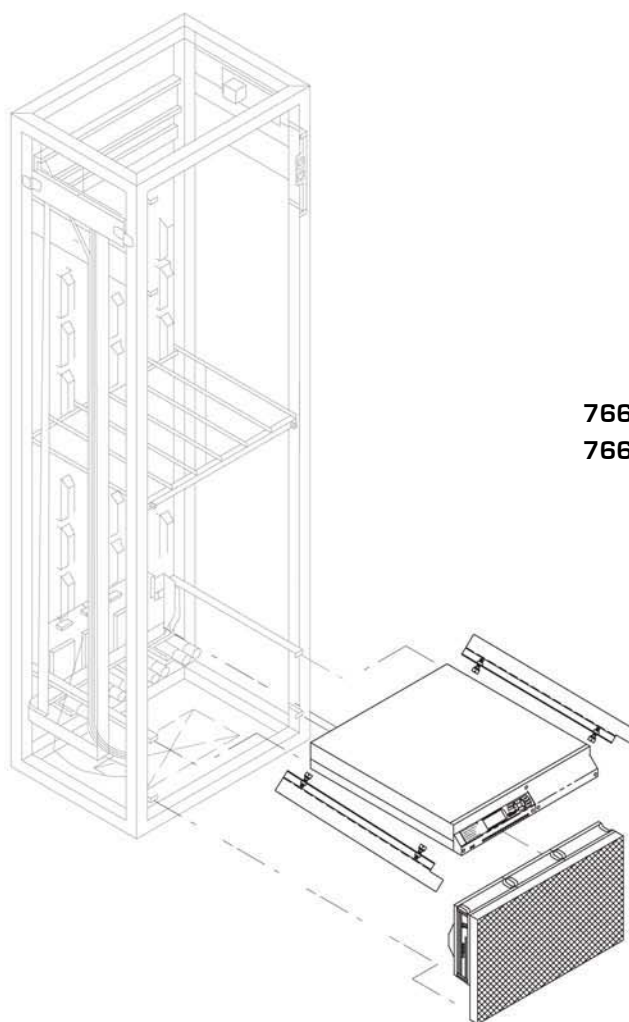# Strand

CD80/CD80AE
Processor Retrofit Kits

For Retrofit Kits:
76698-0004 (120V Markets)
76698-0005 (230V Markets)

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CD80/CD80AE Processor Retrofit Kit Installation Guide

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IMPORTANT SAFEGUARDS

Safeguards

When using electrical equipment, basic safety precautions should always be followed including the following:

a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**.

b. Do not use outdoors.

c. Do not mount near gas or electric heaters.

d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

f. Do not use this equipment for other than intended use.

g. Refer installation and service to properly trained and qualified personnel.

SAVE THESE INSTRUCTIONS.

Warnings

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltage and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to persons.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for permanent installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

CAUTION: Wire openings MUST have fittings or lining to protect wires/cables from damage. Use 90° C copper wire only! Aluminum wire may not be used.

TABLE OF CONTENTS

PREFACE

1. About This Guide

The document provides installation and operation instructions for the following products:

- 76698-0004 CD80/CD80AE Processor Retrofit Kit (C21 Processor, 120V Markets)
- 76698-0005 CD80/CD80AE Processor Retrofit Kit (EC21 Processor, 230V Markets)

WARNING! CD80/CD80AE Processor Retrofit Kits are not interchangeable, and must be installed in the appropriate voltage CD80AE Dimming Rack.

Please read all instructions before installing or using this product. *Retain this guide for future reference*.

2. Additional Manuals

Refer to the originally-supplied CD80AE manual for dimming rack operation and care.

OVERVIEW

1. About CD80/CD80AE Processor Retrofit Kits

CD80/CD80AE Processor Retrofit Kits provide C21 (for 120V markets) or EC21 (for 230V markets) dimming processors to existing CD80 and CD80AE Dimming Racks. These processors represent premium performance and high value for all levels of users. Designed to interface directly with Strand ShowNet Ethernet, the processors include an Ethernet port. An available Ethernet switch option may be added to any processor to simplify network wiring for multiple rack installations.

