

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 FEU4C1009030 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 FEU4C1009030 F4LC-SQ-WH
 Description: 4 INCH 10000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

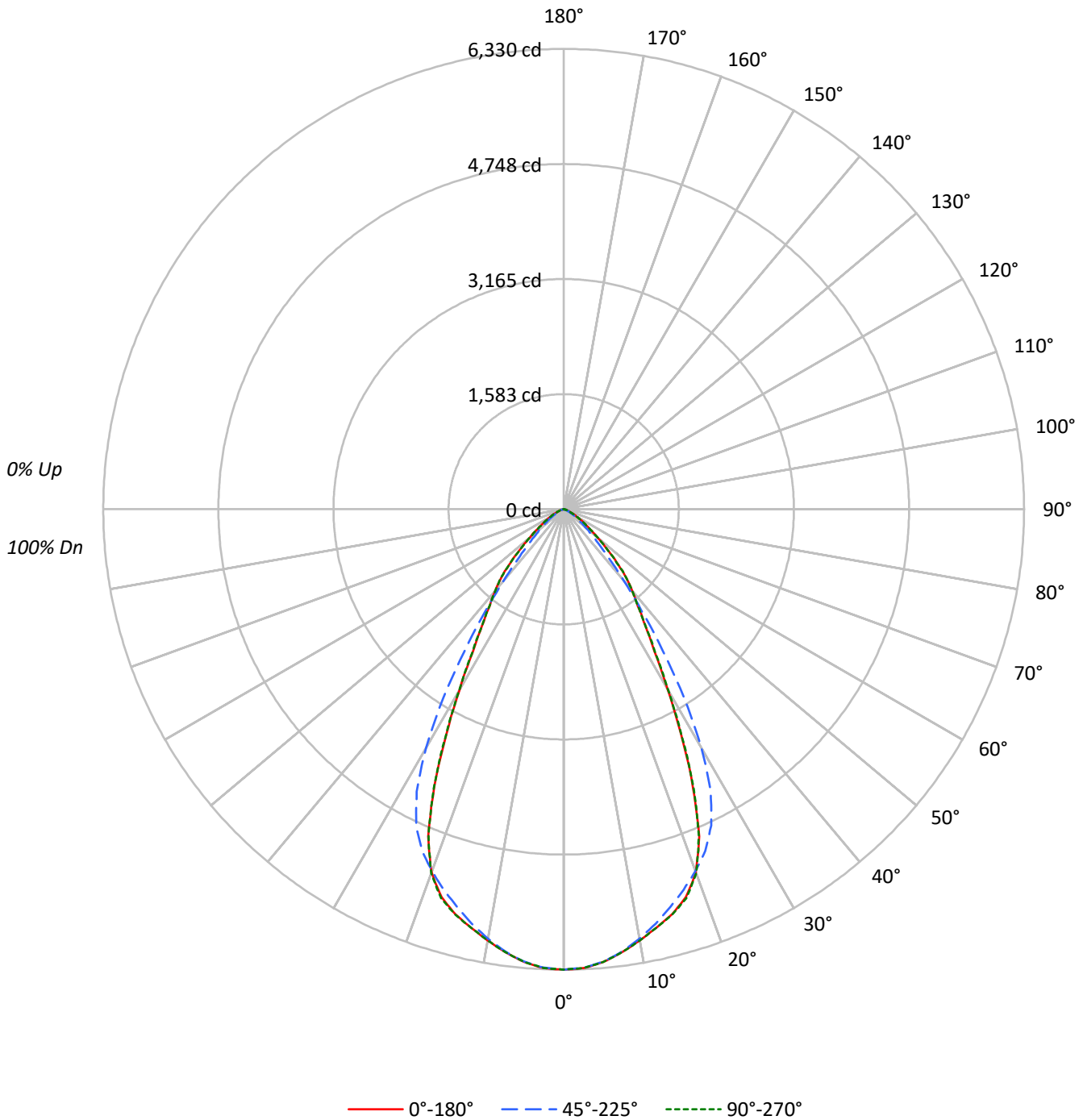
Lumens per Lamp: N/A
 Luminaire Lumens: 6700.0 lumens
 Efficiency: N/A
 Efficacy: 58.6 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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°	610794	610794	610794
5°	605204	604817	605010
10°	589706	587365	589706
15°	575512	565143	576111
20°	545659	543616	546686
25°	447595	510717	449926
30°	319173	421932	319618
35°	230211	279589	230918
40°	184565	162435	184565
45°	140836	94796	139744
50°	92903	60539	92603
55°	62461	40643	61788
60°	41992	27731	42378
65°	28722	19589	28265
70°	19156	14078	19156
75°	12638	10401	12638
80°	8891	7779	8891
85°	6643	6643	6643

