

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: **FLDSQ4C75D010 FEU4C759035 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: FLDSQ4C75D010 FEU4C759035 F4LC-SQ-WLI
 Description: 4 INCH 7500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

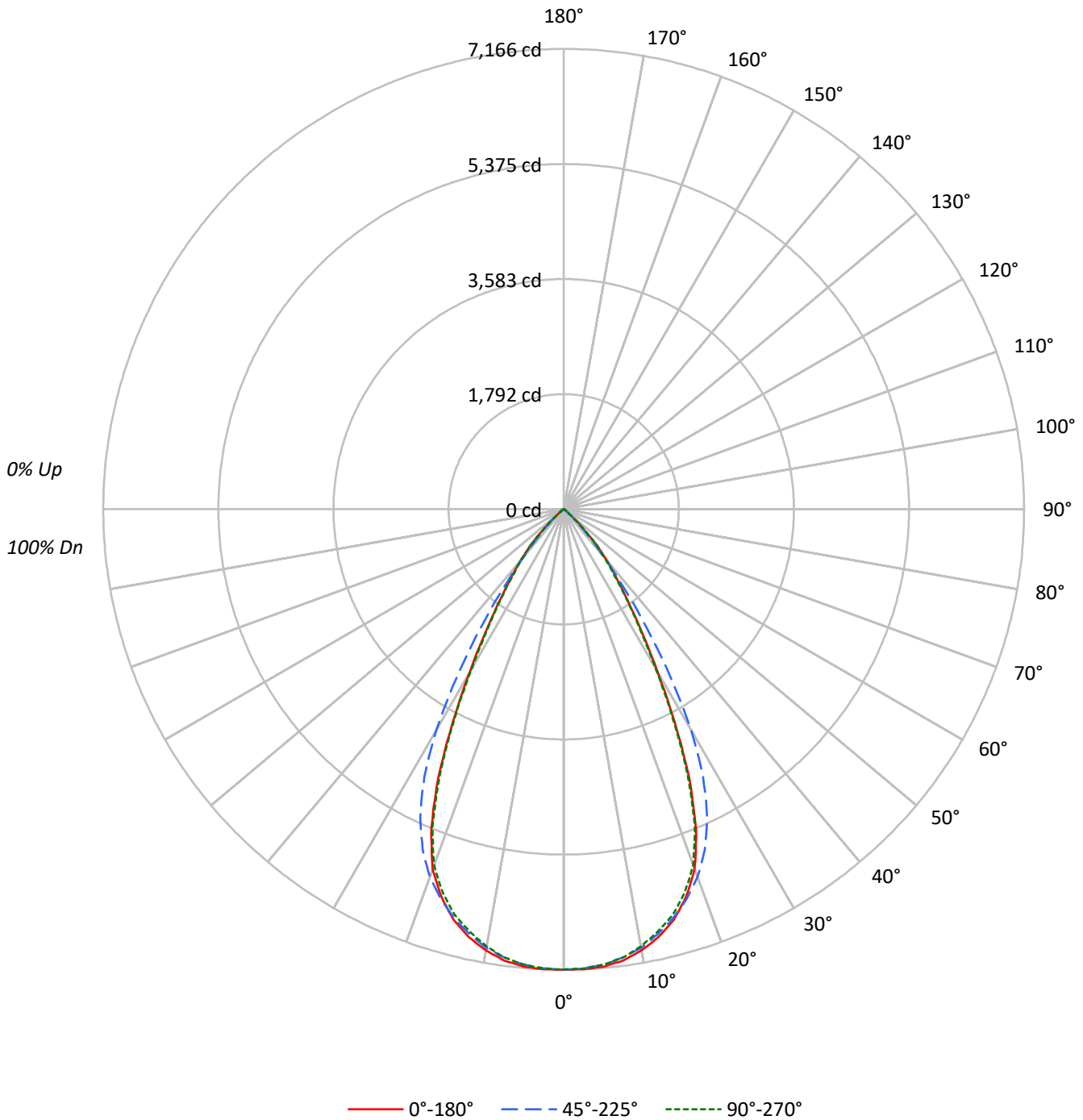
Lumens per Lamp: N/A
 Luminaire Lumens: 6414.0 lumens
 Efficiency: N/A
 Efficacy: 78.7 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 81.5
 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°	691304	691304	691304
5°	692027	688841	688841
10°	682932	678905	676808
15°	660770	657653	653208
20°	611960	625309	605194
25°	492043	562480	485560
30°	324766	441028	317056
35°	202978	264830	199303
40°	132469	122733	127292
45°	63779	48960	60191
50°	16062	19514	15071
55°	8865	8024	8579
60°	6040	5075	5712
65°	4132	3767	4132
70°	3244	2793	3244
75°	2461	2461	2461
80°	1834	2723	2723
85°	1771	3653	3653

