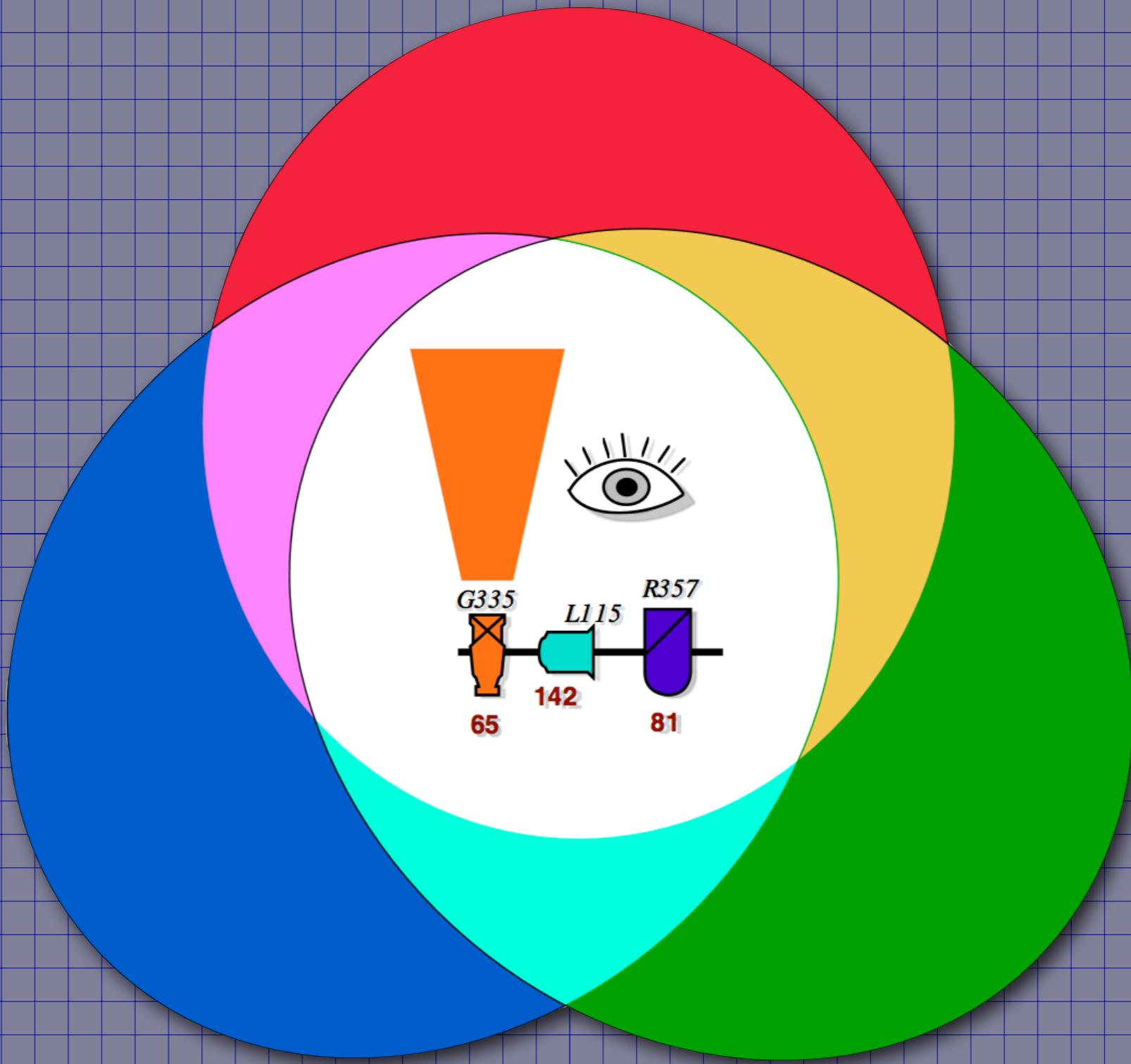


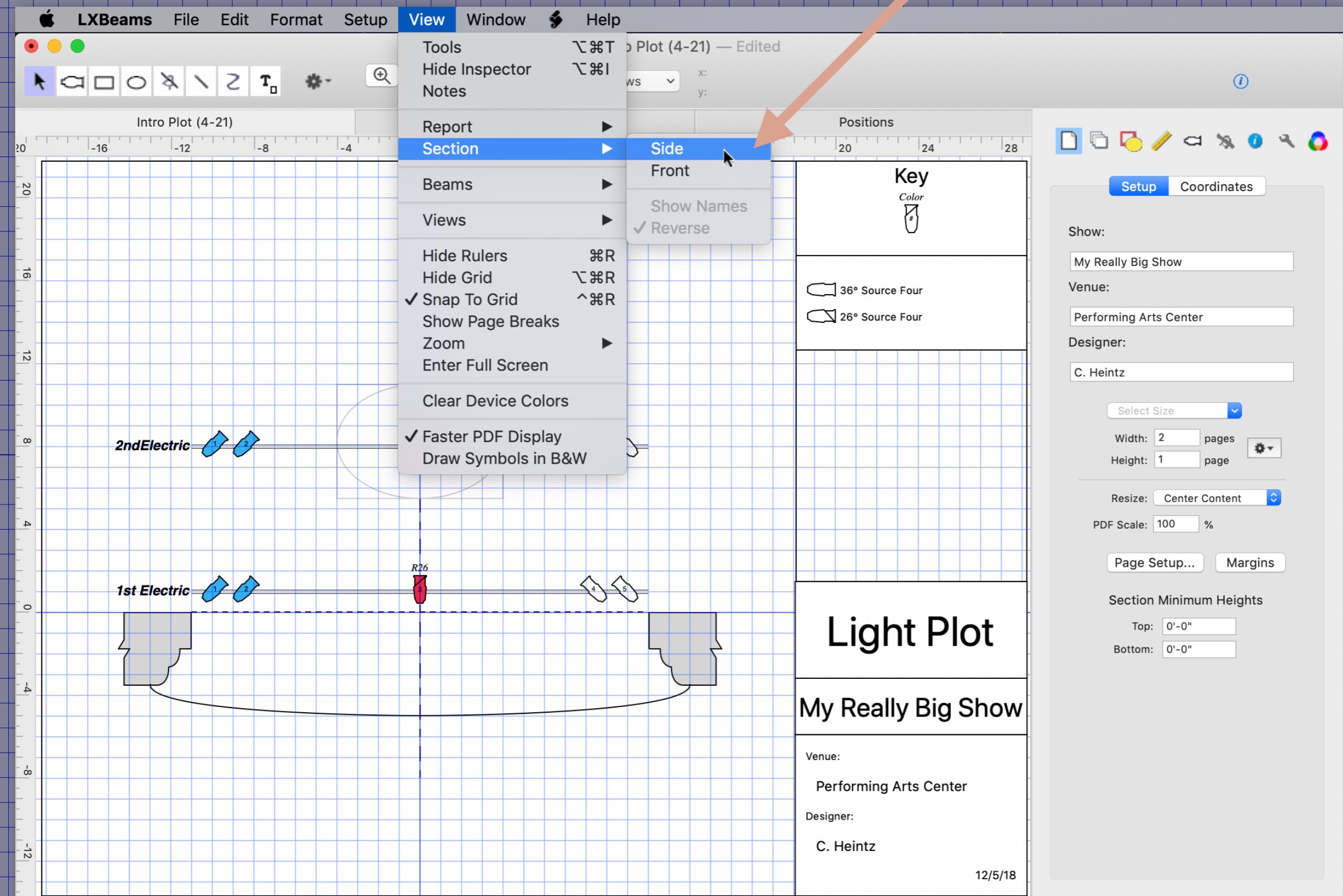
3D Basics



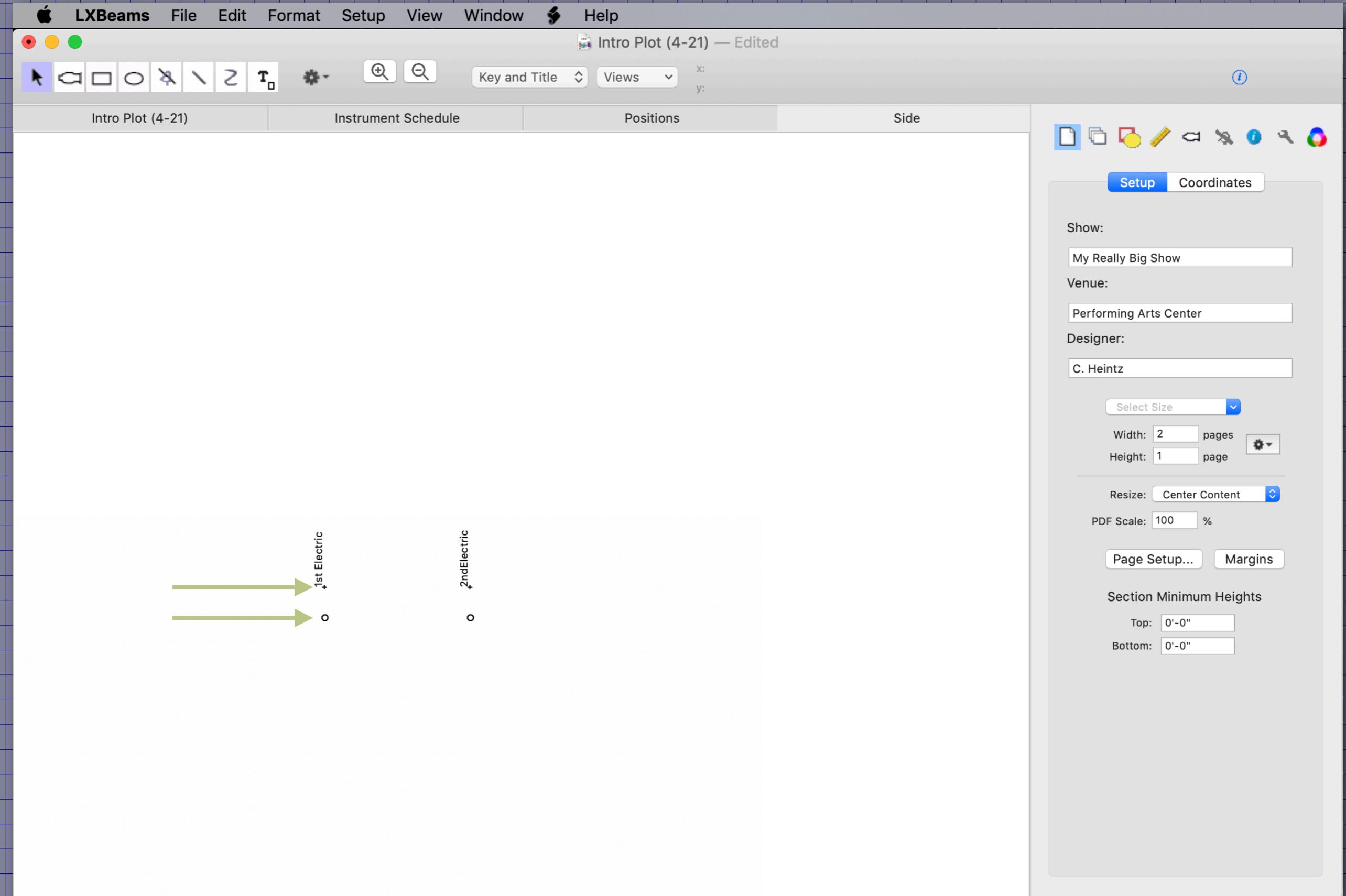
IATSE 728 Workshop 2020

©2020

Select View→Section→Side

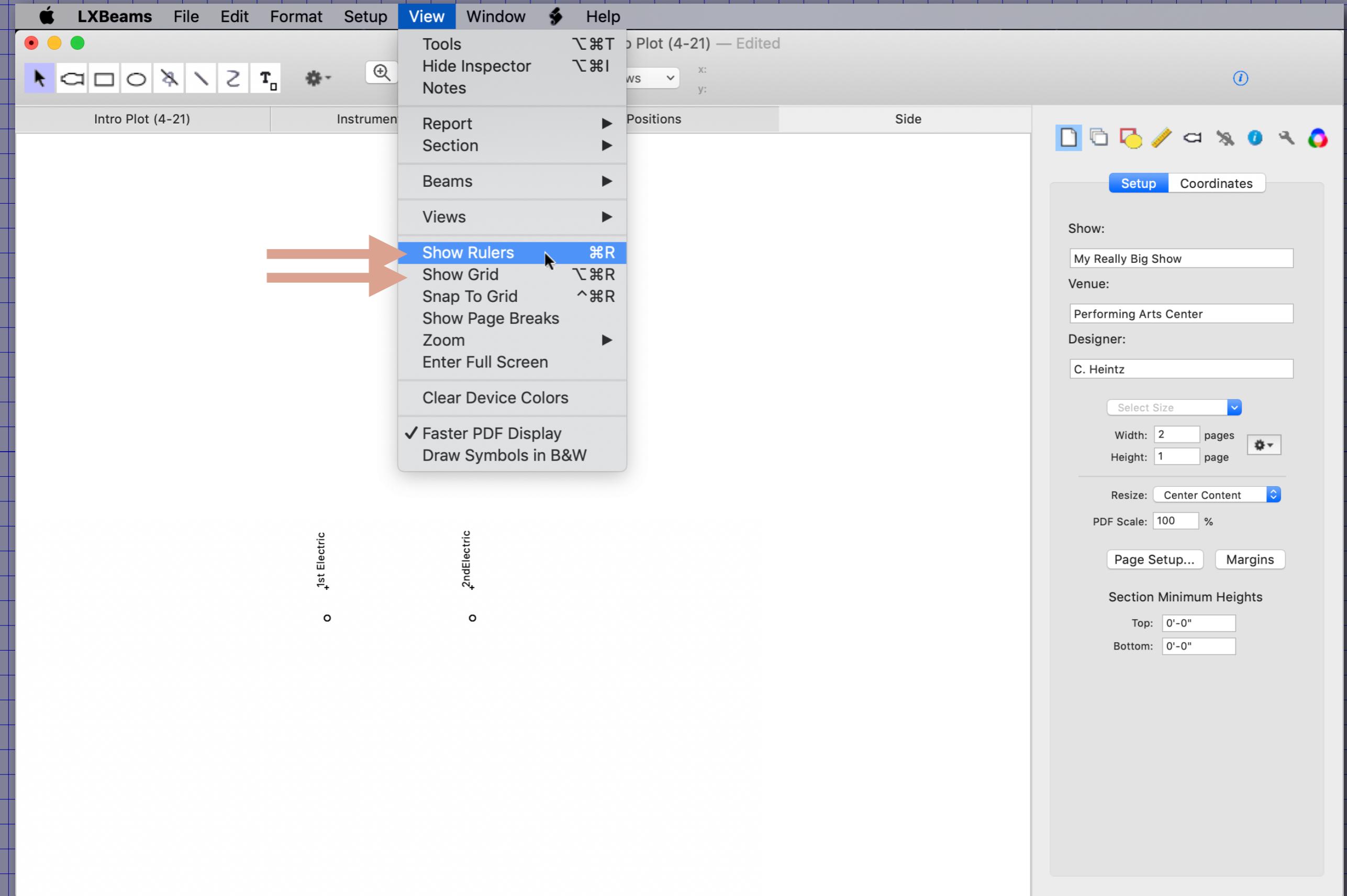


Side Section shows flat projection looking from SL to SR



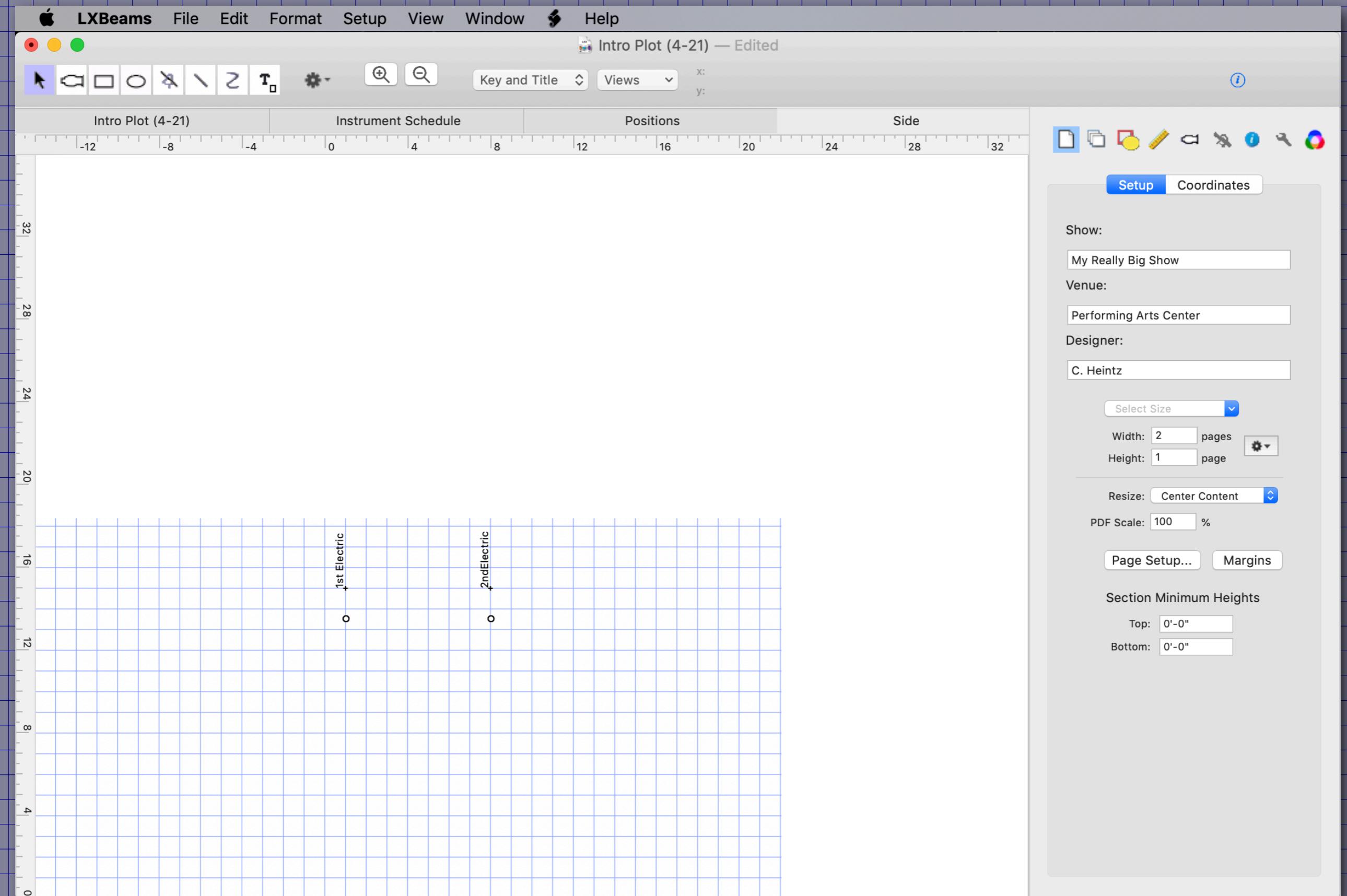
Positions are shown as well as light locations.

