

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-LI**

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

Summary

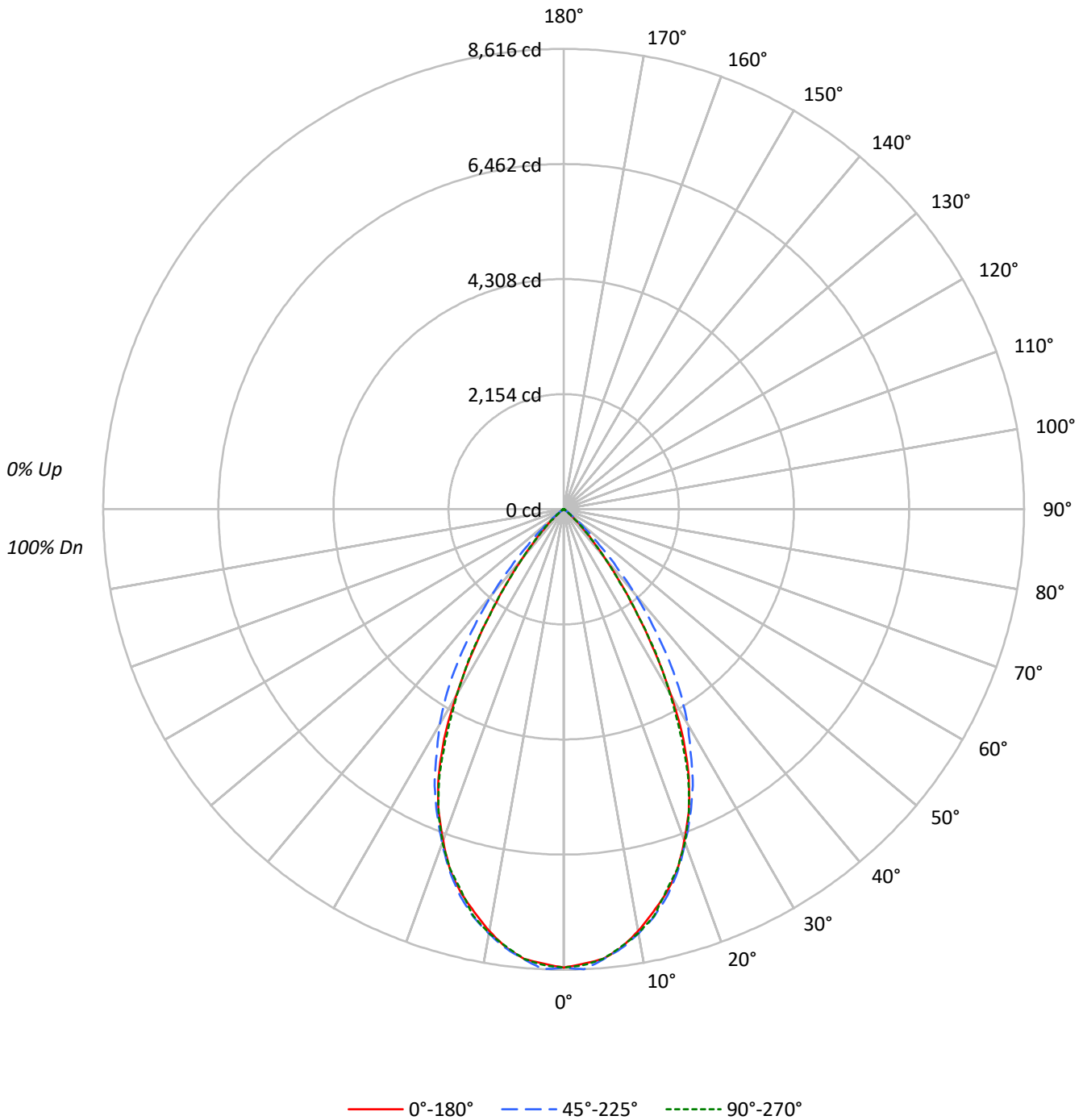
Lumens per Lamp: N/A
 Luminaire Lumens: 7919.1 lumens
 Efficiency: N/A
 Efficacy: 97.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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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CATALOG NUMBER: FLDSQ4C75D010 FEU4C759035 F4LC-SQ-LI

