

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: **FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI**

Issue Date: 12/13/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

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: FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI
 Description: 4 INCH 5000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

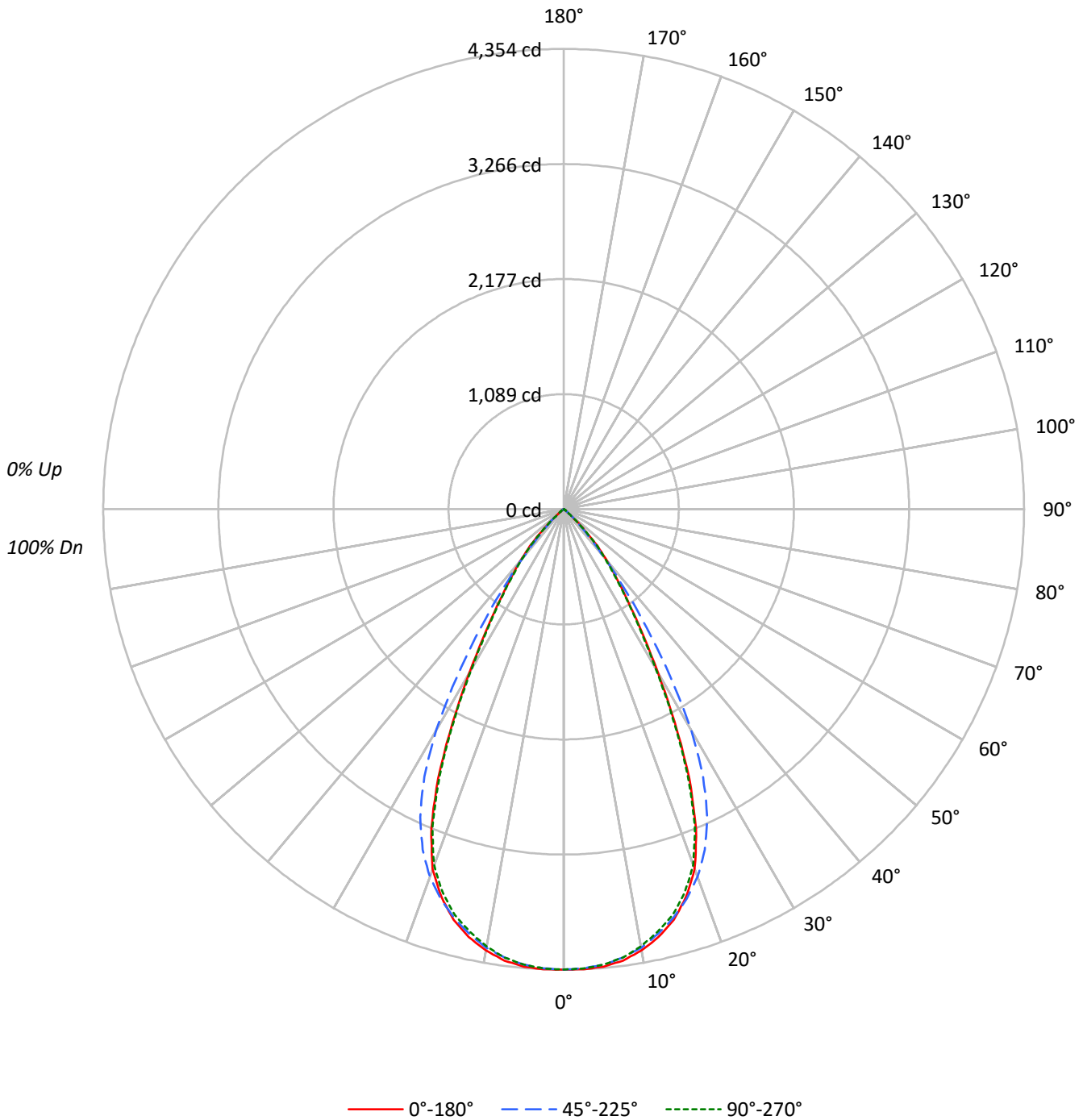
Lumens per Lamp: N/A
 Luminaire Lumens: 3897.0 lumens
 Efficiency: N/A
 Efficacy: 66.7 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 58.4
 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

TEST NUMBER: P#
CATALOG NUMBER: FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI

Luminous Intensity Polar Plot



TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI

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°	420016	420016	420016
5°	420458	418521	418521
10°	414934	412485	411211
15°	401469	399571	396874
20°	371809	379921	367702
25°	298950	341749	295011
30°	197317	267955	192638
35°	123327	160903	121089
40°	80487	74567	77338
45°	38753	29747	36570
50°	9757	11859	9157
55°	5383	4878	5215
60°	3667	3088	3474
65°	2511	2283	2511
70°	1975	1693	1975
75°	1491	1491	1491
80°	1111	1667	1667
85°	1107	2214	2214

TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	409.4	10.5
10°-20°	1118.0	28.7
20°-30°	1332.3	34.2
30°-40°	754.4	19.4
40°-50°	233.2	6.0
50°-60°	32.4	0.8
60°-70°	11.1	0.3
70°-80°	4.4	0.1
80°-90°	1.9	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°	2859.6	73.4
0°-40°	3614.0	92.7
0°-60°	3879.7	99.6
0°-90°	3897.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3897.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4353	4353	4353	4353	4353	
5°	4341	4331	4321	4318	4321	411
15°	4019	4012	4000	3984	3973	1121
25°	2808	2972	3210	2977	2771	1252
35°	1047	1142	1366	1145	1028	681
45°	284	331	218	322	268	235
55°	32	32	29	31	31	31
65°	11	11	10	11	11	12
75°	4	4	4	4	4	4
85°	1	2	2	2	2	1
90°	0	0	0	0	0	

TEST NUMBER: P#
 CATALOG NUMBER: FLDSQ4C50D010 FEU4C509027 F4LC-SQ-WLI

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4353	4353	4353	4353	4353
2.5°	4354	4347	4345	4343	4347
5°	4341	4331	4321	4318	4321
7.5°	4304	4294	4277	4273	4276
10°	4235	4226	4210	4201	4197
12.5°	4144	4129	4114	4104	4094
15°	4019	4012	4000	3984	3973
17.5°	3846	3856	3863	3831	3802
20°	3621	3658	3700	3635	3581
22.5°	3270	3376	3483	3360	3240
25°	2808	2972	3210	2977	2771
27.5°	2269	2477	2852	2478	2239
30°	1771	1985	2405	1957	1729
32.5°	1360	1520	1879	1496	1331
35°	1047	1142	1366	1145	1028
37.5°	814	862	919	845	790
40°	639	641	592	631	614
42.5°	474	472	364	460	463
45°	284	331	218	322	268
47.5°	135	187	131	177	125
50°	65	90	79	84	61
52.5°	44	46	45	44	42
55°	32	32	29	31	31
57.5°	24	24	21	23	23
60°	19	18	16	18	18
62.5°	14	14	12	14	14
65°	11	11	10	11	11
67.5°	9	9	7	9	8
70°	7	7	6	7	7
72.5°	5	5	5	5	5
75°	4	4	4	4	4
77.5°	3	3	3	3	3
80°	2	2	3	3	3
82.5°	2	2	2	2	2
85°	1	2	2	2	2
87.5°	1	1	2	2	2
90°	0	0	0	0	0

(END OF REPORT)