

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: **FLDSQ4C70D010 FEU4C709050 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: FLDSQ4C70D010 FEU4C709050 F4LC-SQ-WLI
 Description: 4 INCH 7000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

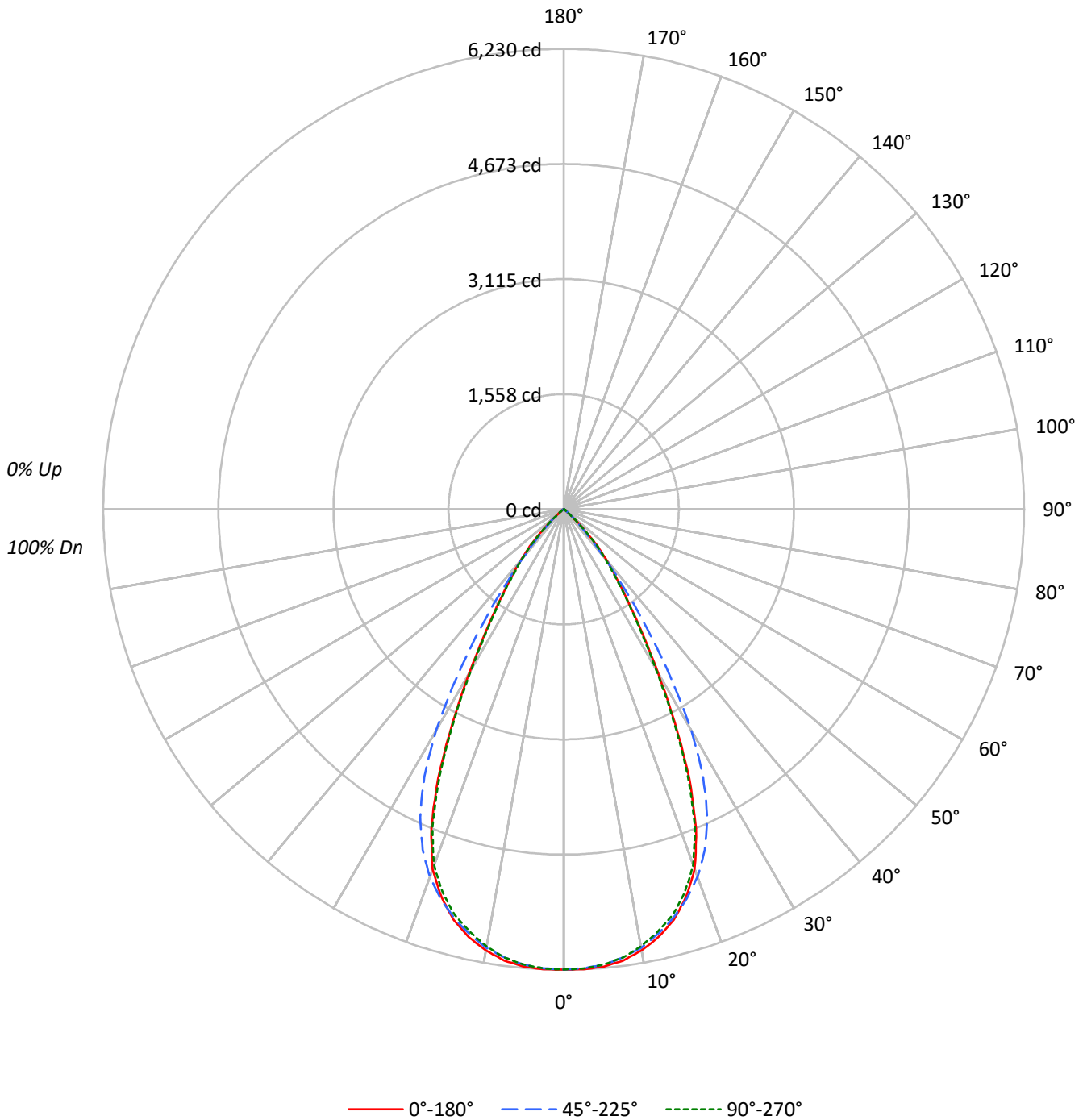
Lumens per Lamp: N/A
 Luminaire Lumens: 5576.0 lumens
 Efficiency: N/A
 Efficacy: 71.5 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 78
 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°	600981	600981	600981
5°	601611	598841	598841
10°	593714	590206	588384
15°	574443	571726	567870
20°	532002	543605	526129
25°	427750	488988	422118
30°	282328	383404	275631
35°	176463	230223	173259
40°	115163	106698	110653
45°	55456	42561	52331
50°	13960	16962	13105
55°	7705	6981	7469
60°	5249	4419	4979
65°	3585	3265	3585
70°	2821	2426	2821
75°	2125	2125	2125
80°	1611	2389	2389
85°	1550	3211	3211