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
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93				93
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87				87
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80				80
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75				75
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69				69
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64				64
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60				60
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56				56
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53				53
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50				50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	827633	827633	827633
5°	818126	819182	818126
10°	785406	790227	789159
15°	742512	747956	738696
20°	677635	682656	680993
25°	590043	608610	585976
30°	448682	516078	442020
35°	282428	401197	284996
40°	152383	264951	149637
45°	72131	130875	71366
50°	27005	49071	27005
55°	12835	15594	11927
60°	8414	7372	8414
65°	4977	4977	4977
70°	3075	4655	3075
75°	2088	2088	2088
80°	3112	3112	3112
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	795.3	10.0
10°-20°	2084.2	26.3
20°-30°	2546.1	32.2
30°-40°	1780.8	22.5
40°-50°	583.6	7.4
50°-60°	92.8	1.2
60°-70°	25.3	0.3
70°-80°	8.5	0.1
80°-90°	2.4	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°	5425.6	68.5
0°-40°	7206.4	91.0
0°-60°	7882.8	99.5
0°-90°	7919.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7919.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8578	8578	8578	8578	8578	
5°	8447	8449	8458	8406	8447	792
15°	7433	7463	7488	7438	7395	2073
25°	5542	5627	5717	5613	5504	2490
35°	2398	2831	3406	2788	2420	1530
45°	529	651	959	643	523	443
55°	76	82	93	82	71	75
65°	22	27	22	27	22	24
75°	6	6	6	6	6	8
85°	0	0	0	0	0	2
90°	0	0	0	0	0	

