X-PoE BASIC TROUBLESHOOTING — LOADS NOT TURNING ON

ABOUT THIS GUIDE

This guide provides a quick verification method to identify the cause when a load connected to an X-PoE system is not operating. The goal is to determine whether the issue originates from a cable issue, a PD/fixture connection issue, or an X-PoE switch configuration issue.

POSSIBLE ISSUE AREAS

Cable Issue

- Faulty or damaged CAT6 cable
- Improper cable installation

PD / Fixture Connection Issue

- Poor connection between the PD and the LED fixture
- LED module failure

X-PoE Switch Issue

- Switch configuration preventing load activation
- Port configuration or hardware issue

ASSUMPTIONS

Before beginning troubleshooting:

- Switch firmware/software is current
- X-PoE switch is configured for automatic load discovery and activation (default configuration)
- CAT6 cable has previously been tested and verified functional
- The technician knows the switch, port, and channel associated with the affected load

TERMS

Term	Definition
Affected Fixture	The light or DC outlet being investigated. It is expected to be ON but currently is not.
X-PoE Switch	A DC lighting control network switch with integrated LED drivers (e.g., XS-108H).
Port	A physical network port on the X-PoE switch that provides power and communication.

Term	Definition
Channel	Individual power output on a port. Each port typically provides two independent channels (CH1 and CH2).
PD	Power Distribution Module — device used to connect a fixture to the CAT6 cable.
Aggregated Load	Two fixtures connected together and powered from both channels of a single port instead of two independent fixtures.

REQUIRED TOOLS

1. **Test Load** — known-good load that auto-discovers and turns on
2. **Troubleshooting Module** — pass-through PD with no signature resistors
3. **DMM** — Digital Multimeter
4. **AMM** — Analog Multimeter (useful for observing scanning signals)

TROUBLESHOOTING OVERVIEW

Start troubleshooting in the telecommunications room to avoid ladder work whenever possible.

The Troubleshooting Module helps determine whether the issue lies toward the switch or toward the fixture.

Interpretation Guide

Observation	Likely Cause
No scanning signal	Issue toward the X-PoE switch
No signature resistance	Issue toward the affected fixture
Scanning signal + signature resistance	Continue testing with test load

Test Load Results

Result	Likely Cause
Test load turns on	Issue likely between PD and LEDs, or inside the LED fixture
Test load does not turn on	X-PoE switch may not be configured to enable the load

Move from the network closet toward the affected fixture using the troubleshooting module to isolate the failure point.

PROCEDURE

Begin troubleshooting at the X-PoE switch in the telecommunications room. Each step determines whether the fault lies toward the switch or toward the load.

Step 1 — Identify the Port

Locate the X-PoE switch and port supplying the affected fixture. Verify:

- Correct cable is connected
- Port status indicator

Port Status Indicators

LED Color	Meaning
Red	Switch detected an error (possible cable issue)
White (solid/flashing)	Port not providing power (possible cable issue)
Green (solid/flashing)	Port providing power (possible fixture issue)
Orange	Connected to IEEE load (e.g., DCO-65)
No LED	Verify X-PoE switch power

Step 2 — Test Cable Toward Fixture

Disconnect the CAT6 cable from the switch and connect it to the Troubleshooting Module. Use a Digital Multimeter to measure signature resistance.

Channel 1 Test

Measure: CH1 + → CH1 -

Result	Meaning
Short	Cable fault
Open	Load not connected or cable fault

Expected resistance values:

Device	Resistance
LED Fixture	7 kΩ – 25 kΩ
DCO-65 / IEEE PoE	~25 kΩ
DCO-100	45 kΩ – 50 kΩ

Channel 2 Test

Measure: CH2 + → CH2 -

Interpret results the same as Channel 1.

Step 3 — Test Cable Toward Switch

Connect CAT6 cable from the X-PoE switch to the Troubleshooting Module. Use an Analog Multimeter to measure voltage.

Channel 1

Measure: CH1 + → CH1 -

Result	Meaning
No voltage	Cable or switch issue
Voltage above 24V	Switch verified load and enabled power
Pulsing ~10V once/sec	Normal scanning behavior

Channel 2

Measure: CH2 + → CH2 -

Interpret results the same as Channel 1.

Step 4 — Verify Fixture Operation

Plug the test load directly into the X-PoE switch and wait up to 30 seconds.

> **EXPECTED RESULT**
> The test load turns on. This confirms the X-PoE switch is operational and port configuration is correct.

If cable tests also pass, the issue likely exists inside the LED fixture or PD connection.

KEY TAKEAWAY

Start troubleshooting at the network closet and work outward. Using the troubleshooting module quickly determines whether the issue lies toward the switch or toward the fixture, minimizing ladder work and reducing troubleshooting time.

RELATED INFORMATION

Technical Support

Questions about a load that will not turn on can be sent to support@luum.io. Include the switch, port, channel, LED color, and the resistance or voltage you measured.

Document Feedback

While we have taken great care to ensure the accuracy and completeness of this document, we welcome your feedback and suggestions. If you notice any errors or omissions, or feel a topic could benefit from further explanation, please email your feedback to support@luum.io.

Revision History

Date	Revision	Notes
11/3/2026	A	Converted to the current guide format.

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