

Getting Started with TracePro

A TracePro Webinar

March 2, 2016

Presenter

- **Presenter**

Dave Jacobsen

Sr. Application Engineer

Lambda Research Corporation

- **Moderator**

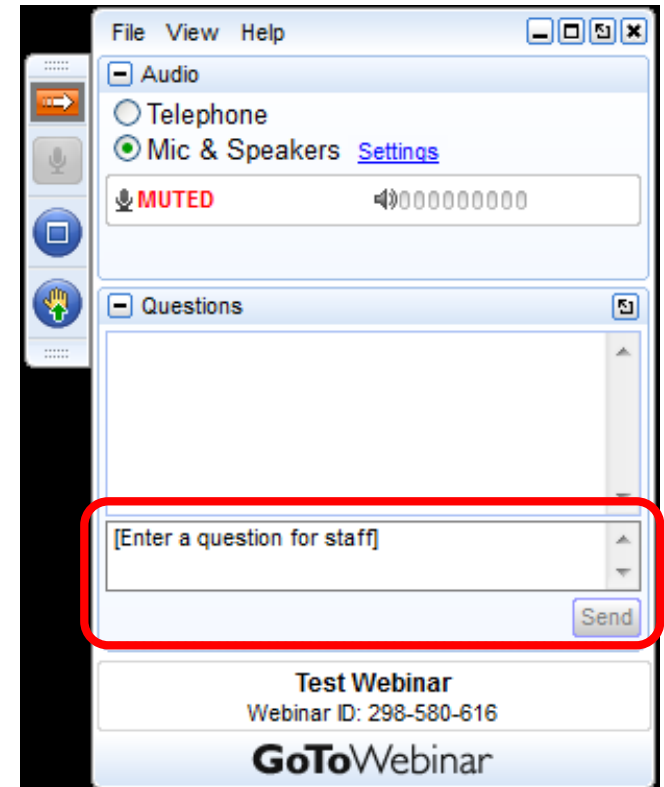
Mike Gauvin

Vice President of Sales and Marketing

Lambda Research Corporation

Format

- A 25-30 minute presentation followed by a question and answer session
- Please submit your questions anytime using Question box in the GoToWebinar control panel



Additional Resources

- Past TracePro Webinars

<http://www.lambdares.com/webinars>

- TracePro Tutorial Videos

<http://www.lambdares.com/videos>

- TracePro Tutorials

<http://www.lambdares.com/features/tracepro-tutorials>

- Information on upcoming TracePro Training Classes

<http://www.lambdares.com/training/software-training>

Upcoming TracePro Training

- **University of Applied Sciences – Jena, Germany**
 - Introduction to TracePro – Mar. 8 – Mar. 9, 2016
 - Optimization with TracePro – Mar. 10 – Mar. 11, 2016

- **Littleton, MA USA**
 - Introduction to TracePro – Mar. 22 – Mar. 23, 2016
 - Optimization with TracePro – Mar. 24 – Mar. 25, 2016

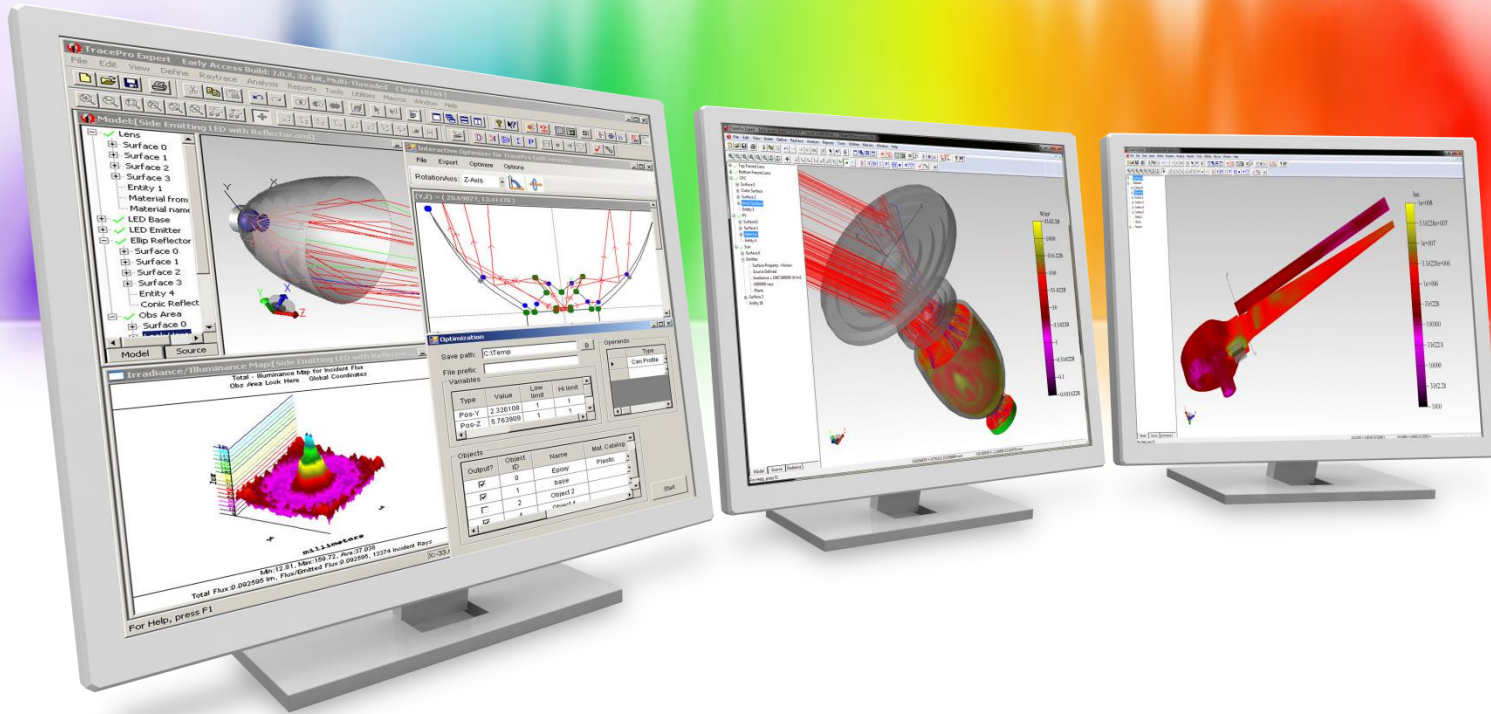
Latest TracePro Release

TracePro 7.7.1

Released February 26, 2016

Customers with current maintenance and support agreements can download this new release at:

<http://www.lambdare.com/CustomerSupportCenter/index.php/trace-pro/current-release>



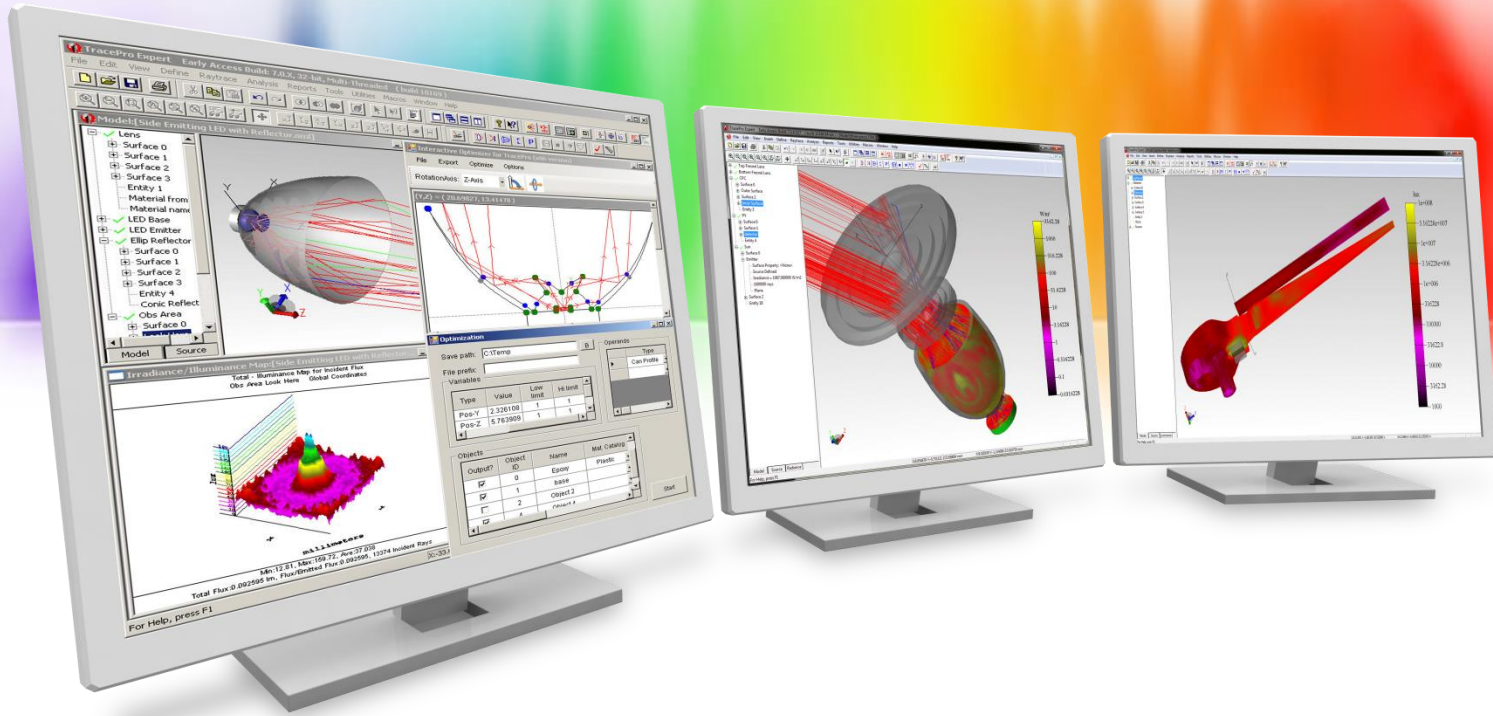
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Agenda

