

RET-GPDIMMER LED Lamp Retrofit Guide

The Retrofit GP Dimming Card

The Retrofit GP Dimming Card is intended to be used by customers who wish to replace their existing incandescent lamps with more energy-efficient LED lamps. The Retrofit GP Dimming Card is certified for use in North America and will control up to 300 W of forward-phase controlled 120 V~ LED lamps. It provides improved LED lamp dimming performance when compared with existing Lutron® GP dimming cards.

Model: RET-GPDIMMER

This document describes the four steps required to replace an existing GP card with the RET-GPDIMMER card. For product specifications, please visit http://www.lutron.com/TechnicalDocumentLibrary/369803_ENG.pdf

Step 1: Choose a lamp from the *Recommended LED Lamps* table

The table below lists the lamps that have been tested for overall compatibility with the RET-GPDIMMER card. These lamps meet Lutron's high-quality dimming performance criteria when used with the RET-GPDIMMER card. Lutron will continue to update the list as more lamps are approved.

Recommended LED Lamps¹

| Type | LED Lamp Wattage | Manufacturer | Model Number | Incandescent Bulb Replacement Wattage | LED Lamps per Card | | Circuit Selector Trim Settings ² | | Measured Dimming Range ³ | | Perceived Low-End ⁴ |
|-------------------|-------------------|--------------|--|---------------------------------------|--------------------|------|---|----------|-------------------------------------|----------|--------------------------------|
| | | | | | Min. | Max. | Low-End | High-End | Low-End | High-End | |
| A Lamp | 9.5 | CREE | BA19-08027OMF | 60 | 1 | 31 | 1 | 72 | 0.2% | 91% | 5% |
| | 11 | Phillips | 9290002268A 11A19/2700 DIM | | 1 | 27 | 22 | 85 | 2.0% | 98% | 14% |
| | 13 | GE | LED13DA19/830 | | 1 | 23 | 13 | 78 | 4.0% | 89% | 20% |
| | | | LED13DA19/830/BK | | | | | | | | |
| | | | LED13DA19/830/TP | | | | | | | | |
| LED13DA19/827 | | | | | | | | | | | |
| PAR 38 | 19 | Phillips | 9290002473 19PAR38/F36 3000 DIM AF RO (82529) | 75 | 1 | 15 | 20 | 85 | 2.0% | 98% | 14% |
| | 14 | TCP | LED14P38D41KFL | | 1 | 21 | 12 | 75 | 1.0% | 99% | 9% |
| | 17 | TCP | LED17E26P3830KFNL | 1 | 17 | 12 | 75 | 0.5% | 99% | 7% | |
| | | | LED17E26P3827KNFL | | | | | | | | |
| | | | LED17E26P3830KFL | | | | | | | | |
| | | | LED17E26P3827KFL | | | | | | | | |
| | | | LED17E26P3841KFL | | | | | | | | |
| | | | LED17E26P3850KFL | | | | | | | | |
| | LED17E26P3841KNFL | | | | | | | | | | |
| LED17E26P3850KNFL | | | | | | | | | | | |
| R30 Lamp | 12 | GE | LED12DBR30/830 | 60 | 1 | 25 | 10 | 67 | 5.0% | 88% | 21% |
| | 13 | Phillips | 9290002344 | | 1 | 23 | 25 | 85 | 1.0% | 99% | 9% |

(Table continues on next page)

¹ Performance was evaluated at 120 V~ 60 Hz with load type 2-1.

² Circuit Selector Trim Settings refers to adjusting the low- and high-end trim settings on the circuit selector. High-end trim is set to reduce dead travel; low-end trim is set to reduce turn-on time and to eliminate flicker.

³ Values are based on light output using the specified dimming control and may not be an indication of the full-rated capability of the fixture.

⁴ Perceived light-level percentage is the square root of the measured light-level percentage, per IESNA Lighting Handbook.

