



Troubleshooting Guide Outdoor LED



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The information presented in this LED Service Guide is generic in nature. It can be applied to and used in troubleshooting Holophane and AEL Outdoor Luminaires.



SAFETY FIRST

This servicing guide contains information for safe practices and recommends the proper equipment used when servicing LED lighting systems, along with the construction and operating features that may affect servicing. Please follow all safety guidelines as outlined in the installation instructions that come with your Holophane luminaire.

WARRANTY

For limited warranty visit:

<https://www.acuitybrands.com/-/media/Files/Acuity/Resources/Terms and Conditions/Lighting Column 1/Acuity Brands LED-OLED/ABL LED Commerical Outdoor.pdf?la=en>





Visual Inspection Procedures

If the luminaire is not performing per the product specification, please make sure to conduct the following steps to determine root cause of failure.

- 1. Ensure power has been turned off or disconnected from the luminaire before completing steps #2 through #5 of the visual inspections**
2. Conduct a visual inspection of the internal components for evidence of any failed components. Replace any components identified or replace luminaire.
3. Complete a visual Inspection of the internal wirings to confirm there are no pinched wire leads. Repair wire leads identified or replace luminaire.
4. Complete a visual inspection of all internal wiring connectors to insure pins have nested correctly inside of each connector. Disconnect each of the connectors one at a time and complete a pull test on each of the leads separately to insure they do not pull out of the connector. If one of the leads does pull out of the connector, repair it by re-inserting into the connector and lock in place. If the lead does not stay seated, replace the harness identified or replace the luminaire.
5. Fusing (Optional) - Remove fusing from holder and validate that the fuse is in good condition. By using a multi-meter, check continuity on the fuses to make sure they are not blown. Replace fusing if damaged.

Troubleshooting: Non-Functional

If the luminaire is not illuminating at all under any circumstance, then follow the troubleshooting steps below for Non-Functional luminaires.

Non-Functioning	Poor terminal block connection	<ol style="list-style-type: none">1. Visually inspect terminal block connections to ensure there are no loose or obstructed wires. Wires may not be stripped back far enough to fully engage with the connectors or the wires may have been pushed too far into the connectors. (Figure 1)2. Measure the input voltage to validate that there is voltage at the terminal block after the luminaire has been energized by measuring the voltage between the black and white leads on the terminal block (Figure 2)
	Incorrect Wiring / Reverse polarity	<ol style="list-style-type: none">1. Check for correct polarity between the LED driver output leads and the LED light engine leads by inspecting wire connections between driver and LED light engine using the wiring diagram supplied inside of the luminaire. If leads do not match wire diagram this will result in an outage and or low-level output.2. Reconnect leads using the wiring diagram to correct this problem3. If the symptom is still present, replace the luminaire
	Driver Failure	<ol style="list-style-type: none">1. Confirm there is voltage on the output side of the LED driver/s (each driver if multiple drivers are present).2. Disconnect the output connector from the LED driver and the input connector from the LED light engine.3. With the luminaire energized, confirm the output voltage of the LED driver using a DC voltmeter. If no voltage is present, replace the LED driver or the luminaire. (Figure 3)

