

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: **FLDSQ4C10D010 FEU4C109040 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: FLDSQ4C10D010 FEU4C109040 F4LC-SQ-WLI
 Description: 4 INCH 1000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

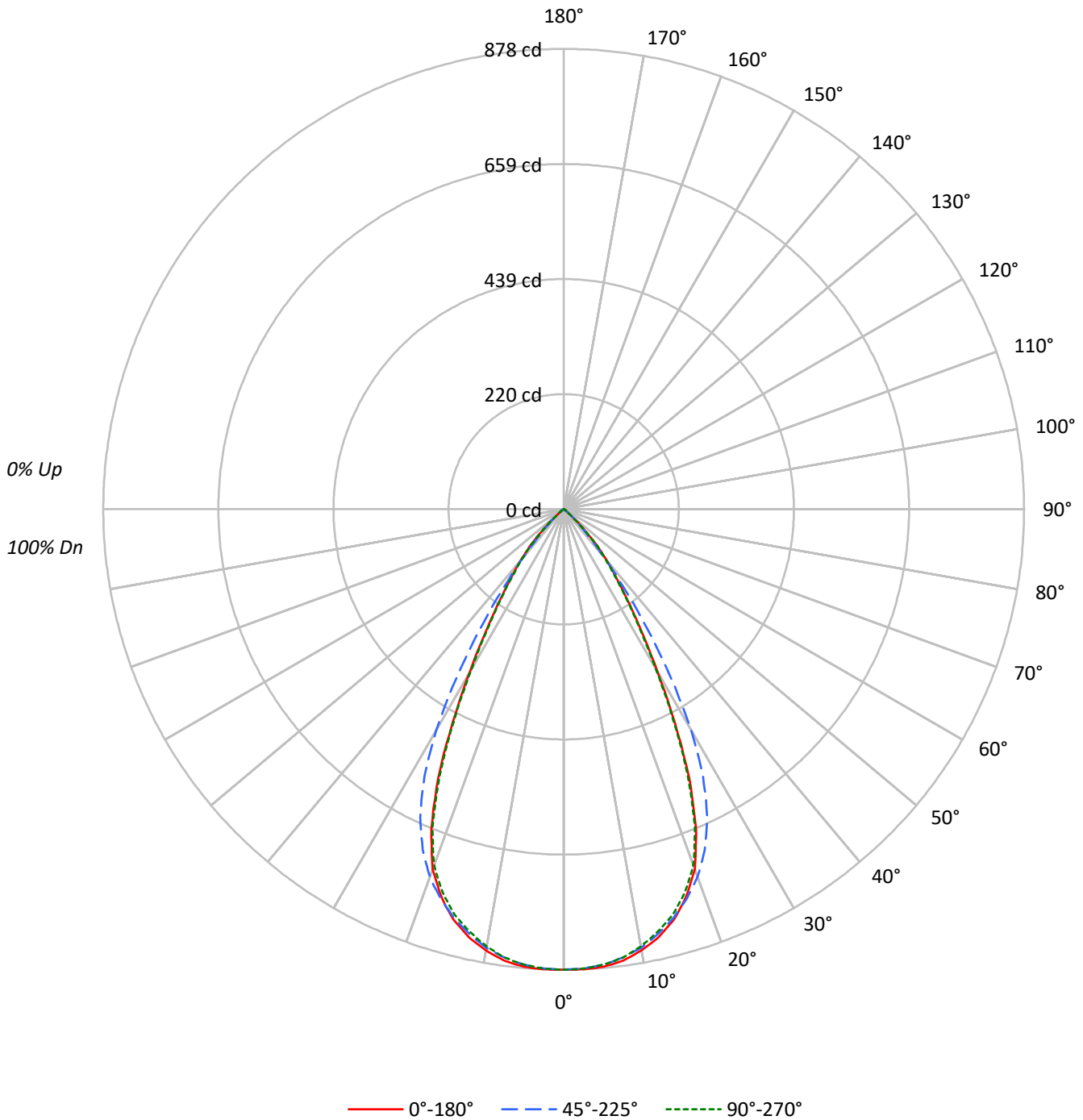
Lumens per Lamp: N/A
 Luminaire Lumens: 786.0 lumens
 Efficiency: N/A
 Efficacy: 80.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.8
 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°	84717	84717	84717
5°	84808	84411	84411
10°	83692	83193	82938
15°	80973	80593	80044
20°	74988	76631	74167
25°	60301	68925	59503
30°	39798	54048	38851
35°	24877	32451	24418
40°	16236	15039	15594
45°	7819	6004	7382
50°	1966	2387	1846
55°	1093	976	1060
60°	733	618	695
65°	502	457	502
70°	395	339	395
75°	298	298	298
80°	222	333	333
85°	221	443	443

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.6	10.5
10°-20°	225.5	28.7
20°-30°	268.7	34.2
30°-40°	152.2	19.4
40°-50°	47.0	6.0
50°-60°	6.5	0.8
60°-70°	2.2	0.3
70°-80°	0.9	0.1
80°-90°	0.4	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°	576.8	73.4
0°-40°	728.9	92.7
0°-60°	782.5	99.6
0°-90°	786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	878	878	878	878	878	
5°	876	874	872	871	872	83
15°	811	809	807	804	801	226
25°	566	599	647	600	559	253
35°	211	230	276	231	207	137
45°	57	67	44	65	54	47
55°	6	6	6	6	6	6
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	878.0	878.0	878.0	878.0	878.0
2.5°	878.2	876.8	876.4	876.0	876.8
5°	875.6	873.5	871.5	870.9	871.5
7.5°	868.1	866.1	862.6	861.8	862.4
10°	854.2	852.4	849.1	847.3	846.5
12.5°	835.8	832.8	829.8	827.8	825.7
15°	810.6	809.2	806.8	803.6	801.3
17.5°	775.7	777.7	779.1	772.7	766.8
20°	730.3	737.8	746.3	733.2	722.3
22.5°	659.5	680.9	702.5	677.7	653.5
25°	566.4	599.4	647.4	600.4	558.9
27.5°	457.6	499.6	575.2	499.8	451.6
30°	357.2	400.4	485.1	394.7	348.7
32.5°	274.3	306.6	379.0	301.7	268.5
35°	211.2	230.3	275.5	230.9	207.3
37.5°	164.2	173.9	185.4	170.4	159.3
40°	128.9	129.3	119.4	127.3	123.8
42.5°	95.6	95.2	73.4	92.8	93.4
45°	57.3	66.8	44.0	64.9	54.1
47.5°	27.2	37.7	26.4	35.7	25.2
50°	13.1	18.2	15.9	16.9	12.3
52.5°	8.9	9.3	9.1	8.9	8.5
55°	6.5	6.5	5.8	6.3	6.3
57.5°	4.8	4.8	4.2	4.6	4.6
60°	3.8	3.6	3.2	3.6	3.6
62.5°	2.8	2.8	2.4	2.8	2.8
65°	2.2	2.2	2.0	2.2	2.2
67.5°	1.8	1.8	1.4	1.8	1.6
70°	1.4	1.4	1.2	1.4	1.4
72.5°	1.0	1.0	1.0	1.0	1.0
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.4	0.4	0.6	0.6	0.6
82.5°	0.4	0.4	0.4	0.4	0.4
85°	0.2	0.4	0.4	0.4	0.4
87.5°	0.2	0.2	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)