Section views have their own settings for rulers and grid.



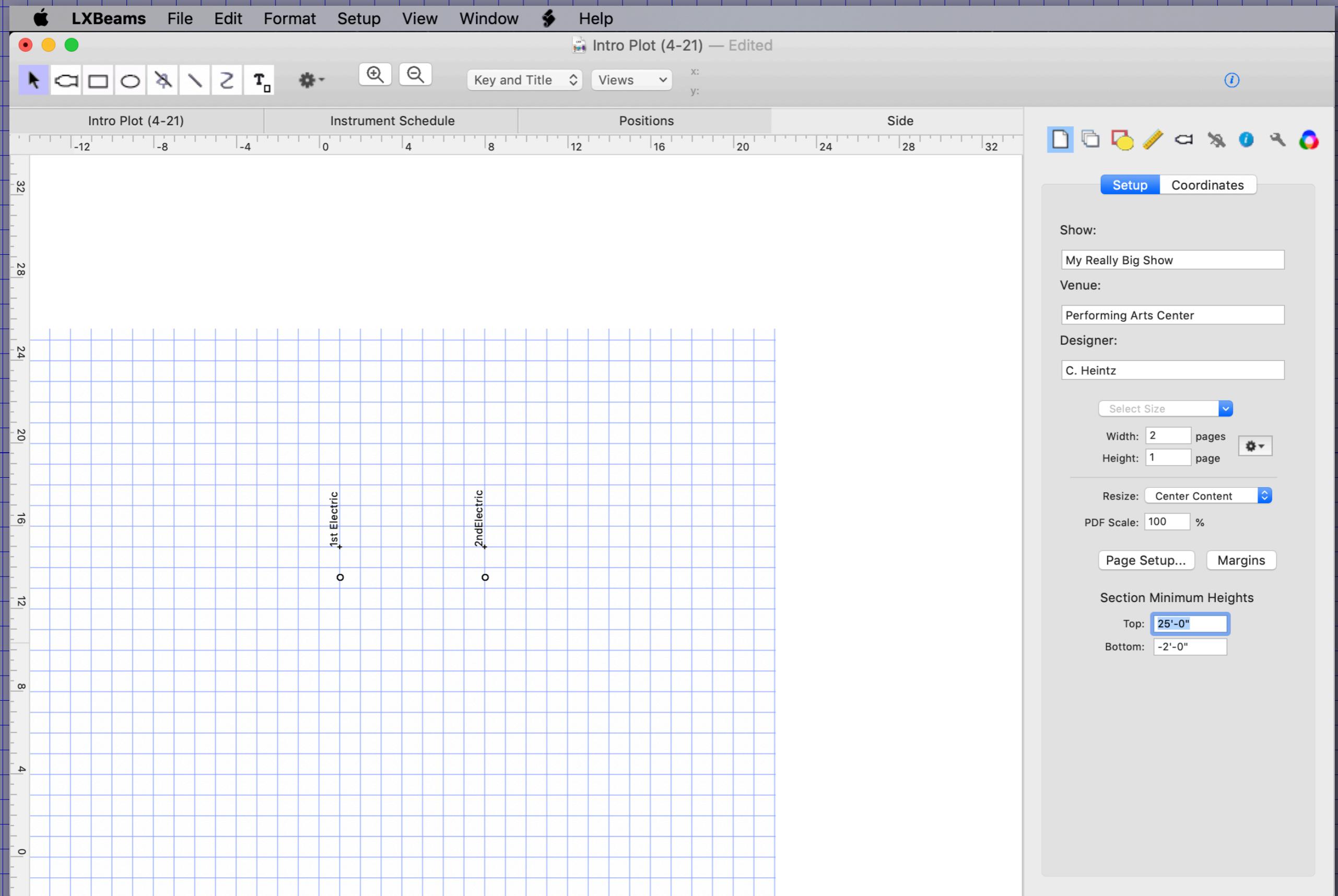
Select View→Show Rulers and View→Show Grid.

By default, the section starts at the floor and extends up to include all objects.



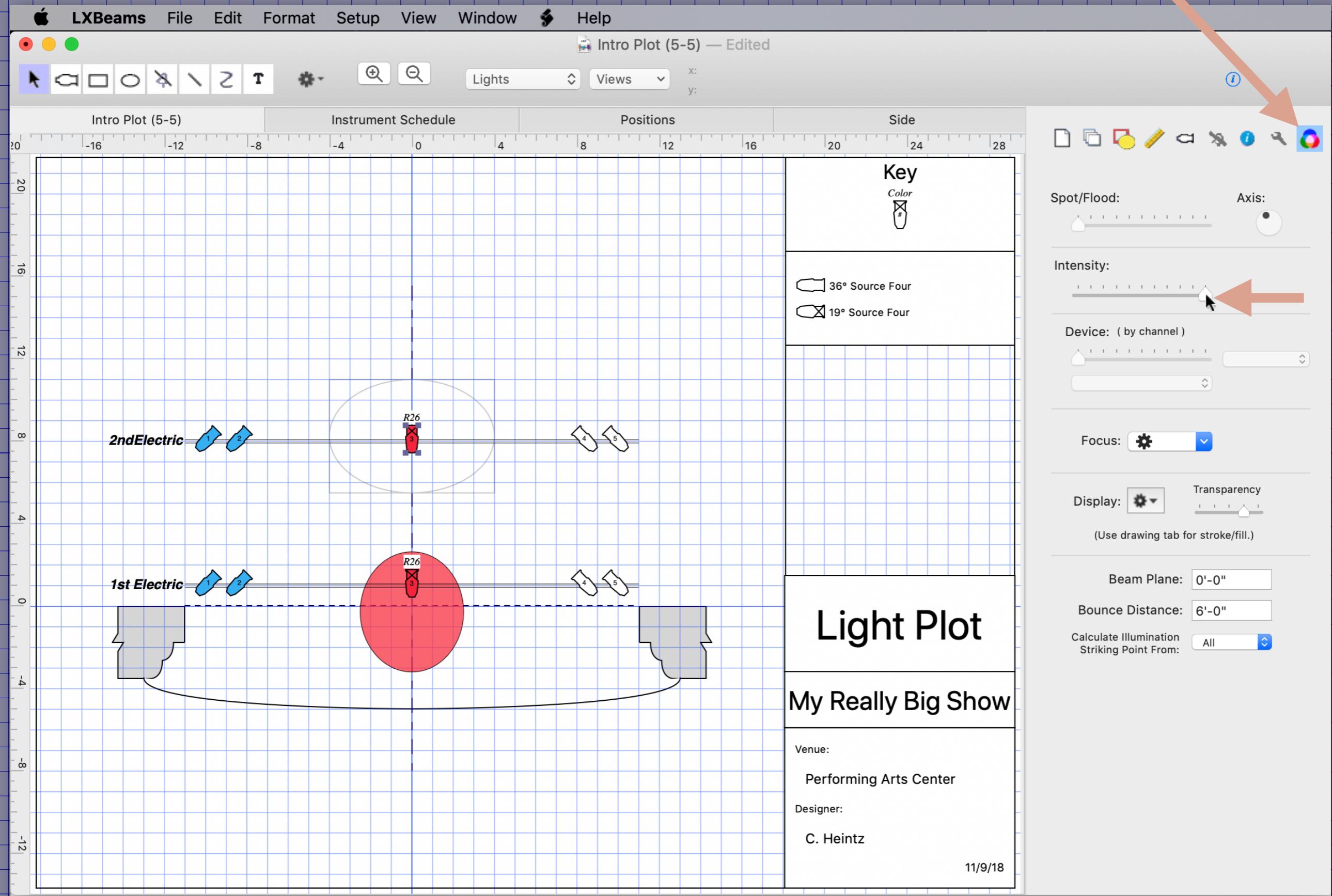
The width is equal to the extent of the main plot on the Y axis.

The Document tab allows expanding the height above and below.



Try changing the minimum to 25 at the top and -2 at the bottom.

In the main view, select the center light and switch to the Inspector's Beams tab.



Move the Intensity slider all the way to the right.

Switch to the Inspector's Info tab.

The screenshot shows the LXBeams software interface. The main window displays a 'Light Plot' titled 'Intro Plot (5-5) — Edited'. The plot area shows two circular light fixtures labeled 'R26' at positions (0, 0) and (0, 8). Each fixture has five associated spotlights labeled 1 through 5. A large red circle highlights the top fixture. The plot includes a grid and axes. To the right is a 'Key' panel listing light types: 'Color' (with a color icon), '36° Source Four', and '19° Source Four'. Below the plot is a sidebar with sections for 'Light Plot', 'My Really Big Show', 'Venue: Performing Arts Center', 'Designer: C. Heintz', and the date '11/9/18'. On the far right is the 'Inspector' panel, which is currently on the 'Info' tab. It lists various properties for a selected light, including 'Position' (2ndElectric, #3, R26), 'Focus' (Focus X: 0'-0", Focus Y: 0'-0", Focus Height: 0'-0"), and '3D' (Rendering, X offset: 0'-0", Y offset: 0'-0", Z offset: -1'-6"). A green arrow points from the text below to the 'Focus' section in the Inspector, and a red arrow points to the 'Info' tab itself.

Property Value

▼ Position

▼ Light

- Position 2ndElectric
- # 3
- Color R26
- Channel
- Dimmer
- Template
- Use
- Group

▼ More

- Frost
- Circuit
- Mark
- Note

▼ Focus

- Focus X 0'-0"
- Focus Y 0'-0" **Focus Height 0'-0"**

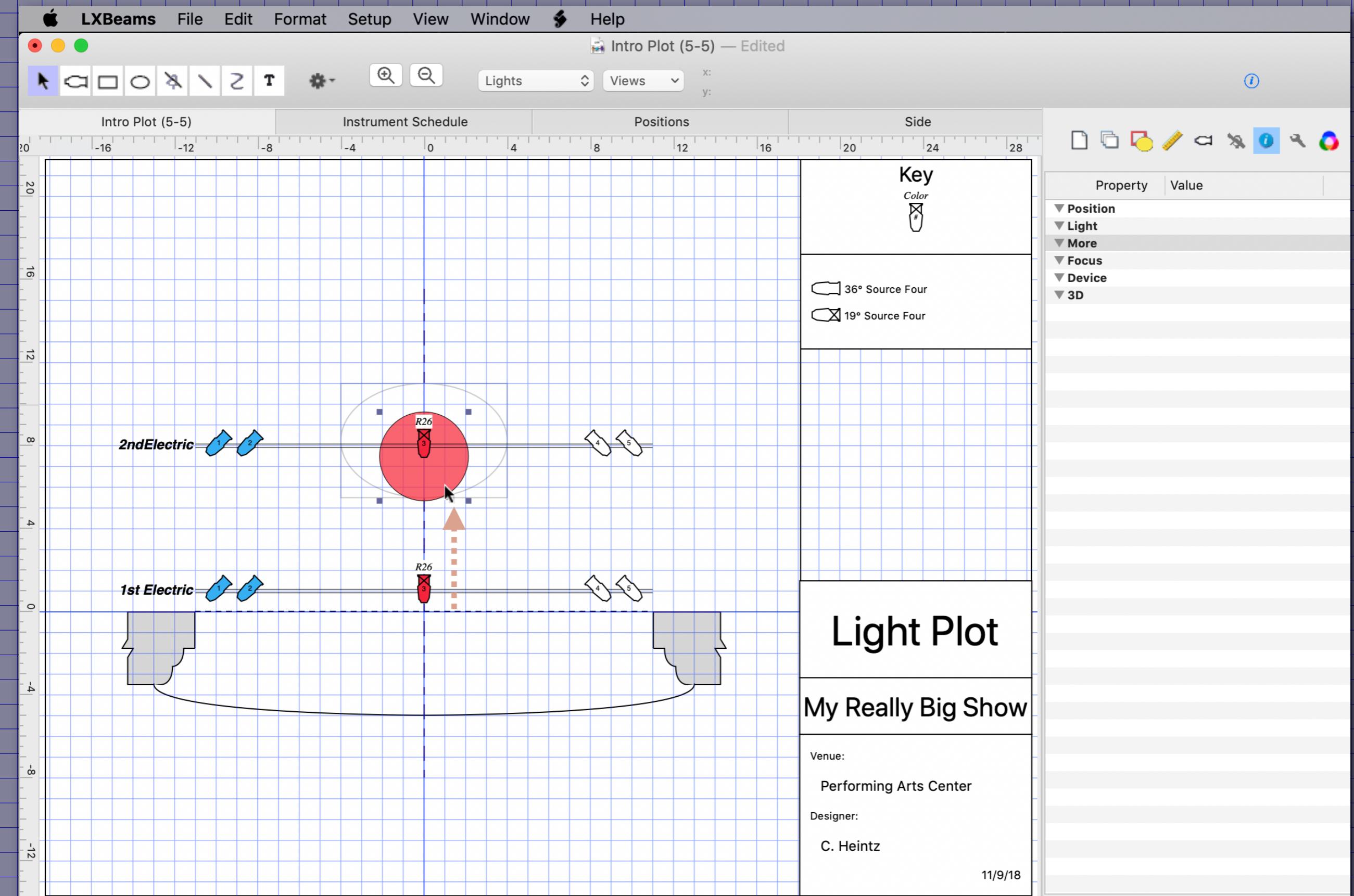
▼ Device

▼ 3D

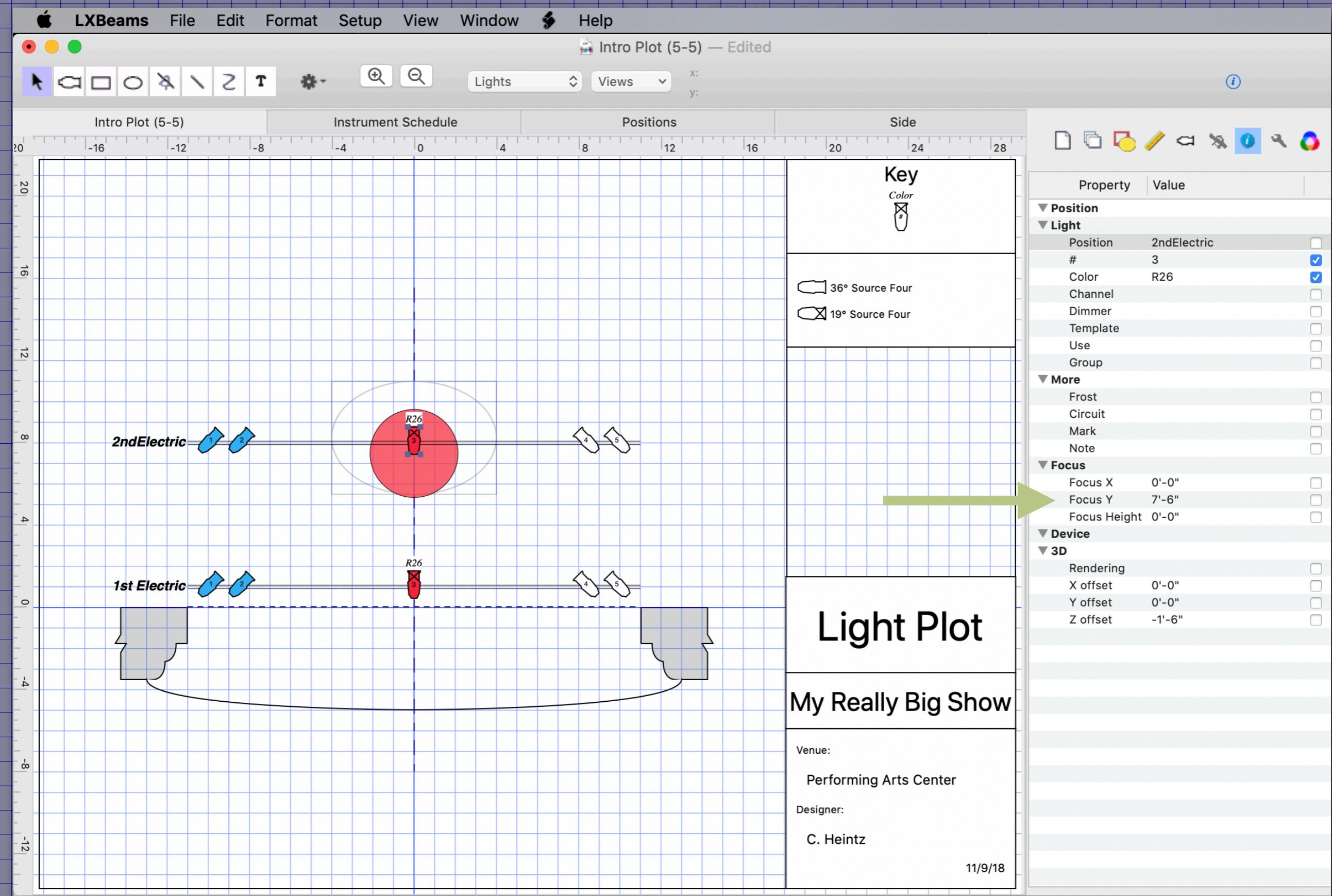
- Rendering
- X offset 0'-0"
- Y offset 0'-0"
- Z offset -1'-6"

Take a look at the light's focus properties.

