

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: **FLDSQ4C05D010 FEU4C059050 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: FLDSQ4C05D010 FEU4C059050 F4LC-SQ-WLI
 Description: 4 INCH 500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

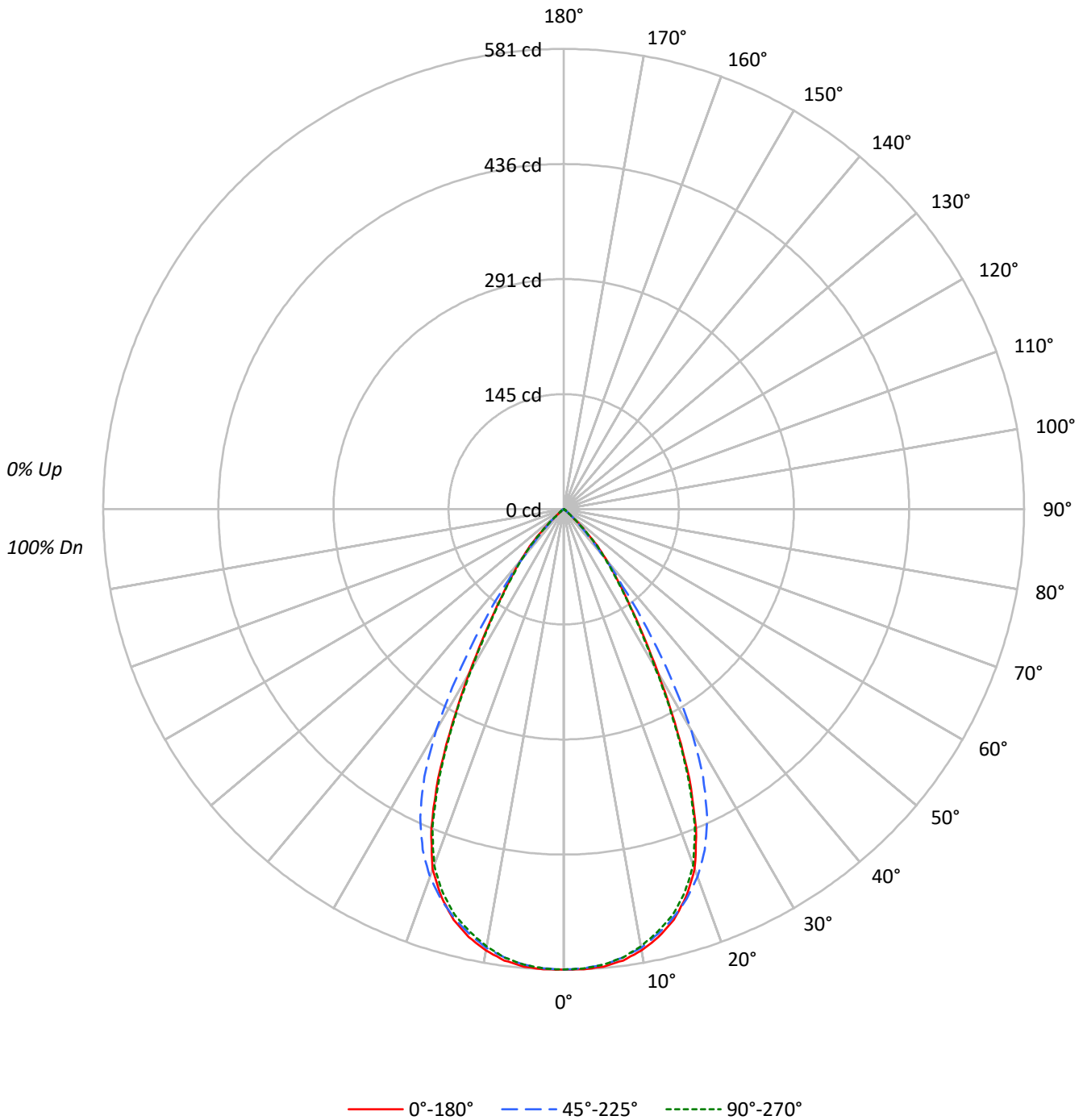
Lumens per Lamp: N/A
 Luminaire Lumens: 520.0 lumens
 Efficiency: N/A
 Efficacy: 72.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 7.2
 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	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	100	100	
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94	
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	79	75	72	71	71	71	71	
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	71	68	66	66	66	66	
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	59	58	58	58	58	
9	76	66	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	
10	72	63	57	53	71	62	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	56041	56041	56041
5°	56100	55848	55848
10°	55367	55044	54867
15°	53572	53313	52953
20°	49616	50694	49061
25°	39892	45598	39370
30°	26328	35753	25704
35°	16455	21473	16161
40°	10744	9951	10316
45°	5172	3971	4885
50°	1306	1576	1216
55°	723	656	690
60°	482	405	463
65°	342	297	342
70°	254	226	254
75°	186	186	186
80°	167	222	222
85°	111	332	332

