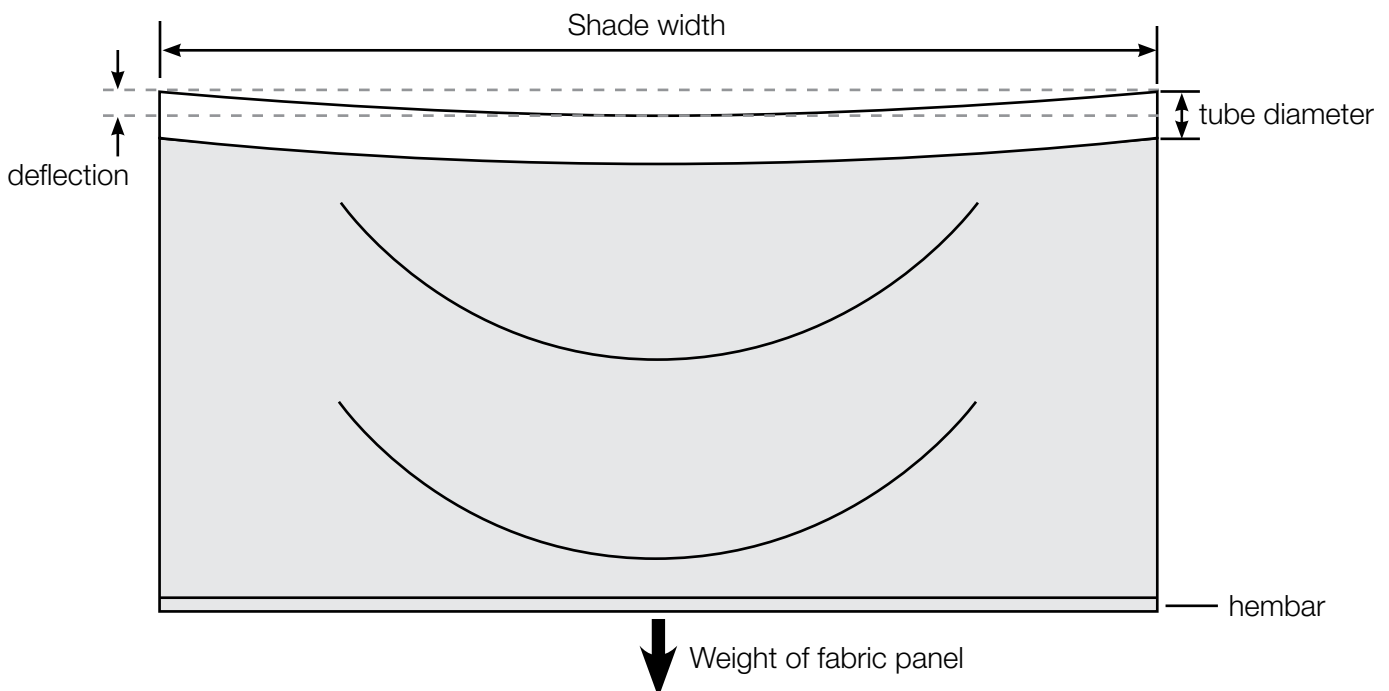


### Shade Aesthetics

#### Overview

The purpose of this document is to provide guidelines for designing flat shades for larger applications.

#### Terminology



1. **Tube deflection** - the sag in the shade tube influenced by shade width, tube diameter, and fabric panel weight.
2. **Batten** - a horizontal stiffener made of fiberglass that is inserted into a small .25 in. (6.4 mm) pocket in the fabric panel, typically near the vertical center of the shade or at a seam.
3. **V's/Smiles** - a sagging in the fabric panel of large shades which has a V shape.
4. **Ripples/Waves** - a vertical ripple in the fabric panel.
5. **Edge Curl** - vertical edges of the fabric panel curl in either direction typically creating an hourglass shape.

## Background

Lutron has received feedback from customers regarding shade aesthetics that indicates large shades exhibit inconsistent aesthetic performance depending on shade types and sizes. Examples of this performance include V's or waves in the shade. Some customers find these characteristics unexpected or unacceptable. We have studied the issue and found several factors that affect the aesthetic performance, including tube deflection, shade width, and shade height. Please refer to the Appendix for photographs of representative shades.

## Addressing Tube Deflection

As shade width increases, tube deflection increases. Deflection can amplify the addressed aesthetic characteristics. See Figure 6 in the Appendix for a representative shade.

### **Options to reduce deflection include:**

- Reduce shade width, i.e. split one wide shade into two or more shades - refer to Figure 5 in the Appendix.
- Increase tube diameter and add a batten, i.e. move from a roller 100™ tube to a roller 225™ tube - refer to Figure 7 in the Appendix. Increasing tube diameter will require a larger pocket for installation. Please refer to technical information on our website for pocket sizes.

Note: A batten alone will not improve the appearance of a shade with high deflection.

## Addressing Wide Applications

As shade width increases, typically over 108 in. (2743 mm), waves and edge curls tend to increase. See Figure 3 in the Appendix for a representative shade.

