

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: **FLDSQ4C100D010 FEU4C1009050 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: FLDSQ4C100D010 FEU4C1009050 F4LC-SQ-WH
 Description: 4 INCH 10000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

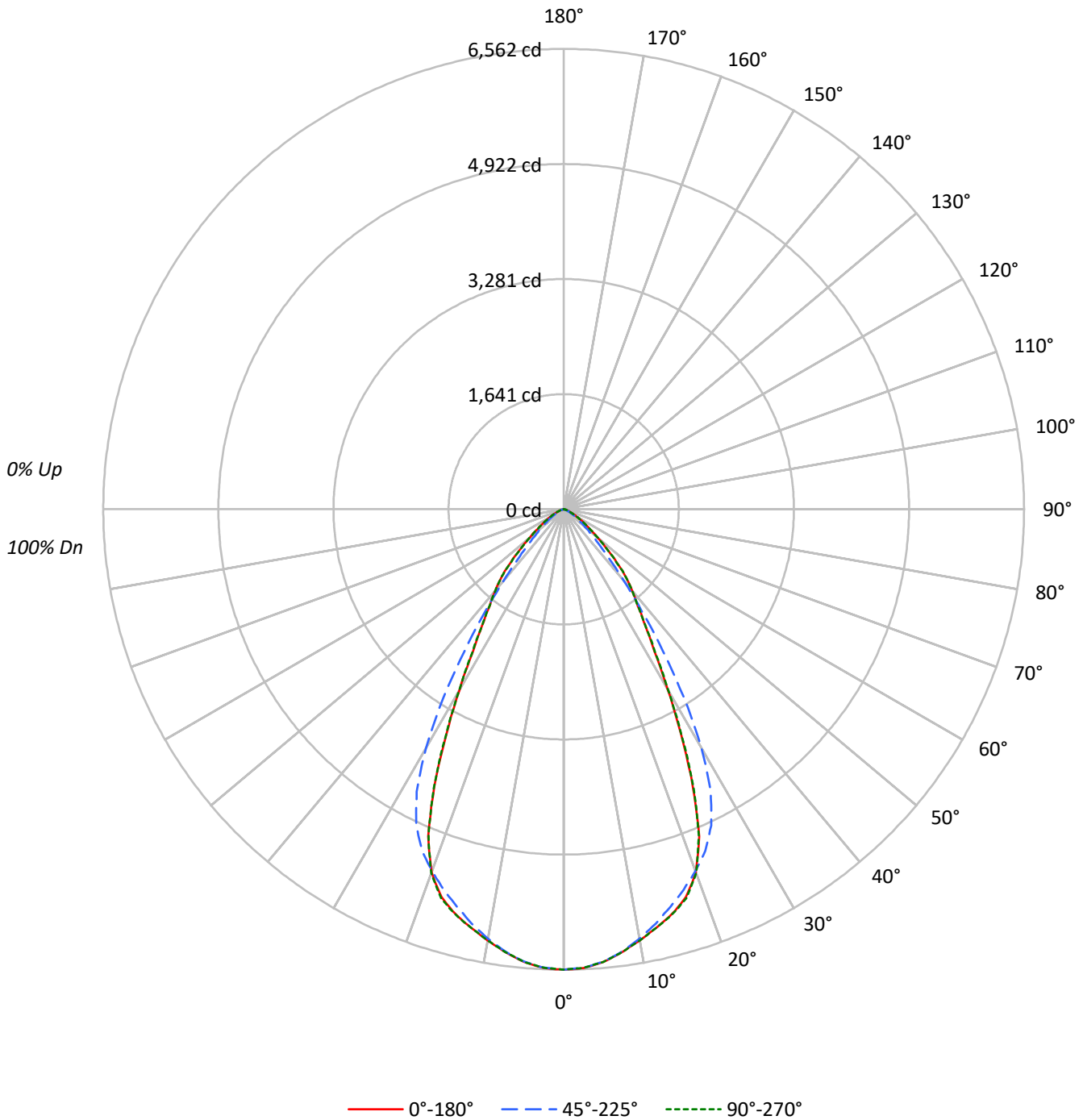
Lumens per Lamp: N/A
 Luminaire Lumens: 6945.0 lumens
 Efficiency: N/A
 Efficacy: 60.7 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 114.4
 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

