

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: **FLDSQ4C55D010 FEU4C559050 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: FLDSQ4C55D010 FEU4C559050 F4LC-SQ-WLI
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

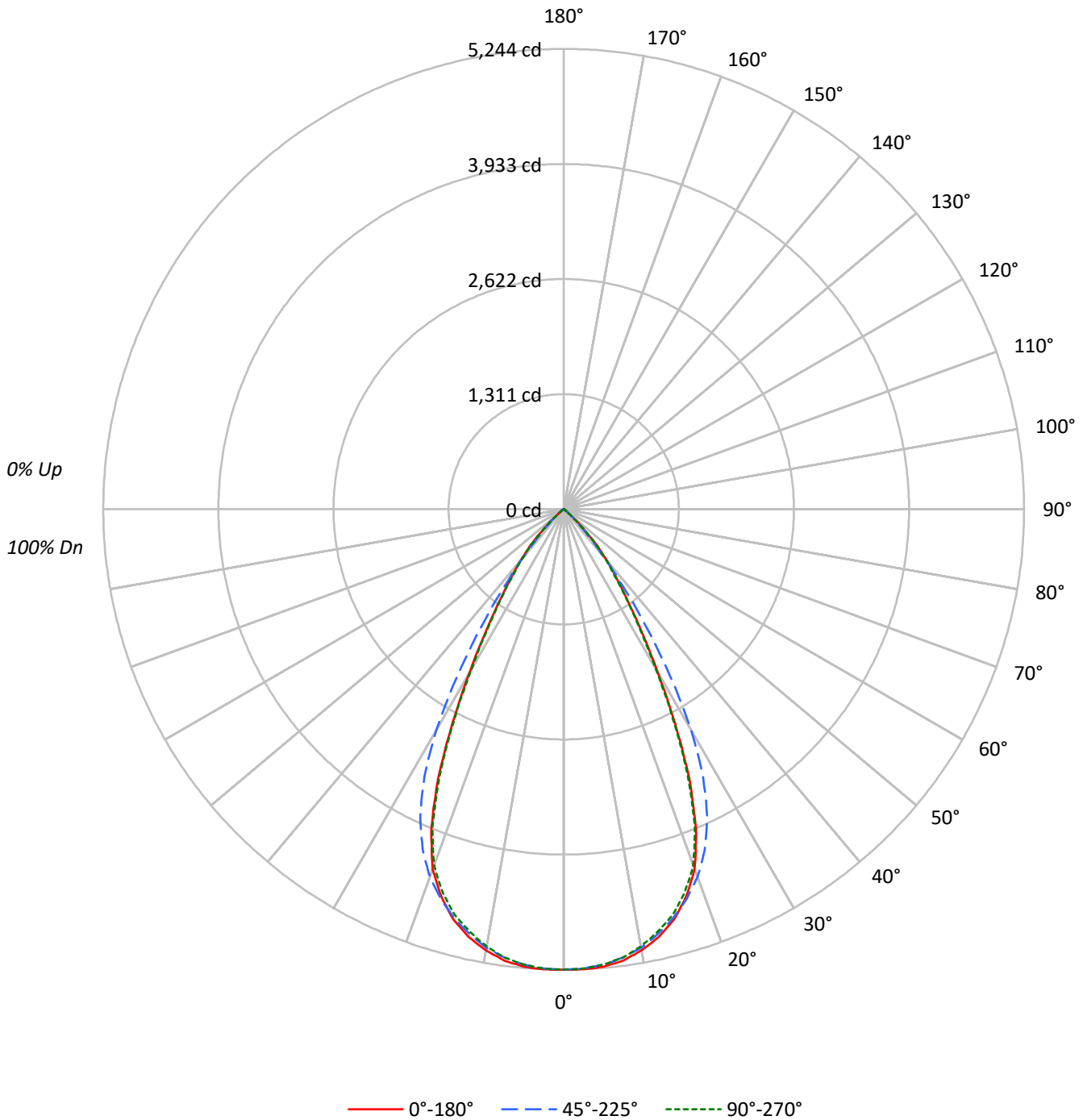
Lumens per Lamp: N/A
 Luminaire Lumens: 4694.0 lumens
 Efficiency: N/A
 Efficacy: 73.5 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 63.9
 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	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97	96	95	94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93	91	89	87
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		88	85	83	81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83	80	77	76
5	93	84	79	74	91	84	78	74	82	77	73		80	76	73		79	75	72	71
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		74	71	68	66
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		70	66	63	62
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		67	63	59	58
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		63	59	56	55
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		60	56	53	52