Click on the beam and drag it upwards.

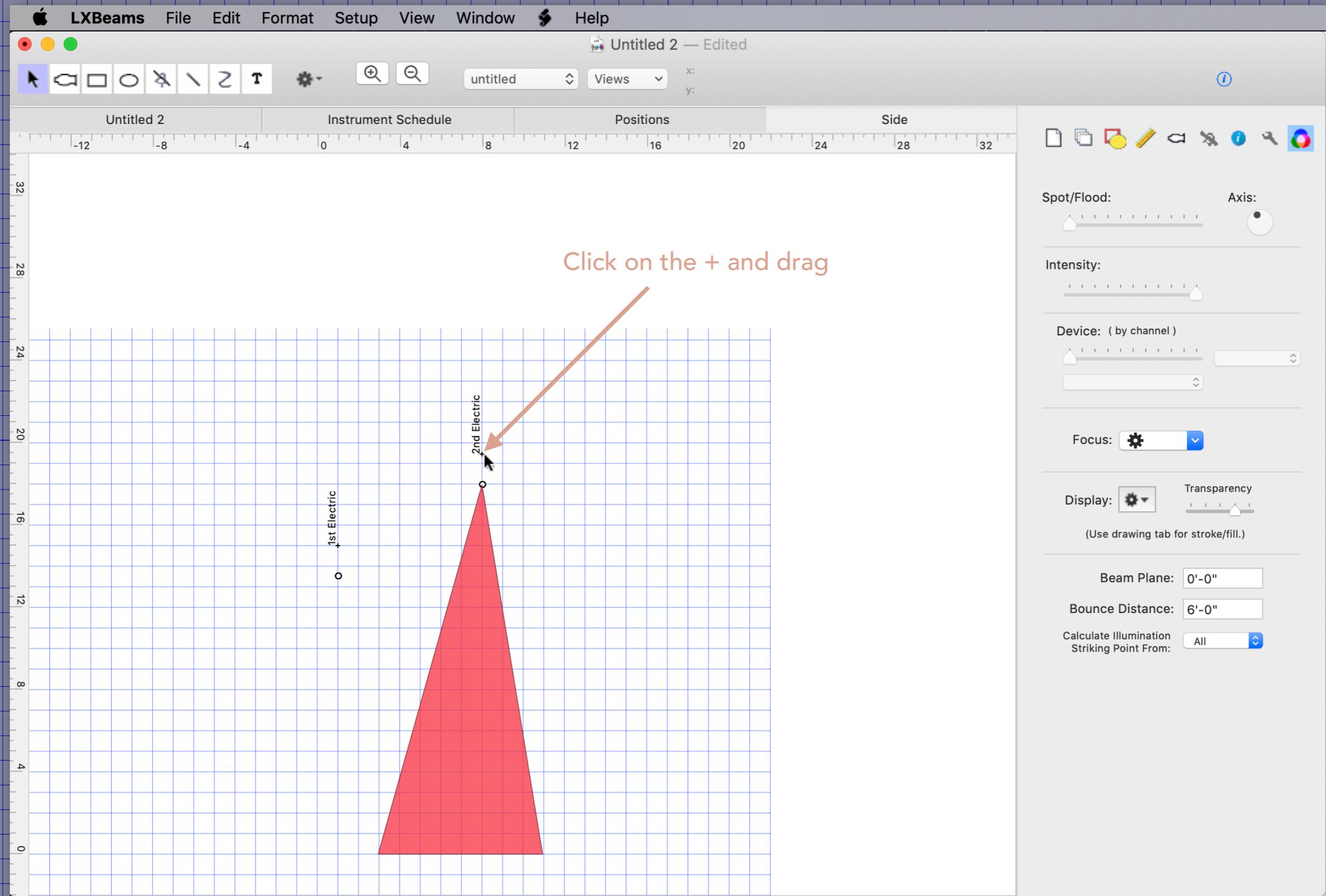


Select the light again. Note the focus properties have changed.



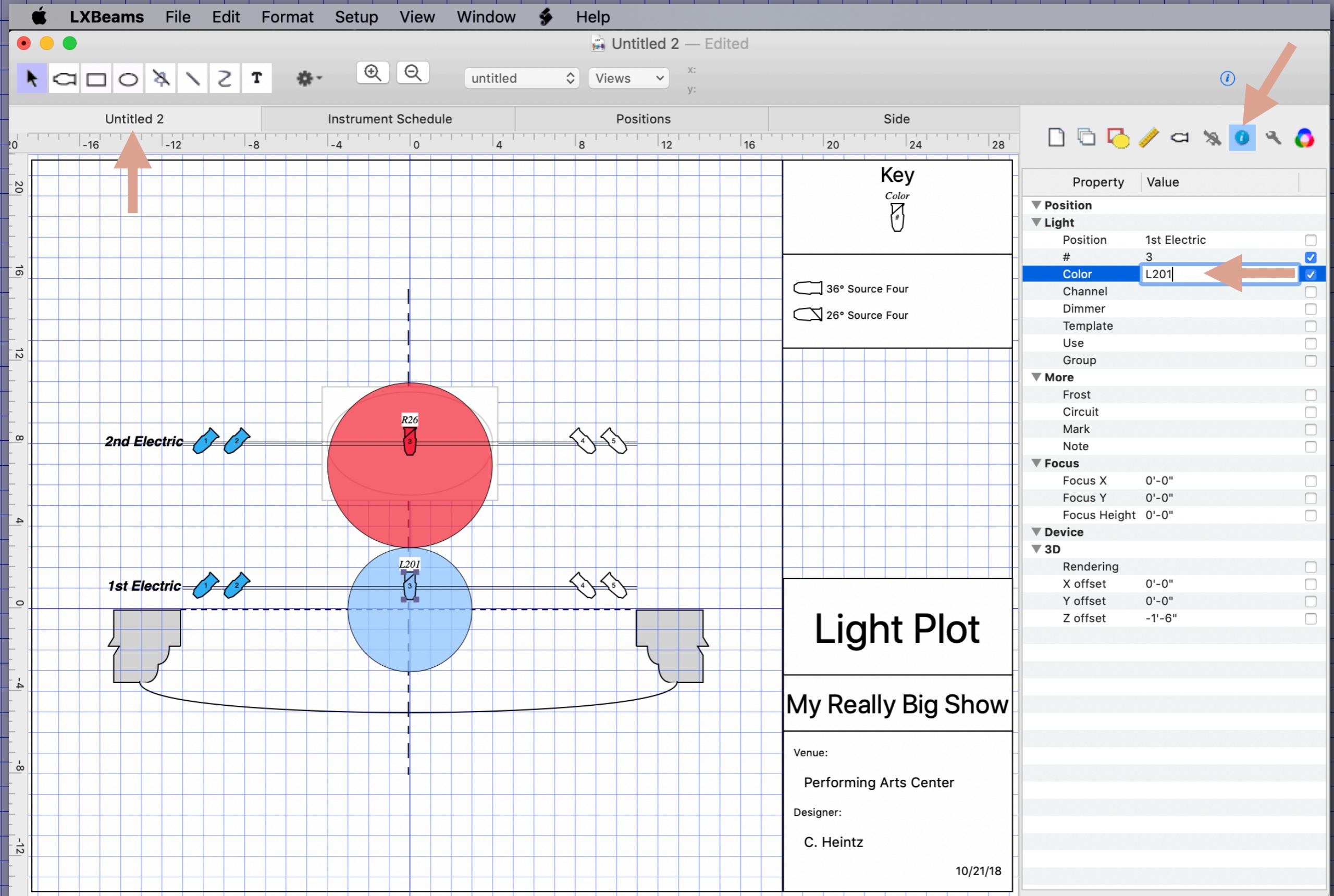
You can click on the arrow tool before the symbol to deselect the beam if necessary.

Switch back to the Side section. Click on the position and drag it up.



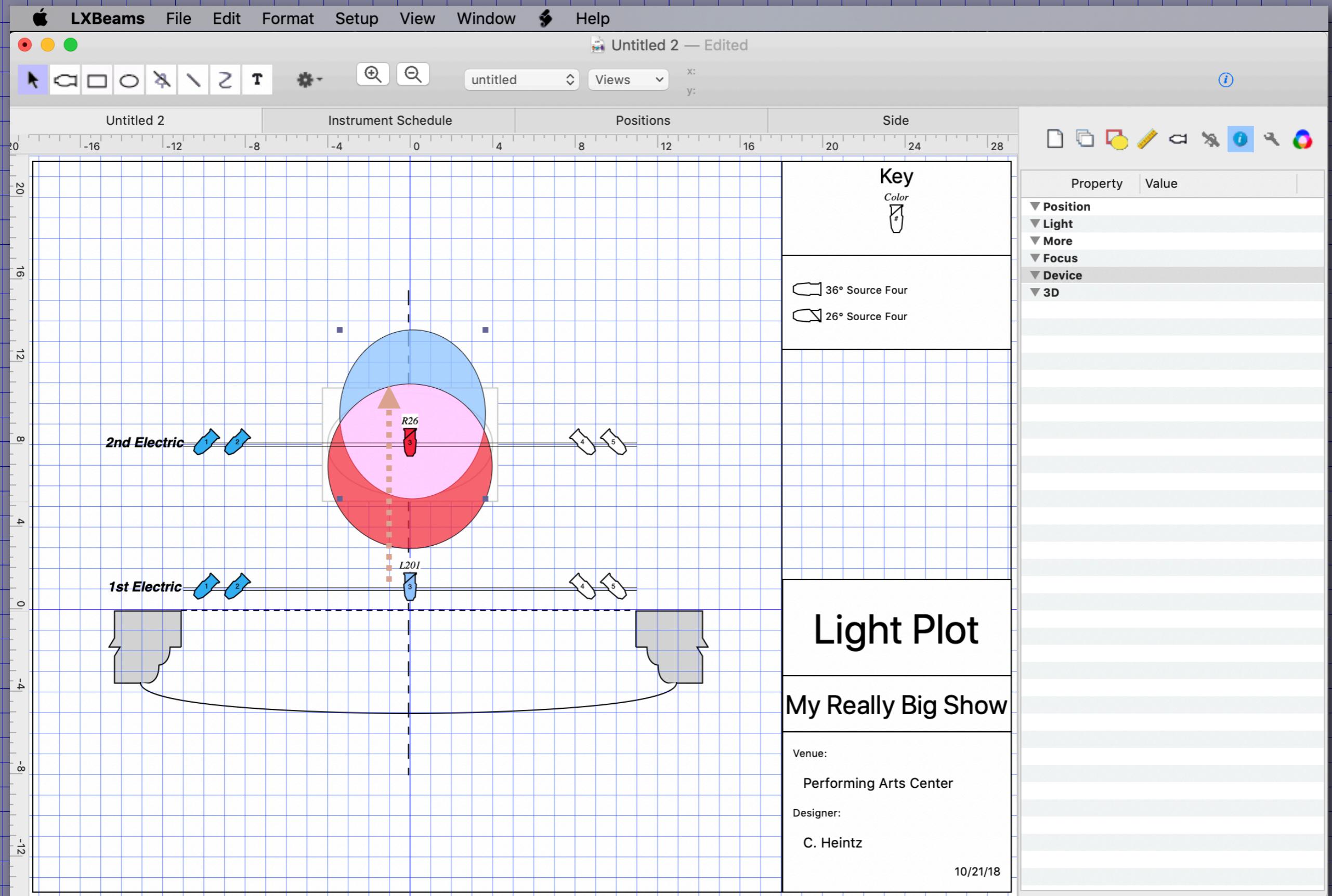
This changes the height. The beam is adjusted automatically.

In the main view, click the DSC light, change its color and add its beam.



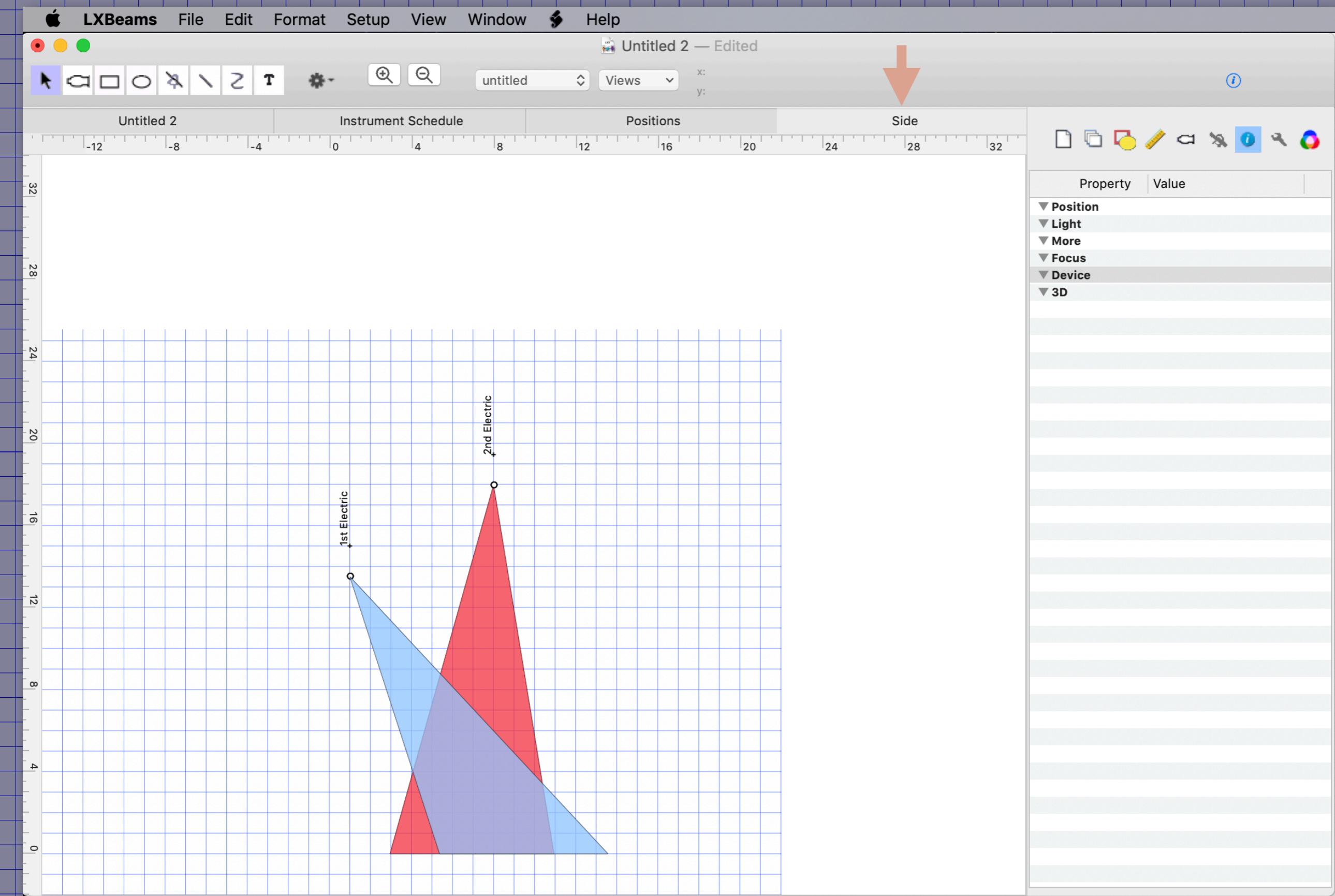
Use View->Beams->Create Beam or Intensity. The color is found in the Inspector's Info tab.