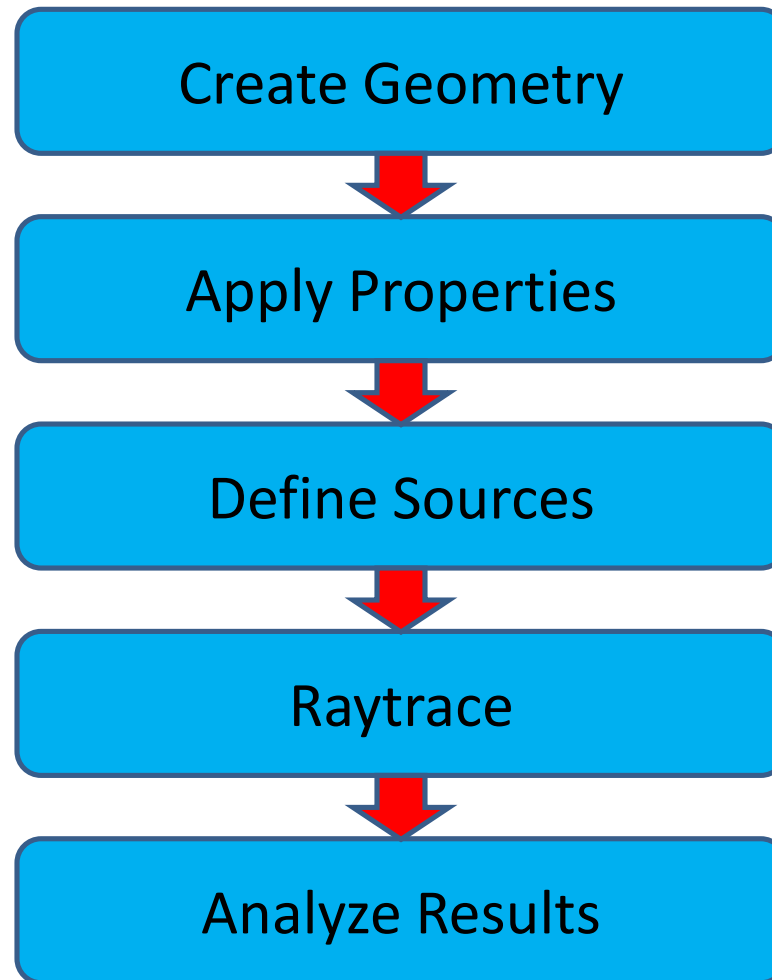
- Introduction
- Luminaire Example
 - Importing geometry from CAD program
 - Creating geometry in TracePro
 - Applying properties
 - Define sources
 - Running the raytrace
 - Analyzing the results
- Light Guide / Backlight Example
 - Using rayfiles
- Questions and Answers