Step 1: Choose a lamp from the Recommended LED Lamps table (continued)**Recommended LED Lamps¹** (continued)

| Type | LED Lamp Wattage | Manufacturer | Model Number | Incandescent Bulb Replacement Wattage | LED Lamps per Card | | Circuit Selector Trim Settings ² | | Measured Dimming Range ³ | | Perceived Low-End ⁴ | | | | | | | | | |
|----------------|---|--------------|---|---------------------------------------|--------------------|------|---|----------|-------------------------------------|----------|--------------------------------|---------------|----|---|----|----|----|------|-----|-----|
| | | | | | Min. | Max. | Low-End | High-End | Low-End | High-End | | | | | | | | | | |
| Candelabra | 3.5 | GE | LED3DCAC-C | 15 | 1 | 85 | 16 | 99 | 2.0% | 96% | 13% | | | | | | | | | |
| | | | LED3DCAM-C | | | | | | | | | | | | | | | | | |
| | | | 68168 | | | | | | | | | | | | | | | | | |
| | | Phillips | 9290001878 BC4B11/DECO/2700-150 120V | 18 | 1 | 85 | 15 | 99 | 1.0% | 97% | 11% | | | | | | | | | |
| | | | 9290002227 BC3.5B11/DECO/2700 E12 120V | | | | | | | | | | | | | | | | | |
| | | | 9290002227 BC3.5B11/DECO/2700 E12 120V | | | | | | | | | | | | | | | | | |
| | | | 9290001878 BC3.5B11/AMB/2700 DIM 120V | | | | | | | | | | | | | | | | | |
| | | | 9290002227 BC3.5B11/AMB/2700 E12 120V | | | | | | | | | | | | | | | | | |
| | | | 9290002227 BC3.5B11/AMB/2700 E12 120V (2pk) | | | | | | | | | | | | | | | | | |
| | | | 9290002417 3.5B11/END/2700 E12 DIM 8/1 | | | | | | | | | | | | | | | | | |
| | 9290002419 BC3B12/AMB/2700 E26 DIM 120V | | | | | | | | | | | | | | | | | | | |
| | 9290002419 3.5B12/END/2700 E26 DIM 8/1 | | | | | | | | | | | | | | | | | | | |
| | 9290001877 BC4BA11/DECO/2700 150 120V | | | | | | | | | | | | | | | | | | | |
| | 9290001877 BC3.5BA11/AMB/2700 DIM 120V | | | | | | | | | | | | | | | | | | | |
| | 9290002418 3.5BA11/END/2700 E12 DIM 8/1 | | | | | | | | | | | | | | | | | | | |
| | 9290001883 BC4BA11/DECO/2700 150 E26 120V | | | | | | | | | | | | | | | | | | | |
| | 9290001883 BC3.5BA12/AMB/2700 DIM 120V | | | | | | | | | | | | | | | | | | | |
| | 9290002420 3.5F15/END/2700 E26 DIM 8/1 | | | | | | | | | | | | | | | | | | | |
| | 4 | | TCP | | | | | | | | | LED4E12B1127K | 20 | 1 | 75 | 10 | 87 | 8.0% | 89% | 28% |
| | | | | | | | | | | | | LED4E12F1127K | | | | | | | | |
| LED4E12B1127KF | | | | | | | | | | | | | | | | | | | | |
| LED4E12F1127KF | | | | | | | | | | | | | | | | | | | | |

¹ Performance was evaluated at 120 V~ 60 Hz with load type 2-1.

² Circuit Selector Trim Settings refers to adjusting the low- and high-end trim settings on the circuit selector. High-end trim is set to reduce dead travel; low-end trim is set to reduce turn-on time and to eliminate flicker.

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⁴ Perceived light-level percentage is the square root of the measured light-level percentage, per IESNA Lighting Handbook.