Click on the new beam and drag it upstage.

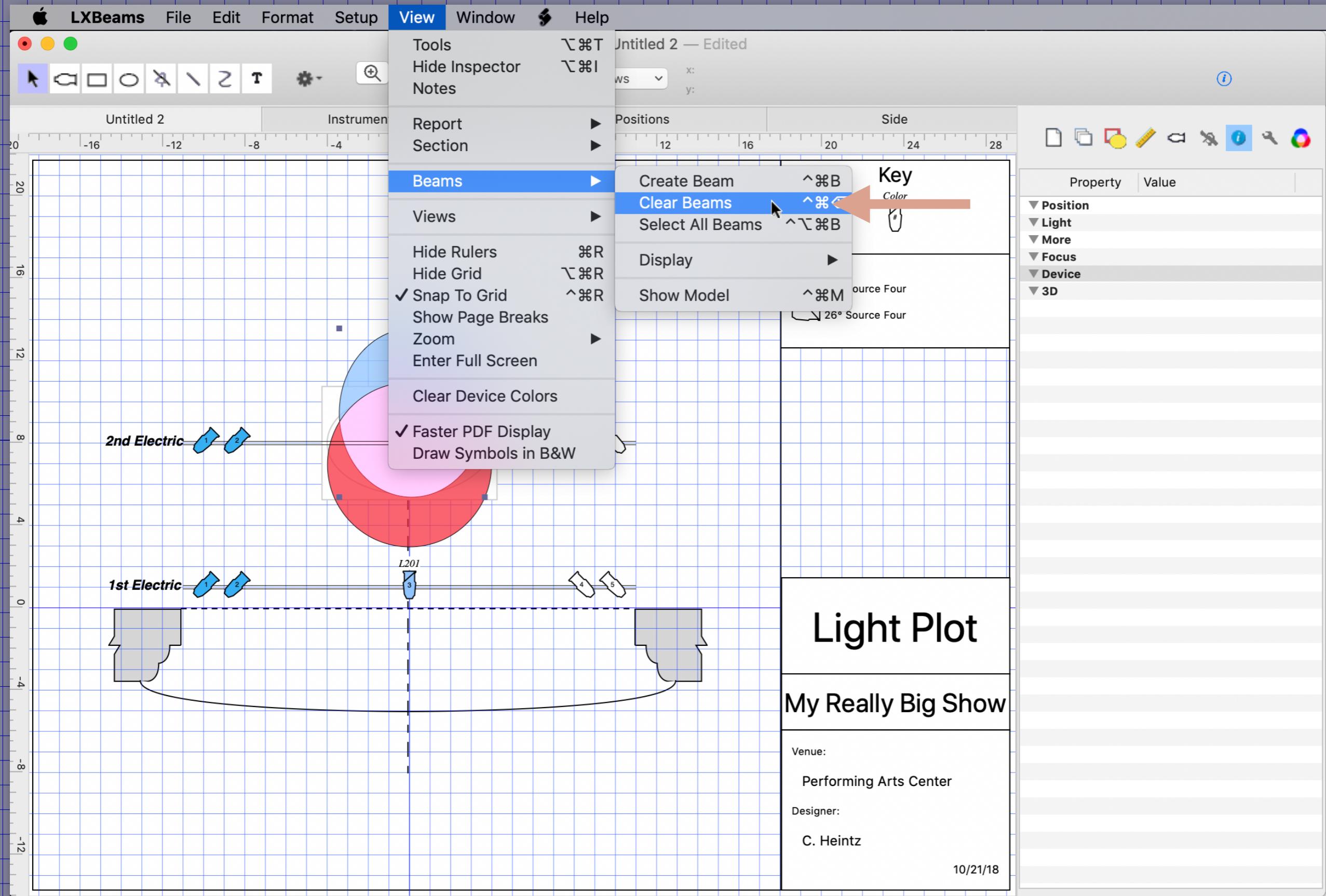


The beam changes size as it gets further away and shows the color overlap.

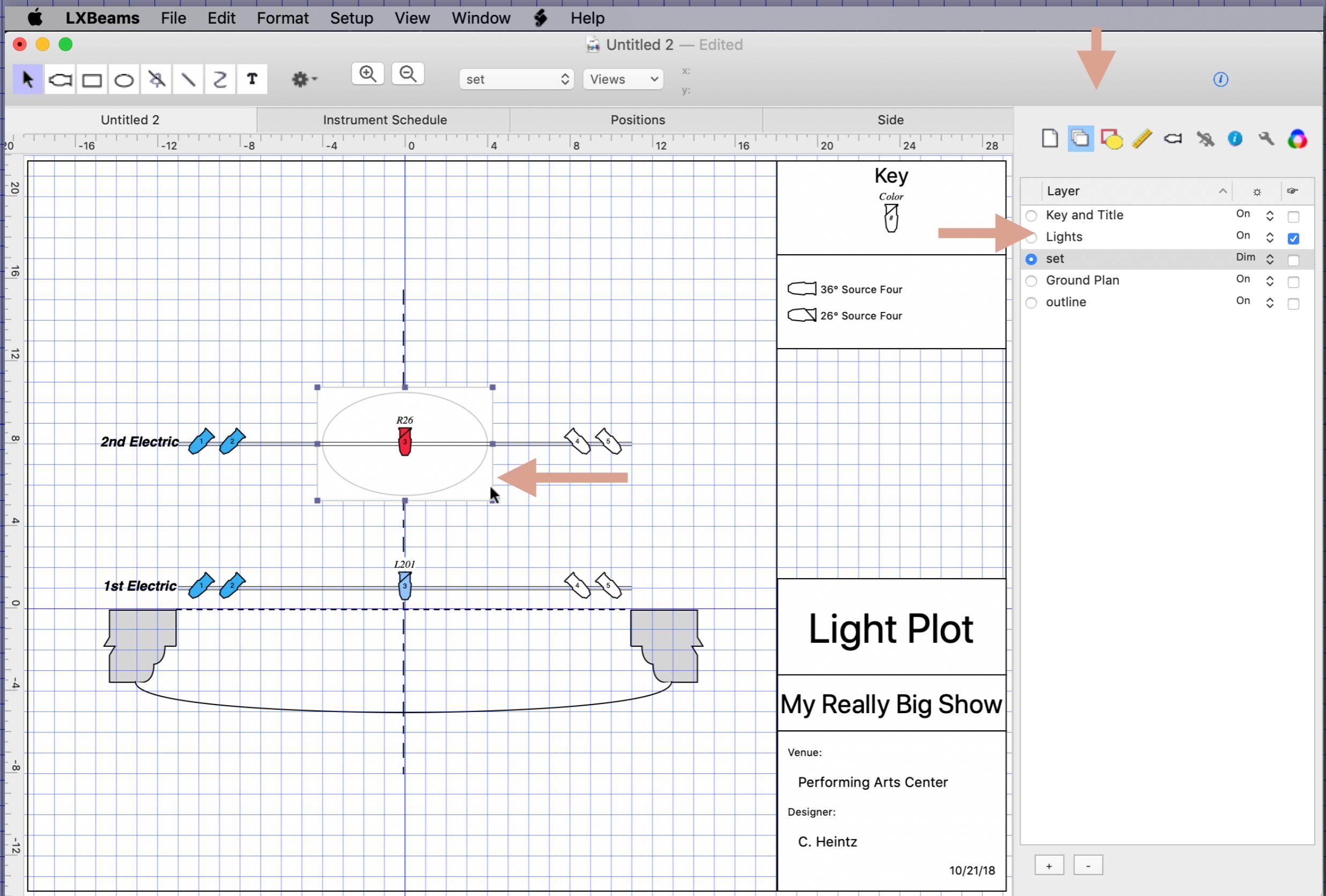
You can see the two beams in the side section.



Choose View→Beams→Clear Beams.

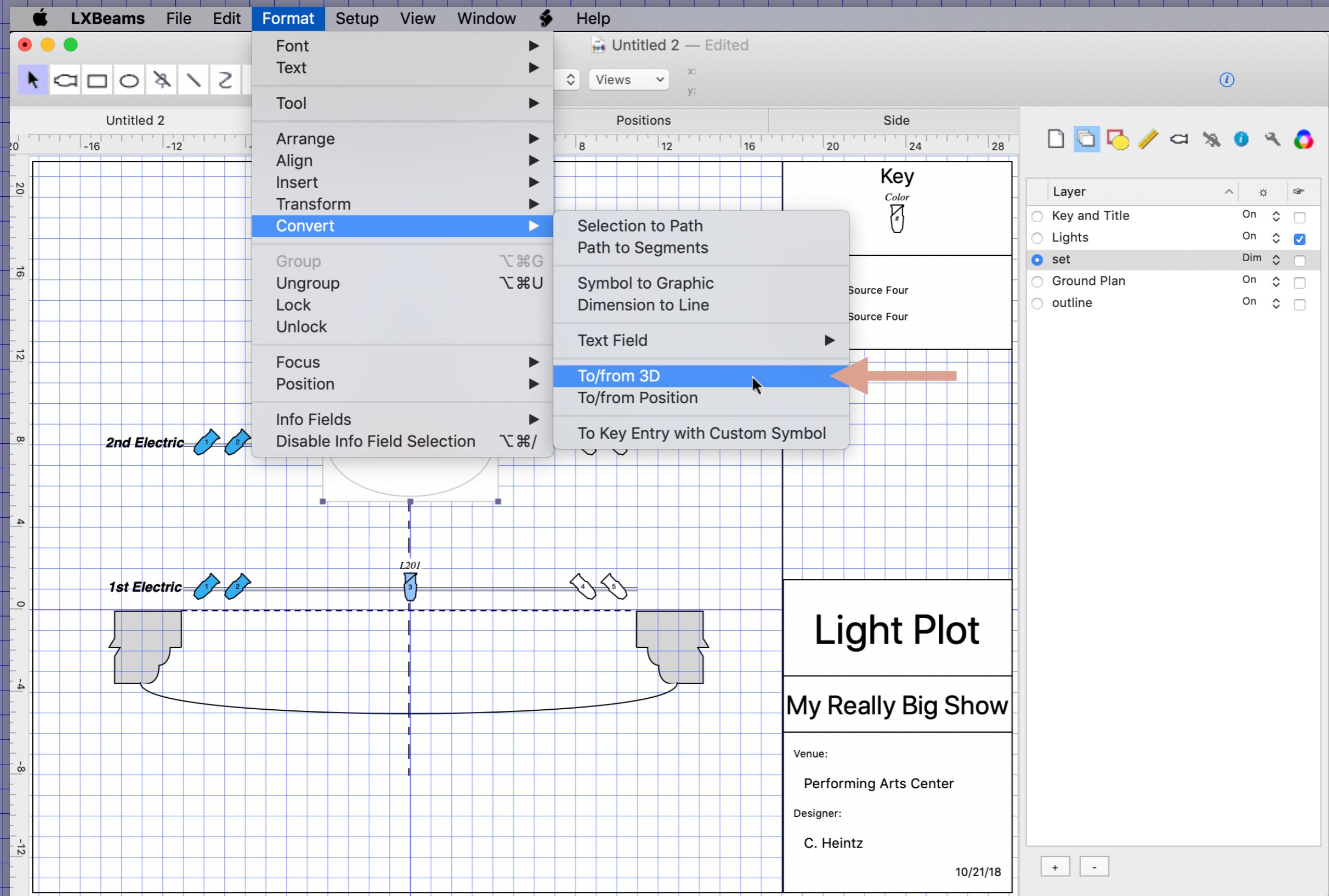


Switch to the main view/layers tab.
After naming the “untitled” layer, select the rectangle.



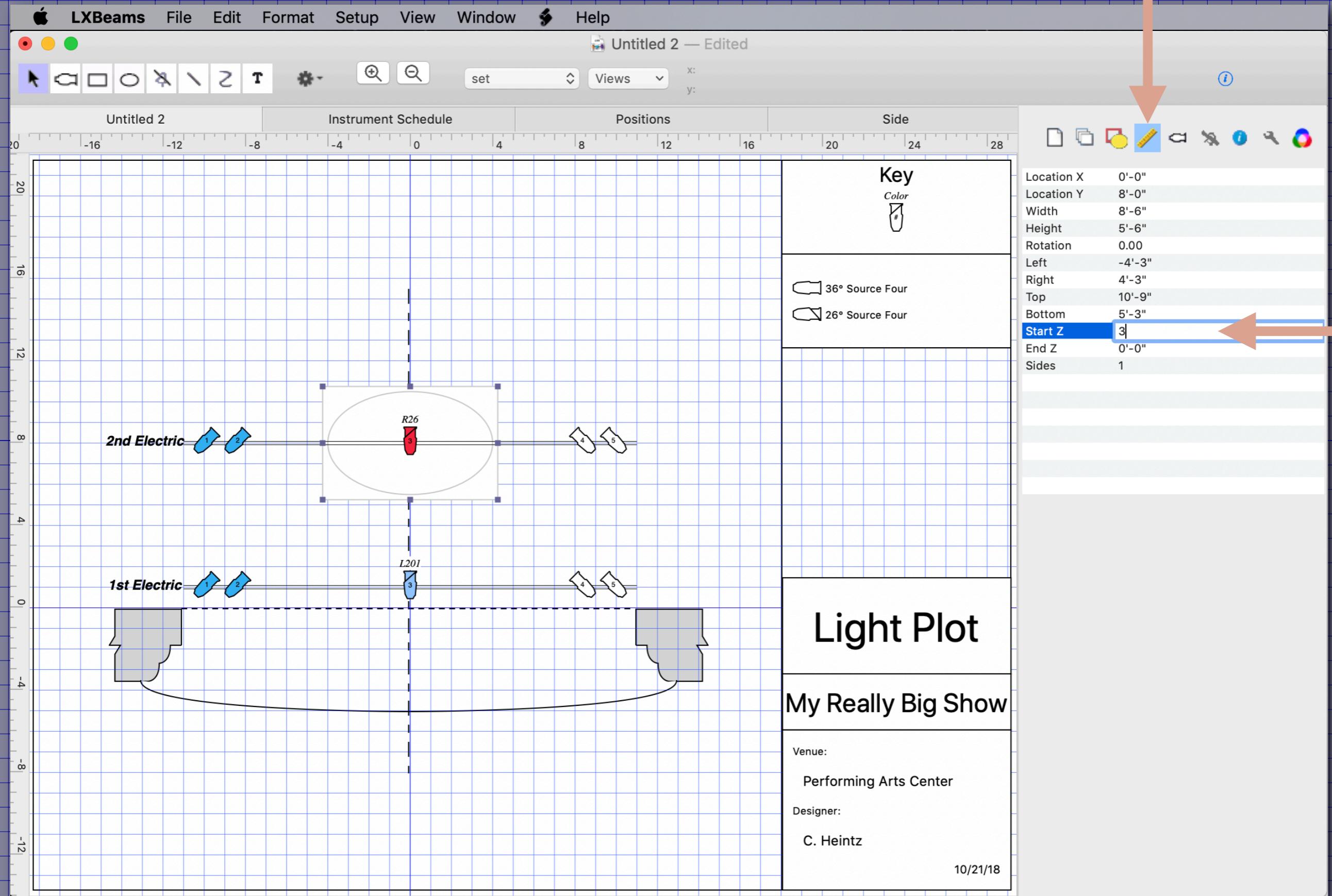
Make sure that the untitled/set layer is current.

Choose Format→Convert→To/from 3D.