FIGURE 1

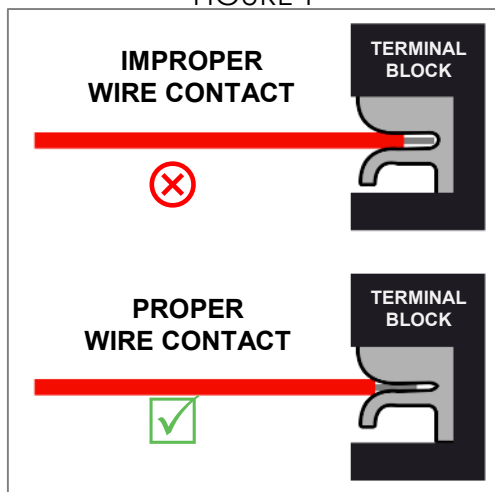


FIGURE 2

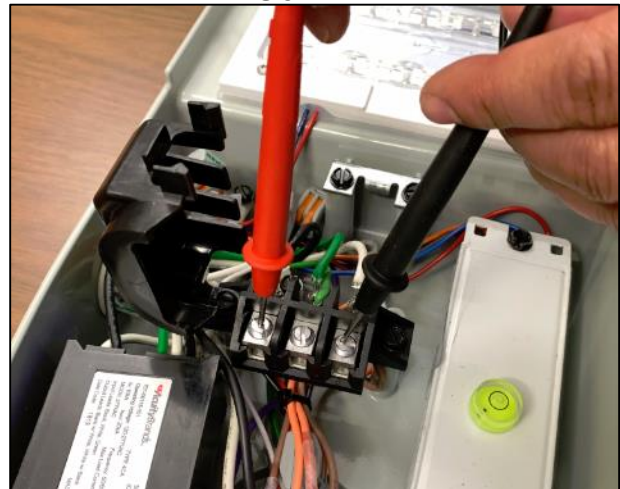
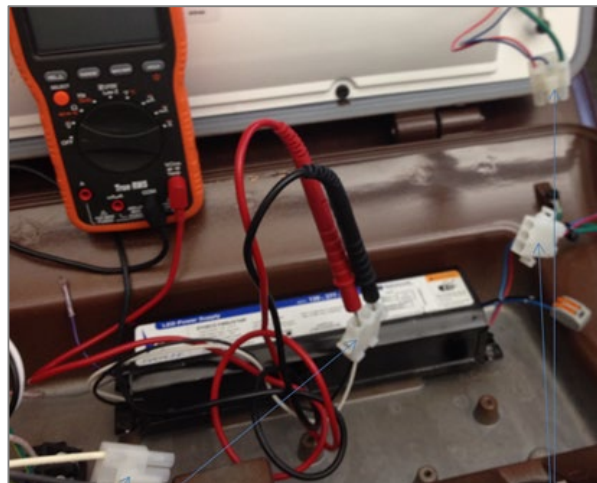


FIGURE 3



Troubleshooting: Non-Functional

(Continued)

Non-Functioning	Surge Protection Device (SPD)	With Indicator Light <ol style="list-style-type: none">1) If light is on, SPD is working as designed2) If light is off, SPD is not functioning and needs replaced
		Without Indicator Light <ol style="list-style-type: none">1) Count/check number of leads to the SPD2) If there are 3 leads, the SPD is a parallel device and unit will function regardless, so visually inspect the device for damage, and follow the steps in this guide to troubleshoot non-functioning luminaires3) If there are 5 leads, the SPD is a series device. Follow the next steps:<ol style="list-style-type: none">a) Disconnect the output side of the SPD from the rest of the circuit by disconnecting the harness or connector.b) Measure the output voltage between the output leads to confirm the correct voltage. If no voltage detection, proceed to steps c & d belowc) Replace the surge protection device (See page 5)d) Re-test
	Photocontrol Device (if applicable)	Photocontrol Functionality <ol style="list-style-type: none">1) Confirm that the attached photo control device or shorting cap is present and is rated the same as of the luminaire.2) Confirm that the photocontrol device is functional by measuring the output of the photo control receptacle. This can be completed by first covering the lens on the photo control device and then measuring the voltage from the receptacle inside of the luminaire. If no voltage confirmed, replace photo control device.
		Incorrect Photocontrol Wiring <ol style="list-style-type: none">1) Confirm the red and black leads from the photocontrol receptacle are wired per the wiring specification. Red lead terminates to driver input and photocontrol black lead is terminated to SPD output. If wired backwards, this can stop luminaire from functioning2) Correct the wiring by swapping both the red & black leads on the connectors.3) If the symptom is still present after you confirm wiring is correct, replace photocontrol or replace luminaire.

Troubleshooting: Abnormal Functionality

If the luminaire does illuminate but functions abnormally under any circumstance, then follow the troubleshooting steps below.