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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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	92	92	
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84	84	84	84	
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	77	77	
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71	71	71	71	
5	89	80	74	69	88	79	73	69	78	72	68	76	71	68	74	70	67	66	66	66	66	
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61	61	61	61	
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56	56	56	56	
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52	52	52	52	
9	72	61	55	51	71	61	55	51	60	54	51	59	54	50	58	54	50	49	49	49	49	
10	68	58	52	48	67	57	51	47	57	51	47	56	51	47	55	50	47	46	46	46	46	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	633131	633131	633131
5°	627336	626929	627133
10°	611271	608841	611271
15°	596559	585810	597178
20°	565620	563495	566678
25°	463958	529391	466386
30°	330838	437351	331306
35°	238621	289813	239352
40°	191317	168380	191317
45°	145981	98262	144848
50°	96296	62746	95980
55°	64749	42123	64043
60°	43536	28754	43922
65°	29772	20320	29292
70°	19861	14585	19861
75°	13123	10811	13123
80°	9224	8057	9224
85°	6864	6864	6864

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	610.0	8.8
10°-20°	1663.2	23.9
20°-30°	2079.3	29.9
30°-40°	1398.8	20.1
40°-50°	738.6	10.6
50°-60°	300.2	4.3
60°-70°	111.3	1.6
70°-80°	36.0	0.5
80°-90°	7.7	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°	4352.5	62.7
0°-40°	5751.2	82.8
0°-60°	6790.0	97.8
0°-90°	6945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6945.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6562	6562	6562	6562	6562	
5°	6477	6471	6473	6473	6475	610
15°	5972	5922	5864	5920	5978	1673
25°	4358	4602	4972	4610	4381	1962
35°	2026	2127	2460	2131	2032	1304
45°	1070	1016	720	1012	1062	820
55°	385	323	250	323	381	357
65°	130	106	89	106	128	134
75°	35	31	29	31	35	41
85°	6	6	6	6	6	8
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6561.7	6561.7	6561.7	6561.7	6561.7
2.5°	6545.2	6541.0	6539.0	6539.0	6541.0
5°	6476.9	6470.7	6472.7	6472.7	6474.8
7.5°	6367.2	6365.1	6358.9	6367.2	6367.2
10°	6238.9	6228.6	6214.1	6230.6	6238.9
12.5°	6106.5	6075.4	6050.6	6075.4	6106.5
15°	5972.0	5922.3	5864.4	5920.2	5978.2
17.5°	5796.1	5746.4	5682.3	5756.8	5812.6
20°	5508.5	5512.6	5487.8	5508.5	5518.8
22.5°	5047.0	5140.1	5270.5	5142.2	5032.5
25°	4357.9	4602.1	4972.5	4610.4	4380.7
27.5°	3619.2	3929.6	4535.9	3948.2	3642.0
30°	2969.4	3244.6	3925.4	3263.3	2973.6
32.5°	2404.5	2609.4	3190.8	2634.2	2431.4
35°	2025.8	2127.2	2460.4	2131.4	2032.0
37.5°	1736.1	1736.1	1827.2	1744.4	1727.9
40°	1518.9	1452.6	1336.8	1450.6	1518.9
42.5°	1316.1	1216.7	970.5	1212.6	1320.2
45°	1069.8	1016.0	720.1	1011.9	1061.5
47.5°	821.5	784.3	542.2	780.1	827.7
50°	641.5	583.5	418.0	579.4	639.4
52.5°	492.5	430.4	322.8	430.4	488.4
55°	384.9	322.8	250.4	322.8	380.7
57.5°	295.9	246.2	190.4	242.1	293.8
60°	225.6	184.2	149.0	184.2	227.6
62.5°	171.8	140.7	113.8	138.6	169.7
65°	130.4	105.5	89.0	105.5	128.3
67.5°	95.2	78.6	68.3	78.6	97.3
70°	70.4	60.0	51.7	57.9	70.4
72.5°	51.7	43.5	39.3	43.5	51.7
75°	35.2	31.0	29.0	31.0	35.2
77.5°	24.8	22.8	20.7	22.8	24.8
80°	16.6	14.5	14.5	16.6	16.6
82.5°	10.3	10.3	10.3	10.3	10.3
85°	6.2	6.2	6.2	6.2	6.2
87.5°	4.1	4.1	4.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)