Introduction

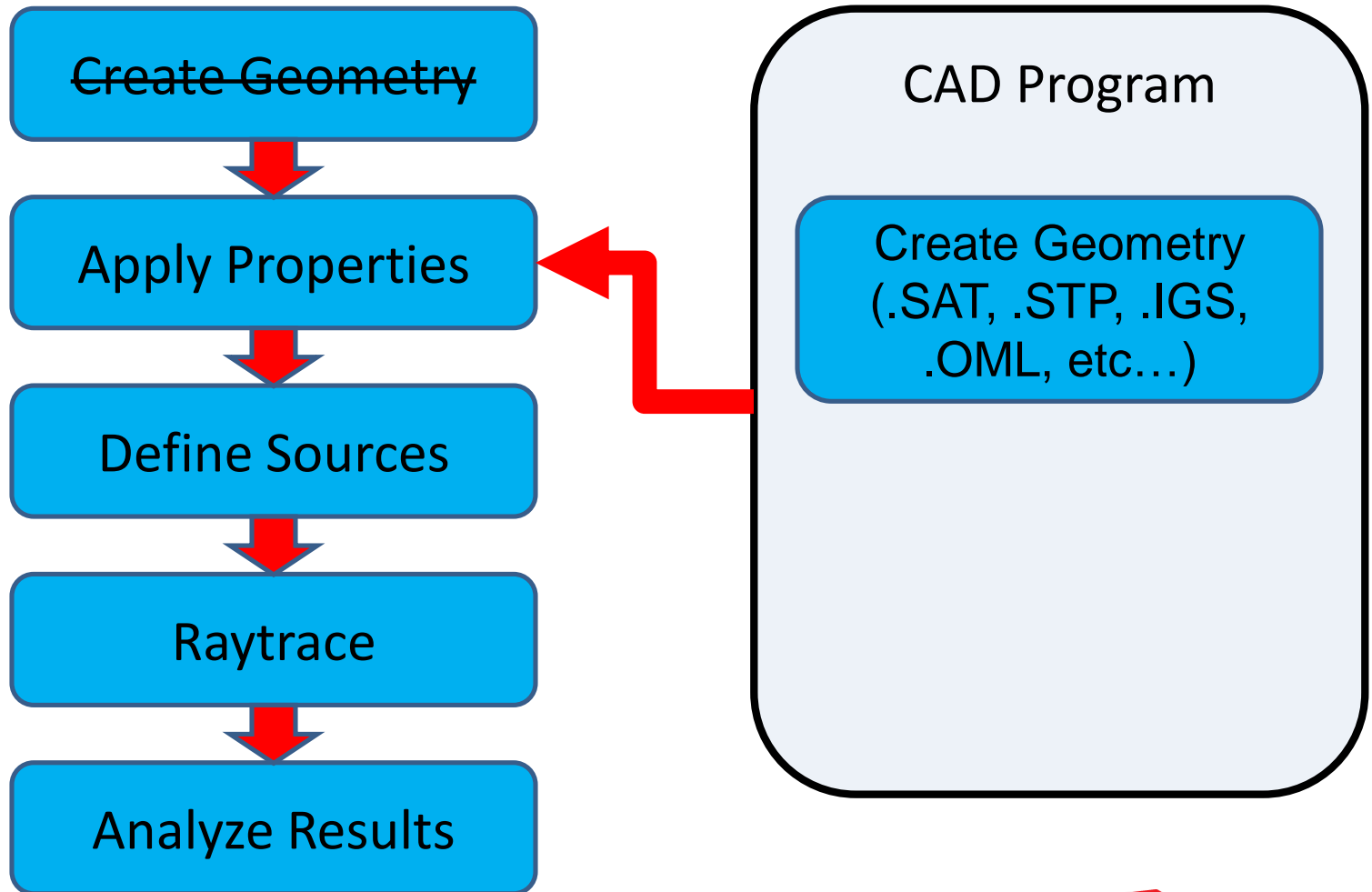
Introduction

Typical TracePro workflow



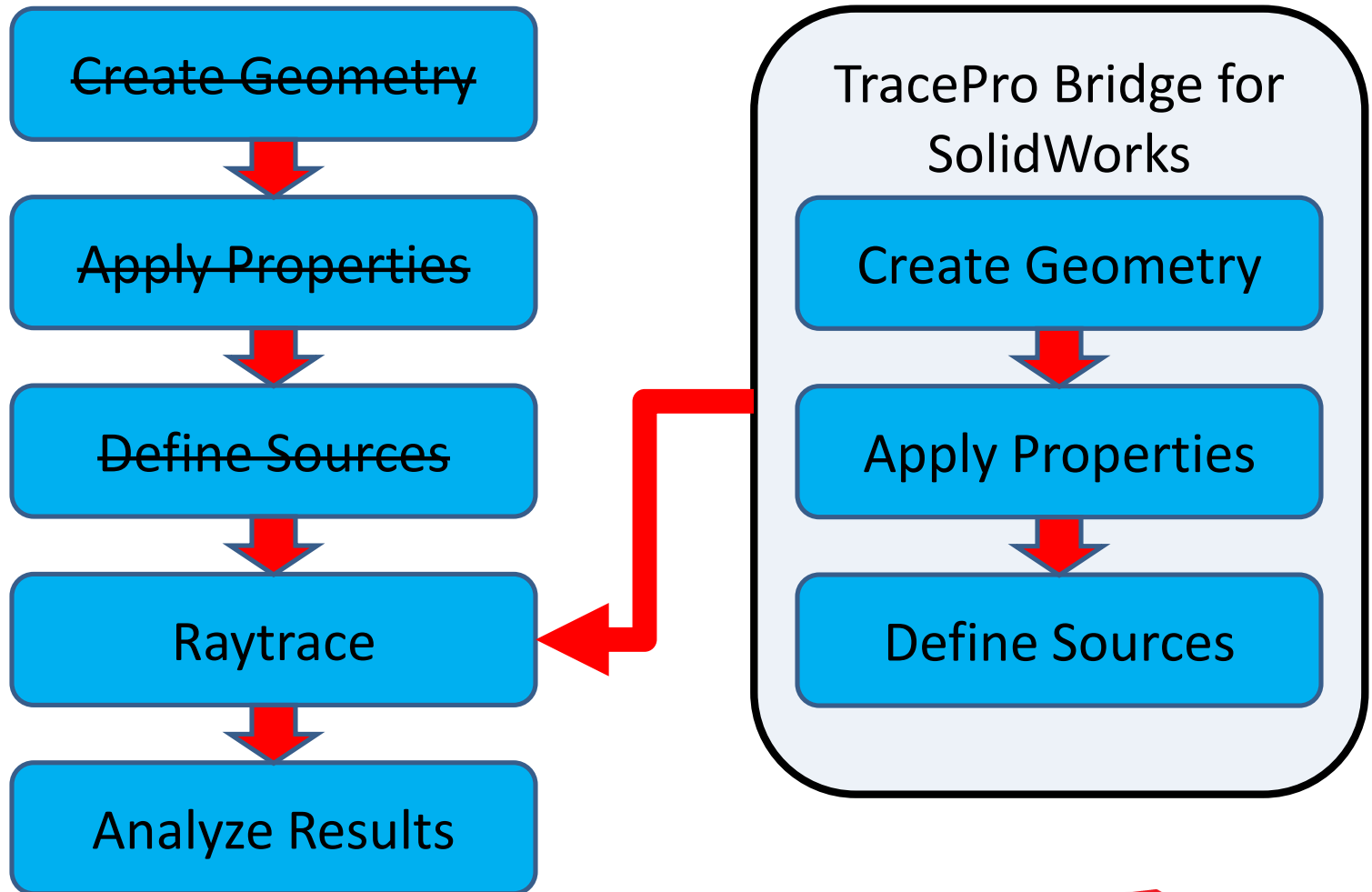
Introduction

Alternate TracePro workflow



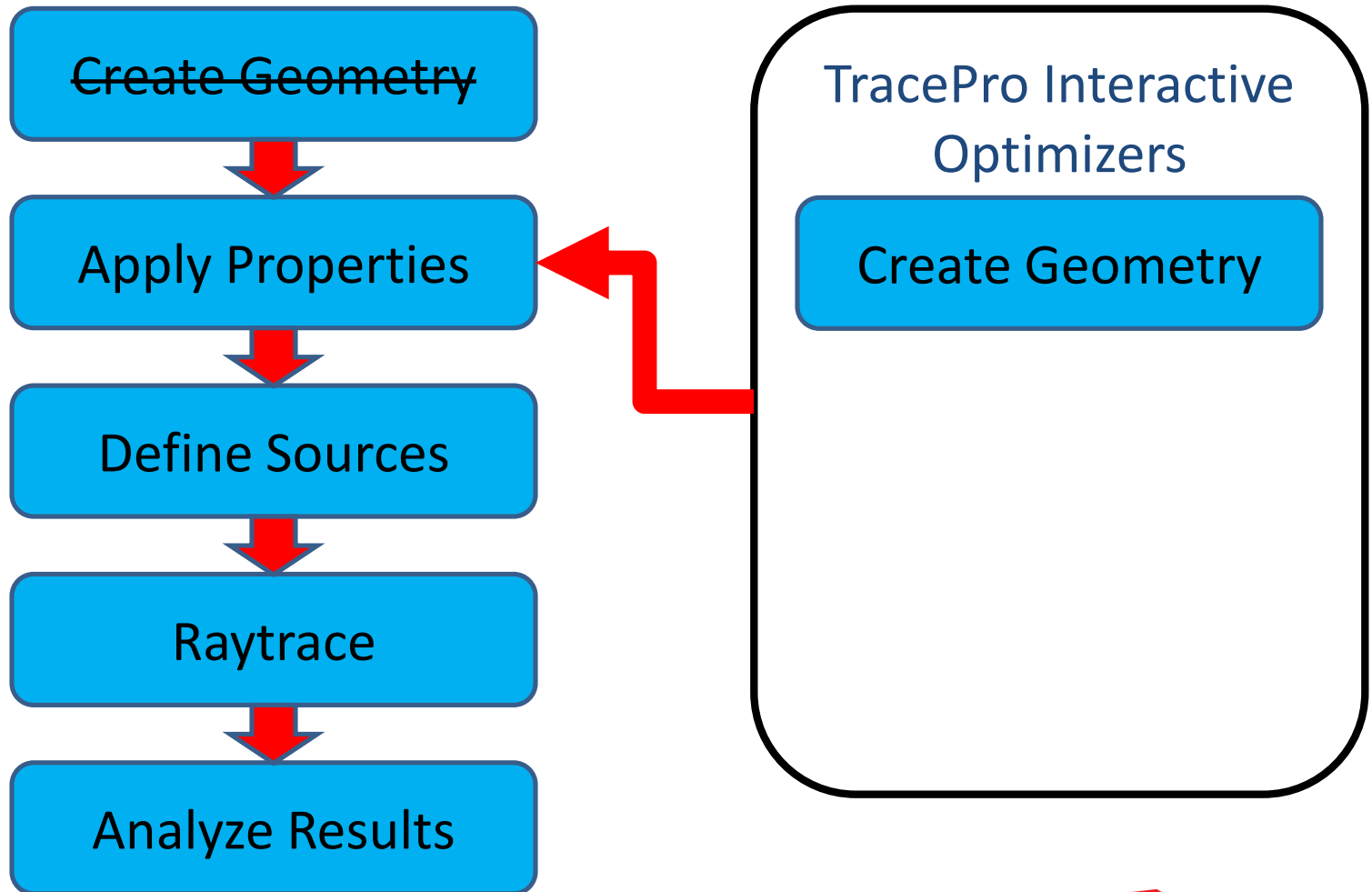
Introduction

Alternate TracePro workflow