Two DMX512 inputs are standard with the second input available for use as an RS485 input to support existing Outlook or SWC systems or our new Vision.net architectural controls.

All systems are easy to set up and configure over a network using a standard web browser to access rack status and configuration options.

2. Installation Overview

The following items are required to successfully install an CD80/CD80AE Processor Retrofit Kit:

- Review this document completely before starting the installation.
- Unpack and inspect equipment. Compare the equipment and parts you received with the information contained in "Included Items" on page 4. If these do not match, contact Vari-Lite Customer Service at: 1-214-647-7880.
- Become familiar with the existing processor and wiring before performing the installation instructions contained in this guide.
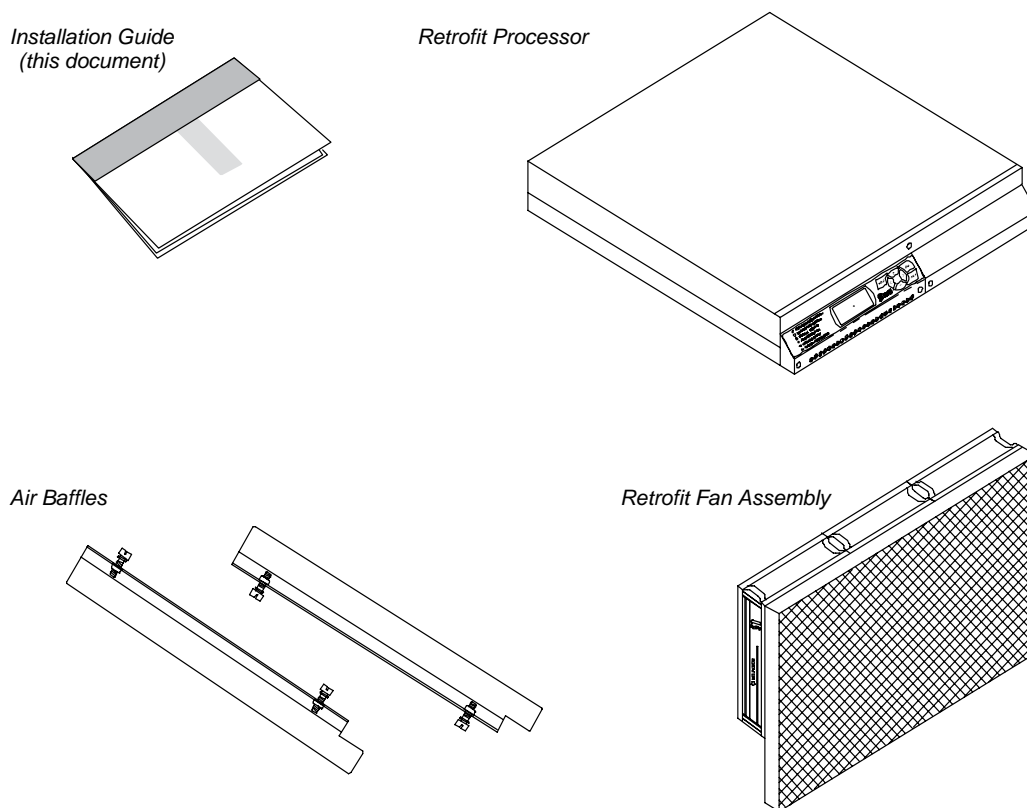
3.   Included Items

Installation Guide (this document)

Retrofit Processor

Air Baffles

Retrofit Fan Assembly

Figure 1: CD80/CD80AE Processor Retrofit Kit Included Items

CD80/CD80AE Processor Retrofit Kit (with C21 Processors - 120V Markets)

The following items are included with the 76698-0004 CD80/CD80AE Processor Retrofit Kit:

1 Each	CD80/CD80AE Retrofit C21 Processor Unit
2 Each	CD80/CD80AE Retrofit Air Baffles
1 Each	CD80/CD80AE Retrofit Fan Assembly
1 Each	Installation Guide *(this document)*

CD80/CD80AE Processor Retrofit Kit (with EC21 Processors - 230V Markets)

The following items are included with the 76698-0005 CD80/CD80AE Processor Retrofit Kit:

1 Each	CD80/CD80AE Retrofit EC21 Processor Unit
2 Each	CD80/CD80AE Retrofit Air Baffles
1 Each	CD80/CD80AE Retrofit Fan Assembly
1 Each	Installation Guide *(this document)*

Note: For installation of both retrofits kits cable tie wraps and proper tools are required. These items are readily available and not supplied with the retrofit kits.