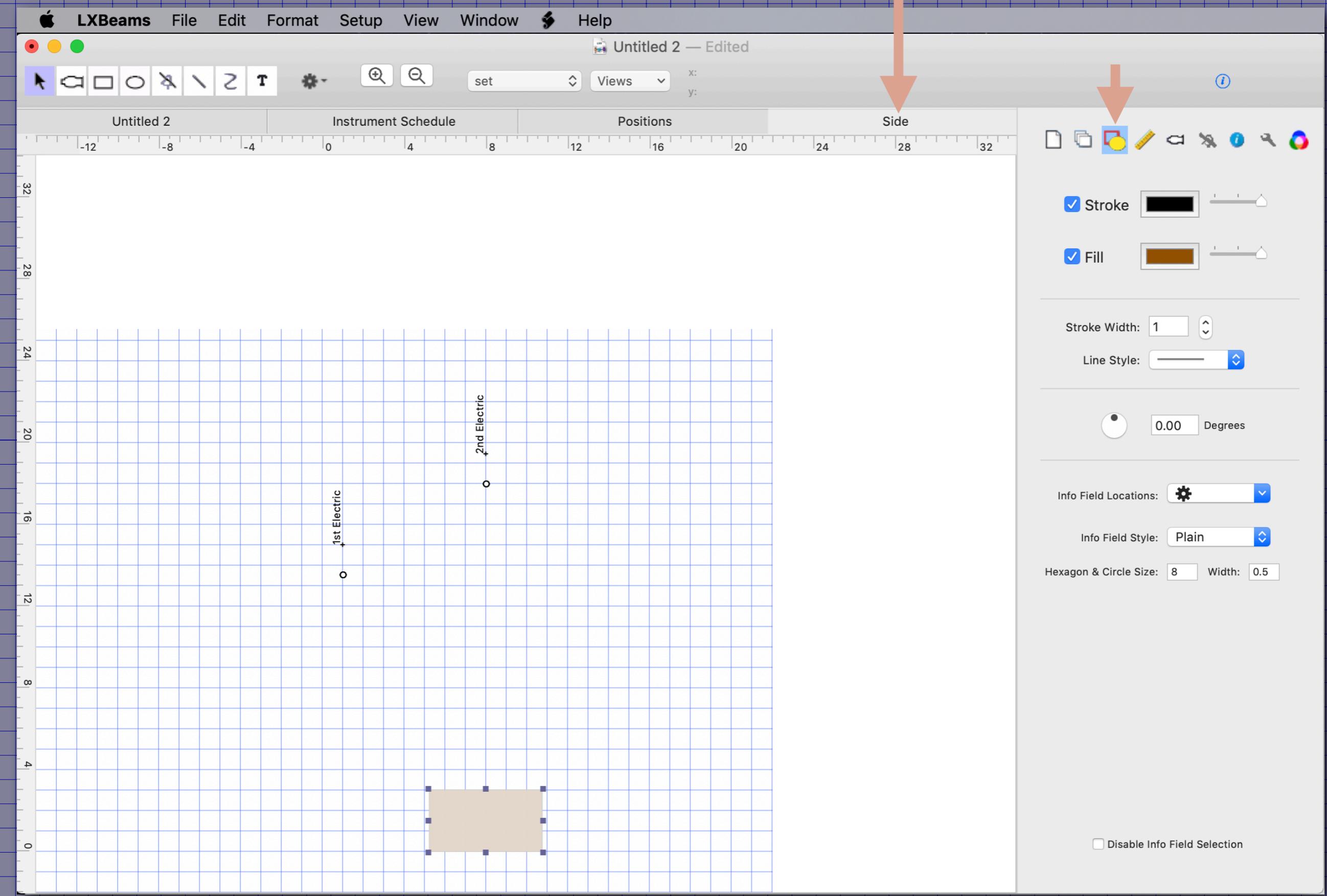
3D rectangles can also be drawn directly by changing the tools to 3D mode

Switch to the Inspector's Measurements tab and edit the Start Z property.



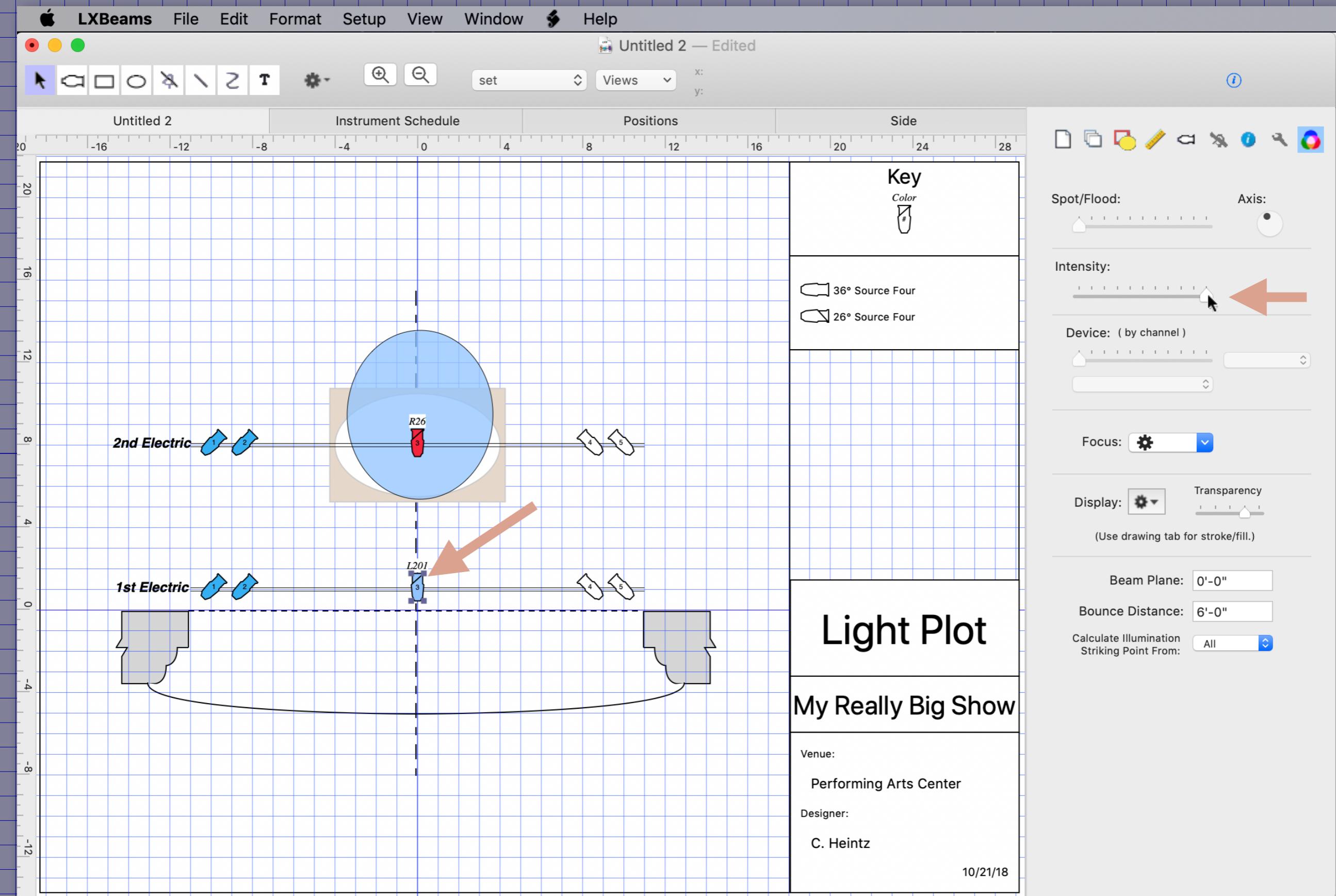
Width and height refer to the X/Y size. Z is the "height" axis away from the page.

You can see how the 3D rectangle appears in section, seen from the side.

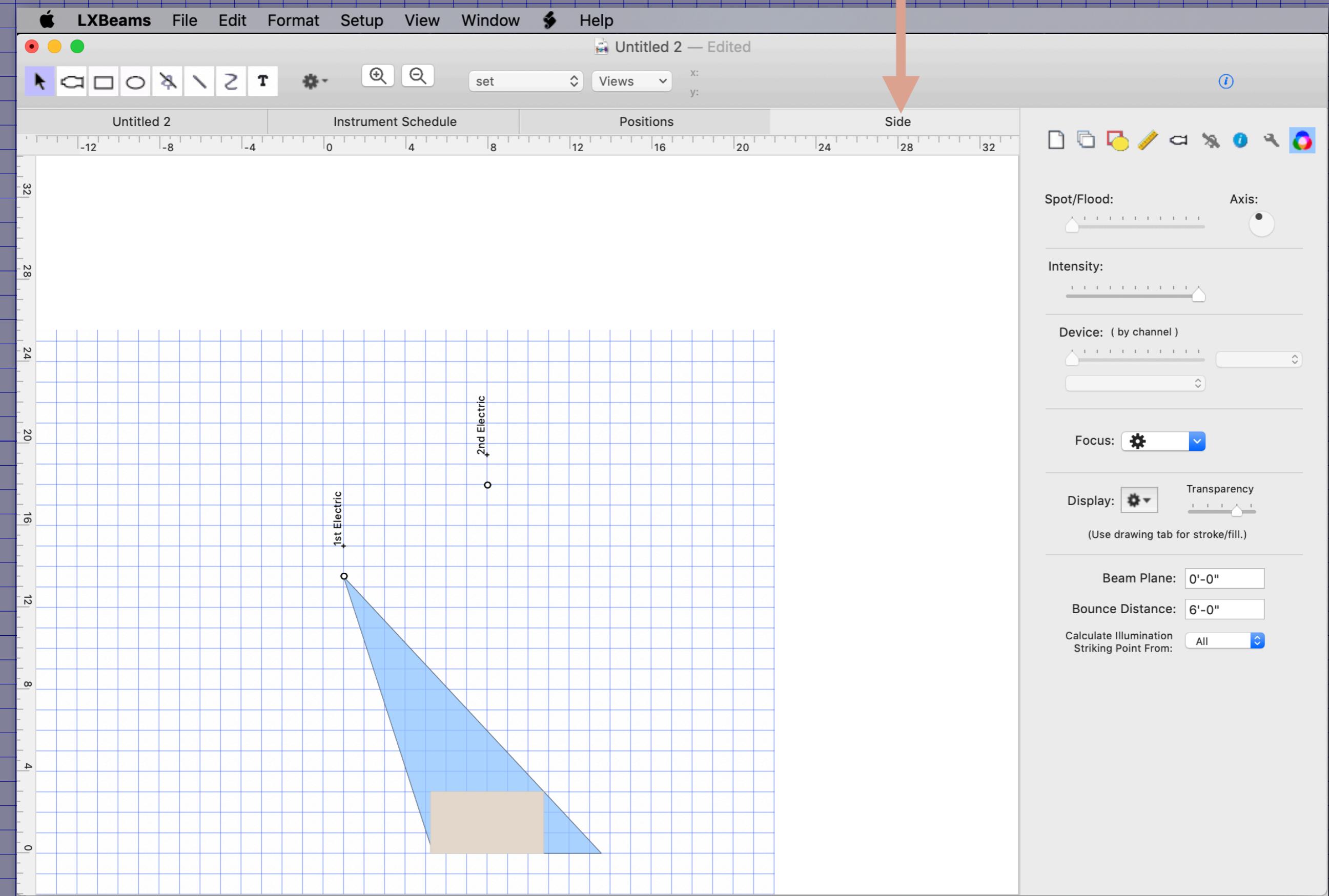


You might change the fill color from white to make it easier to see.

Select the center light and turn its beam back on.

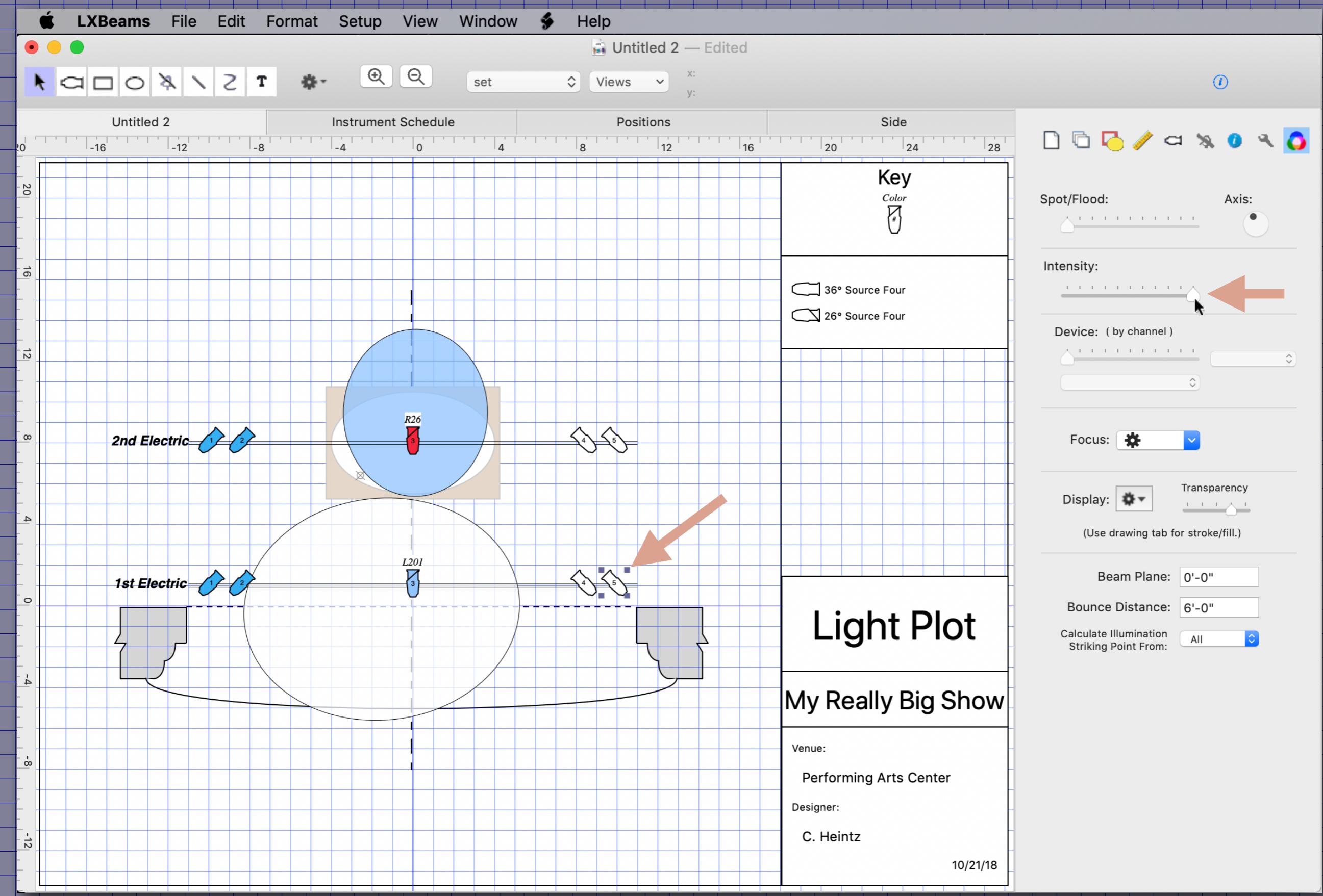


You can see what happens in the side section view.

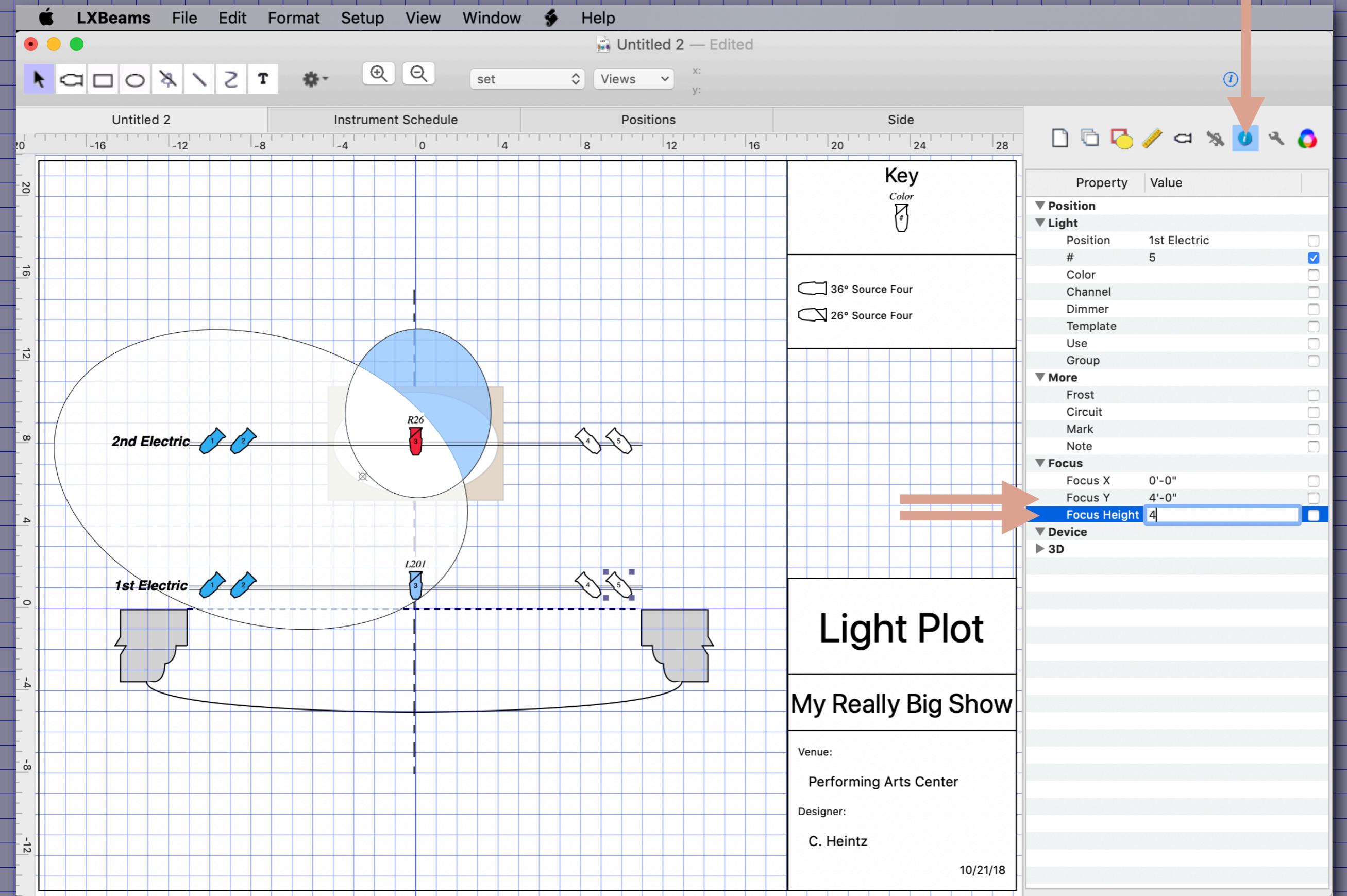


A person standing on the platform would be out of the light.