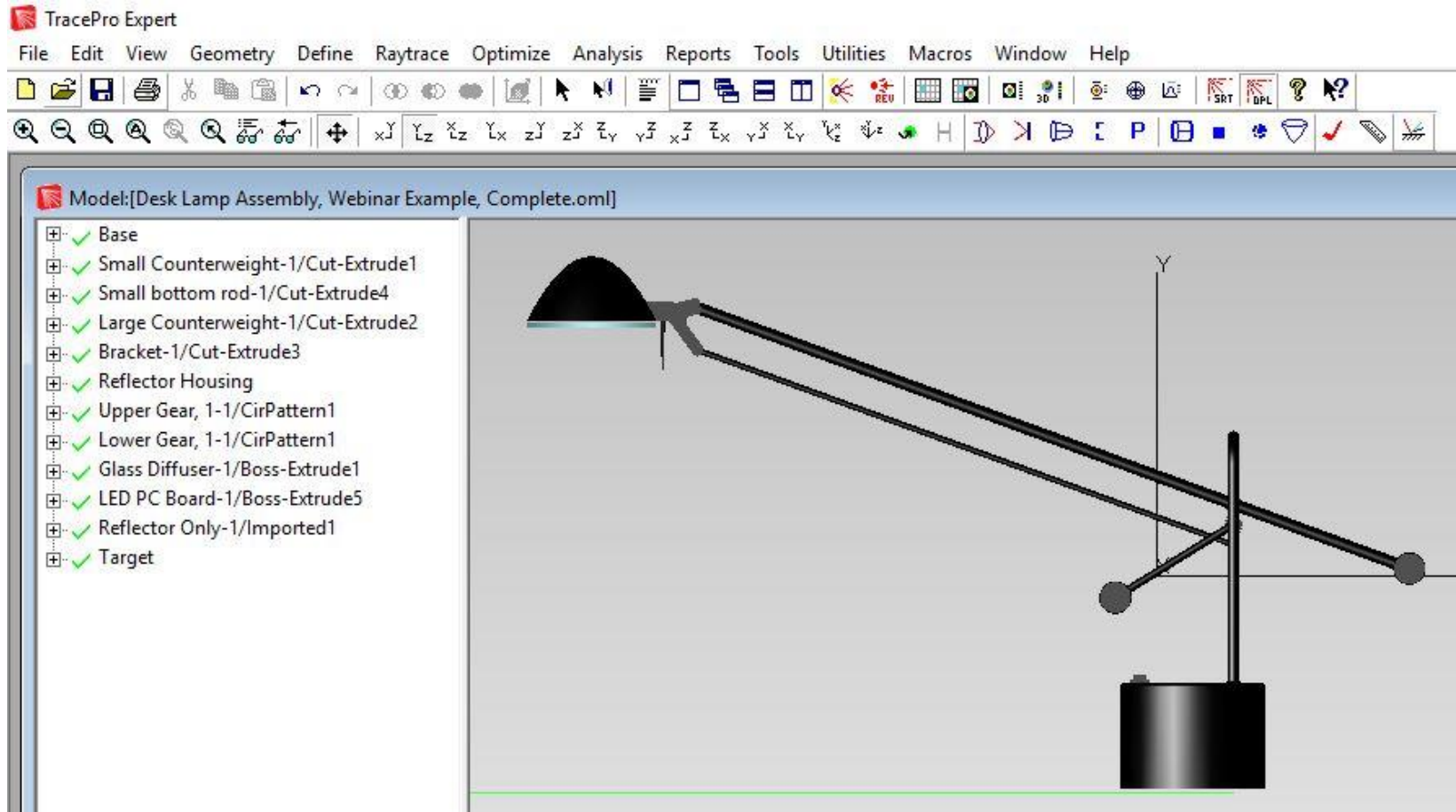
Introduction

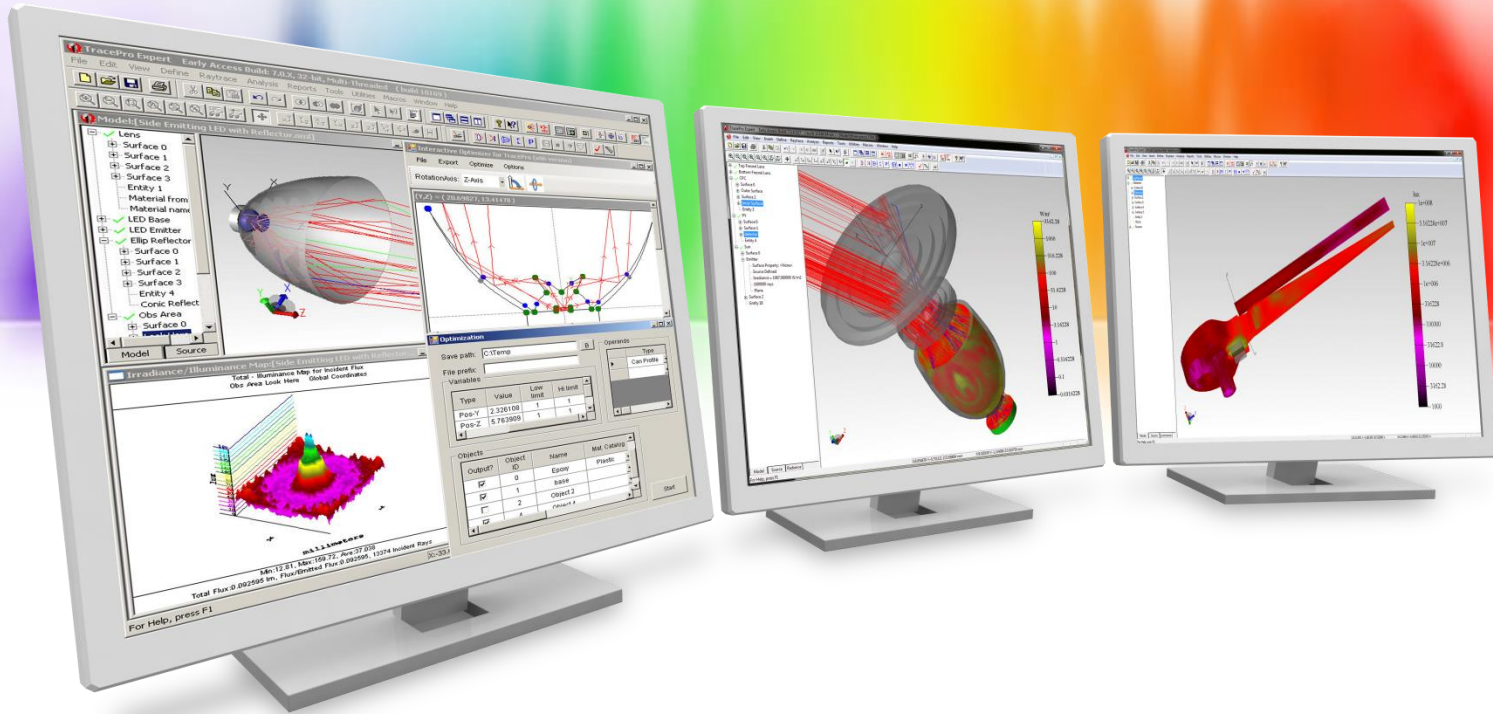
Typical TracePro workflow



Introduction

Logical and organized menu structure – relevant items are grouped together and follow a logical order to facilitate an organized workflow