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	505920	505920	505920
5°	506448	504114	504114
10°	499802	496843	495315
15°	483580	481293	478046
20°	447855	457620	442906
25°	360092	411642	355344
30°	237672	322760	232034
35°	148546	193814	145849
40°	96949	89820	93158
45°	46682	35833	44048
50°	11754	14290	11033
55°	6477	5871	6275
60°	4419	3724	4188
65°	3014	2740	3014
70°	2370	2031	2370
75°	1789	1789	1789
80°	1334	2000	2000
85°	1329	2657	2657

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.1	10.5
10°-20°	1346.6	28.7
20°-30°	1604.8	34.2
30°-40°	908.7	19.4
40°-50°	280.9	6.0
50°-60°	39.0	0.8
60°-70°	13.3	0.3
70°-80°	5.3	0.1
80°-90°	2.2	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°	3444.5	73.4
0°-40°	4353.2	92.7
0°-60°	4673.2	99.6
0°-90°	4694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4694.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5243	5243	5243	5243	5243	
5°	5229	5217	5205	5201	5205	495
15°	4841	4832	4818	4799	4786	1350
25°	3382	3580	3866	3586	3338	1508
35°	1261	1376	1645	1379	1238	821
45°	342	399	263	388	323	282
55°	38	38	35	37	37	38
65°	13	13	12	13	13	14
75°	5	5	5	5	5	5
85°	1	2	2	2	2	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5243.3	5243.3	5243.3	5243.3	5243.3
2.5°	5244.5	5236.1	5233.6	5231.2	5236.1
5°	5228.8	5216.8	5204.7	5201.1	5204.7
7.5°	5184.3	5172.2	5151.7	5146.9	5150.5
10°	5101.2	5090.3	5071.0	5060.2	5055.4
12.5°	4991.5	4973.5	4955.4	4943.4	4931.3
15°	4841.0	4832.5	4818.1	4798.8	4785.6
17.5°	4632.6	4644.6	4653.1	4614.5	4579.6
20°	4361.6	4406.1	4456.7	4378.4	4313.4
22.5°	3938.8	4066.5	4195.4	4047.2	3902.7
25°	3382.3	3579.8	3866.5	3585.9	3337.7
27.5°	2733.1	2983.6	3435.3	2984.8	2696.9
30°	2133.2	2391.0	2896.9	2357.2	2082.6
32.5°	1638.1	1830.9	2263.3	1802.0	1603.2
35°	1261.1	1375.6	1645.4	1379.2	1238.2
37.5°	980.5	1038.3	1107.0	1017.8	951.6
40°	769.7	772.1	713.1	760.1	739.6
42.5°	570.9	568.5	438.4	554.1	557.7
45°	342.1	398.7	262.6	387.9	322.8
47.5°	162.6	225.2	157.8	213.2	150.6
50°	78.3	108.4	95.2	101.2	73.5
52.5°	53.0	55.4	54.2	53.0	50.6
55°	38.5	38.5	34.9	37.3	37.3
57.5°	28.9	28.9	25.3	27.7	27.7
60°	22.9	21.7	19.3	21.7	21.7
62.5°	16.9	16.9	14.5	16.9	16.9
65°	13.2	13.2	12.0	13.2	13.2
67.5°	10.8	10.8	8.4	10.8	9.6
70°	8.4	8.4	7.2	8.4	8.4
72.5°	6.0	6.0	6.0	6.0	6.0
75°	4.8	4.8	4.8	4.8	4.8
77.5°	3.6	3.6	3.6	3.6	3.6
80°	2.4	2.4	3.6	3.6	3.6
82.5°	2.4	2.4	2.4	2.4	2.4
85°	1.2	2.4	2.4	2.4	2.4
87.5°	1.2	1.2	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)