

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: **FLDSQ4C08D010 FEU4C089030 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: FLDSQ4C08D010 FEU4C089030 F4LC-SQ-WH
 Description: 4 INCH 800 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

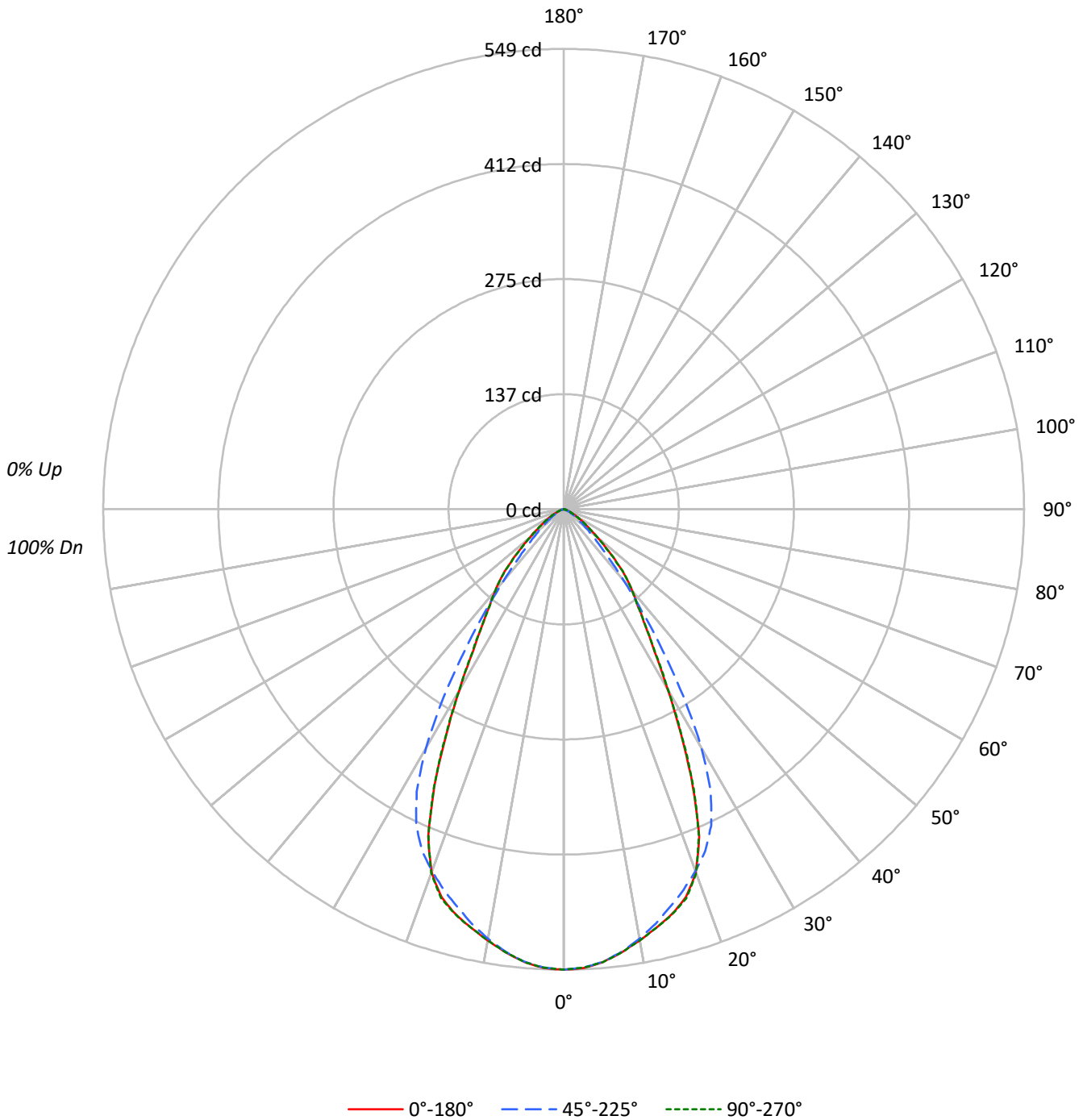
Lumens per Lamp: N/A
 Luminaire Lumens: 581.0 lumens
 Efficiency: N/A
 Efficacy: 58.7 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.9
 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°	52963	52963	52963
5°	52477	52448	52468
10°	51134	50938	51134
15°	49906	49007	49956
20°	47316	47141	47408
25°	38817	44289	39019
30°	27676	36589	27720
35°	19966	24241	20025
40°	16009	14082	16009
45°	12213	8215	12117
50°	8061	5254	8031
55°	5417	3516	5366
60°	3647	2412	3667
65°	2489	1690	2443
70°	1664	1213	1664
75°	1081	895	1081
80°	778	667	778
85°	554	554	554

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	8.8
10°-20°	139.1	23.9
20°-30°	173.9	29.9
30°-40°	117.0	20.1
40°-50°	61.8	10.6
50°-60°	25.1	4.3
60°-70°	9.3	1.6
70°-80°	3.0	0.5
80°-90°	0.6	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°	364.1	62.7
0°-40°	481.1	82.8
0°-60°	568.0	97.8
0°-90°	581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	549	549	549	549	549	
5°	542	541	542	542	542	51
15°	500	495	491	495	500	140
25°	365	385	416	386	366	164
35°	170	178	206	178	170	109
45°	90	85	60	85	89	69
55°	32	27	21	27	32	30
65°	11	9	7	9	11	11
75°	3	3	2	3	3	3
85°	0	0	0	0	0	1
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	548.9	548.9	548.9	548.9	548.9
2.5°	547.6	547.2	547.0	547.0	547.2
5°	541.8	541.3	541.5	541.5	541.7
7.5°	532.7	532.5	532.0	532.7	532.7
10°	521.9	521.1	519.9	521.2	521.9
12.5°	510.9	508.3	506.2	508.3	510.9
15°	499.6	495.4	490.6	495.3	500.1
17.5°	484.9	480.7	475.4	481.6	486.3
20°	460.8	461.2	459.1	460.8	461.7
22.5°	422.2	430.0	440.9	430.2	421.0
25°	364.6	385.0	416.0	385.7	366.5
27.5°	302.8	328.7	379.5	330.3	304.7
30°	248.4	271.4	328.4	273.0	248.8
32.5°	201.2	218.3	266.9	220.4	203.4
35°	169.5	178.0	205.8	178.3	170.0
37.5°	145.2	145.2	152.9	145.9	144.5
40°	127.1	121.5	111.8	121.4	127.1
42.5°	110.1	101.8	81.2	101.4	110.4
45°	89.5	85.0	60.2	84.7	88.8
47.5°	68.7	65.6	45.4	65.3	69.2
50°	53.7	48.8	35.0	48.5	53.5
52.5°	41.2	36.0	27.0	36.0	40.9
55°	32.2	27.0	20.9	27.0	31.9
57.5°	24.8	20.6	15.9	20.3	24.6
60°	18.9	15.4	12.5	15.4	19.0
62.5°	14.4	11.8	9.5	11.6	14.2
65°	10.9	8.8	7.4	8.8	10.7
67.5°	8.0	6.6	5.7	6.6	8.1
70°	5.9	5.0	4.3	4.8	5.9
72.5°	4.3	3.6	3.3	3.6	4.3
75°	2.9	2.6	2.4	2.6	2.9
77.5°	2.1	1.9	1.7	1.9	2.1
80°	1.4	1.2	1.2	1.4	1.4
82.5°	0.9	0.9	0.9	0.9	0.9
85°	0.5	0.5	0.5	0.5	0.5
87.5°	0.3	0.3	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)