Step 2: Retrofit GP Dimming Card wiring requirements

The Retrofit GP Dimming Card is a drop-in replacement for the existing card. It uses the existing wiring harness inside the GP panel which will be connected to the new card in the same orientation as the existing card.

Note: In the GP panel, the DH load wire must be moved to the SH load terminal for each circuit that is changed to a new card. Refer to the Installation Guide at www.lutron.com/TechnicalDocumentLibrary/041442.pdf

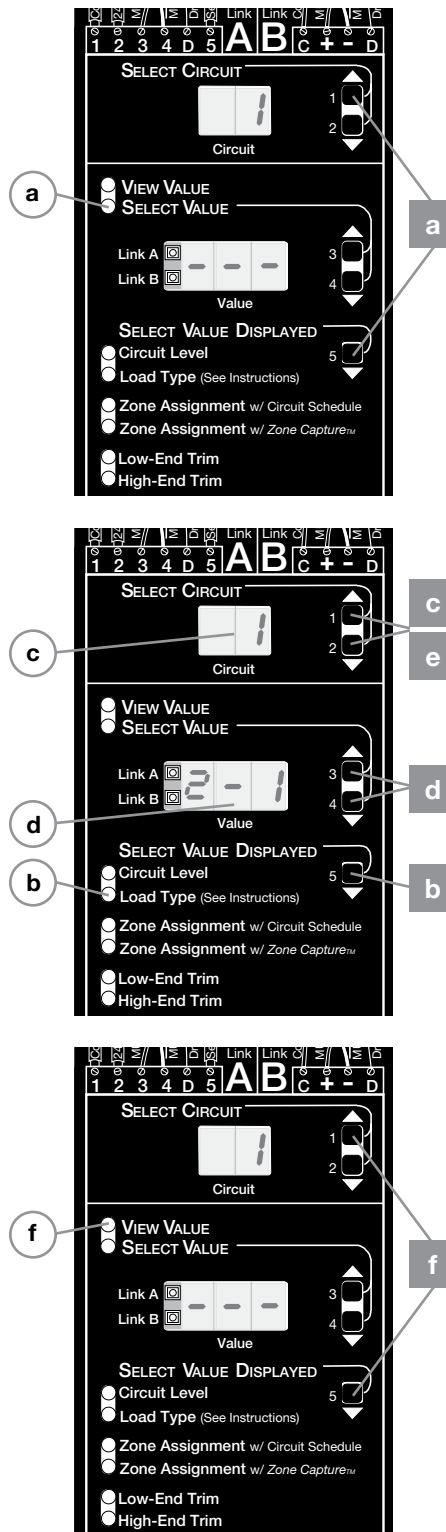
Step 3: Set up the circuit selector*

The load type for each circuit changing to the new card must be set to 2-1 on the circuit selector inside the panel. Follow the procedures below:

Change load types

- a** Press and hold buttons 1 and 5 until the **Select Value LED (a)** blinks once per second.
- b** Press button 5 until the **Load Type LED (b)** lights up.
- c** Use buttons 1 and 2 to select the circuit number that will display in the **Circuit** window (c).
- d** Use button 3 or 4 to display the load type in **Value** window (d). Set value to 2-1.
- e** Use buttons 1 and 2 to choose another circuit that needs to be changed and repeat step **d** for each circuit.
- f** Press and hold buttons 1 and 5 until the **View Value LED (f)** lights up.

* For GRAFIK™ 4000 systems only. GRAFIK 6000® and GRAFIK 7000™ systems require technical support for set-up; visit www.lutron.com/en-US/Service-Support/Pages/Assistance/TechnicalSupportForm.aspx for more details.