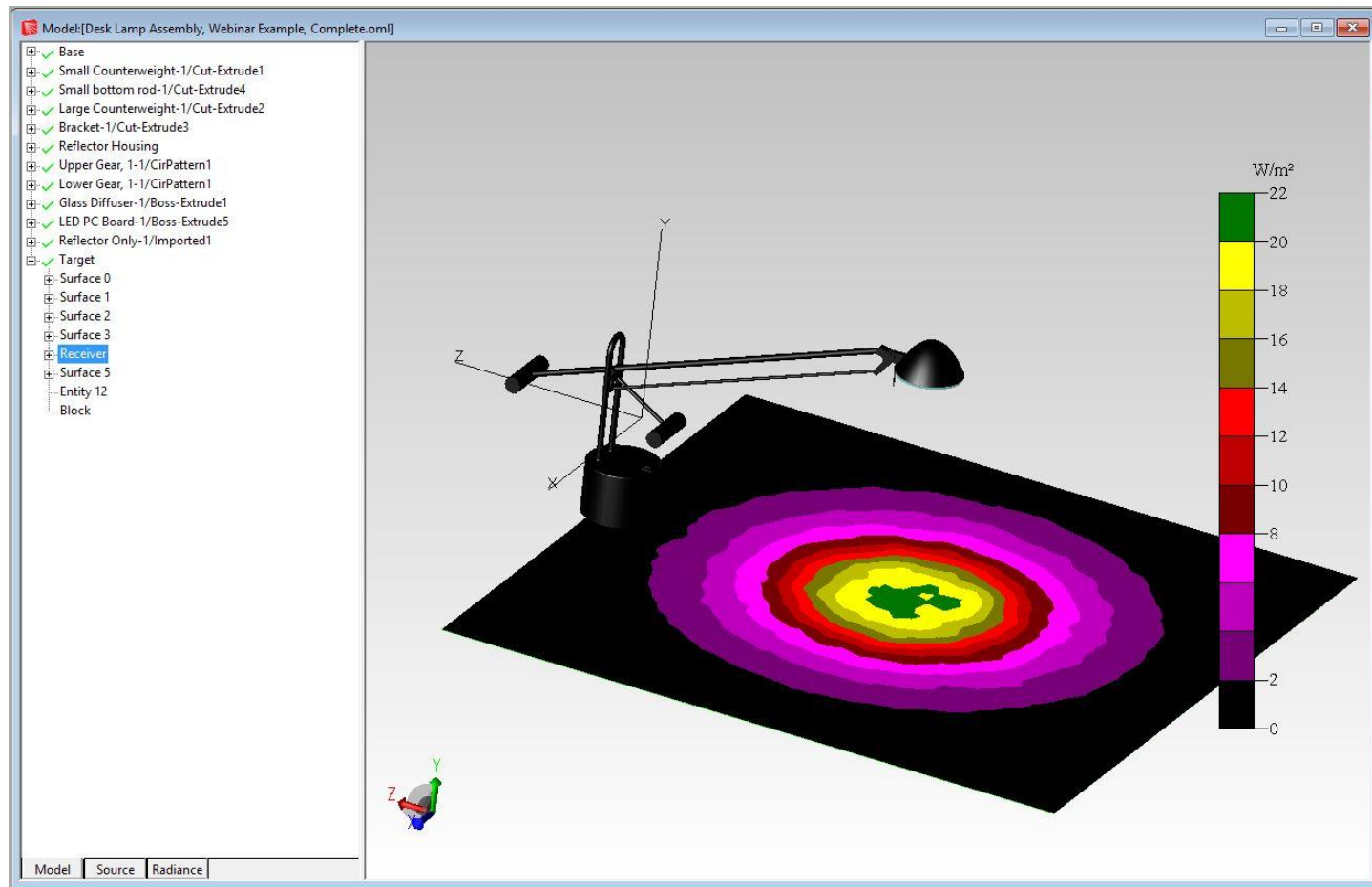




Luminaire Example

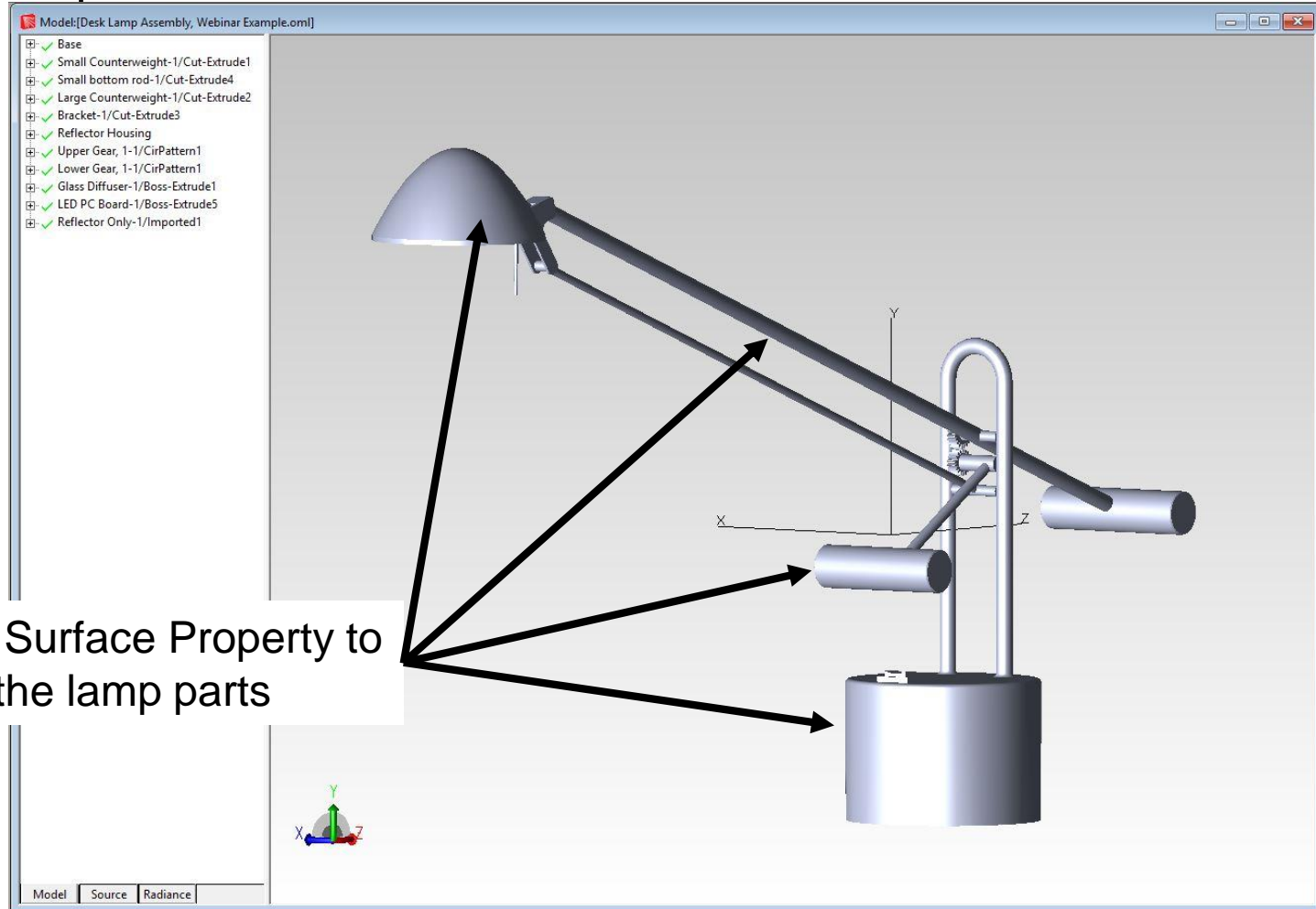
Luminaire Example

Finished Model with 3D Irradiance/Illuminance



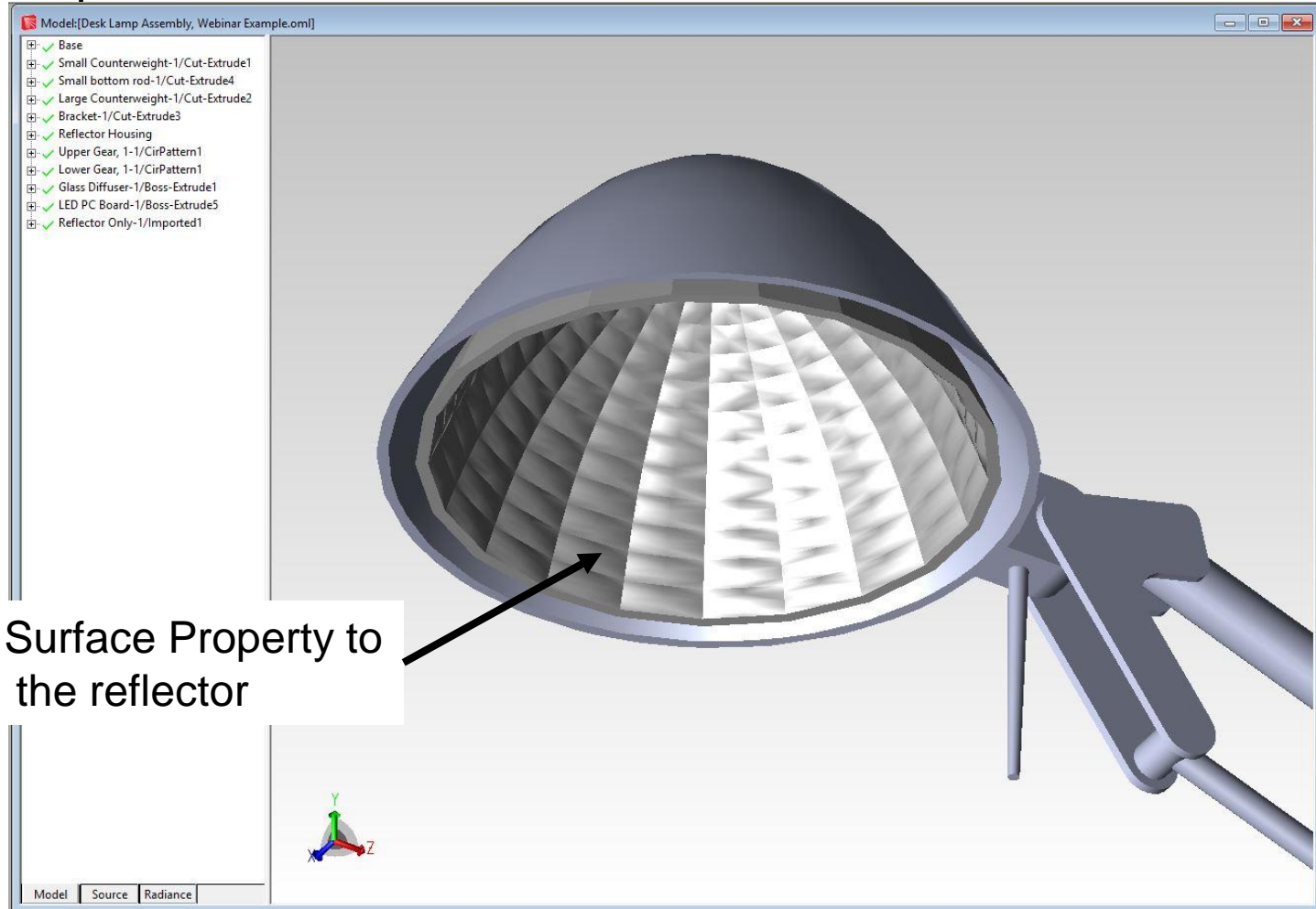
Luminaire Example

Apply Properties