TEST NUMBER: P#
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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5
2.5°	8512.1	8572.2	8555.7	8594.0	8594.0	8550.4	8561.3	8577.5	8599.3	8615.8	8484.8
5°	8446.7	8501.2	8452.1	8506.6	8473.9	8425.0	8506.6	8463.0	8490.3	8457.6	8479.4
7.5°	8272.4	8359.6	8261.5	8326.9	8305.1	8277.7	8310.4	8299.5	8316.0	8288.6	8228.8
10°	8016.2	8087.2	8021.8	8114.3	8070.7	8043.6	8070.7	8098.0	8092.5	8065.4	8098.0
12.5°	7722.0	7803.6	7770.9	7825.4	7776.5	7776.5	7841.9	7825.4	7831.0	7809.2	7847.2
15°	7433.1	7493.2	7444.0	7515.0	7493.2	7433.1	7460.3	7460.3	7504.1	7487.6	7444.0
17.5°	7073.5	7122.5	7068.0	7084.4	7062.6	7051.7	7166.1	7089.8	7133.4	7100.7	7106.2
20°	6599.4	6621.2	6604.8	6648.3	6621.2	6653.9	6643.0	6632.1	6632.1	6648.3	6610.3
22.5°	6119.7	6119.7	6136.2	6147.1	6168.9	6136.2	6201.6	6147.1	6152.4	6190.7	6179.8
25°	5542.2	5525.8	5564.0	5618.5	5640.3	5612.9	5700.1	5656.5	5689.2	5716.6	5656.5
27.5°	4839.3	4839.3	4877.3	4970.0	4986.3	5018.9	5138.8	5138.8	5182.4	5144.4	5188.0
30°	4027.1	4087.2	4136.1	4256.0	4294.2	4365.1	4490.3	4550.4	4648.5	4632.0	4610.2
32.5°	3193.4	3275.2	3280.6	3406.0	3509.4	3629.3	3798.3	3939.9	4010.9	4059.8	4005.3
35°	2397.7	2446.9	2490.5	2577.6	2752.0	2910.1	3062.6	3247.9	3373.3	3406.0	3356.9
37.5°	1754.8	1765.7	1809.3	1890.9	2021.7	2174.5	2359.7	2561.2	2692.2	2741.1	2686.6
40°	1209.8	1220.7	1242.5	1313.4	1422.4	1531.3	1678.5	1885.6	2005.4	2103.5	2032.6
42.5°	811.9	822.8	844.6	899.1	959.1	1062.5	1177.1	1307.8	1422.4	1465.9	1427.7
45°	528.6	528.6	539.5	577.7	610.4	692.1	773.9	855.5	931.8	959.1	931.8
47.5°	310.7	316.0	326.9	354.3	392.3	425.0	485.0	539.5	561.3	583.1	572.2
50°	179.9	179.9	196.1	212.6	239.7	261.5	283.3	305.1	316.0	326.9	316.0
52.5°	98.1	103.6	109.0	114.5	125.4	147.2	163.5	163.5	169.0	174.3	169.0
55°	76.3	76.3	76.3	76.3	81.8	81.8	81.8	87.2	87.2	92.7	87.2
57.5°	54.5	54.5	54.5	60.0	60.0	60.0	54.5	54.5	54.5	54.5	54.5
60°	43.6	43.6	43.6	43.6	43.6	43.6	43.6	38.2	38.2	38.2	38.2
62.5°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
65°	21.8	21.8	27.3	27.3	27.3	27.3	27.3	21.8	21.8	21.8	21.8
67.5°	16.5	16.5	16.5	16.5	21.8	21.8	16.5	16.5	16.5	16.5	16.5
70°	10.9	10.9	10.9	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
72.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
75°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5	8577.5
2.5°	8577.5	8484.8	8495.7	8544.8	8517.5	8544.8	8539.5	8539.5
5°	8484.8	8457.6	8414.1	8397.6	8430.3	8501.2	8490.3	8446.7
7.5°	8310.4	8239.7	8288.6	8310.4	8283.3	8326.9	8348.7	8255.9
10°	8103.4	8076.3	8065.4	8076.3	8065.4	8108.9	8054.5	8054.5
12.5°	7809.2	7765.6	7765.6	7831.0	7792.7	7760.0	7803.6	7798.3
15°	7515.0	7427.6	7427.6	7449.4	7465.8	7444.0	7449.4	7394.9
17.5°	7078.9	7051.7	7013.5	7073.5	7089.8	7068.0	7084.4	7057.1
20°	6670.1	6670.1	6599.4	6626.6	6648.3	6664.8	6675.7	6632.1
22.5°	6147.1	6158.0	6108.8	6163.3	6179.8	6125.3	6136.2	6125.3
25°	5667.4	5662.1	5623.8	5602.0	5612.9	5591.1	5585.8	5504.0
27.5°	5138.8	5084.3	5002.7	5024.5	4931.8	4855.5	4855.5	4730.1
30°	4566.6	4474.1	4365.1	4256.0	4174.3	4087.2	4038.0	3967.3
32.5°	3896.4	3771.2	3634.8	3487.6	3395.1	3264.3	3193.4	3231.7
35°	3231.7	3046.2	2861.0	2714.0	2572.1	2495.8	2408.6	2419.5
37.5°	2588.5	2327.0	2163.6	2005.4	1885.6	1787.5	1749.3	1738.4
40°	1890.9	1683.9	1520.4	1405.9	1324.3	1248.0	1204.4	1188.0
42.5°	1307.8	1160.8	1029.9	937.3	882.9	833.7	811.9	806.6
45°	850.2	763.0	675.8	610.4	566.8	534.2	528.6	523.0
47.5°	534.2	490.4	435.9	386.9	348.7	326.9	310.7	310.7
50°	305.1	288.9	261.5	234.4	212.6	201.7	185.2	179.9
52.5°	163.5	163.5	152.6	130.8	114.5	103.6	103.6	98.1
55°	87.2	87.2	81.8	81.8	76.3	76.3	76.3	70.9
57.5°	54.5	54.5	60.0	60.0	54.5	54.5	54.5	54.5
60°	38.2	43.6	43.6	43.6	43.6	43.6	43.6	43.6
62.5°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
65°	21.8	27.3	27.3	27.3	27.3	21.8	21.8	21.8
67.5°	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
70°	16.5	16.5	16.5	16.5	16.5	10.9	10.9	10.9
72.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
75°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)