INSTALLATION

Note: The procedures described in this section are the same for all versions of the CD80/CD80AE Processor Retrofit Kit

1. Original CD80/CD80AE Processor and Fan Assembly Removal

To remove the current (old-style) CD80/CD80AE processor:

Step 1. Shut off power to dimmer rack at supply source.

WARNING! Failure to shut off power to dimmer rack at supply source may lead to injury or death!

Step 2. Confirm, at rear of processor at processor interconnect board, that cables connected to processor are labeled as "DMX" and control communication wiring "J1-J4". If not, label them accordingly for reference when installing new processor.

CAUTION: Failure to properly identify control communication wiring (J1 through J4) and mark these connections may lead to miscommunication of the dimming modules.

Step 3. Remove CD80/CD80AE (original) processor/control and fan assemblies from the rack*.

IMPORTANT! *Be sure to retain all mounting screws as they shall be reused when installing retrofit processor and fan assemblies.

2. CD80/CD80AE Processor Retrofit Kit Installation

To install the CD80/CD80AE Processor Retrofit Kit:

Step 1. Make sure power is shut off at supply source (as described in previous section).

WARNING! Failure to shut off power to dimmer rack at supply source may lead to injury or death!

Step 2. Confirm there is sufficient clearance (at least 4 inches) to attach the new lower fan assembly below retrofit processor. Some notes:

    a. The original CD80/CD80AE rack is bottom fed and the installing electrician may have pulled the power wiring from front to back below the underside of the original processor housing and fan assembly.

    b. If power wiring is occupying the space where the fans reside, there may be a clearance issue with the new fans.

    c. The new fan assembly mounts directly to the front of the CD80/CD80AE rack since the new fans protrude about three inches toward the power busses, any wire fill may be an issue.

Step 3. If there is sufficient clearance, connect fan power connector and mount the fan assembly as shown in **Figure 2**.
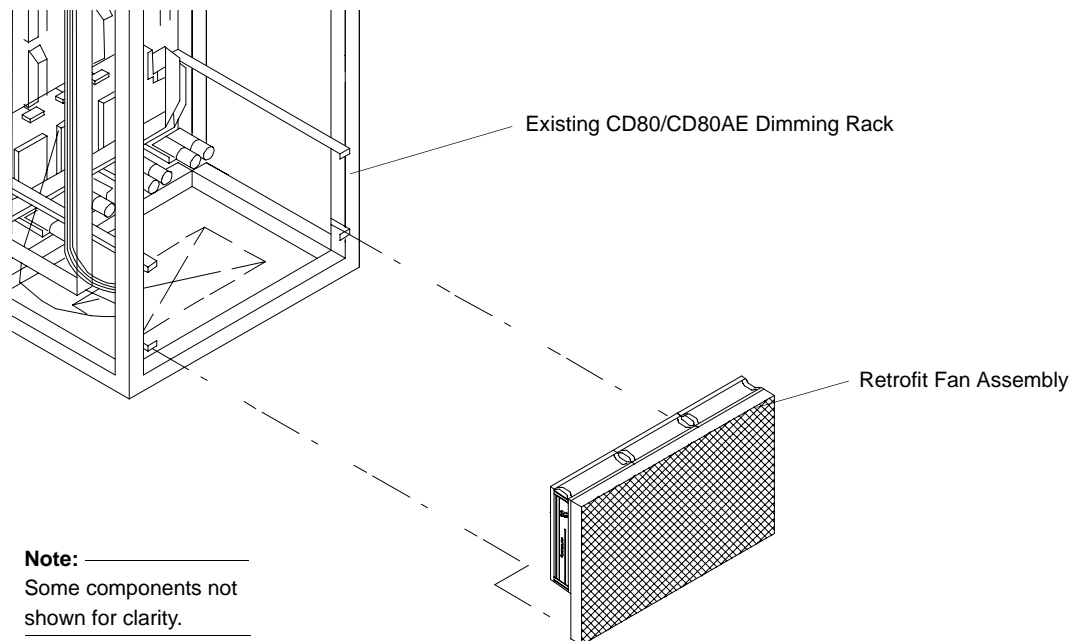