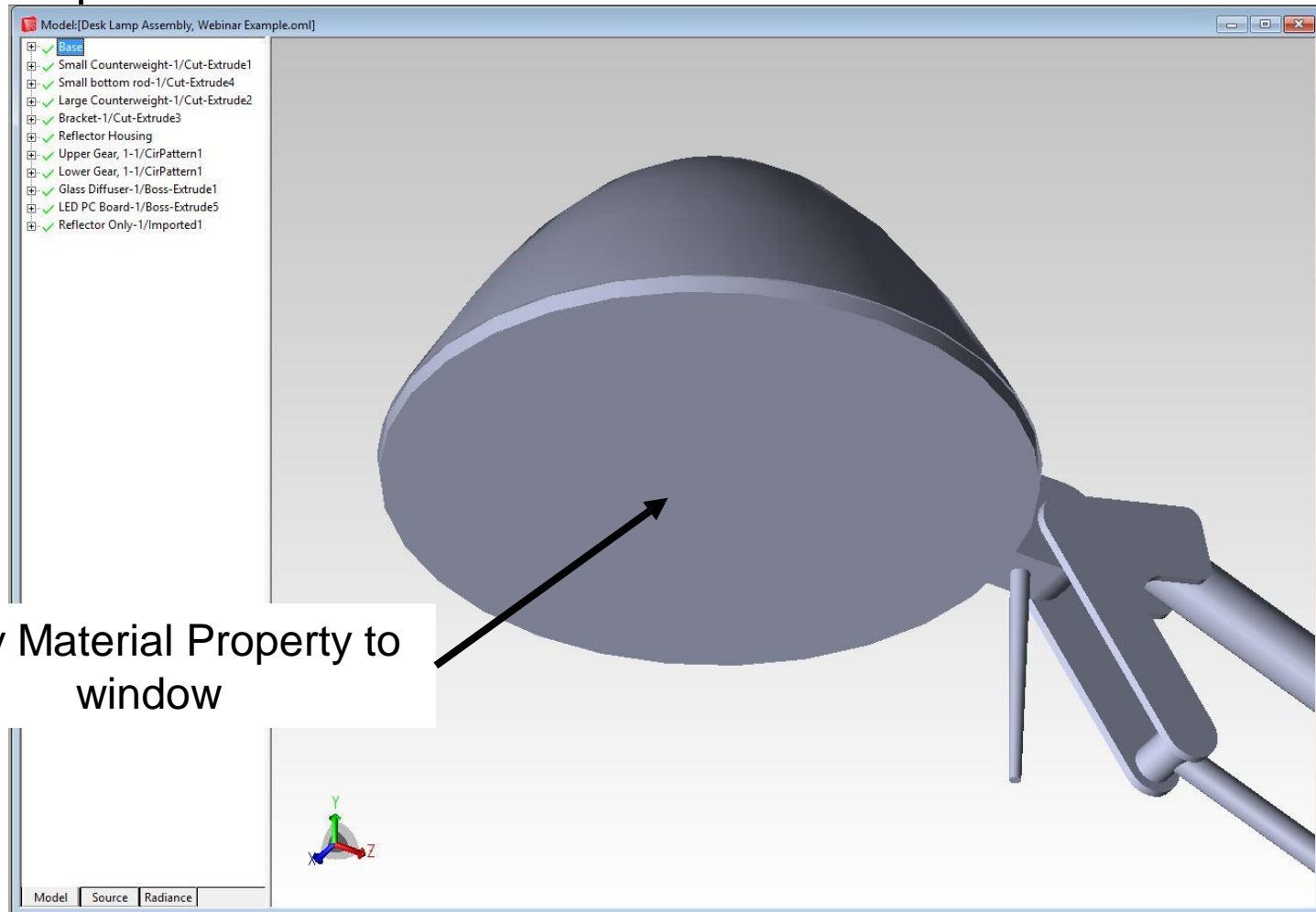
Luminaire Example

Apply Properties



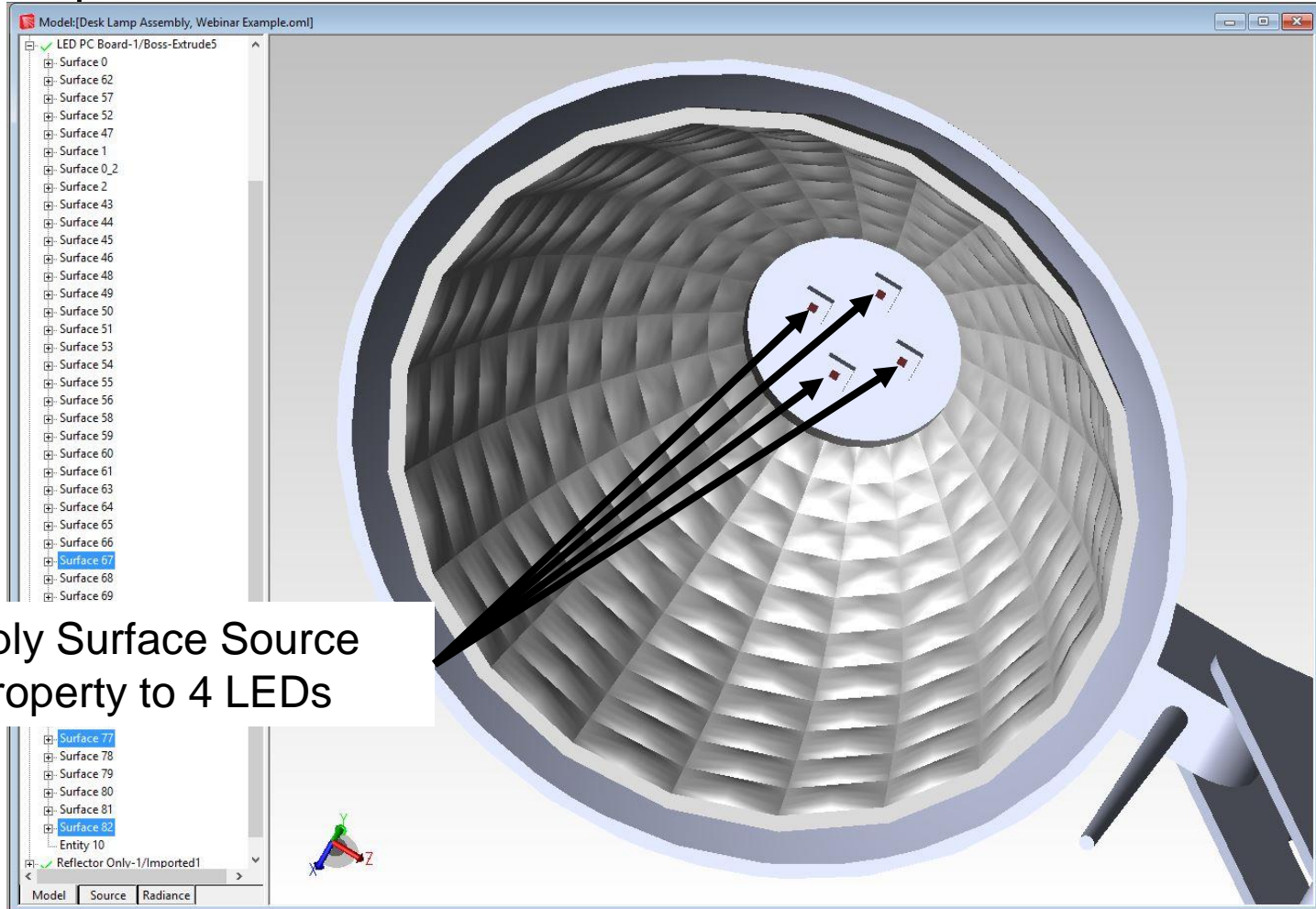
Luminaire Example

Apply Properties



Luminaire Example

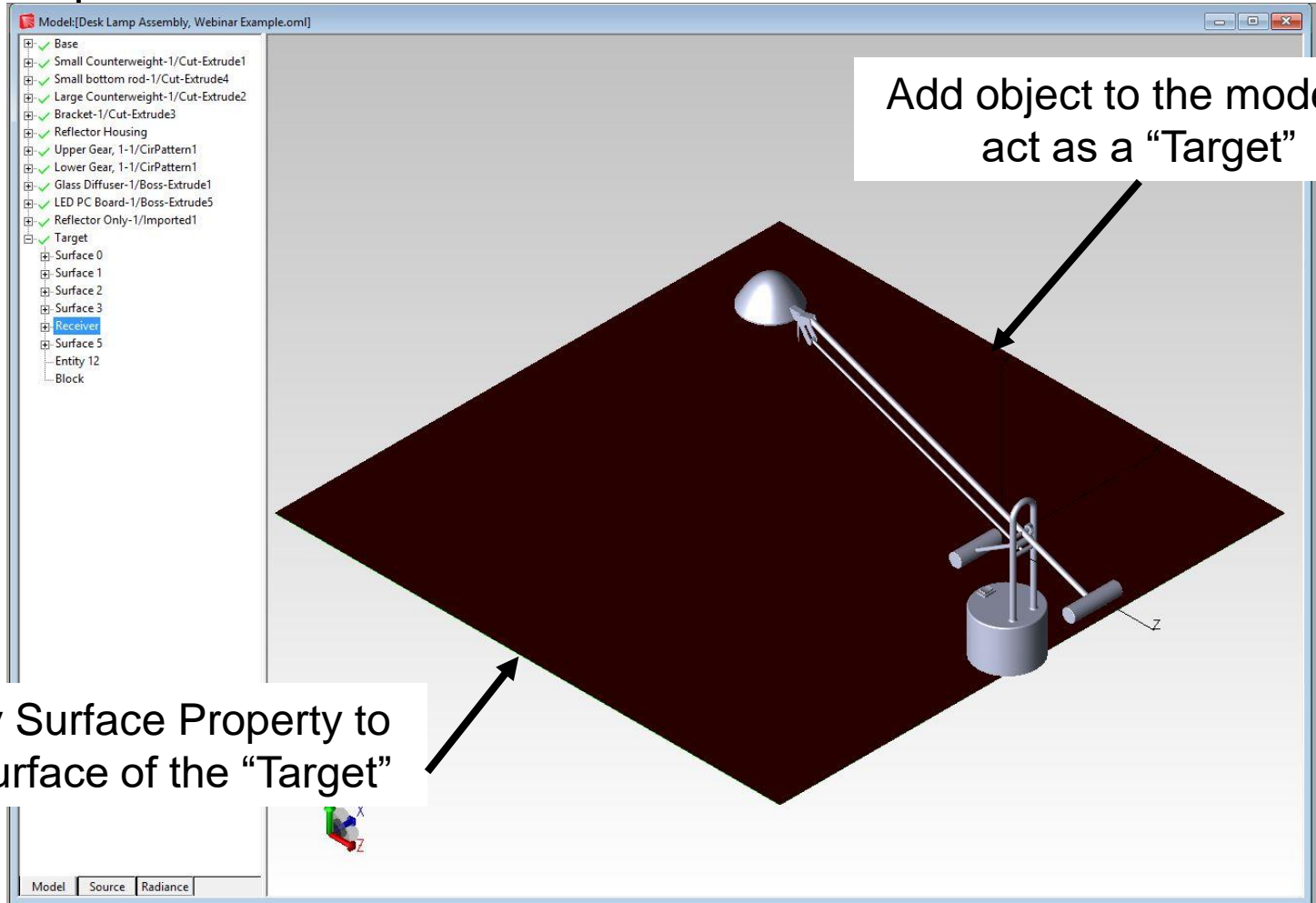
Apply Properties