### Options to reduce waves and edge curls include:

- Reduce shade width, i.e. split one wide shade into two or more shades - refer to Figure 5 in the Appendix.
- Add a batten (Guideline - add one batten for every roll width [i.e. 72 in. (1828 mm), 98 in. (2489 mm), etc.]) - refer to Figure 4 in the Appendix.

## Addressing Tall Applications

As the shade height increases, the edge curls and waves tend to increase. Refer to Figure 1 in the Appendix for a representative shade.

### Options to reduce these characteristics:

- Add a batten (Guideline - add one batten for every roll width [i.e. 72 in. (1828 mm), 98 in. (2489 mm), etc.]) - refer to Figure 2 in the Appendix.
- Reduce vertical height of shade, i.e. split the shade vertically into two or more shades

## Other Considerations

Other environmental factors in a space can affect the aesthetic appearance of a shade, including the following:

- Lights cast directly down a shade, such as with down lights, emphasize the appearance of minor waves.
- Ventilation from heating and cooling systems can cause a shade to sway, thereby causing movement of waves or V's.

### Worldwide Technical and Sales Assistance

If you need assistance call the toll-free **Lutron Technical Support Center**. Please provide exact model number when calling.

24 hours a day / 7 days a week

(800) 523-9466 (U.S.A. and Canada)

Other countries call (610) 282-3800

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## Appendix

**Figure 1 - Tall, Narrow Shade**



**Figure 2 - Tall, Narrow Shade with Battens**



## Appendix

**Figure 3 - Wide, Low Deflection Shade**

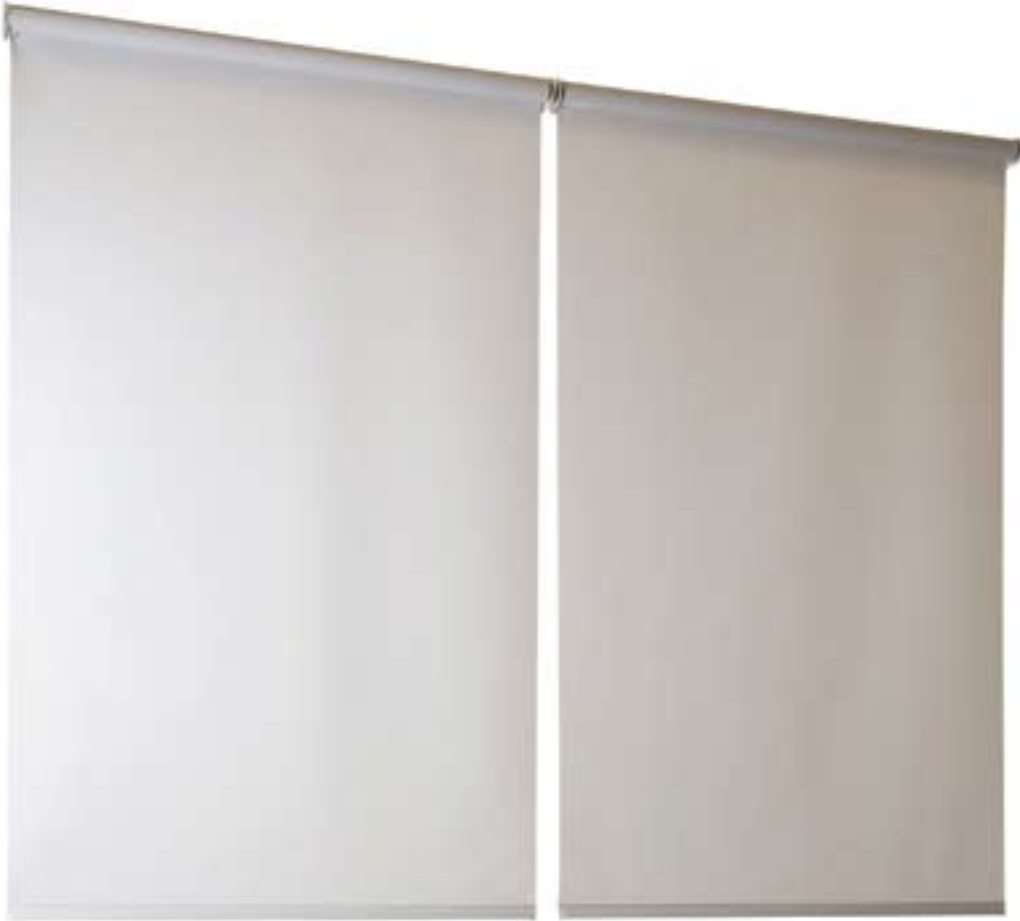


**Figure 4 - Wide, Low Deflection Shade with Batten**



## Appendix

**Figure 5 - Wide Shade Split  
Into Two Narrower Shades**



**Figure 6 - Wide,  
High Shade  
Deflection**



**Figure 7 - Same  
shade with reduced  
deflection and a  
batten**

