Troubleshooting LED Fixtures on Series Circuits

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Record of Changes

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Troubleshooting Elevated and In-pavement LED Fixtures

1. Introduction

This service bulletin provides instructions on how to troubleshoot Elevated and In-pavement LED fixtures used on constant current series circuits.

2. Special Tools and Equipment Required

A calibrated true RMS multi-meter and current clamp are critical to correctly measuring the current on a series circuit.
The following instruments are recommended by SAS:

- True RMS Digital Multi-meter (Fluke 87 or equivalent)
- Current clamp (AEMC 200A or equivalent)

3. General Instructions

WARNING: Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.

4. LED Current Ranges

Tables 1 & 2 identify the typical range over which the fixture will operate at each step. These ranges are typical but may vary depending on the specific fixture. If the current provided to the fixture is at the edge of the range, the fixture may fluctuate between steps.

Table 1. Five (5) Step CCR

Step	Current Range
Off	0-2.20A
1	2.21-3.10A
2	3.11-3.75A
3	3.76-4.45A
4	5.01-6.05A
5	6.06-6.70A*

Table 2. Three (3) Step CCR

Step	Current Range
B10	4.46-5.00A
B30	5.01-6.05A
B100	6.06-6.70A*

* If the current is above 6.70A, the fixture intensity will not change, but the electronics could be damaged.

5. Troubleshooting Steps