Add another beam from the last light on the 1st Electric.

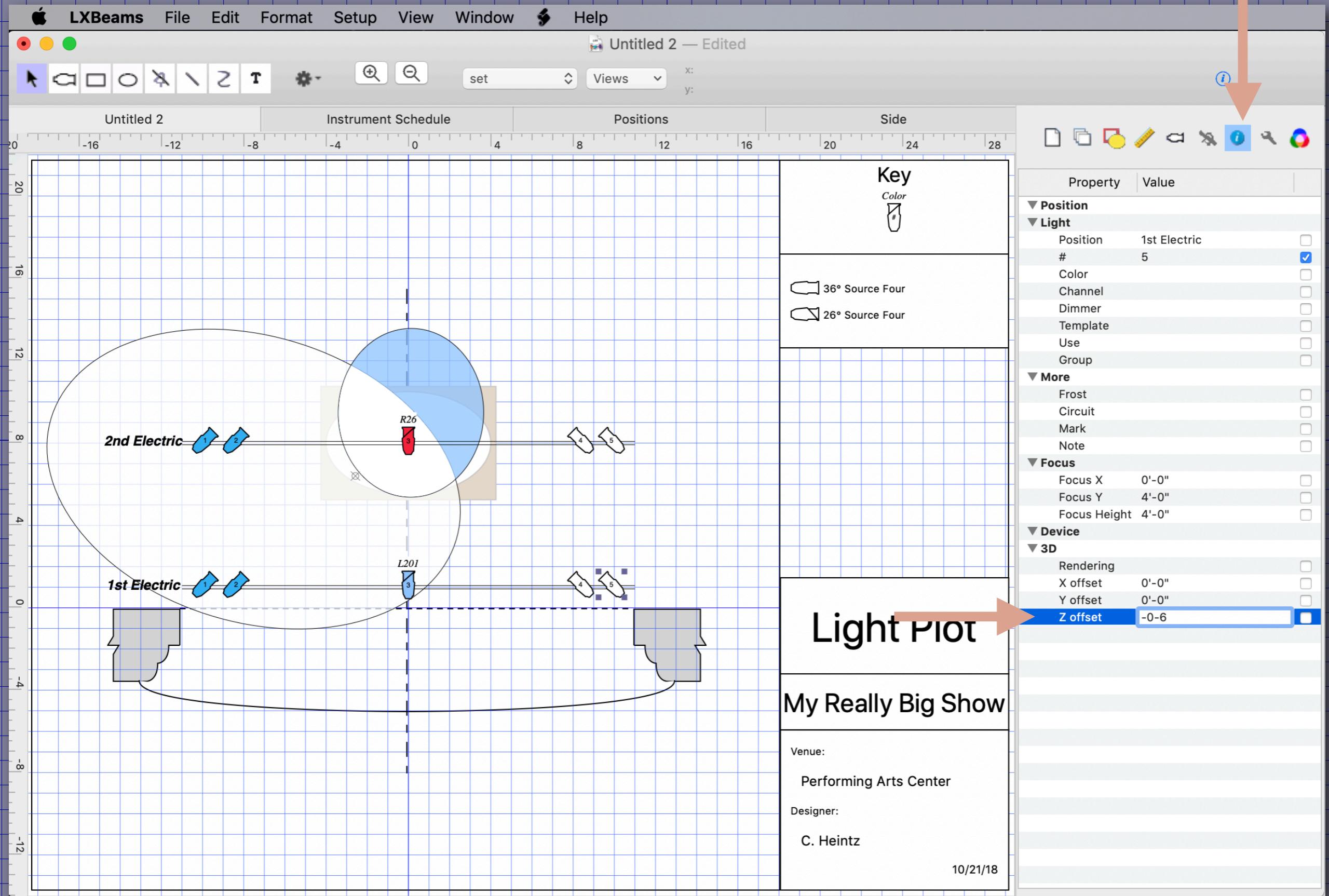


Look at the Focus properties for the selected light in the Inspector's Info tab.



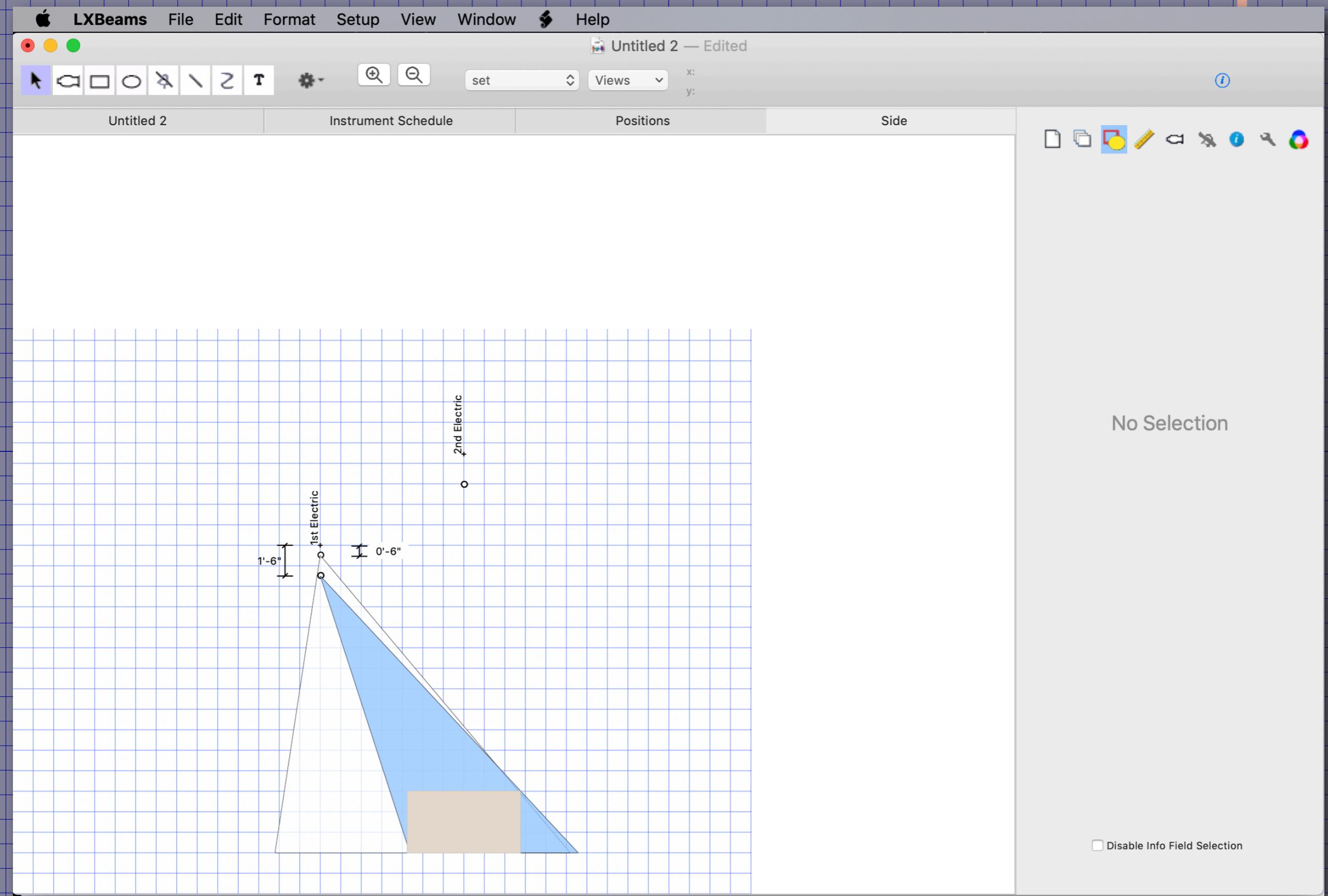
Change "Focus Y" to "4" and change "Focus Height" to "4". Notice the beam.

Look at the 3D properties for the selected light in the Inspector's Info tab.



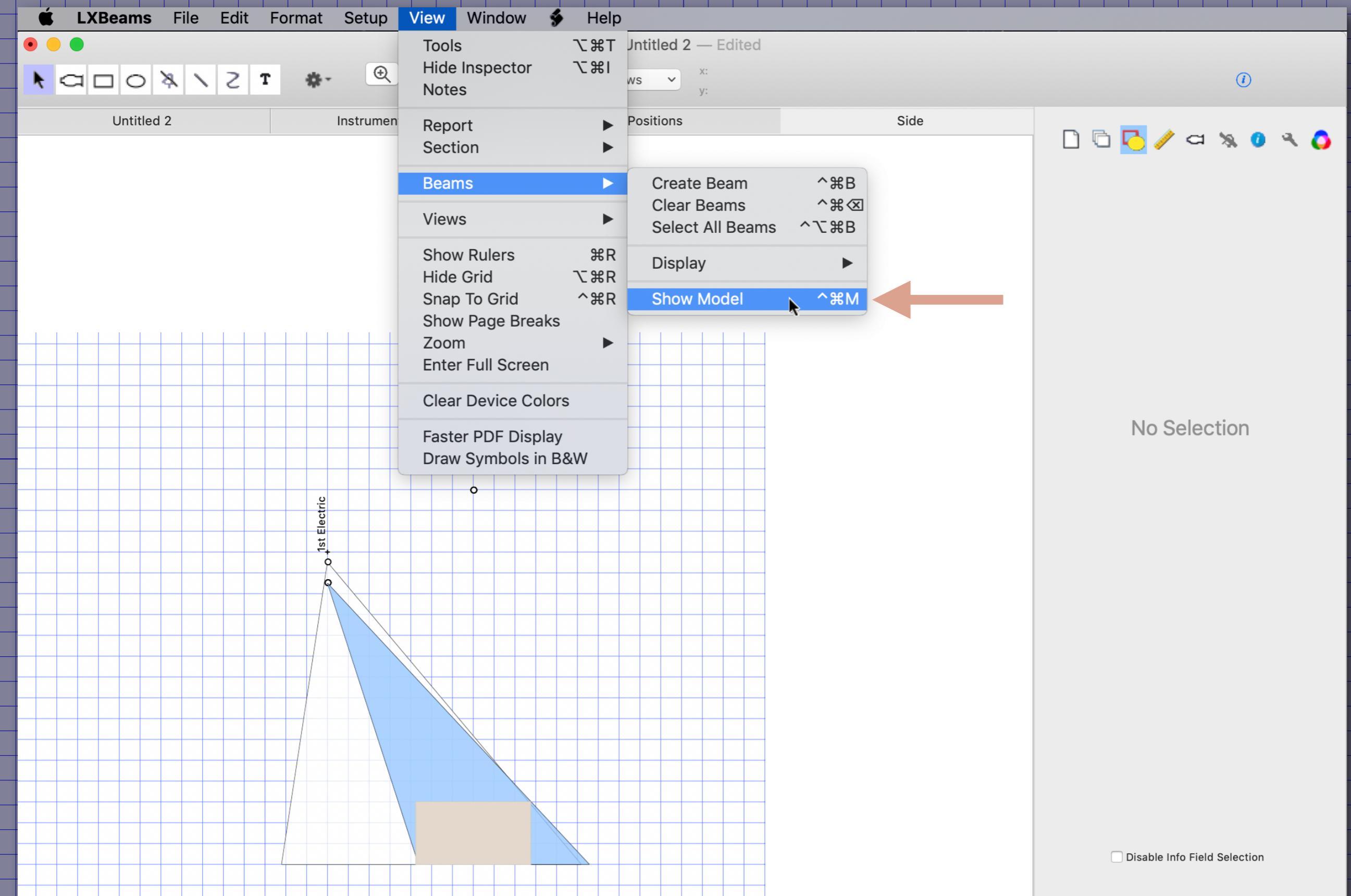
Change "Z offset" to "-0-6". Notice the beam, it got slightly bigger.

Switch to the side section to see what happened.

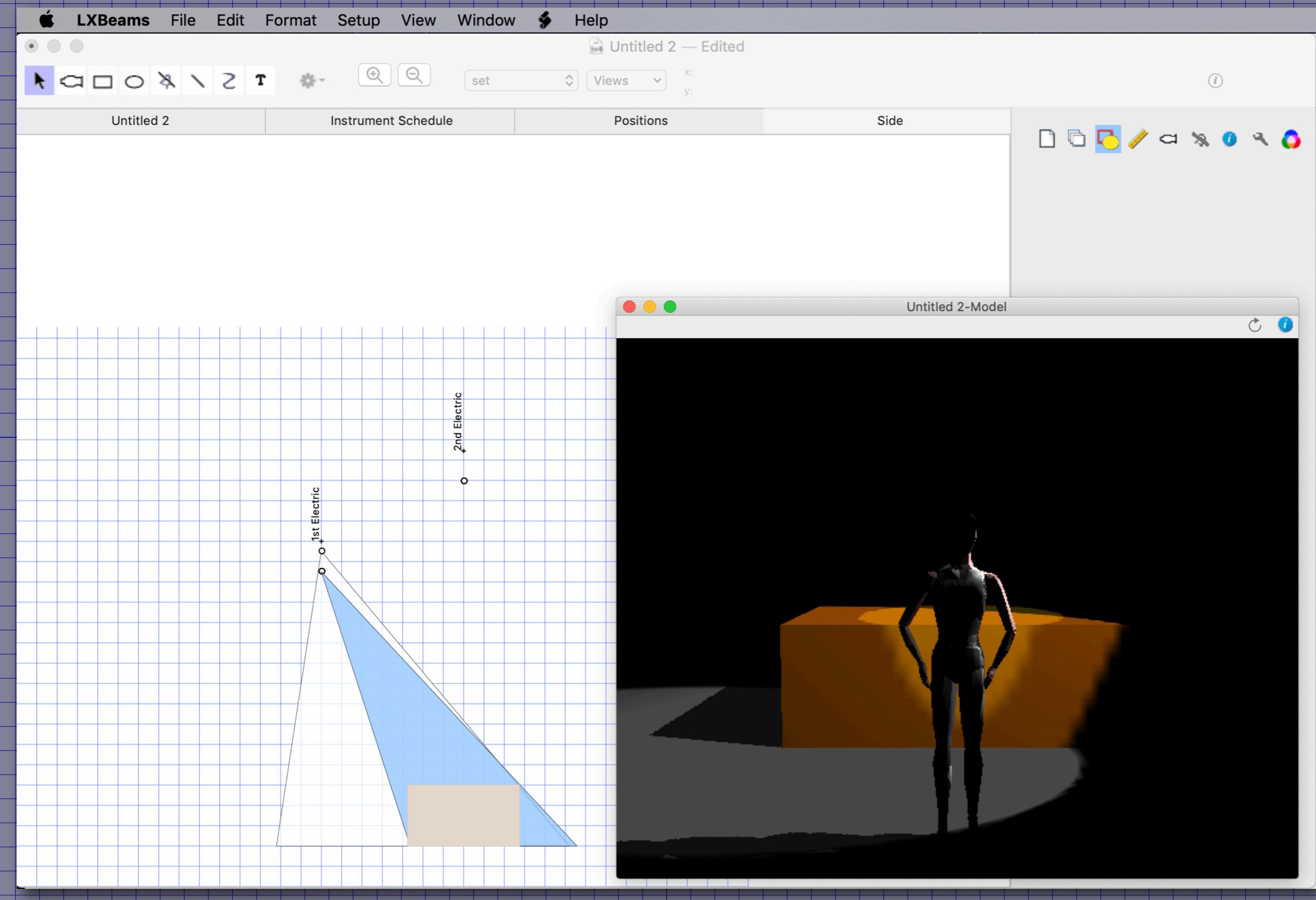


The Z offset is the distance from the intersection of the light and position.

