

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 FEU4C809030 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 FEU4C809030 F4LC-SQ-WH
 Description: 4 INCH 8000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

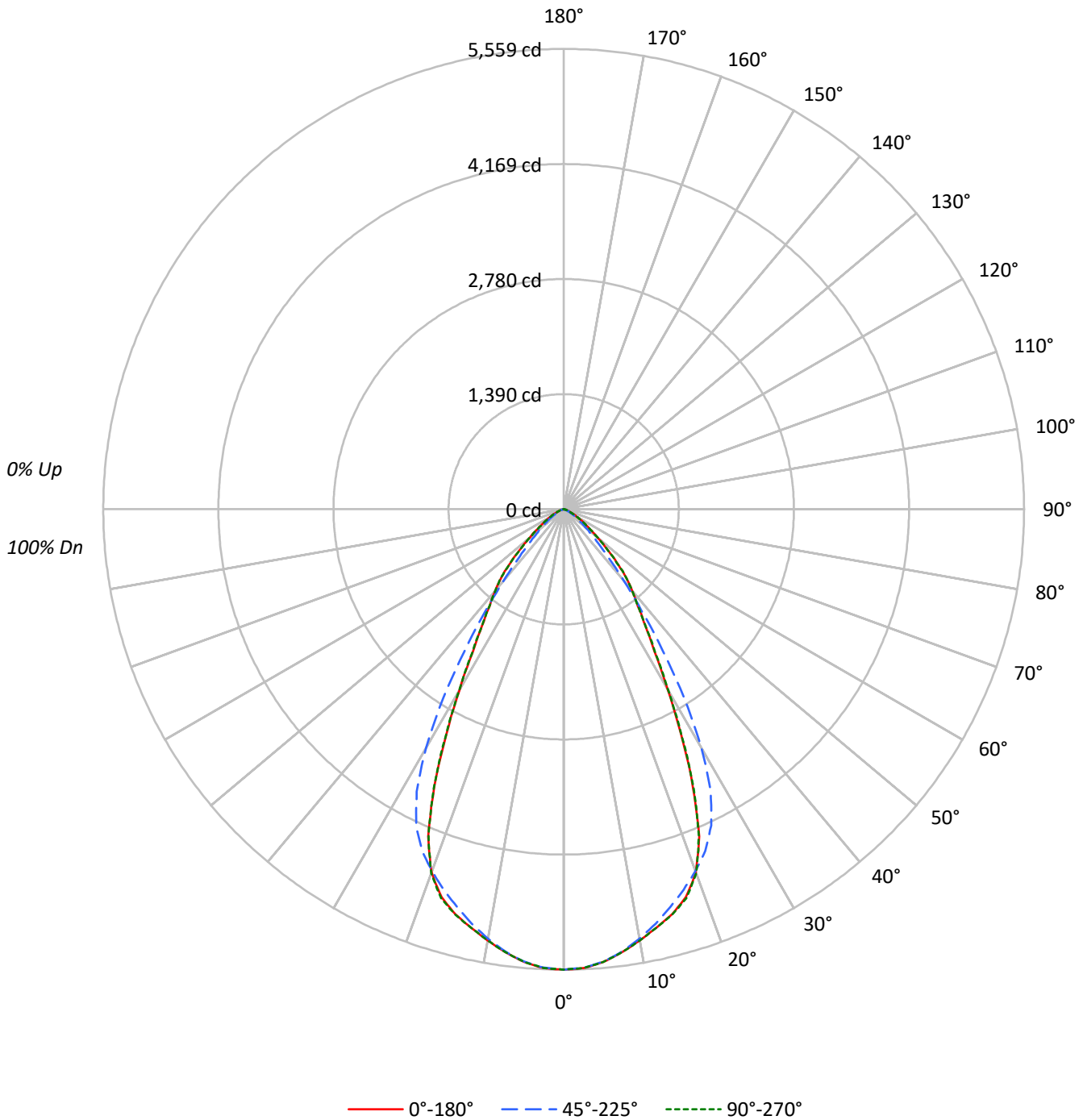
Lumens per Lamp: N/A
 Luminaire Lumens: 5884.0 lumens
 Efficiency: N/A
 Efficacy: 65.7 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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°	536411	536411	536411
5°	531496	531157	531321
10°	517889	515822	517889
15°	505417	496317	505946
20°	479204	477407	480107
25°	393085	448510	395129
30°	280300	370535	280690
35°	202165	245536	202789
40°	162082	142647	162082
45°	123684	83252	122728
50°	81585	53154	81315
55°	54858	35680	54269
60°	36878	24354	37206
65°	25206	17215	24818
70°	16814	12357	16814
75°	11110	9134	11110
80°	7779	6835	7779
85°	5868	5868	5868