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	673.8	10.5
10°-20°	1840.0	28.7
20°-30°	2192.8	34.2
30°-40°	1241.7	19.4
40°-50°	383.9	6.0
50°-60°	53.3	0.8
60°-70°	18.2	0.3
70°-80°	7.2	0.1
80°-90°	3.1	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°	4706.6	73.4
0°-40°	5948.3	92.7
0°-60°	6385.5	99.6
0°-90°	6414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7165	7165	7165	7165	7165	
5°	7145	7128	7112	7107	7112	677
15°	6615	6603	6584	6557	6539	1844
25°	4622	4892	5283	4900	4561	2061
35°	1723	1880	2248	1884	1692	1122
45°	467	545	359	530	441	386
55°	53	53	48	51	51	52
65°	18	18	16	18	18	19
75°	7	7	7	7	7	7
85°	2	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°	7164.6	7164.6	7164.6	7164.6	7164.6
2.5°	7166.2	7154.7	7151.4	7148.1	7154.7
5°	7144.8	7128.3	7111.9	7106.9	7111.9
7.5°	7083.9	7067.4	7039.5	7032.9	7037.8
10°	6970.3	6955.5	6929.2	6914.4	6907.8
12.5°	6820.6	6795.9	6771.2	6754.7	6738.3
15°	6614.8	6603.3	6583.6	6557.2	6539.1
17.5°	6330.1	6346.5	6358.1	6305.4	6257.7
20°	5959.8	6020.7	6089.8	5982.8	5893.9
22.5°	5382.1	5556.5	5732.6	5530.2	5332.7
25°	4621.7	4891.6	5283.3	4899.8	4560.8
27.5°	3734.5	4076.9	4694.1	4078.5	3685.1
30°	2914.9	3267.1	3958.4	3221.0	2845.7
32.5°	2238.4	2501.8	3092.6	2462.3	2190.7
35°	1723.2	1879.6	2248.3	1884.5	1692.0
37.5°	1339.8	1418.8	1512.6	1390.8	1300.3
40°	1051.7	1055.0	974.4	1038.6	1010.6
42.5°	780.2	776.9	599.1	757.1	762.0
45°	467.4	544.8	358.8	530.0	441.1
47.5°	222.2	307.8	215.6	291.3	205.7
50°	107.0	148.1	130.0	138.3	100.4
52.5°	72.4	75.7	74.1	72.4	69.1
55°	52.7	52.7	47.7	51.0	51.0
57.5°	39.5	39.5	34.6	37.9	37.9
60°	31.3	29.6	26.3	29.6	29.6
62.5°	23.0	23.0	19.8	23.0	23.0
65°	18.1	18.1	16.5	18.1	18.1
67.5°	14.8	14.8	11.5	14.8	13.2
70°	11.5	11.5	9.9	11.5	11.5
72.5°	8.2	8.2	8.2	8.2	8.2
75°	6.6	6.6	6.6	6.6	6.6
77.5°	4.9	4.9	4.9	4.9	4.9
80°	3.3	3.3	4.9	4.9	4.9
82.5°	3.3	3.3	3.3	3.3	3.3
85°	1.6	3.3	3.3	3.3	3.3
87.5°	1.6	1.6	3.3	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)