Figure 2: Retrofit Fan Assembly Installation

Step 4. Attach the airflow baffles, as illustrated in **Figure 3**, to dimmer rack upper processor guide rails Note, the thumb screws will face inwards.
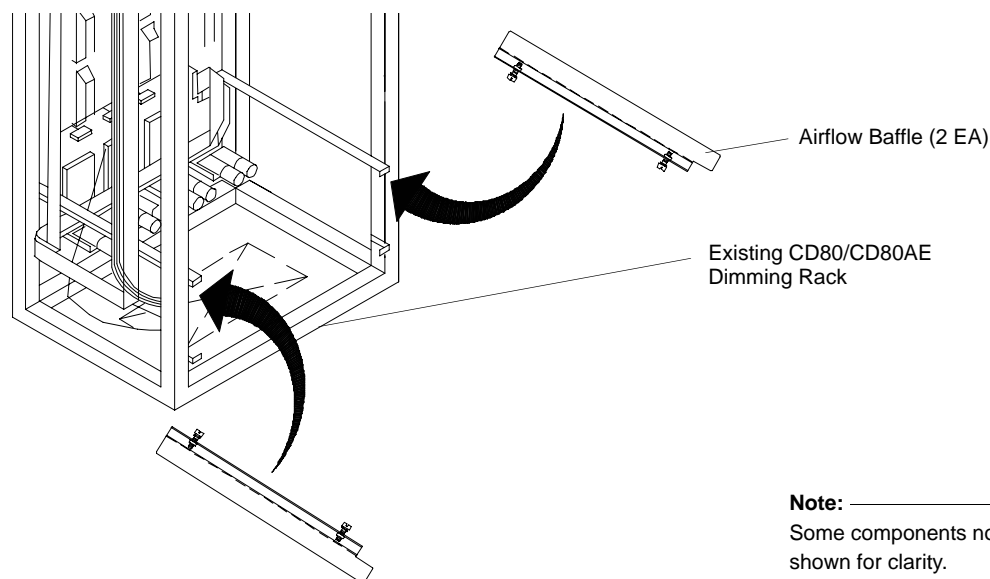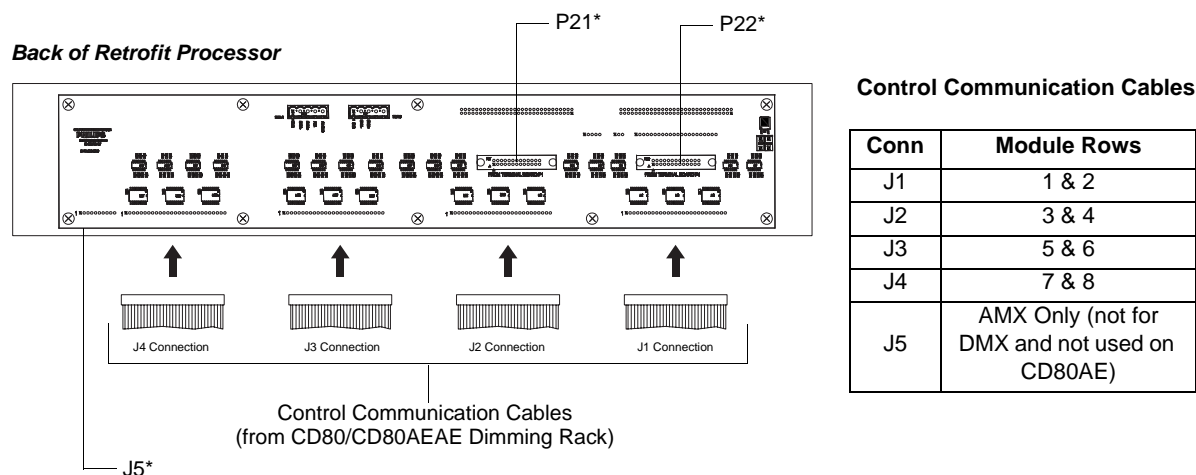

Figure 3: Air Baffle Installation

Step 5. At rack, connect original round female processor power connector to new-style power adapter connector.

