

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: **FLDSQ4C80D010 FEU4C809027 F4LC-SQ-WH**

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: FLDSQ4C80D010 FEU4C809027 F4LC-SQ-WH
 Description: 4 INCH 8000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

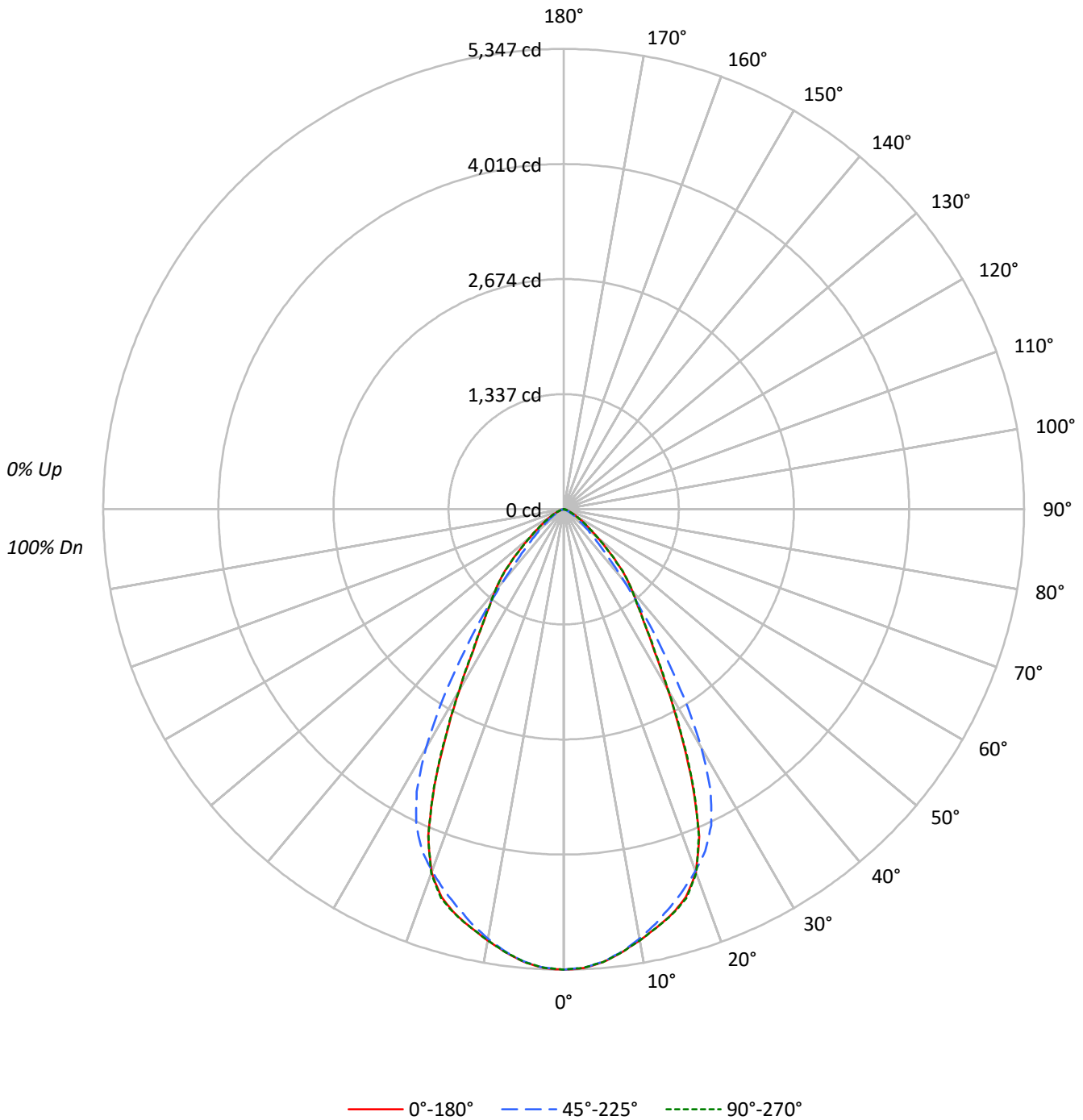
Lumens per Lamp: N/A
 Luminaire Lumens: 5659.0 lumens
 Efficiency: N/A
 Efficacy: 63.2 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 89.5
 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	113	110	107	105	110	108	105	103	104	102	100		100	98	97		96	95	94	92
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		90	88	86	84
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		85	82	79	77
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		79	76	73	71
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		74	70	67	66
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		70	65	62	61
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		65	61	58	56
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		62	57	54	52
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		58	54	50	49
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		55	50	47	46