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.8	10.5
10°-20°	1599.6	28.7
20°-30°	1906.3	34.2
30°-40°	1079.5	19.4
40°-50°	333.7	6.0
50°-60°	46.4	0.8
60°-70°	15.8	0.3
70°-80°	6.3	0.1
80°-90°	2.7	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°	4091.7	73.4
0°-40°	5171.2	92.7
0°-60°	5551.3	99.6
0°-90°	5576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6228	6228	6228	6228	6228	
5°	6211	6197	6183	6178	6183	588
15°	5751	5741	5723	5700	5685	1603
25°	4018	4252	4593	4260	3965	1791
35°	1498	1634	1954	1638	1471	975
45°	406	474	312	461	384	336
55°	46	46	42	44	44	45
65°	16	16	14	16	16	17
75°	6	6	6	6	6	6
85°	1	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°	6228.5	6228.5	6228.5	6228.5	6228.5
2.5°	6229.9	6219.9	6217.0	6214.2	6219.9
5°	6211.3	6197.0	6182.7	6178.4	6182.7
7.5°	6158.4	6144.1	6119.7	6114.0	6118.3
10°	6059.7	6046.8	6023.9	6011.0	6005.3
12.5°	5929.4	5908.0	5886.5	5872.2	5857.9
15°	5750.6	5740.6	5723.4	5700.5	5684.8
17.5°	5503.1	5517.4	5527.4	5481.6	5440.1
20°	5181.1	5234.1	5294.1	5201.1	5123.9
22.5°	4678.9	4830.6	4983.7	4807.7	4636.0
25°	4017.8	4252.5	4593.0	4259.6	3964.9
27.5°	3246.6	3544.2	4080.8	3545.6	3203.7
30°	2534.0	2840.2	3441.2	2800.2	2473.9
32.5°	1946.0	2174.9	2688.6	2140.6	1904.5
35°	1498.1	1634.0	1954.5	1638.3	1470.9
37.5°	1164.7	1233.4	1315.0	1209.1	1130.4
40°	914.3	917.2	847.1	902.9	878.5
42.5°	678.2	675.4	520.8	658.2	662.5
45°	406.4	473.6	311.9	460.7	383.5
47.5°	193.2	267.6	187.4	253.3	178.9
50°	93.0	128.8	113.0	120.2	87.3
52.5°	63.0	65.8	64.4	63.0	60.1
55°	45.8	45.8	41.5	44.4	44.4
57.5°	34.3	34.3	30.0	32.9	32.9
60°	27.2	25.8	22.9	25.8	25.8
62.5°	20.0	20.0	17.2	20.0	20.0
65°	15.7	15.7	14.3	15.7	15.7
67.5°	12.9	12.9	10.0	12.9	11.4
70°	10.0	10.0	8.6	10.0	10.0
72.5°	7.2	7.2	7.2	7.2	7.2
75°	5.7	5.7	5.7	5.7	5.7
77.5°	4.3	4.3	4.3	4.3	4.3
80°	2.9	2.9	4.3	4.3	4.3
82.5°	2.9	2.9	2.9	2.9	2.9
85°	1.4	2.9	2.9	2.9	2.9
87.5°	1.4	1.4	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)