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	516.8	8.8
10°-20°	1409.1	23.9
20°-30°	1761.6	29.9
30°-40°	1185.1	20.1
40°-50°	625.7	10.6
50°-60°	254.3	4.3
60°-70°	94.3	1.6
70°-80°	30.4	0.5
80°-90°	6.6	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°	3687.5	62.7
0°-40°	4872.6	82.8
0°-60°	5752.7	97.8
0°-90°	5884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5884.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5559	5559	5559	5559	5559	
5°	5487	5482	5484	5484	5486	517
15°	5060	5018	4968	5016	5065	1417
25°	3692	3899	4213	3906	3711	1662
35°	1716	1802	2084	1806	1722	1104
45°	906	861	610	857	899	695
55°	326	274	212	274	323	302
65°	110	89	75	89	109	114
75°	30	26	24	26	30	35
85°	5	5	5	5	5	7
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5559.3	5559.3	5559.3	5559.3	5559.3
2.5°	5545.2	5541.7	5540.0	5540.0	5541.7
5°	5487.4	5482.1	5483.9	5483.9	5485.6
7.5°	5394.5	5392.7	5387.5	5394.5	5394.5
10°	5285.8	5277.0	5264.7	5278.8	5285.8
12.5°	5173.6	5147.3	5126.2	5147.3	5173.6
15°	5059.6	5017.5	4968.5	5015.8	5064.9
17.5°	4910.6	4868.5	4814.2	4877.3	4924.6
20°	4666.9	4670.4	4649.4	4666.9	4675.7
22.5°	4276.0	4354.9	4465.3	4356.6	4263.7
25°	3692.2	3899.0	4212.8	3906.0	3711.4
27.5°	3066.3	3329.3	3842.9	3345.0	3085.6
30°	2515.8	2749.0	3325.7	2764.7	2519.3
32.5°	2037.2	2210.7	2703.4	2231.8	2060.0
35°	1716.3	1802.2	2084.5	1805.8	1721.6
37.5°	1470.9	1470.9	1548.0	1477.9	1463.9
40°	1286.8	1230.7	1132.5	1229.0	1286.8
42.5°	1115.0	1030.9	822.2	1027.4	1118.5
45°	906.4	860.8	610.1	857.3	899.4
47.5°	696.0	664.4	459.3	660.9	701.3
50°	543.5	494.4	354.1	490.9	541.7
52.5°	417.3	364.7	273.5	364.7	413.7
55°	326.1	273.5	212.1	273.5	322.6
57.5°	250.7	208.6	161.3	205.1	248.9
60°	191.1	156.0	126.2	156.0	192.8
62.5°	145.5	119.2	96.4	117.5	143.8
65°	110.4	89.4	75.4	89.4	108.7
67.5°	80.6	66.6	57.9	66.6	82.4
70°	59.6	50.8	43.8	49.1	59.6
72.5°	43.8	36.8	33.3	36.8	43.8
75°	29.8	26.3	24.5	26.3	29.8
77.5°	21.0	19.3	17.5	19.3	21.0
80°	14.0	12.3	12.3	14.0	14.0
82.5°	8.8	8.8	8.8	8.8	8.8
85°	5.3	5.3	5.3	5.3	5.3
87.5°	3.5	3.5	3.5	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)