(Step 3 continues on next page)

Step 3: Set up the circuit selector* (continued)

High- and low-end trim settings must also be set as indicated in the **Recommended LED Lamps** table. Follow the procedures below:

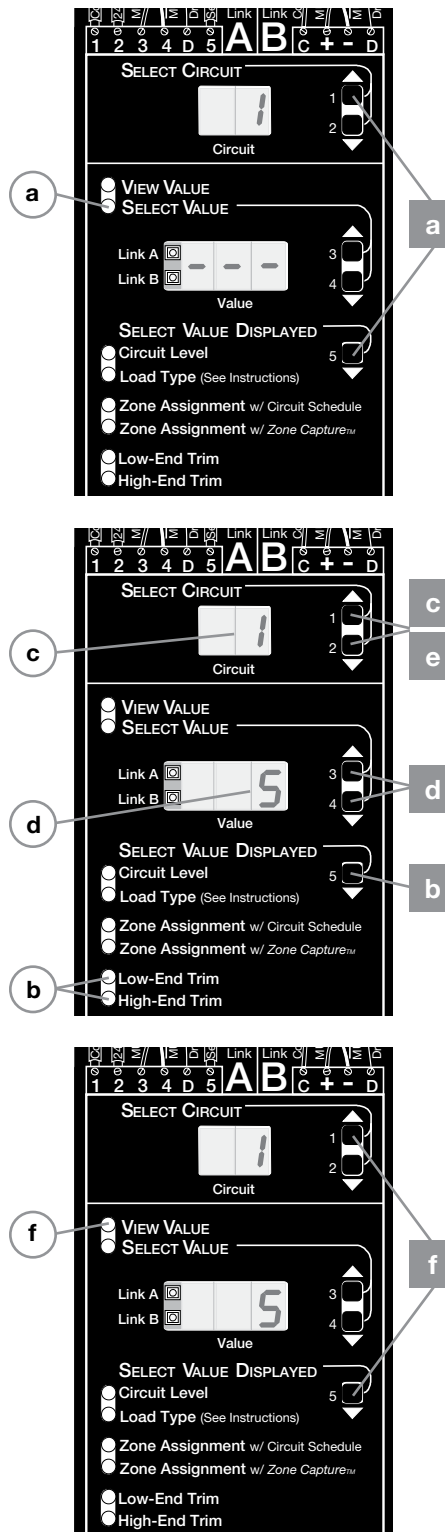
Change trim settings

- a** Press and hold buttons 1 and 5 until the **Select Value LED** (a) lights up.
- b** Press button 5 repeatedly until the **Low-End Trim LED** (b) or the **High-End Trim** (b) LED lights up.
- c** Use buttons 1 and 2 to select the circuit that needs to be changed; the circuit number will display in the **Circuit** window (c).
- d** Use buttons 3 and 4 to reset the trim as desired; the value will display in the **Value** window (d). See “Circuit Selector Trim Settings” in the **Recommended LED Lamps** table (Step 1). The load will go to the new setting while in this mode, regardless of the GRAFIK™ control’s intensity.
- e** Use buttons 1 and 2 to choose another circuit that needs to be changed and repeat step **d** for each circuit.
- f** Press and hold buttons 1 and 5 until the **View Value LED** (f) lights up.

Notes

- “1” is the minimum low-end trim setting and “99” is the maximum high-end trim setting.
- “Value” is a relative number; it is not a percentage of intensity, but rather a reference point to help set other circuits, if desired. Record the new trim setting on a Circuit Directory so that it is documented.