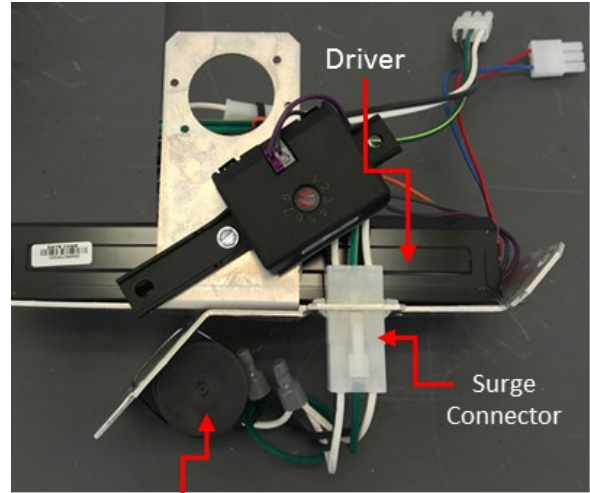
Low Brightness	Incorrect Wiring / Reverse polarity	<p>1. Check for correct polarity between the LED driver output leads and the LED light engine input leads by inspecting wire connections between driver and LED light engine using the wiring diagram supplied inside of the luminaire.</p> <p>If leads do not match wire diagram this will result in an outage and or low-level output.</p> <p>2. Reconnect leads using the wiring diagram to correct this problem</p> <p>3. If the symptom is still present, replace luminaire</p>
	Field Adjustable Output Device (if applicable)	<p>The Field Adjustable Output Device can be set from low to maximum lumen output. Check the setting to ensure that it is turned to the desired output.</p> <p>Visit the respective product page on our web site to view/download spec sheets and/or installation instructions for the FAO devices.</p>
Flickering	Photocontrol Device (if applicable)	<p>1. Confirm the red and black leads from the photocontrol receptacle are wired per the wiring specification. Red lead terminates to driver input and photocontrol black lead is terminated to SPD output. If wired backwards this can cause luminaire flickering or cycling.</p> <p>2. Correct the wiring by swapping both the red & black leads on the connectors.</p> <p>3. If the symptom is still present after you confirm wiring is correct, replace photocontrol or replace luminaire.</p>
Cycling	Photocontrol Device (if applicable)	<p>Luminaire cycling may be caused by an overly sensitive photocontrol device. Light from the luminaire or from other light sources around it, can trick the photocontrol causing it to turn off the luminaire.</p> <p>Seasonal changes can also cause cycling problems due to reflective light differences between green leaves in spring and summer, and dead leaves and exposed tree bark in the fall and winter</p> <p>To correct, reposition the photocontrol away from strong light sources</p>
Day Burner	Photocontrol Device (if applicable)	<p>A luminaire that burns both night and day usually has a defective photocontrol. LED luminaires should be controlled by using photo controls that can withstand the high inrush current created by LED drivers.</p> <ul style="list-style-type: none"> - Acuity recommends the Dark to Light* "DSS" or "DLL" photo control or equivalent. If there is an equipment mismatch, then replace with appropriate photo control. - If the symptom is still present, replace the luminaire

Replacement of Surge Protection Devices

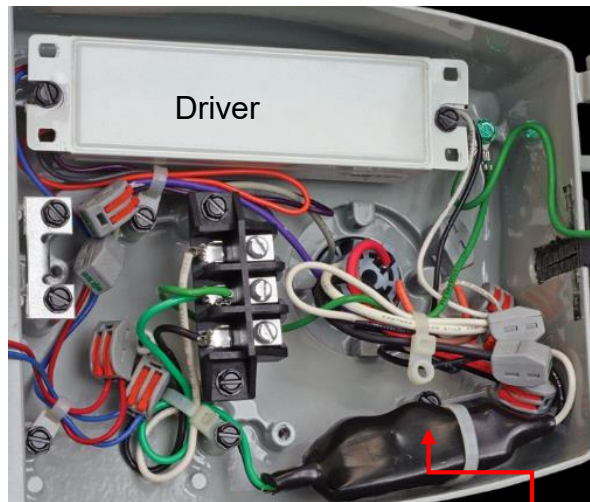
- ✓ Disconnect the input power to the luminaire
- ✓ Open the housing to the luminaire
- ✓ Disconnect both input / output leads from the surge protection device
- ✓ Remove the screws that secure the device
- ✓ Replace the surge protection device and secure by using the screws previously removed
- ✓ Reconnect the input/out leads previously removed from the surge protection device
- ✓ Close the housing door to luminaire
- ✓ Energize the luminaire to confirm correct operation of luminaire

Note: Surge protection replacement devices must be replaced with same type as approved by Acuity Brands Lighting

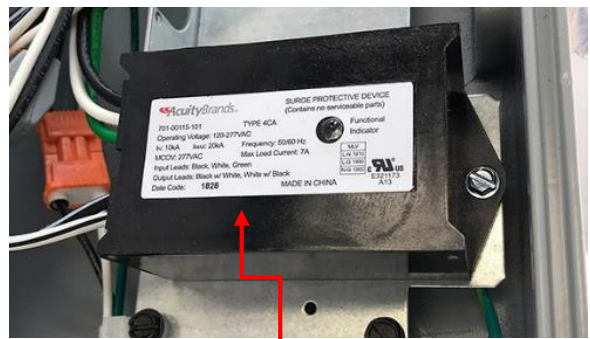
Consult your Sales Representative for specific part numbers



Example: Surge Device



Example: MOV Pack Surge Device



Example: Surge Device with Indicator Light