Step 6. Install new temperature sensor PCB as follows:

   a. Remove the old temperature sensors

   b. Uncoil temperature sensor wire at back of processor and route up left side of dimmer rack.

      c. Attach the new temperature sensor PCB to the old temp sensor bracket using cable tie wraps (note, cable tie wraps are not supplied with kits).

Step 7. Connect J1-J4 connections (from original rack wiring) to the bottom of processor interface card as shown in **Figure 4**.

Figure 4: Control Cable Connections (J1 through J4)

Control Communication Cables

Conn	Module Rows
J1	1 & 2
J2	3 & 4
J3	5 & 6
J4	7 & 8
J5	AMX Only (not for DMX and not used on CD80AE)

Note: *Connections P21, P22 and J5 are only used when the upper connector interconnect PCB is being re-used, otherwise these connections will not be used with retrofit kit processor.

Step 8. If applicable...if a DMX input cable was connected to original interconnection board (in upper left side of CD80/CD80AE dimming rack), move this cable to rear of retrofit kit processor housing. As illustrated in **Figure 5**, connect DMX input cable to either Mux A or Mux B five pin connector.
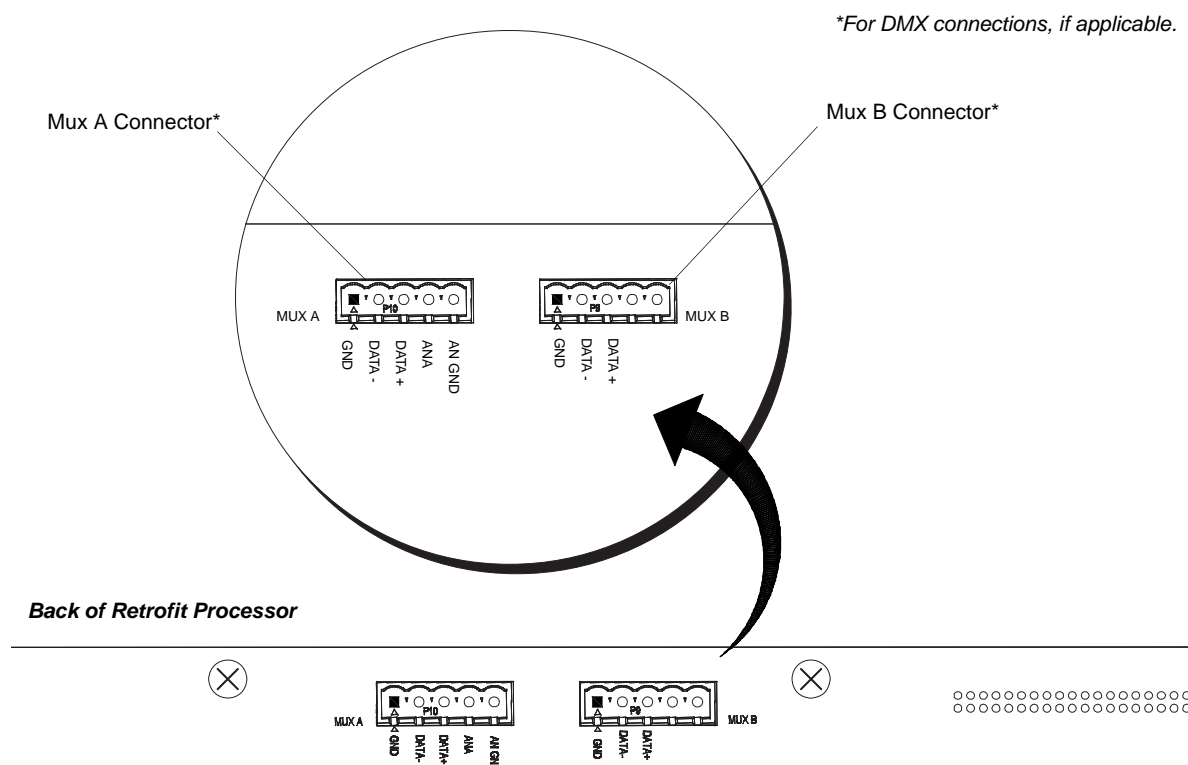