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	10.5
10°-20°	149.2	28.7
20°-30°	177.8	34.2
30°-40°	100.7	19.4
40°-50°	31.1	6.0
50°-60°	4.3	0.8
60°-70°	1.5	0.3
70°-80°	0.6	0.1
80°-90°	0.3	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°	381.6	73.4
0°-40°	482.2	92.7
0°-60°	517.7	99.6
0°-90°	520.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	520.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	581	581	581	581	581	
5°	579	578	577	576	577	55
15°	536	535	534	532	530	150
25°	375	397	428	397	370	167
35°	140	152	182	153	137	91
45°	38	44	29	43	36	31
55°	4	4	4	4	4	4
65°	2	2	1	2	2	2
75°	0	0	0	0	0	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	580.8	580.8	580.8	580.8	580.8
2.5°	581.0	580.0	579.8	579.5	580.0
5°	579.2	577.9	576.6	576.2	576.6
7.5°	574.3	573.0	570.7	570.2	570.6
10°	565.1	563.9	561.8	560.6	560.0
12.5°	553.0	551.0	549.0	547.6	546.3
15°	536.3	535.3	533.7	531.6	530.1
17.5°	513.2	514.5	515.5	511.2	507.3
20°	483.2	488.1	493.7	485.0	477.8
22.5°	436.3	450.5	464.8	448.3	432.3
25°	374.7	396.6	428.3	397.2	369.8
27.5°	302.8	330.5	380.6	330.7	298.8
30°	236.3	264.9	320.9	261.1	230.7
32.5°	181.5	202.8	250.7	199.6	177.6
35°	139.7	152.4	182.3	152.8	137.2
37.5°	108.6	115.0	122.6	112.8	105.4
40°	85.3	85.5	79.0	84.2	81.9
42.5°	63.2	63.0	48.6	61.4	61.8
45°	37.9	44.2	29.1	43.0	35.8
47.5°	18.0	25.0	17.5	23.6	16.7
50°	8.7	12.0	10.5	11.2	8.1
52.5°	5.9	6.1	6.0	5.9	5.6
55°	4.3	4.3	3.9	4.1	4.1
57.5°	3.2	3.2	2.8	3.1	3.1
60°	2.5	2.4	2.1	2.4	2.4
62.5°	1.9	1.9	1.6	1.9	1.9
65°	1.5	1.5	1.3	1.5	1.5
67.5°	1.2	1.2	0.9	1.2	1.1
70°	0.9	0.9	0.8	0.9	0.9
72.5°	0.7	0.7	0.7	0.7	0.7
75°	0.5	0.5	0.5	0.5	0.5
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.3	0.3	0.4	0.4	0.4
82.5°	0.3	0.3	0.3	0.3	0.3
85°	0.1	0.3	0.3	0.3	0.3
87.5°	0.1	0.1	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)