

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: **FLDSQ4C08D010 FEU4C089030 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: FLDSQ4C08D010 FEU4C089030 F4LC-SQ-WLI
 Description: 4 INCH 800 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

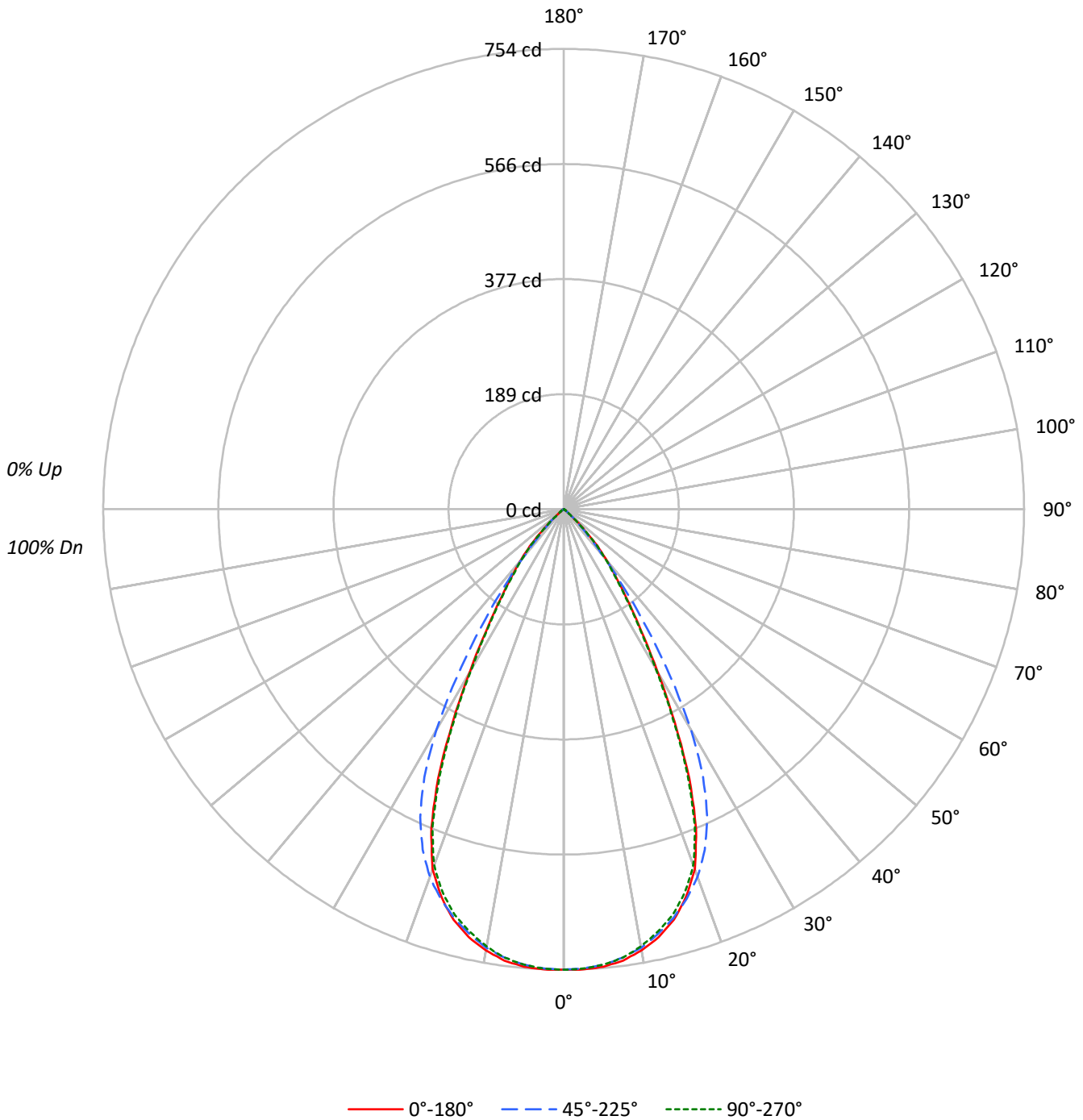
Lumens per Lamp: N/A
 Luminaire Lumens: 675.0 lumens
 Efficiency: N/A
 Efficacy: 68.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.9
 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	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°	72753	72753	72753
5°	72827	72488	72488
10°	71866	71445	71230
15°	69535	69206	68746
20°	64402	65808	63693
25°	51784	59194	51103
30°	34182	46416	33369
35°	21367	27869	20979
40°	13943	12911	13402
45°	6714	5158	6332
50°	1696	2057	1591
55°	925	841	908
60°	637	540	598
65°	434	388	434
70°	339	282	339
75°	261	261	261
80°	167	278	278
85°	221	332	332

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	10.5
10°-20°	193.6	28.7
20°-30°	230.8	34.2
30°-40°	130.7	19.4
40°-50°	40.4	6.0
50°-60°	5.6	0.8
60°-70°	1.9	0.3
70°-80°	0.8	0.1
80°-90°	0.3	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°	495.3	73.4
0°-40°	626.0	92.7
0°-60°	672.0	99.6
0°-90°	675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	675.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	754	754	754	754	754	
5°	752	750	748	748	748	71
15°	696	695	693	690	688	194
25°	486	515	556	516	480	217
35°	181	198	237	198	178	118
45°	49	57	38	56	46	41
55°	6	6	5	5	5	5
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	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	754.0	754.0	754.0	754.0	754.0
2.5°	754.2	752.9	752.6	752.3	752.9
5°	751.9	750.2	748.4	747.9	748.4
7.5°	745.5	743.8	740.8	740.1	740.7
10°	733.5	732.0	729.2	727.7	727.0
12.5°	717.8	715.2	712.6	710.9	709.1
15°	696.1	694.9	692.8	690.1	688.2
17.5°	666.2	667.9	669.1	663.6	658.5
20°	627.2	633.6	640.9	629.6	620.3
22.5°	566.4	584.8	603.3	582.0	561.2
25°	486.4	514.8	556.0	515.6	480.0
27.5°	393.0	429.0	494.0	429.2	387.8
30°	306.8	343.8	416.6	339.0	299.5
32.5°	235.6	263.3	325.5	259.1	230.5
35°	181.4	197.8	236.6	198.3	178.1
37.5°	141.0	149.3	159.2	146.4	136.8
40°	110.7	111.0	102.5	109.3	106.4
42.5°	82.1	81.8	63.0	79.7	80.2
45°	49.2	57.3	37.8	55.8	46.4
47.5°	23.4	32.4	22.7	30.7	21.7
50°	11.3	15.6	13.7	14.5	10.6
52.5°	7.6	8.0	7.8	7.6	7.3
55°	5.5	5.5	5.0	5.4	5.4
57.5°	4.2	4.2	3.6	4.0	4.0
60°	3.3	3.1	2.8	3.1	3.1
62.5°	2.4	2.4	2.1	2.4	2.4
65°	1.9	1.9	1.7	1.9	1.9
67.5°	1.6	1.6	1.2	1.6	1.4
70°	1.2	1.2	1.0	1.2	1.2
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.7	0.7	0.7	0.7	0.7
77.5°	0.5	0.5	0.5	0.5	0.5
80°	0.3	0.3	0.5	0.5	0.5
82.5°	0.3	0.3	0.3	0.3	0.3
85°	0.2	0.3	0.3	0.3	0.3
87.5°	0.2	0.2	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)