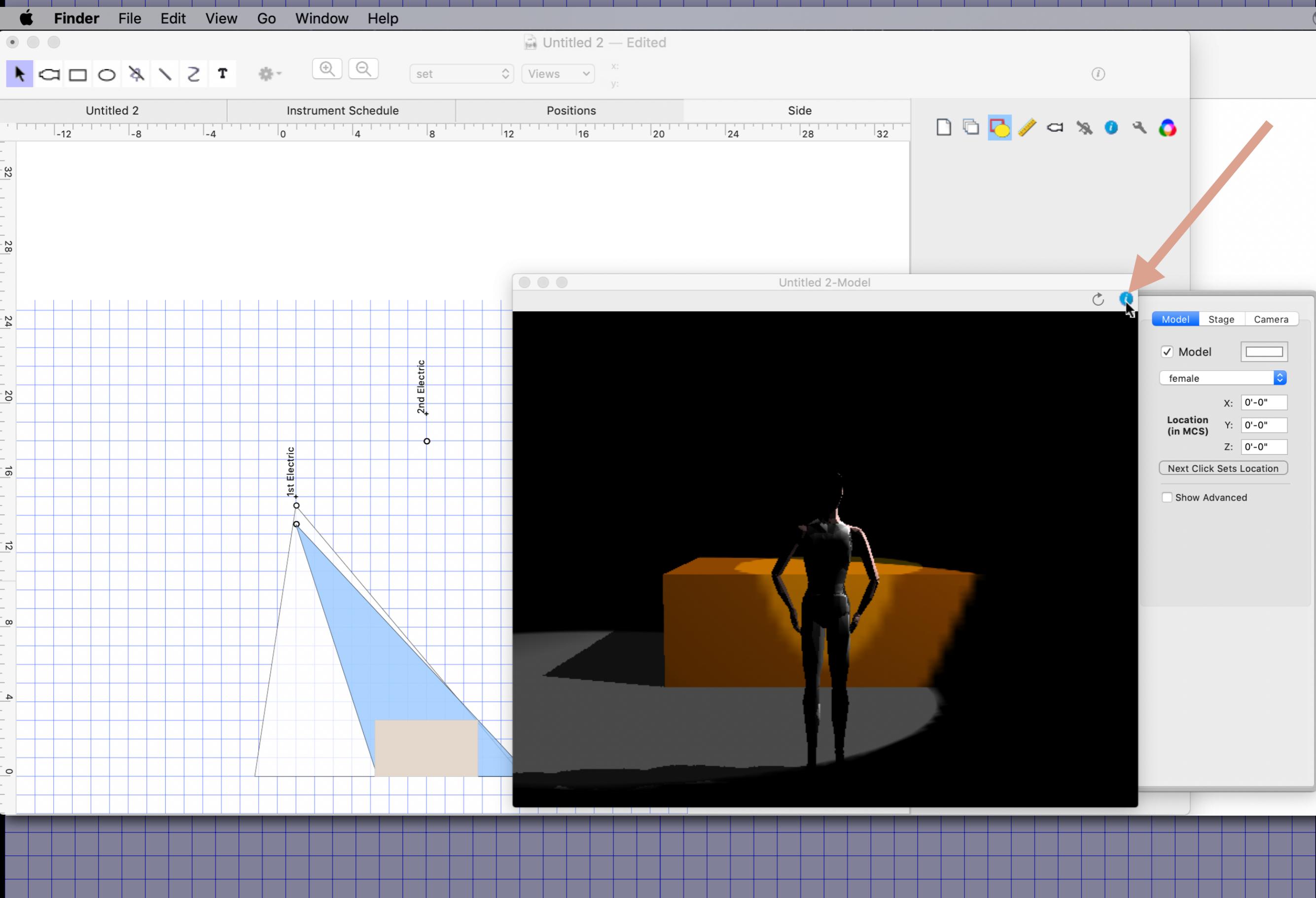
Choose View→Beams→Show Model.



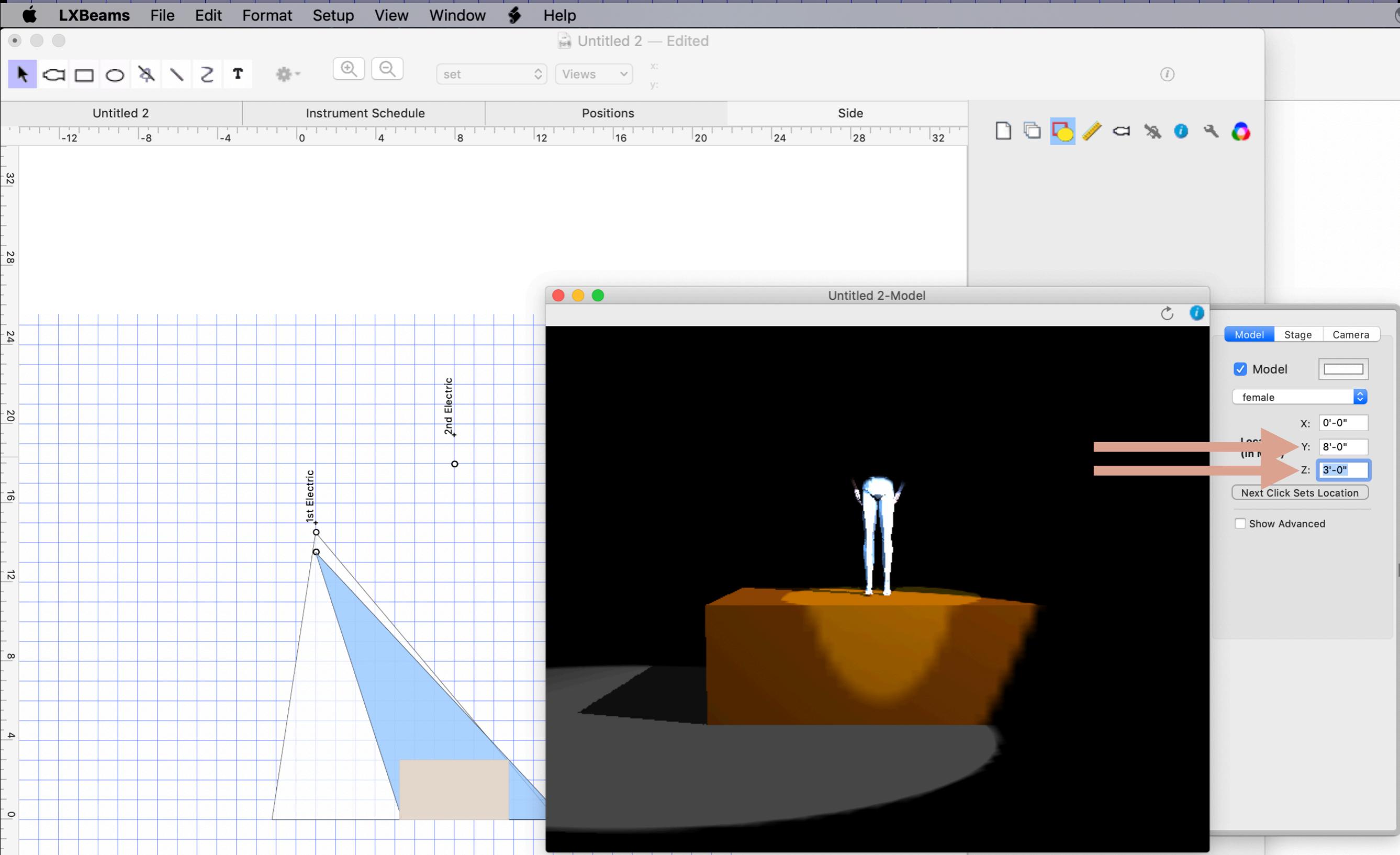
The model window shows a 3D scene.



Click the drawer control in the upper right corner of the model window.

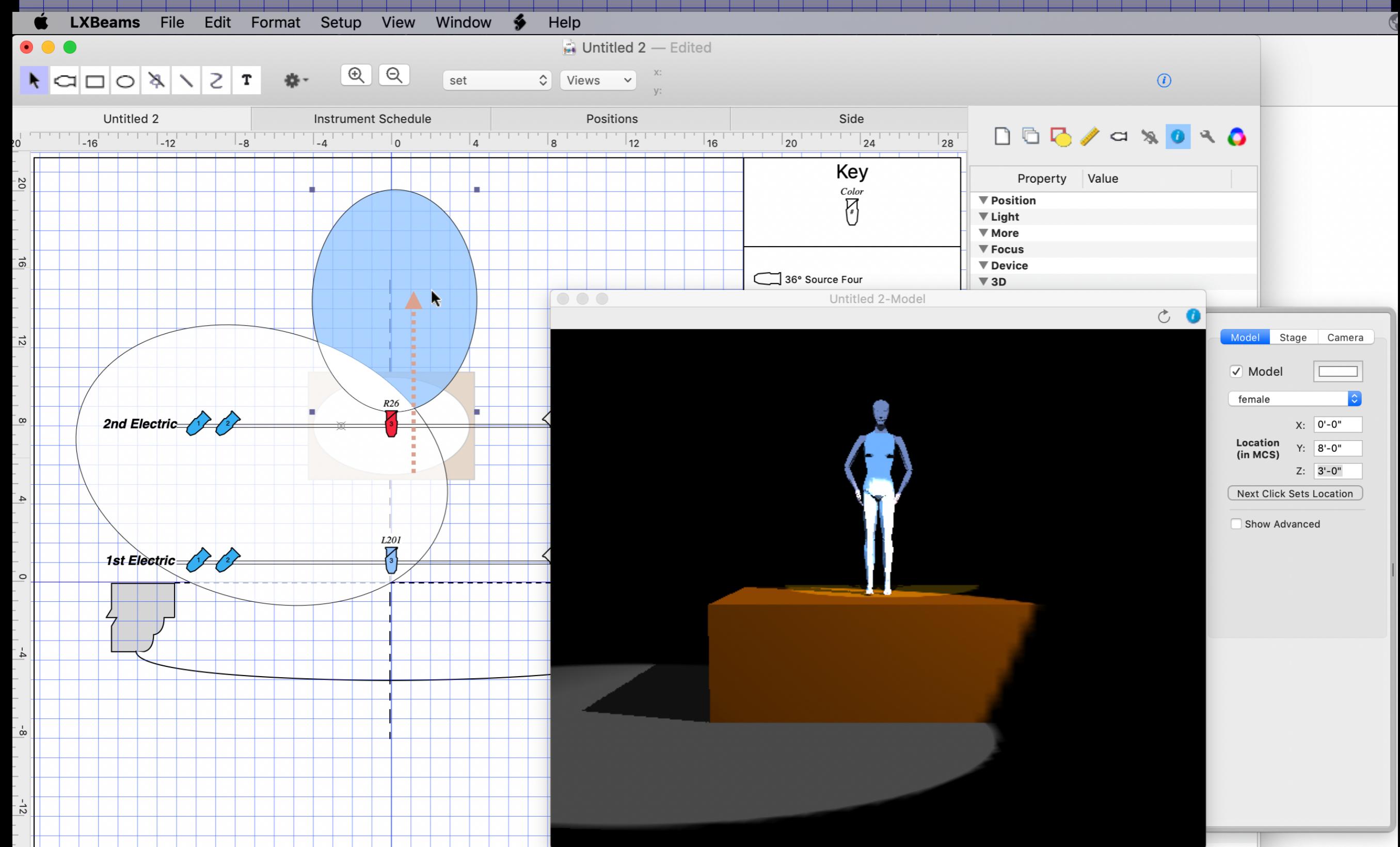


Edit the location of the figure so it is “standing” on the platform.



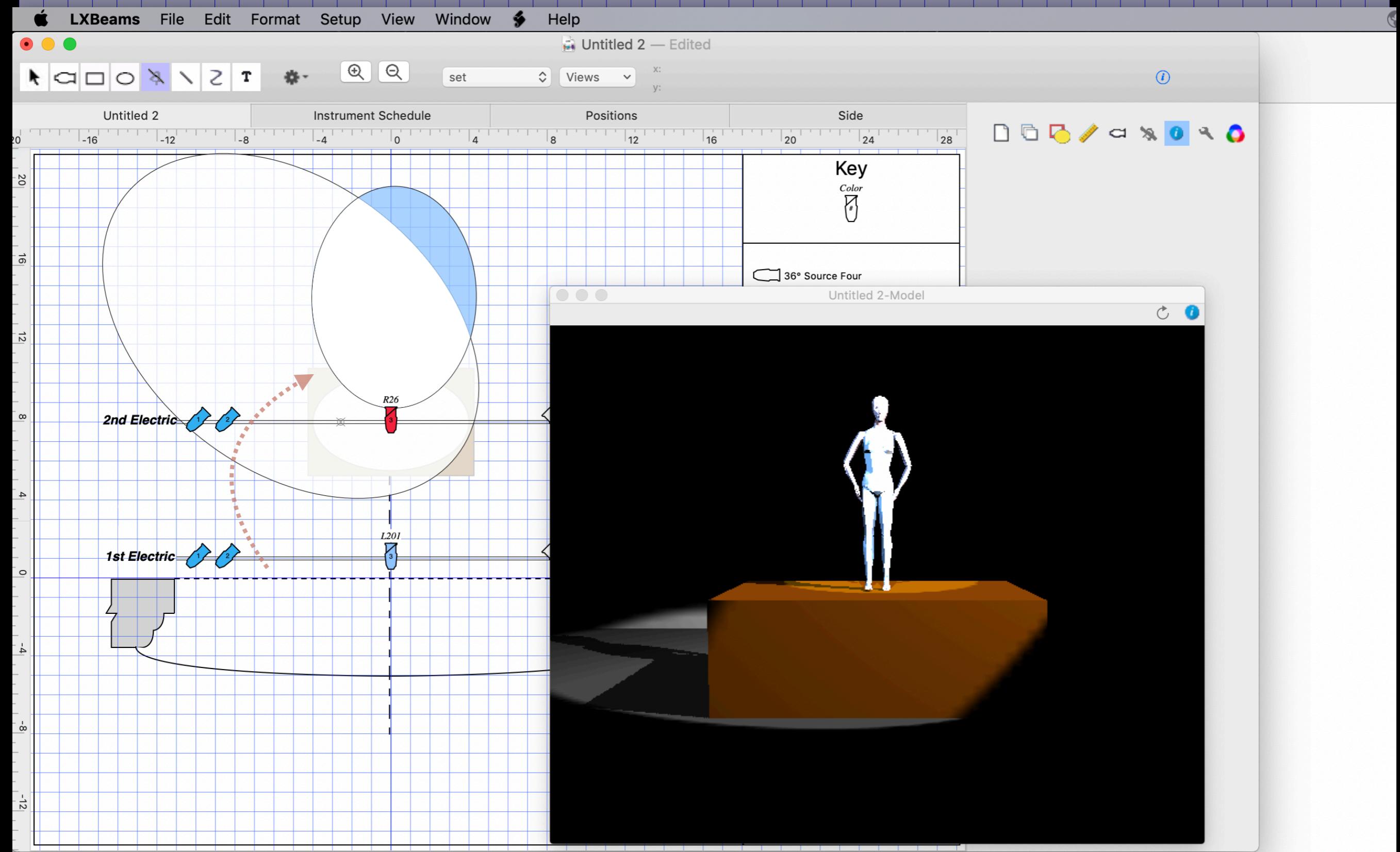
The center of the platform is 8' upstage (y) and 3' high (x)

In the main view, drag the blue beam upstage.



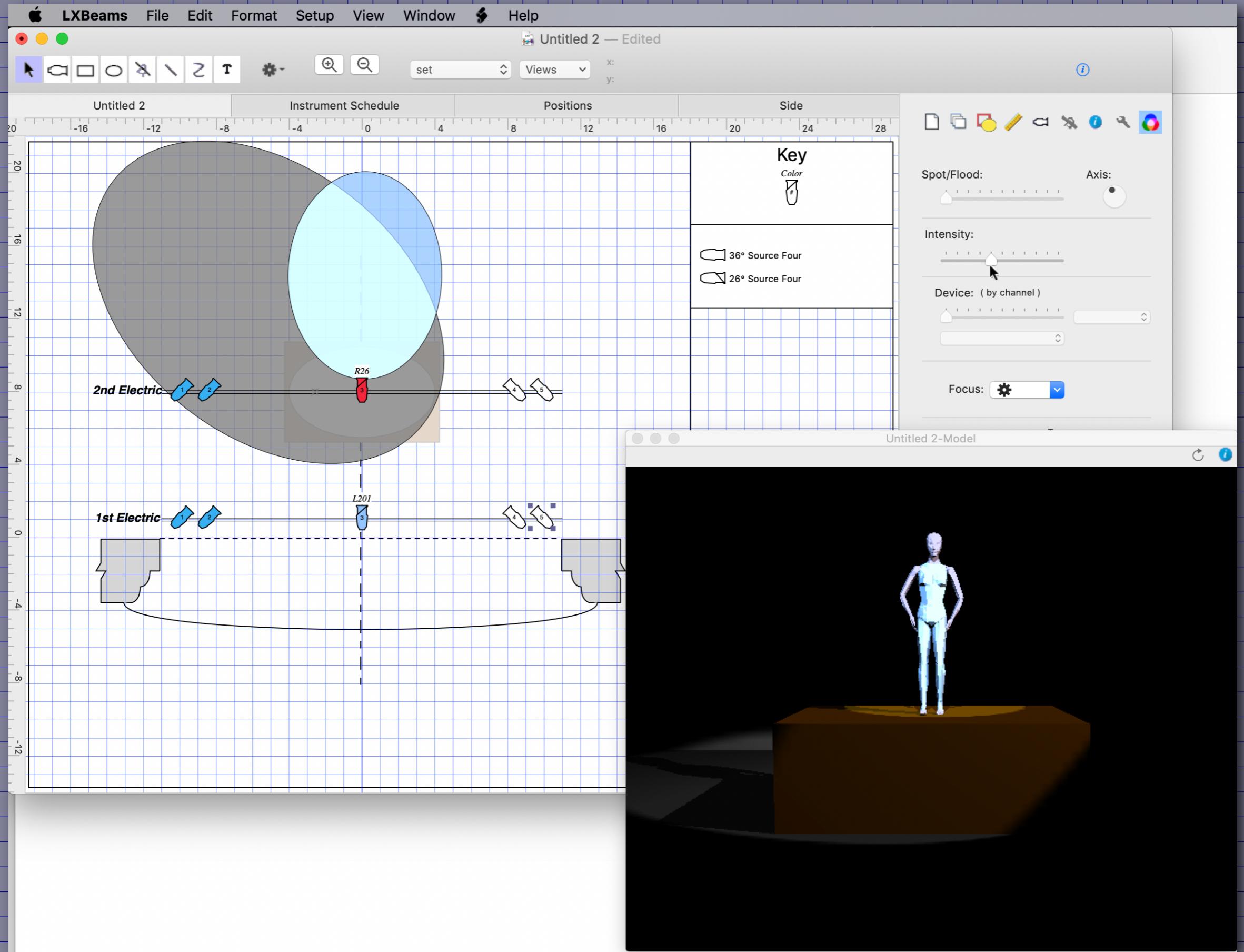
You can see it move in the model window.

