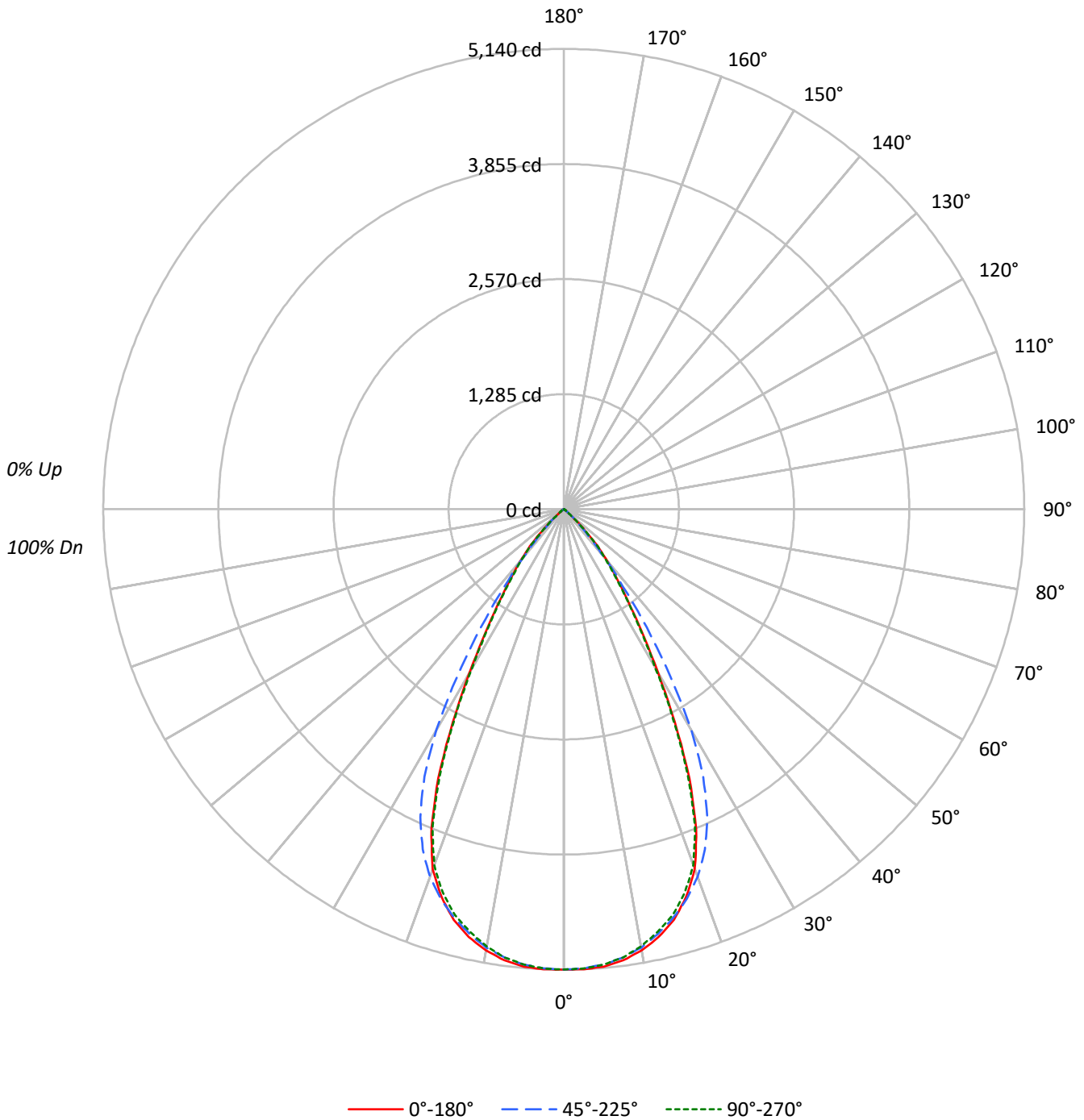
Lumens per Lamp: N/A
 Luminaire Lumens: 4600.0 lumens
 Efficiency: N/A
 Efficacy: 72.0 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 63.9
 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	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°	495789	495789	495789
5°	496307	494022	494022
10°	489789	486899	485390
15°	473891	471653	468467
20°	438881	448461	434034
25°	352885	403402	348232
30°	232915	316298	227388
35°	145578	189927	142940
40°	95010	88019	91294
45°	45740	35110	43161
50°	11513	14005	10808
55°	6359	5753	6157
60°	4323	3647	4091
65°	2968	2694	2968
70°	2342	2003	2342
75°	1752	1752	1752
80°	1334	1945	1945
85°	1329	2657	2657

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	483.2	10.5
10°-20°	1319.6	28.7
20°-30°	1572.6	34.2
30°-40°	890.5	19.4
40°-50°	275.3	6.0
50°-60°	38.2	0.8
60°-70°	13.0	0.3
70°-80°	5.2	0.1
80°-90°	2.2	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°	3375.5	73.4
0°-40°	4266.0	92.7
0°-60°	4579.6	99.6
0°-90°	4600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4600.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5138	5138	5138	5138	5138	
5°	5124	5112	5100	5097	5100	485
15°	4744	4736	4722	4703	4690	1323
25°	3315	3508	3789	3514	3271	1478
35°	1236	1348	1612	1352	1214	804
45°	335	391	257	380	316	277
55°	38	38	34	37	37	37
65°	13	13	12	13	13	14