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	588.5	8.8
10°-20°	1604.6	23.9
20°-30°	2005.9	29.9
30°-40°	1349.4	20.1
40°-50°	712.5	10.6
50°-60°	289.6	4.3
60°-70°	107.4	1.6
70°-80°	34.7	0.5
80°-90°	7.5	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°	4198.9	62.7
0°-40°	5548.4	82.8
0°-60°	6550.5	97.8
0°-90°	6700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6700.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6330	6330	6330	6330	6330	
5°	6248	6242	6244	6244	6246	589
15°	5761	5713	5658	5711	5767	1614
25°	4204	4440	4797	4448	4226	1892
35°	1954	2052	2374	2056	1960	1258
45°	1032	980	695	976	1024	791
55°	371	311	242	311	367	344
65°	126	102	86	102	124	130
75°	34	30	28	30	34	39
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°	6330.2	6330.2	6330.2	6330.2	6330.2
2.5°	6314.3	6310.3	6308.3	6308.3	6310.3
5°	6248.4	6242.4	6244.4	6244.4	6246.4
7.5°	6142.6	6140.6	6134.6	6142.6	6142.6
10°	6018.8	6008.8	5994.9	6010.8	6018.8
12.5°	5891.1	5861.1	5837.2	5861.1	5891.1
15°	5761.3	5713.4	5657.5	5711.4	5767.3
17.5°	5591.6	5543.7	5481.8	5553.7	5607.6
20°	5314.1	5318.1	5294.2	5314.1	5324.1
22.5°	4869.0	4958.8	5084.6	4960.8	4855.0
25°	4204.2	4439.8	4797.1	4447.7	4226.1
27.5°	3491.5	3791.0	4375.9	3808.9	3513.5
30°	2864.7	3130.2	3787.0	3148.2	2868.7
32.5°	2319.7	2517.3	3078.3	2541.3	2345.6
35°	1954.4	2052.2	2373.6	2056.2	1960.4
37.5°	1674.9	1674.9	1762.7	1682.9	1666.9
40°	1465.3	1401.4	1289.6	1399.4	1465.3
42.5°	1269.6	1173.8	936.3	1169.8	1273.6
45°	1032.1	980.2	694.7	976.2	1024.1
47.5°	792.5	756.6	523.0	752.6	798.5
50°	618.9	563.0	403.3	559.0	616.9
52.5°	475.1	415.2	311.4	415.2	471.1
55°	371.3	311.4	241.6	311.4	367.3
57.5°	285.5	237.6	183.7	233.6	283.5
60°	217.6	177.7	143.7	177.7	219.6
62.5°	165.7	135.7	109.8	133.8	163.7
65°	125.8	101.8	85.8	101.8	123.8
67.5°	91.8	75.9	65.9	75.9	93.8
70°	67.9	57.9	49.9	55.9	67.9
72.5°	49.9	41.9	37.9	41.9	49.9
75°	33.9	29.9	27.9	29.9	33.9
77.5°	24.0	22.0	20.0	22.0	24.0
80°	16.0	14.0	14.0	16.0	16.0
82.5°	10.0	10.0	10.0	10.0	10.0
85°	6.0	6.0	6.0	6.0	6.0
87.5°	4.0	4.0	4.0	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)