Figure 5: Retrofit Processor - DMX Connections (if applicable)

Step   9. After all connections are made, install retrofit kit processor directly above new fan assembly using original processor mounting guides as shown in **Figure 6**.
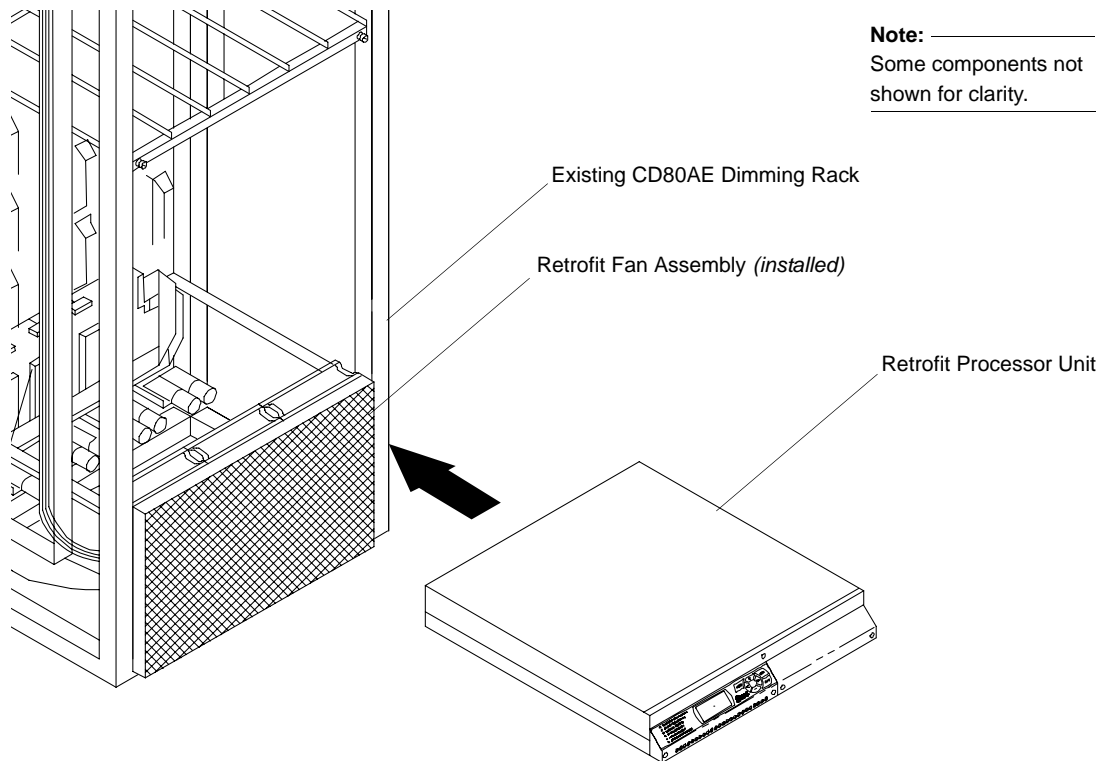
Note:
Some components not shown for clarity.

Existing CD80AE Dimming Rack

Retrofit Fan Assembly *(installed)*

Retrofit Processor Unit

Figure 6: Retrofit Processor Install

Step   10.Check and confirm that all connections are firmly connected.

Step   11.Check and confirm that all cables are not laying directly on or near power busses.

Step   12.Reapply power to dimming rack and check operation.

Notes

TECHNICAL SUPPORT

GLOBAL 24HR TECHNICAL SUPPORT:

Call: +1 214 647 7880

entertainment.service@signify.com

NORTH AMERICA SUPPORT:

Call: 877-VARI-LITE (877-827-4583)

entertainment.service@signify.com

EUROPEAN CUSTOMER SERVICE CENTER:

Call: +31 (0) 543 542 531

entertainment.europe@signify.com