75°	5	5	5	5	5	5
85°	1	2	2	2	2	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5138.3	5138.3	5138.3	5138.3	5138.3
2.5°	5139.5	5131.2	5128.8	5126.5	5131.2
5°	5124.1	5112.3	5100.5	5097.0	5100.5
7.5°	5080.4	5068.6	5048.6	5043.9	5047.4
10°	4999.0	4988.4	4969.5	4958.9	4954.1
12.5°	4891.6	4873.9	4856.2	4844.4	4832.6
15°	4744.0	4735.8	4721.6	4702.7	4689.7
17.5°	4539.8	4551.6	4559.9	4522.1	4487.9
20°	4274.2	4317.9	4367.5	4290.8	4227.0
22.5°	3859.9	3985.0	4111.3	3966.1	3824.5
25°	3314.6	3508.2	3789.1	3514.1	3270.9
27.5°	2678.3	2923.9	3366.5	2925.0	2642.9
30°	2090.5	2343.1	2838.9	2310.0	2040.9
32.5°	1605.3	1794.2	2218.0	1765.9	1571.1
35°	1235.9	1348.0	1612.4	1351.6	1213.5
37.5°	960.8	1017.5	1084.8	997.4	932.5
40°	754.3	756.6	698.8	744.8	724.8
42.5°	559.5	557.1	429.7	543.0	546.5
45°	335.2	390.7	257.3	380.1	316.3
47.5°	159.4	220.7	154.6	208.9	147.6
50°	76.7	106.2	93.3	99.2	72.0
52.5°	51.9	54.3	53.1	51.9	49.6
55°	37.8	37.8	34.2	36.6	36.6
57.5°	28.3	28.3	24.8	27.1	27.1
60°	22.4	21.2	18.9	21.2	21.2
62.5°	16.5	16.5	14.2	16.5	16.5
65°	13.0	13.0	11.8	13.0	13.0
67.5°	10.6	10.6	8.3	10.6	9.4
70°	8.3	8.3	7.1	8.3	8.3
72.5°	5.9	5.9	5.9	5.9	5.9
75°	4.7	4.7	4.7	4.7	4.7
77.5°	3.5	3.5	3.5	3.5	3.5
80°	2.4	2.4	3.5	3.5	3.5
82.5°	2.4	2.4	2.4	2.4	2.4
85°	1.2	2.4	2.4	2.4	2.4
87.5°	1.2	1.2	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)