Drag and position the other beam.

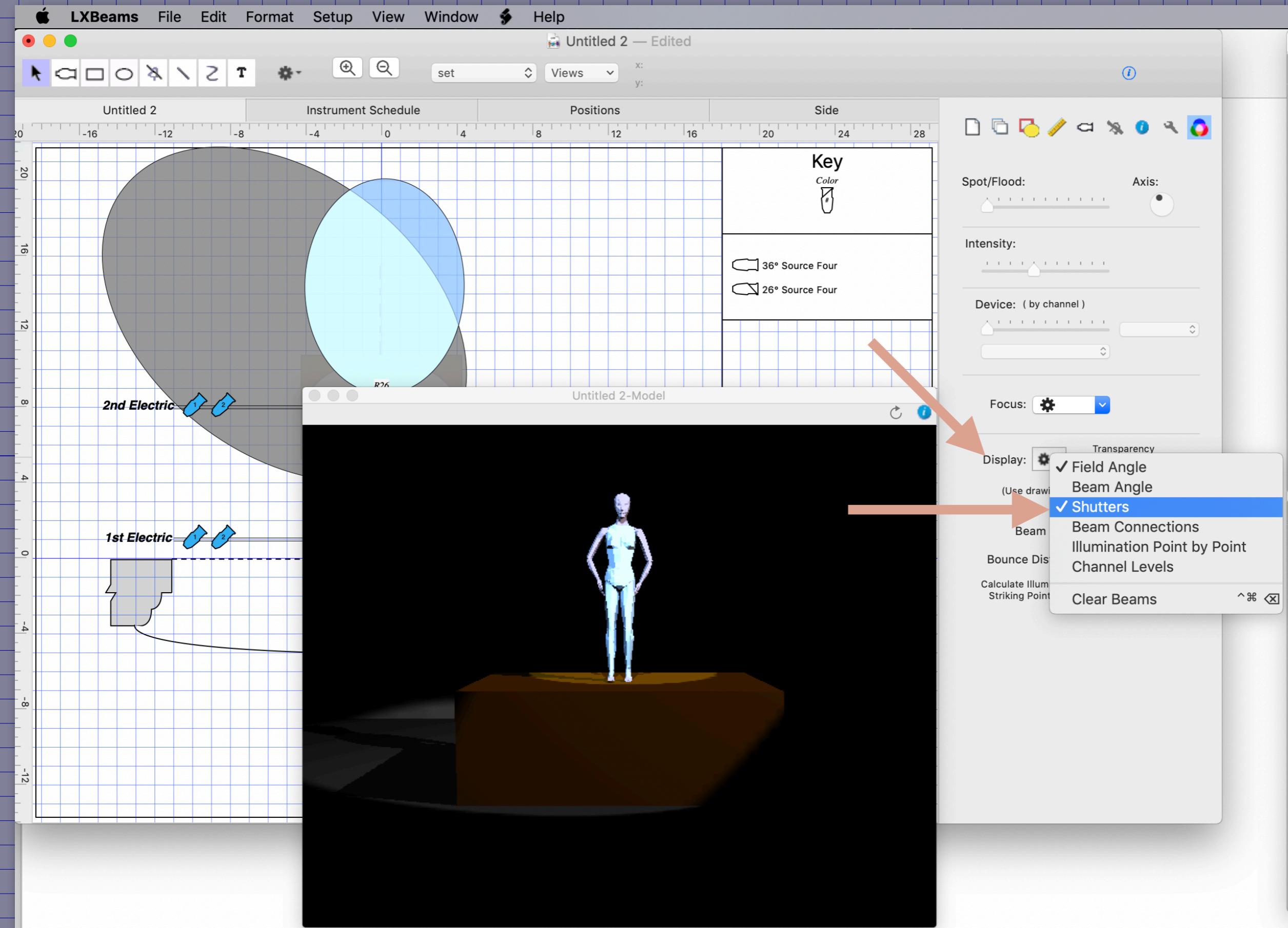


You can see it move in the model window.

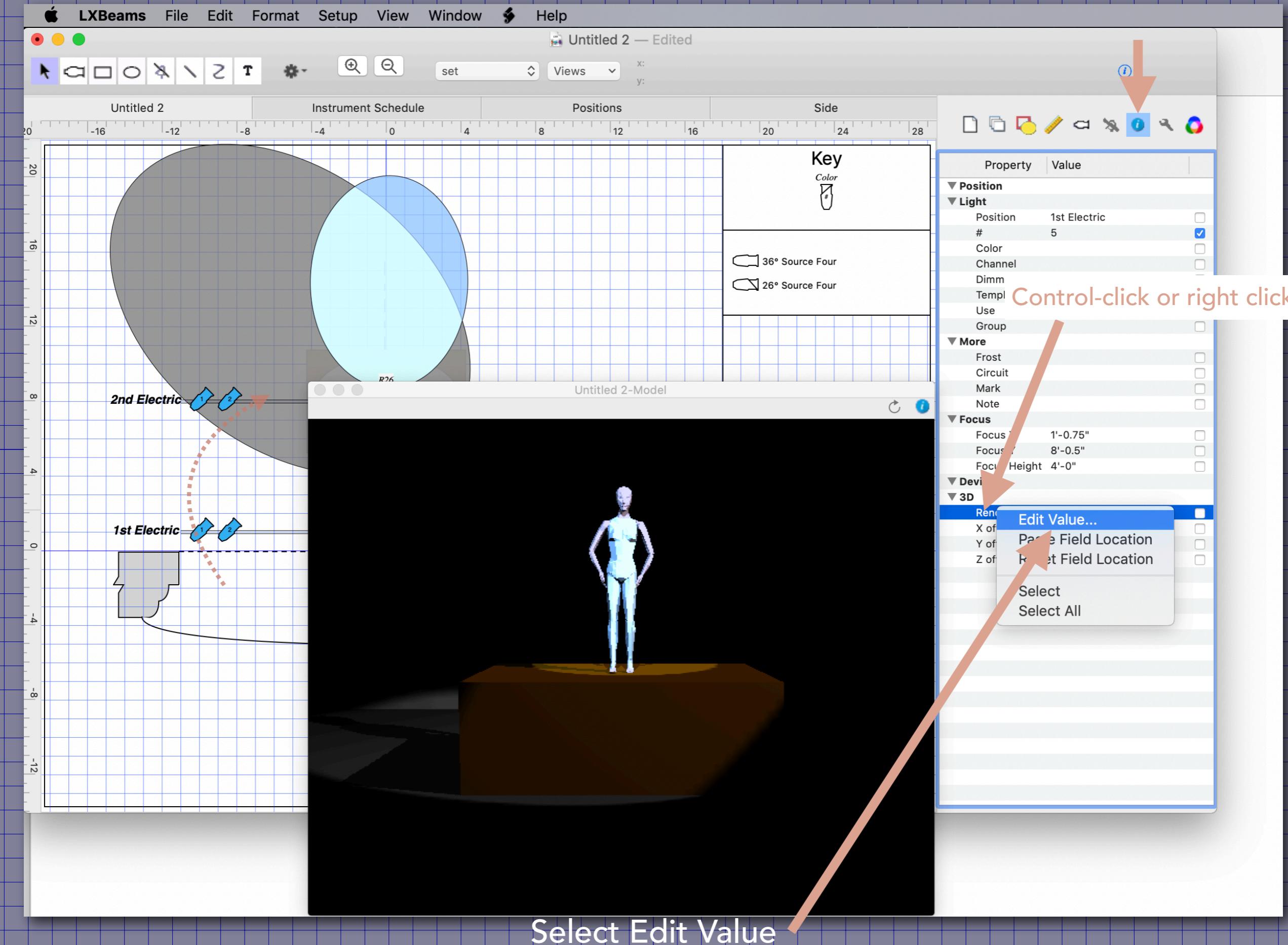
You might want to reduce the intensity of the white light.



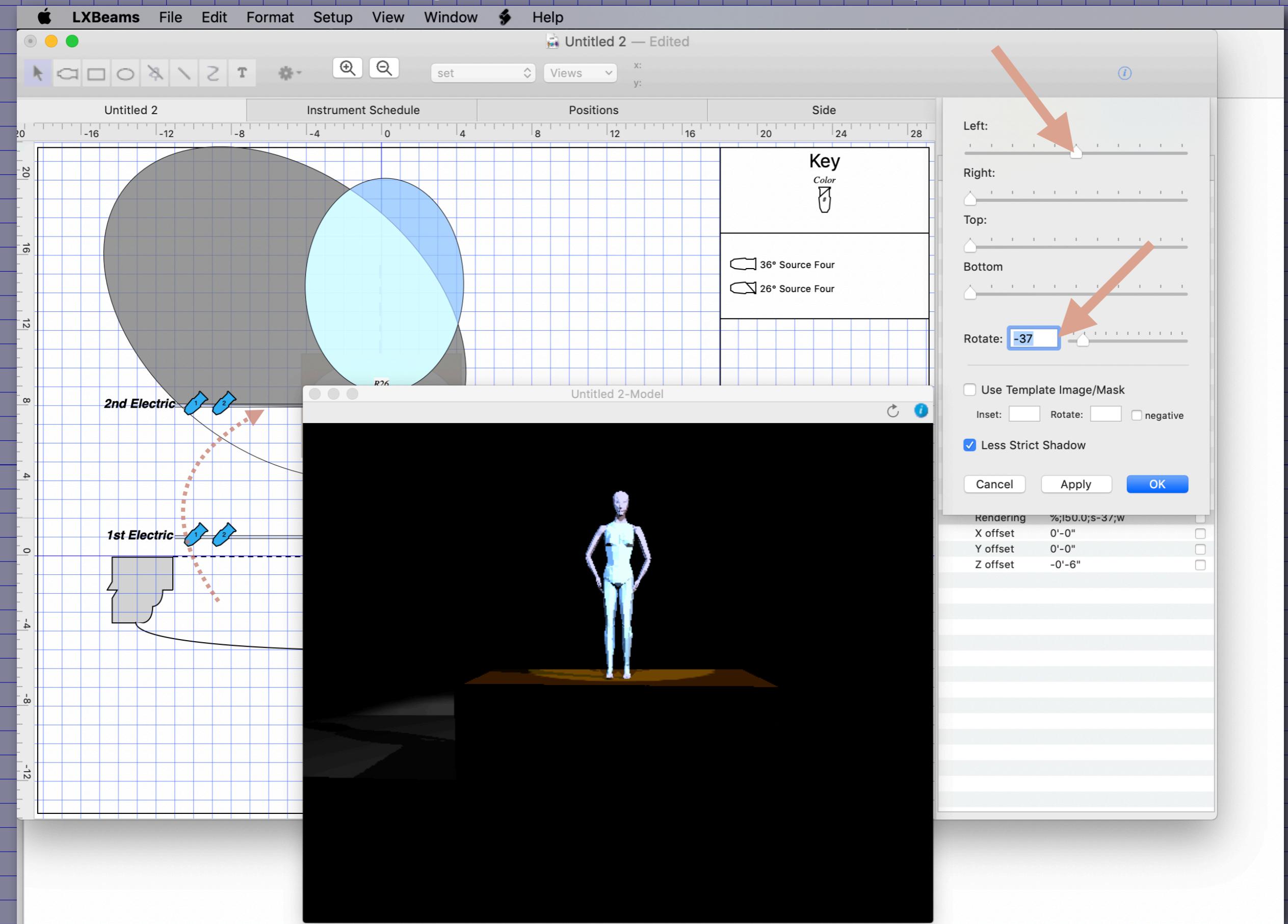
From the display popup enable shutters.



In the info tab, holding the control key, click "Rendering" in the Property column.



Bring the left shutter slider 1/2 way.



Rotate the shutters ~37°. Click OK

In this section we've looked at Sections and Beams

- How a section view shows the (x or y) and z axis.
- How beams are shown in section.
- How you can drag to change the height of a position in section.
- How a 3D rectangle can be used to represent a shape in section.

In this section we've looked at

Sections and Beams

- How you can change the focus of a light by dragging its beam.
- Or, you can set the location of focus by editing info properties
- How the offset z property is used to determine the location of a light in 3D

In this section we've looked at

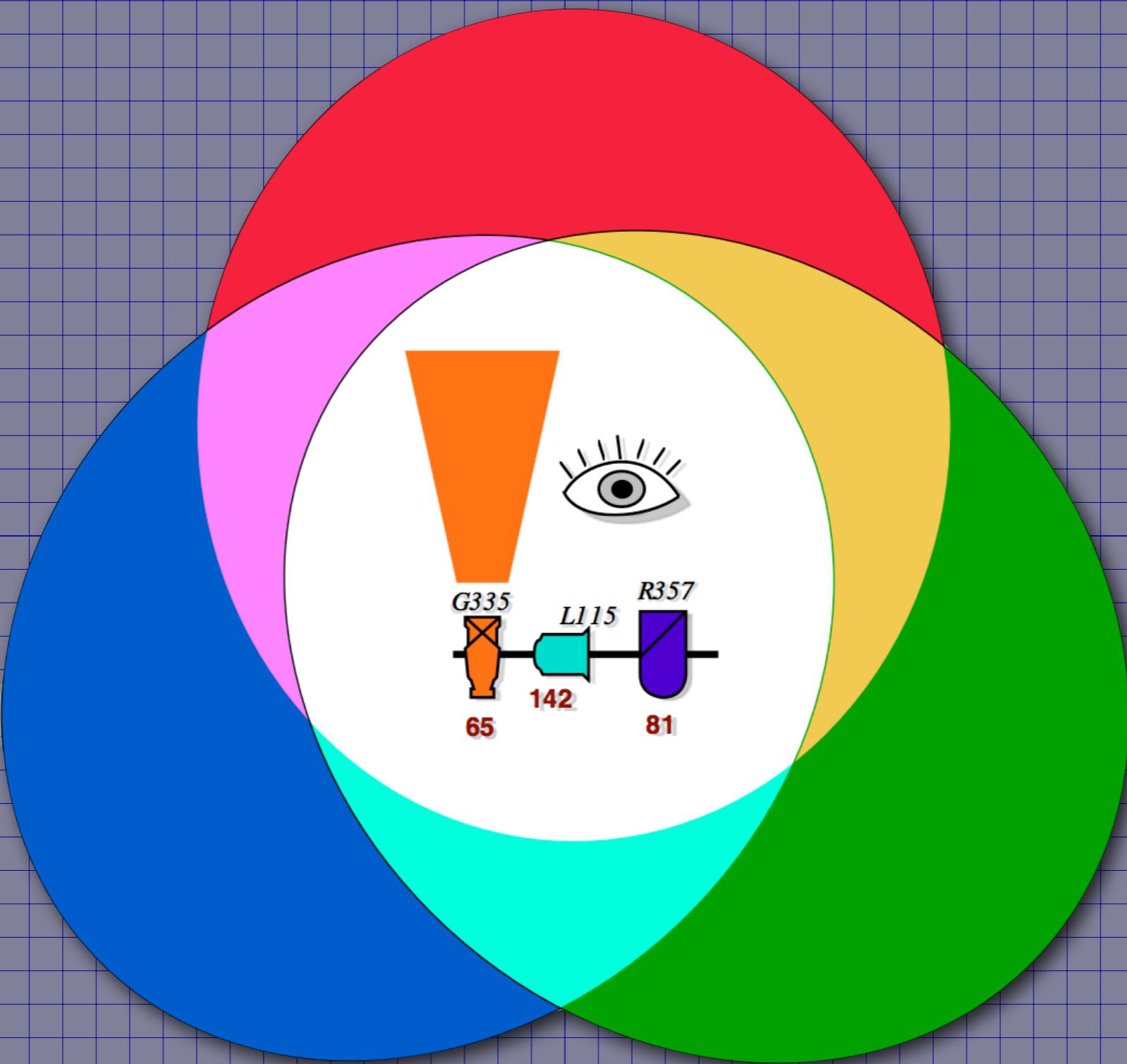
Beams and the model window

- Introduction to the model window.
- Moving the model figure using the controls in the sidebar of the model window.
- Editing the beam display and rendering properties to simulate shutter cuts.

Try It Yourself

- Try turning on other lights
- Experiment with location and shutters.

<https://www.claudeheintzdesign.com/lx>



claudeheintzdesign@gmail.com

©2020