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	515897	515897	515897
5°	511175	510846	511010
10°	498088	496099	498088
15°	486088	477337	486597
20°	460885	459150	461748
25°	378053	431359	380022
30°	269582	356375	269960
35°	194438	236148	195039
40°	155885	137193	155885
45°	118949	80072	118034
50°	78463	51127	78207
55°	52755	34318	52183
60°	35469	23428	35797
65°	24247	16553	23859
70°	16165	11905	16165
75°	10699	8798	10699
80°	7501	6557	7501
85°	5646	5646	5646

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.0	8.8
10°-20°	1355.3	23.9
20°-30°	1694.2	29.9
30°-40°	1139.8	20.1
40°-50°	601.8	10.6
50°-60°	244.6	4.3
60°-70°	90.7	1.6
70°-80°	29.3	0.5
80°-90°	6.3	0.1
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°	3546.5	62.7
0°-40°	4686.3	82.8
0°-60°	5532.7	97.8
0°-90°	5659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5347	5347	5347	5347	5347	
5°	5278	5272	5274	5274	5276	497
15°	4866	4826	4778	4824	4871	1363
25°	3551	3750	4052	3757	3570	1598
35°	1651	1733	2005	1737	1656	1062
45°	872	828	587	824	865	668
55°	314	263	204	263	310	291
65°	106	86	72	86	104	109
75°	29	25	24	25	29	33
85°	5	5	5	5	5	6
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5346.7	5346.7	5346.7	5346.7	5346.7
2.5°	5333.2	5329.8	5328.1	5328.1	5329.8
5°	5277.6	5272.5	5274.2	5274.2	5275.9
7.5°	5188.2	5186.5	5181.5	5188.2	5188.2
10°	5083.7	5075.2	5063.4	5076.9	5083.7
12.5°	4975.7	4950.5	4930.2	4950.5	4975.7
15°	4866.1	4825.7	4778.5	4824.0	4871.2
17.5°	4722.8	4682.4	4630.1	4690.8	4736.3
20°	4488.5	4491.8	4471.6	4488.5	4496.9
22.5°	4112.5	4188.3	4294.6	4190.0	4100.6
25°	3551.0	3749.9	4051.7	3756.7	3569.5
27.5°	2949.0	3201.9	3696.0	3217.1	2967.6
30°	2419.6	2643.8	3198.6	2659.0	2423.0
32.5°	1959.3	2126.2	2600.0	2146.4	1981.2
35°	1650.7	1733.3	2004.8	1736.7	1655.8
37.5°	1414.7	1414.7	1488.8	1421.4	1407.9
40°	1237.6	1183.7	1089.2	1182.0	1237.6
42.5°	1072.4	991.4	790.8	988.1	1075.7
45°	871.7	827.9	586.8	824.5	865.0
47.5°	669.4	639.0	441.8	635.7	674.4
50°	522.7	475.5	340.6	472.1	521.0
52.5°	401.3	350.7	263.0	350.7	397.9
55°	313.6	263.0	204.0	263.0	310.2
57.5°	241.1	200.6	155.1	197.3	239.4
60°	183.8	150.1	121.4	150.1	185.5
62.5°	139.9	114.7	92.7	113.0	138.3
65°	106.2	86.0	72.5	86.0	104.5
67.5°	77.6	64.1	55.6	64.1	79.2
70°	57.3	48.9	42.2	47.2	57.3
72.5°	42.2	35.4	32.0	35.4	42.2
75°	28.7	25.3	23.6	25.3	28.7
77.5°	20.2	18.5	16.9	18.5	20.2
80°	13.5	11.8	11.8	13.5	13.5
82.5°	8.4	8.4	8.4	8.4	8.4
85°	5.1	5.1	5.1	5.1	5.1
87.5°	3.4	3.4	3.4	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)