

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 FEU4C359050 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 FEU4C359050 F4LC-SQ-WH
Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND F4LC-SQW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

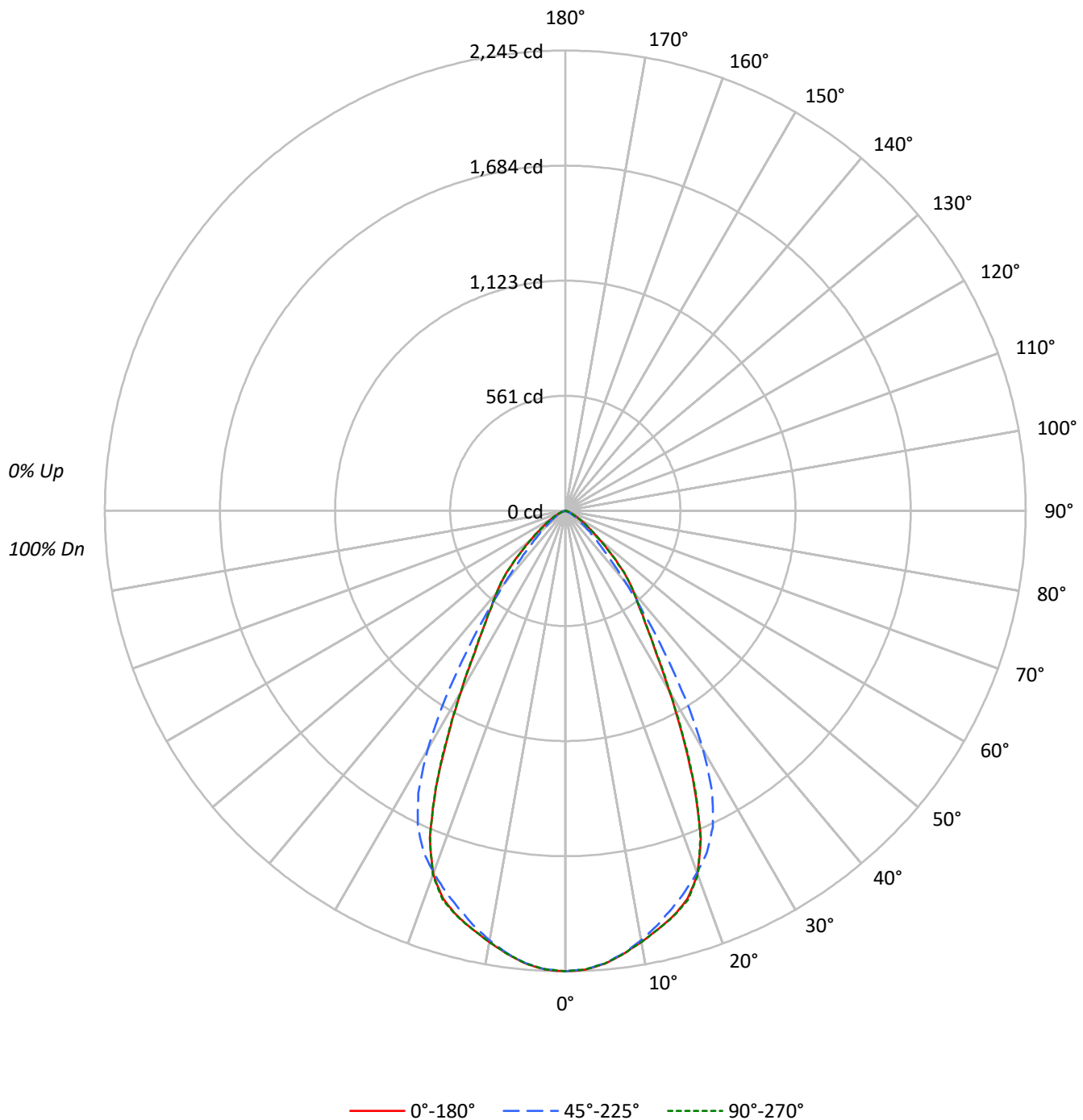
Lumens per Lamp: N/A
Luminaire Lumens: 2376.0 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	216608	216608	216608
5°	214617	214481	214549
10°	209123	208290	209123
15°	204091	200415	204300
20°	193503	192784	193873
25°	158727	181116	159557
30°	113187	149631	113343
35°	81641	99145	81888
40°	65447	57600	65447
45°	49943	33623	49561
50°	32949	21466	32844
55°	22155	14417	21919
60°	14898	9842	15033
65°	10183	6941	10023
70°	6799	4993	6799
75°	4474	3691	4474
80°	3167	2778	3167
85°	2325	2325	2325

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.7	8.8
10°-20°	569.0	23.9
20°-30°	711.4	29.9
30°-40°	478.5	20.1
40°-50°	252.7	10.6
50°-60°	102.7	4.3
60°-70°	38.1	1.6
70°-80°	12.3	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°	1489.0	62.7
0°-40°	1967.6	82.8
0°-60°	2323.0	97.8
0°-90°	2376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2245	2245	2245	2245	2245	
5°	2216	2214	2214	2214	2215	209
15°	2043	2026	2006	2025	2045	572
25°	1491	1574	1701	1577	1499	671
35°	693	728	842	729	695	446
45°	366	348	246	346	363	281
55°	132	110	86	110	130	122
65°	45	36	30	36	44	46
75°	12	11	10	11	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°	2244.9	2244.9	2244.9	2244.9	2244.9
2.5°	2239.2	2237.8	2237.1	2237.1	2237.8
5°	2215.8	2213.7	2214.4	2214.4	2215.1
7.5°	2178.3	2177.6	2175.5	2178.3	2178.3
10°	2134.4	2130.9	2125.9	2131.6	2134.4
12.5°	2089.1	2078.5	2070.0	2078.5	2089.1
15°	2043.1	2026.1	2006.3	2025.4	2045.2
17.5°	1982.9	1965.9	1944.0	1969.5	1988.6
20°	1884.5	1885.9	1877.5	1884.5	1888.1
22.5°	1726.7	1758.5	1803.1	1759.2	1721.7
25°	1490.9	1574.5	1701.2	1577.3	1498.7
27.5°	1238.2	1344.4	1551.8	1350.7	1246.0
30°	1015.9	1110.0	1343.0	1116.4	1017.3
32.5°	822.6	892.7	1091.6	901.2	831.8
35°	693.1	727.8	841.7	729.2	695.2
37.5°	594.0	594.0	625.1	596.8	591.1
40°	519.6	497.0	457.3	496.3	519.6
42.5°	450.2	416.3	332.0	414.9	451.7
45°	366.0	347.6	246.4	346.2	363.2
47.5°	281.1	268.3	185.5	266.9	283.2
50°	219.5	199.6	143.0	198.2	218.8
52.5°	168.5	147.3	110.4	147.3	167.1
55°	131.7	110.4	85.7	110.4	130.3
57.5°	101.2	84.2	65.1	82.8	100.5
60°	77.2	63.0	51.0	63.0	77.9
62.5°	58.8	48.1	38.9	47.4	58.1
65°	44.6	36.1	30.4	36.1	43.9
67.5°	32.6	26.9	23.4	26.9	33.3
70°	24.1	20.5	17.7	19.8	24.1
72.5°	17.7	14.9	13.5	14.9	17.7
75°	12.0	10.6	9.9	10.6	12.0
77.5°	8.5	7.8	7.1	7.8	8.5
80°	5.7	5.0	5.0	5.7	5.7
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)