

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: **FLDSQ4C15D010 FEU4C159050 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: FLDSQ4C15D010 FEU4C159050 F4LC-SQ-WH
 Description: 4 INCH 1500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

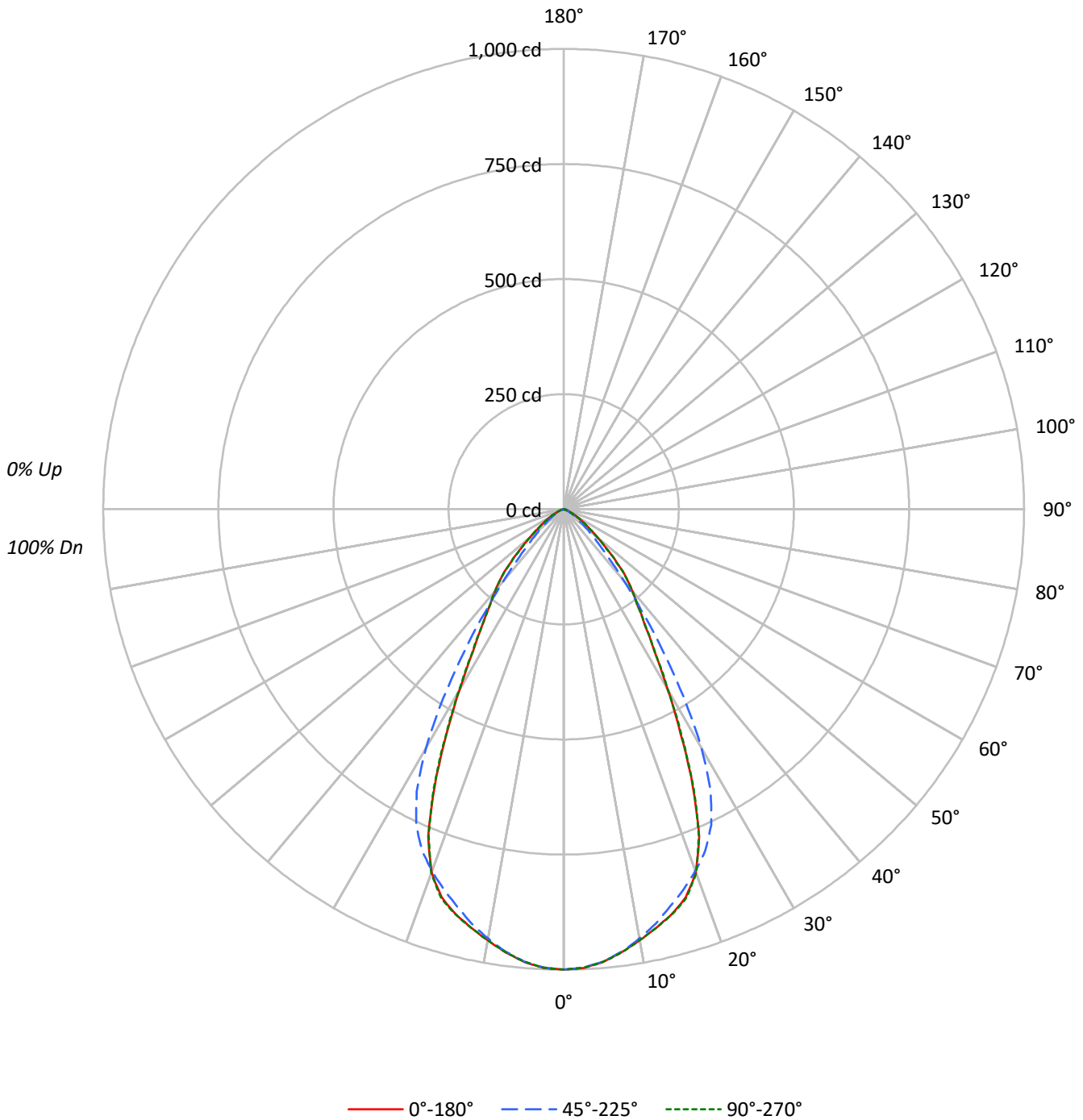
Lumens per Lamp: N/A
 Luminaire Lumens: 1058.0 lumens
 Efficiency: N/A
 Efficacy: 67.0 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 15.8
 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
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°	96450	96450	96450
5°	95569	95511	95540
10°	93118	92755	93118
15°	90882	89244	90972
20°	86170	85842	86324
25°	70681	80646	71054
30°	50404	66627	50471
35°	36350	44148	36468
40°	29147	25645	29147
45°	22242	14969	22065
50°	14666	9562	14621
55°	9858	6409	9757
60°	6638	4381	6696
65°	4543	3105	4452
70°	3019	2229	3019
75°	2013	1640	2013
80°	1389	1222	1389
85°	996	996	996

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	8.8
10°-20°	253.4	23.9
20°-30°	316.8	29.9
30°-40°	213.1	20.1
40°-50°	112.5	10.6
50°-60°	45.7	4.3
60°-70°	17.0	1.6
70°-80°	5.5	0.5
80°-90°	1.2	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°	663.1	62.7
0°-40°	876.1	82.8
0°-60°	1034.4	97.8
0°-90°	1058.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1058.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	987	986	986	986	986	93
15°	910	902	893	902	911	255
25°	664	701	758	702	667	299
35°	309	324	375	325	310	199
45°	163	155	110	154	162	125
55°	59	49	38	49	58	54
65°	20	16	14	16	20	20
75°	5	5	4	5	5	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	999.6	999.6	999.6	999.6	999.6
2.5°	997.1	996.5	996.1	996.1	996.5
5°	986.7	985.7	986.1	986.1	986.4
7.5°	970.0	969.7	968.7	970.0	970.0
10°	950.4	948.9	946.7	949.2	950.4
12.5°	930.3	925.5	921.7	925.5	930.3
15°	909.8	902.2	893.4	901.9	910.7
17.5°	883.0	875.4	865.6	877.0	885.5
20°	839.2	839.8	836.0	839.2	840.7
22.5°	768.9	783.0	802.9	783.4	766.7
25°	663.9	701.1	757.5	702.3	667.4
27.5°	551.3	598.6	691.0	601.5	554.8
30°	452.4	494.3	598.0	497.1	453.0
32.5°	366.3	397.5	486.1	401.3	370.4
35°	308.6	324.1	374.8	324.7	309.6
37.5°	264.5	264.5	278.4	265.7	263.2
40°	231.4	221.3	203.6	221.0	231.4
42.5°	200.5	185.4	147.8	184.7	201.1
45°	163.0	154.8	109.7	154.2	161.7
47.5°	125.1	119.5	82.6	118.8	126.1
50°	97.7	88.9	63.7	88.3	97.4
52.5°	75.0	65.6	49.2	65.6	74.4
55°	58.6	49.2	38.1	49.2	58.0
57.5°	45.1	37.5	29.0	36.9	44.8
60°	34.4	28.1	22.7	28.1	34.7
62.5°	26.2	21.4	17.3	21.1	25.8
65°	19.9	16.1	13.6	16.1	19.5
67.5°	14.5	12.0	10.4	12.0	14.8
70°	10.7	9.1	7.9	8.8	10.7
72.5°	7.9	6.6	6.0	6.6	7.9
75°	5.4	4.7	4.4	4.7	5.4
77.5°	3.8	3.5	3.2	3.5	3.8
80°	2.5	2.2	2.2	2.5	2.5
82.5°	1.6	1.6	1.6	1.6	1.6
85°	0.9	0.9	0.9	0.9	0.9
87.5°	0.6	0.6	0.6	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)