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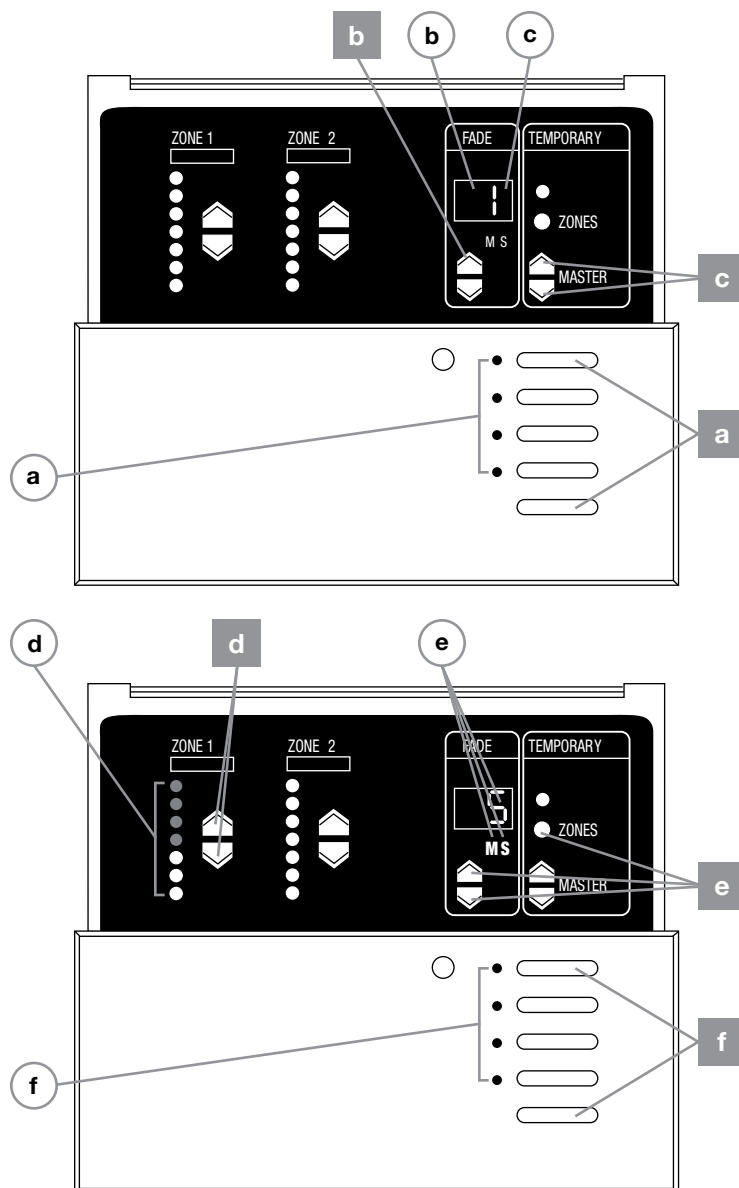
Step 4: Review/change scene light level settings on the GRAFIK™ 4000 control

After changing trim settings on the circuit selector, light levels may need to be adjusted to the proper levels for each scene. To verify that the zone levels are set to the desired intensity for each scene, follow the steps below:

Program scenes using set-up mode

- a** Enter **Set-up** mode. Press and hold the **Scene 1** and **Off** buttons for about three seconds until the **Scene** LEDs **(a)** start cycling. Release the buttons; LEDs should continue to cycle.
- b** Select **Sc** (scene setup) by pressing the **Fade** ▲ button twice. **Sc** and **1** (scene 1) will alternately flash in the **Fade** window **(b)**.
- c** Select **Scene**. Press the **Master** ▲ or ▼ button to select the number of the scene to be programmed (1 through 16; 0 is the Off scene*). The scene number will display in the **Fade** window **(c)**.
- d** Program **Scene** settings for each zone. For lighting zones, press the **Zone** ▲ or ▼ button to set the zone intensity. More **Zone** LEDs **(d)** will light up as zone intensity increases.
- e** Set the scene's fade-in time. Press and hold the **Temporary Zones** button. The current fade-in time will display in the **Fade** window **(e)**. Adjust by using the **Fade** ▲ or ▼ button while still holding the **Temporary Zones** button. Illuminated letter **M** or **S** **(e)** denotes minutes or seconds. (Fade time does not apply to shade zones).
- f** Exit **Set-up** mode. Press and hold the **Scene 1** and **Off** buttons until the **Scene** LEDs **(f)** stop cycling.

* Not all GRAFIK™ 4000 controls will have an Off scene.



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