

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: **FLDSQ4C35D010 FEU4C359035 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: FLDSQ4C35D010 FEU4C359035 F4LC-SQ-WH
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND F4LC-SQW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

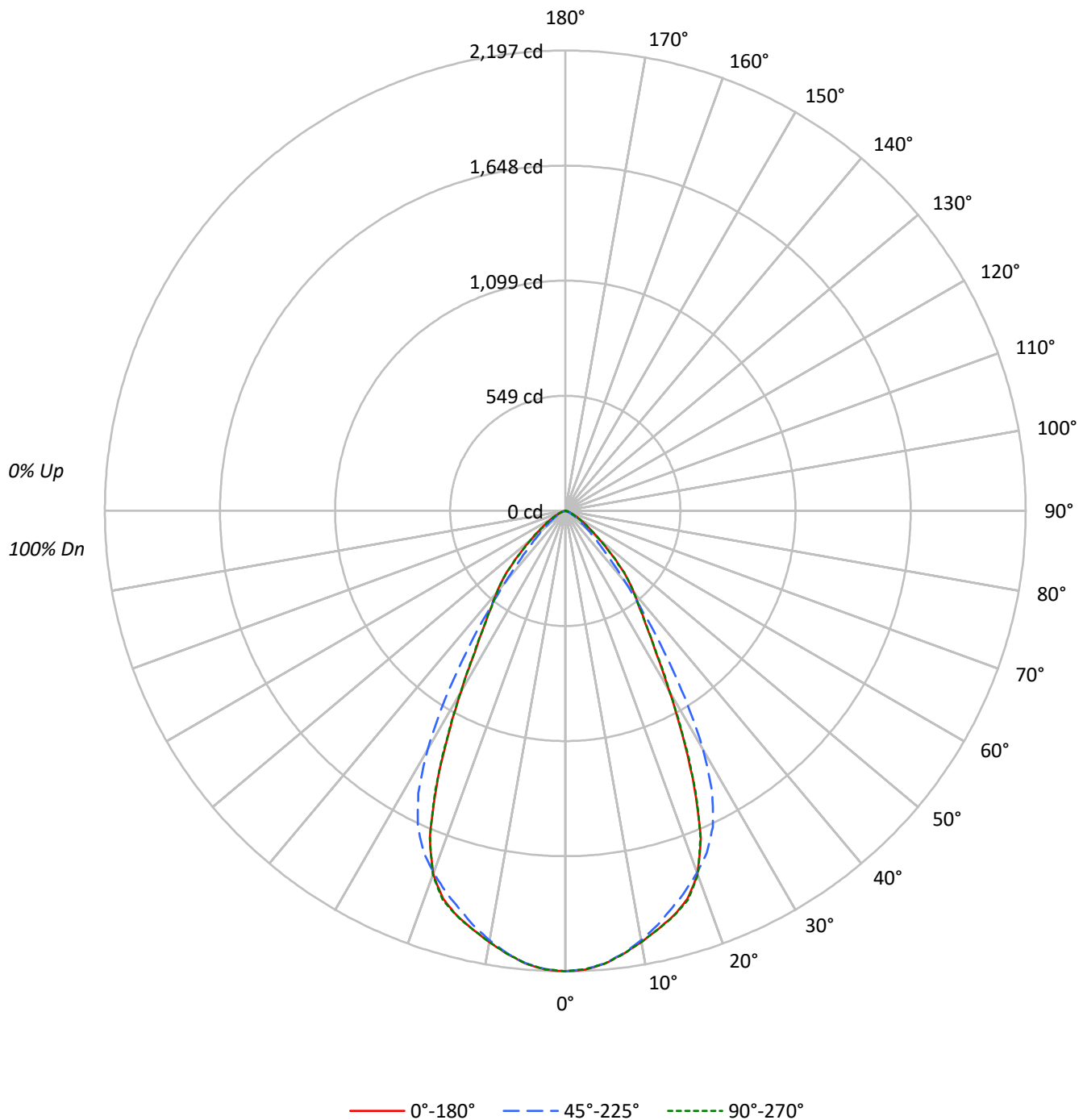
Lumens per Lamp: N/A
Luminaire Lumens: 2325.0 lumens
Efficiency: N/A
Efficacy: 57.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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
RW	70	50	30	10	70	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		100
1	113	110	107	105	110	108	105	103	104	102	100		100	98	97		92
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		84
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		77
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		71
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		66
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		61
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		56
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		52
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		49
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		46

