

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 FEU4C559035 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 FEU4C559035 F4LC-SQ-WLI
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

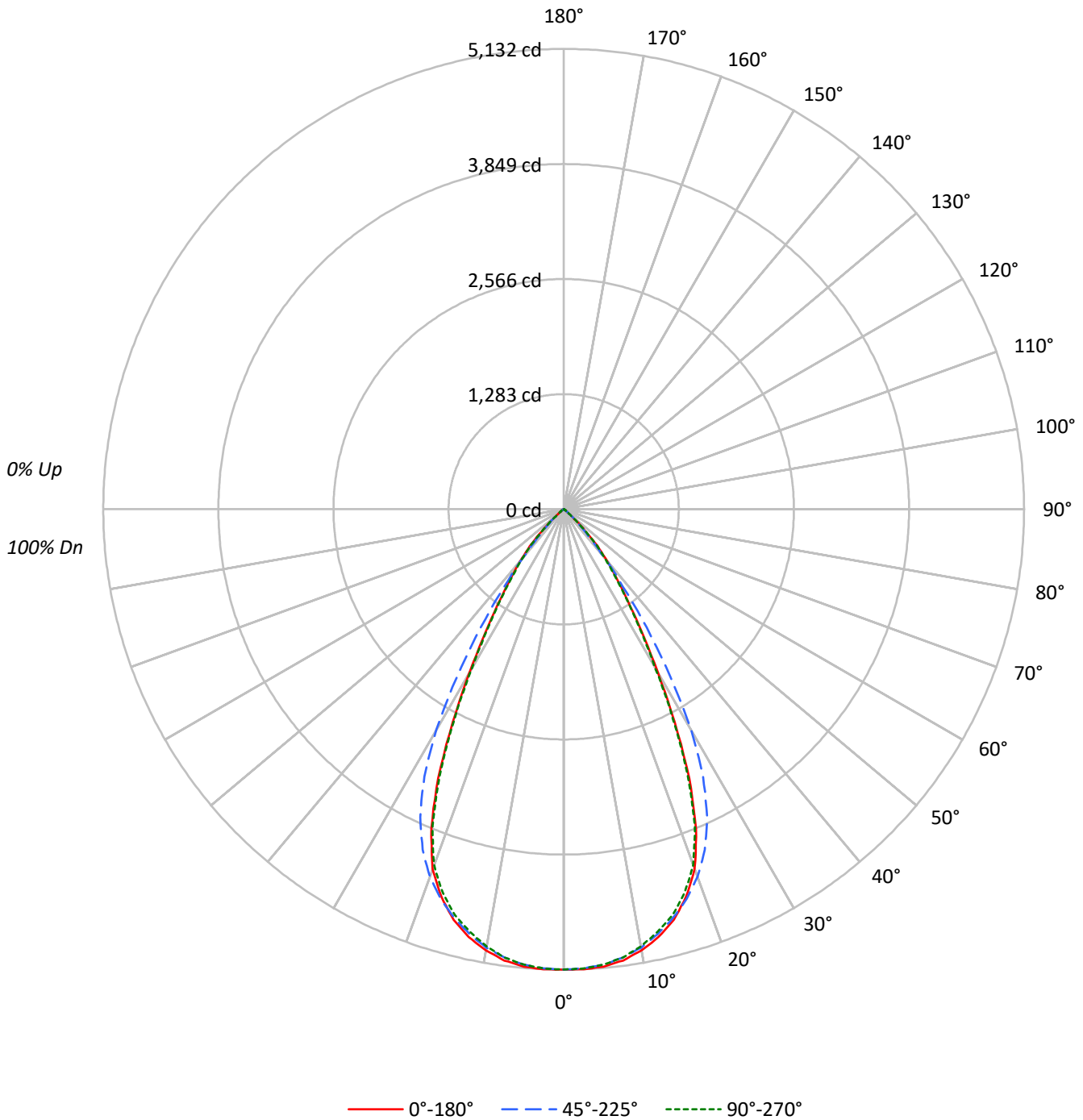
Lumens per Lamp: N/A
 Luminaire Lumens: 4593.0 lumens
 Efficiency: N/A
 Efficacy: 71.9 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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	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	84	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°	495036	495036	495036
5°	495552	493276	493276
10°	489044	486154	484655
15°	473172	470934	467757
20°	438213	447773	433377
25°	352342	402784	347700
30°	232558	315808	227043
35°	145354	189644	142716
40°	94858	87880	91155
45°	45672	35056	43106
50°	11498	13975	10793
55°	6342	5753	6140
60°	4323	3647	4091
65°	2968	2694	2968
70°	2342	2003	2342
75°	1752	1752	1752
80°	1334	1945	1945
85°	1329	2657	2657

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	482.5	10.5
10°-20°	1317.6	28.7
20°-30°	1570.2	34.2
30°-40°	889.2	19.4
40°-50°	274.9	6.0
50°-60°	38.2	0.8
60°-70°	13.0	0.3
70°-80°	5.2	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°	3370.4	73.4
0°-40°	4259.5	92.7
0°-60°	4572.6	99.6
0°-90°	4593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4593.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5130	5130	5130	5130	5130	
5°	5116	5104	5093	5089	5093	484
15°	4737	4729	4714	4696	4683	1321
25°	3310	3503	3783	3509	3266	1476
35°	1234	1346	1610	1350	1212	803
45°	335	390	257	380	316	276
55°	38	38	34	36	36	37
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°	5130.5	5130.5	5130.5	5130.5	5130.5
2.5°	5131.6	5123.4	5121.0	5118.7	5123.4
5°	5116.3	5104.5	5092.8	5089.2	5092.8
7.5°	5072.7	5060.9	5040.9	5036.2	5039.7
10°	4991.4	4980.8	4961.9	4951.3	4946.6
12.5°	4884.1	4866.5	4848.8	4837.0	4825.2
15°	4736.8	4728.6	4714.4	4695.6	4682.6
17.5°	4532.9	4544.7	4552.9	4515.2	4481.1
20°	4267.7	4311.3	4360.8	4284.2	4220.6
22.5°	3854.0	3979.0	4105.1	3960.1	3818.7
25°	3309.5	3502.8	3783.3	3508.7	3265.9
27.5°	2674.3	2919.4	3361.4	2920.6	2638.9
30°	2087.3	2339.5	2834.5	2306.5	2037.8
32.5°	1602.9	1791.5	2214.6	1763.2	1568.7
35°	1234.0	1346.0	1610.0	1349.5	1211.6
37.5°	959.4	1016.0	1083.1	995.9	931.1
40°	753.1	755.5	697.7	743.7	723.7
42.5°	558.7	556.3	429.0	542.2	545.7
45°	334.7	390.1	256.9	379.5	315.9
47.5°	159.1	220.4	154.4	208.6	147.3
50°	76.6	106.1	93.1	99.0	71.9
52.5°	51.9	54.2	53.0	51.9	49.5
55°	37.7	37.7	34.2	36.5	36.5
57.5°	28.3	28.3	24.8	27.1	27.1
60°	22.4	21.2	18.9	21.2	21.2
62.5°	16.5	16.5	14.1	16.5	16.5
65°	13.0	13.0	11.8	13.0	13.0
67.5°	10.6	10.6	8.3	10.6	9.4
70°	8.3	8.3	7.1	8.3	8.3
72.5°	5.9	5.9	5.9	5.9	5.9
75°	4.7	4.7	4.7	4.7	4.7
77.5°	3.5	3.5	3.5	3.5	3.5
80°	2.4	2.4	3.5	3.5	3.5
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)