Apply Surface Source Property to 4 LEDs

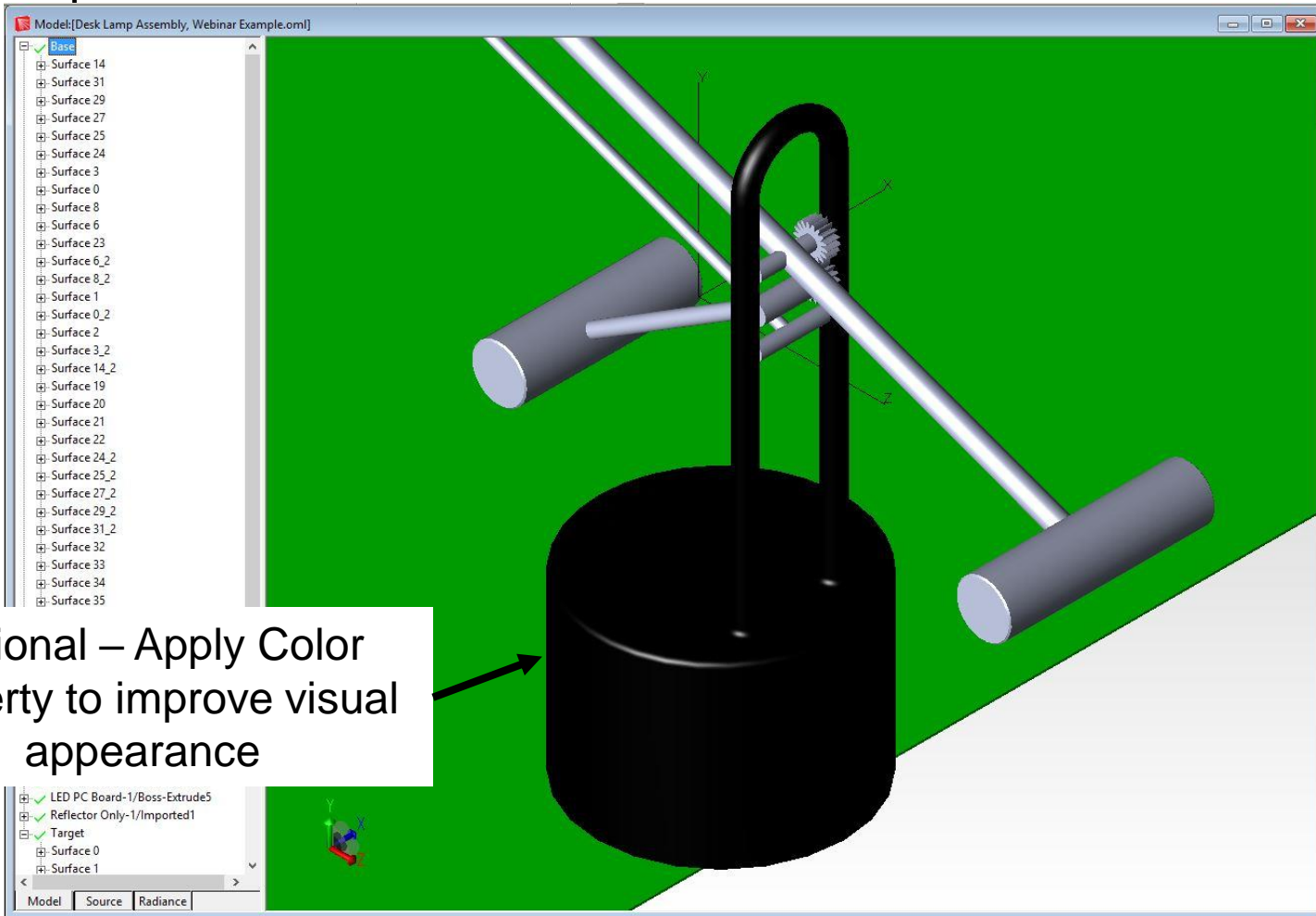
Luminaire Example

Apply Properties



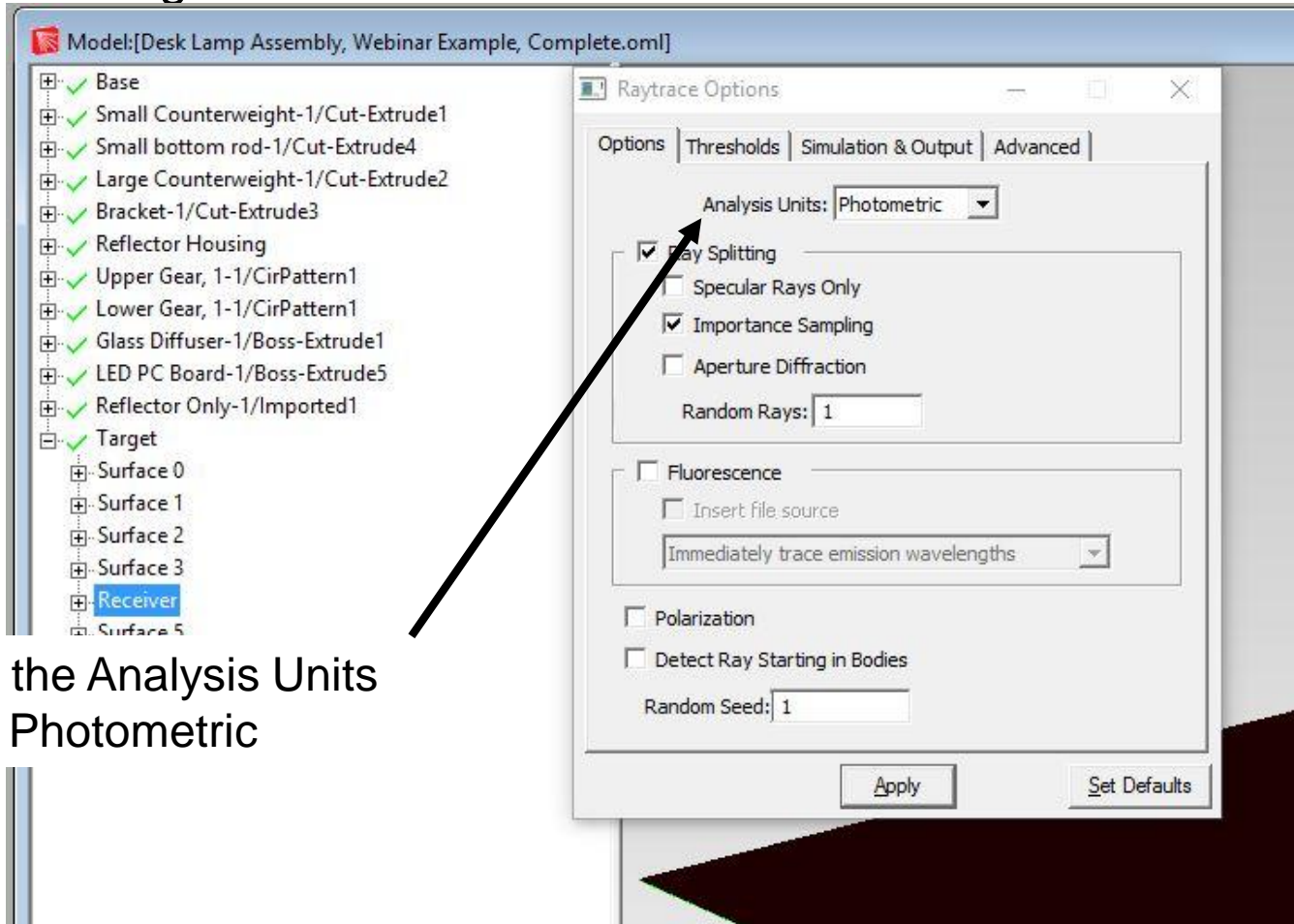
Luminaire Example

Apply Properties



Luminaire Example

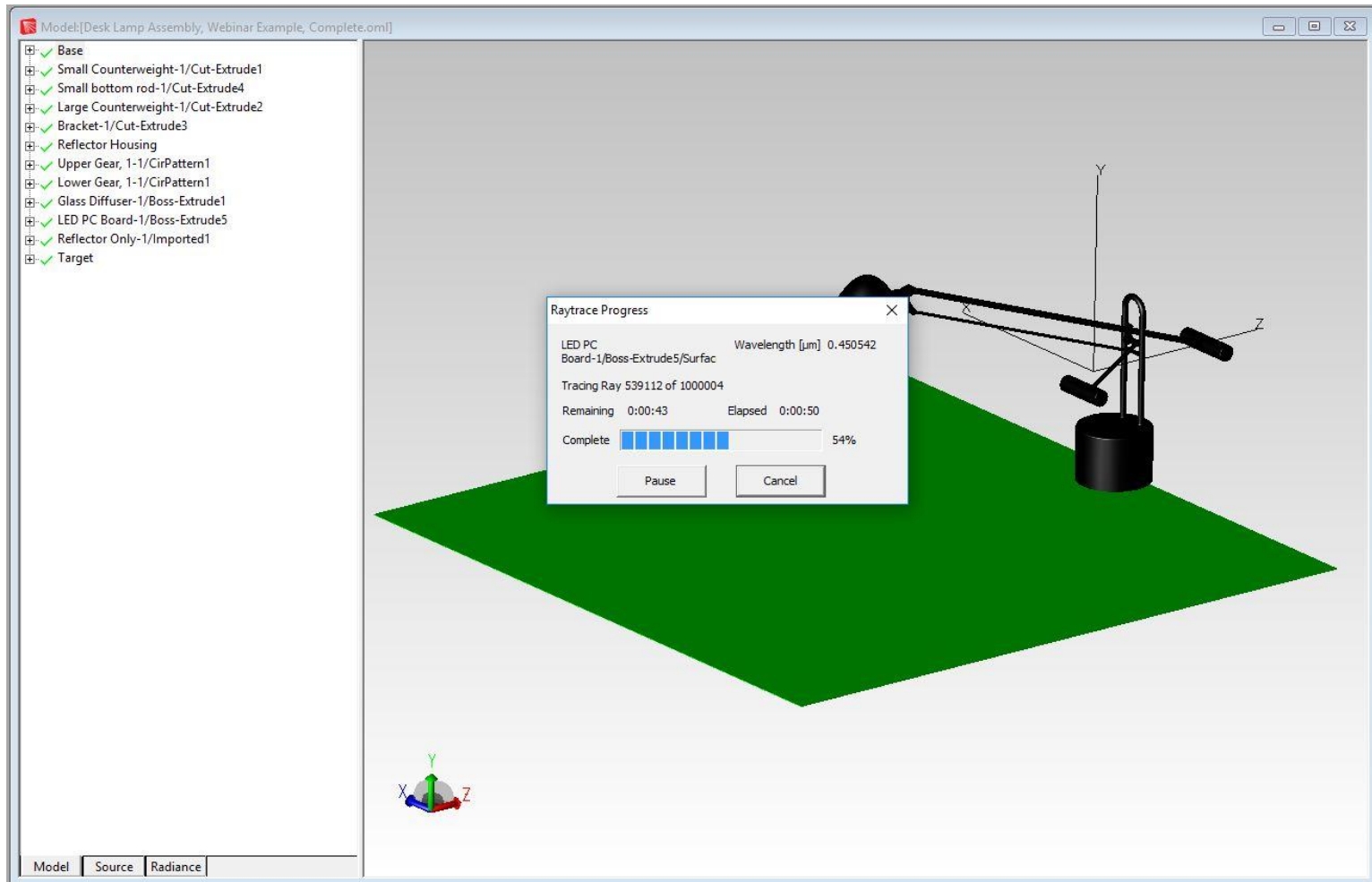