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	211957	211957	211957
5°	210016	209880	209948
10°	204636	203822	204636
15°	199715	196109	199915
20°	189355	188646	189704
25°	155320	177230	156129
30°	110758	146411	110914
35°	79886	97025	80133
40°	64049	56366	64049
45°	48865	32900	48496
50°	32244	21000	32139
55°	21684	14097	21448
60°	14570	9630	14705
65°	9954	6804	9817
70°	6658	4881	6658
75°	4399	3616	4399
80°	3056	2667	3056
85°	2325	2325	2325

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.2	8.8
10°-20°	556.8	23.9
20°-30°	696.1	29.9
30°-40°	468.3	20.1
40°-50°	247.3	10.6
50°-60°	100.5	4.3
60°-70°	37.3	1.6
70°-80°	12.0	0.5
80°-90°	2.6	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°	1457.1	62.7
0°-40°	1925.4	82.8
0°-60°	2273.1	97.8
0°-90°	2325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2197	2197	2197	2197	2197	
5°	2168	2166	2167	2167	2168	204
15°	1999	1983	1963	1982	2001	560
25°	1459	1541	1665	1543	1466	657
35°	678	712	824	714	680	436
45°	358	340	241	339	355	275
55°	129	108	84	108	128	120
65°	44	35	30	35	43	45
75°	12	10	10	10	12	14
85°	2	2	2	2	2	3
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2196.7	2196.7	2196.7	2196.7	2196.7
2.5°	2191.1	2189.8	2189.1	2189.1	2189.8
5°	2168.3	2166.2	2166.9	2166.9	2167.6
7.5°	2131.6	2130.9	2128.8	2131.6	2131.6
10°	2088.6	2085.2	2080.3	2085.8	2088.6
12.5°	2044.3	2033.9	2025.6	2033.9	2044.3
15°	1999.3	1982.6	1963.2	1981.9	2001.3
17.5°	1940.4	1923.7	1902.3	1927.2	1945.9
20°	1844.1	1845.5	1837.2	1844.1	1847.5
22.5°	1689.6	1720.8	1764.4	1721.5	1684.8
25°	1458.9	1540.7	1664.7	1543.4	1466.5
27.5°	1211.6	1315.5	1518.5	1321.8	1219.2
30°	994.1	1086.2	1314.1	1092.5	995.5
32.5°	805.0	873.5	1068.2	881.9	814.0
35°	678.2	712.1	823.7	713.5	680.3
37.5°	581.2	581.2	611.7	584.0	578.4
40°	508.5	486.3	447.5	485.6	508.5
42.5°	440.6	407.3	324.9	405.9	442.0
45°	358.1	340.1	241.1	338.8	355.4
47.5°	275.0	262.5	181.5	261.2	277.1
50°	214.8	195.4	139.9	194.0	214.1
52.5°	164.9	144.1	108.1	144.1	163.5
55°	128.9	108.1	83.8	108.1	127.5
57.5°	99.1	82.4	63.7	81.1	98.4
60°	75.5	61.7	49.9	61.7	76.2
62.5°	57.5	47.1	38.1	46.4	56.8
65°	43.6	35.3	29.8	35.3	43.0
67.5°	31.9	26.3	22.9	26.3	32.6
70°	23.6	20.1	17.3	19.4	23.6
72.5°	17.3	14.5	13.2	14.5	17.3
75°	11.8	10.4	9.7	10.4	11.8
77.5°	8.3	7.6	6.9	7.6	8.3
80°	5.5	4.8	4.8	5.5	5.5
82.5°	3.5	3.5	3.5	3.5	3.5
85°	2.1	2.1	2.1	2.1	2.1
87.5°	1.4	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)