Raytrace Settings



Change the Analysis Units
to Photometric

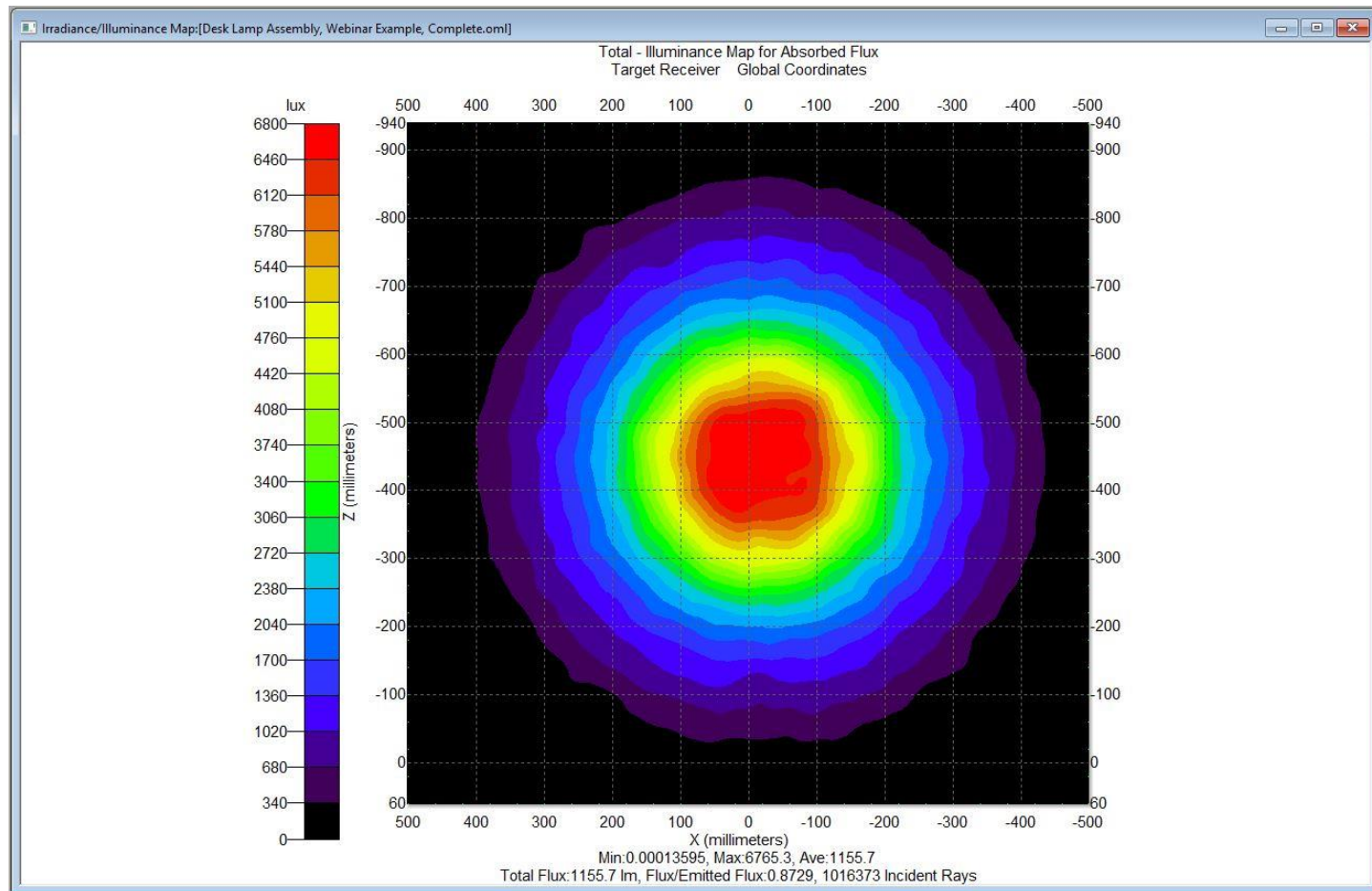
Luminaire Example

Run the raytrace



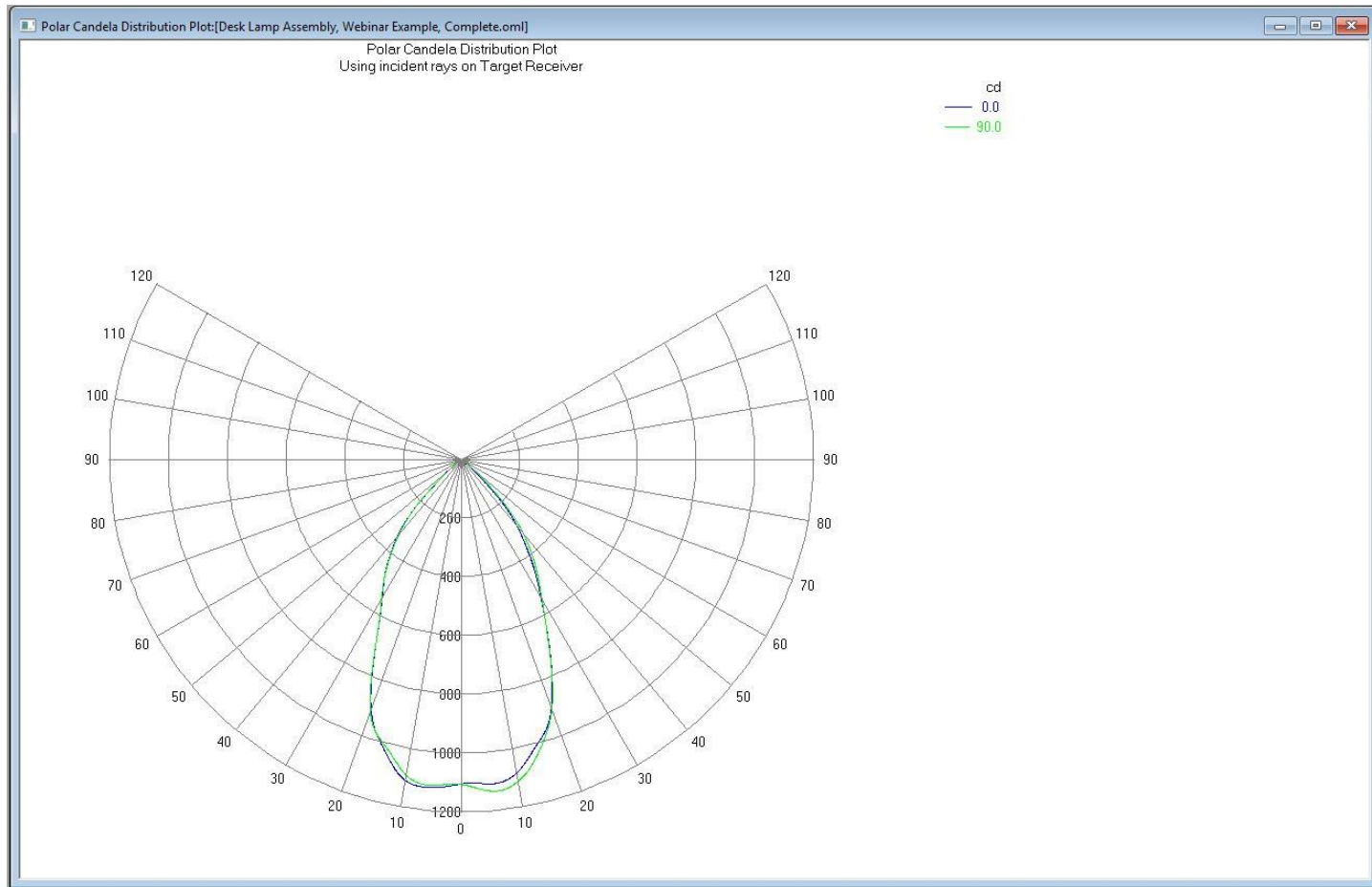
Luminaire Example

Illuminance Map on “Receiver” surface



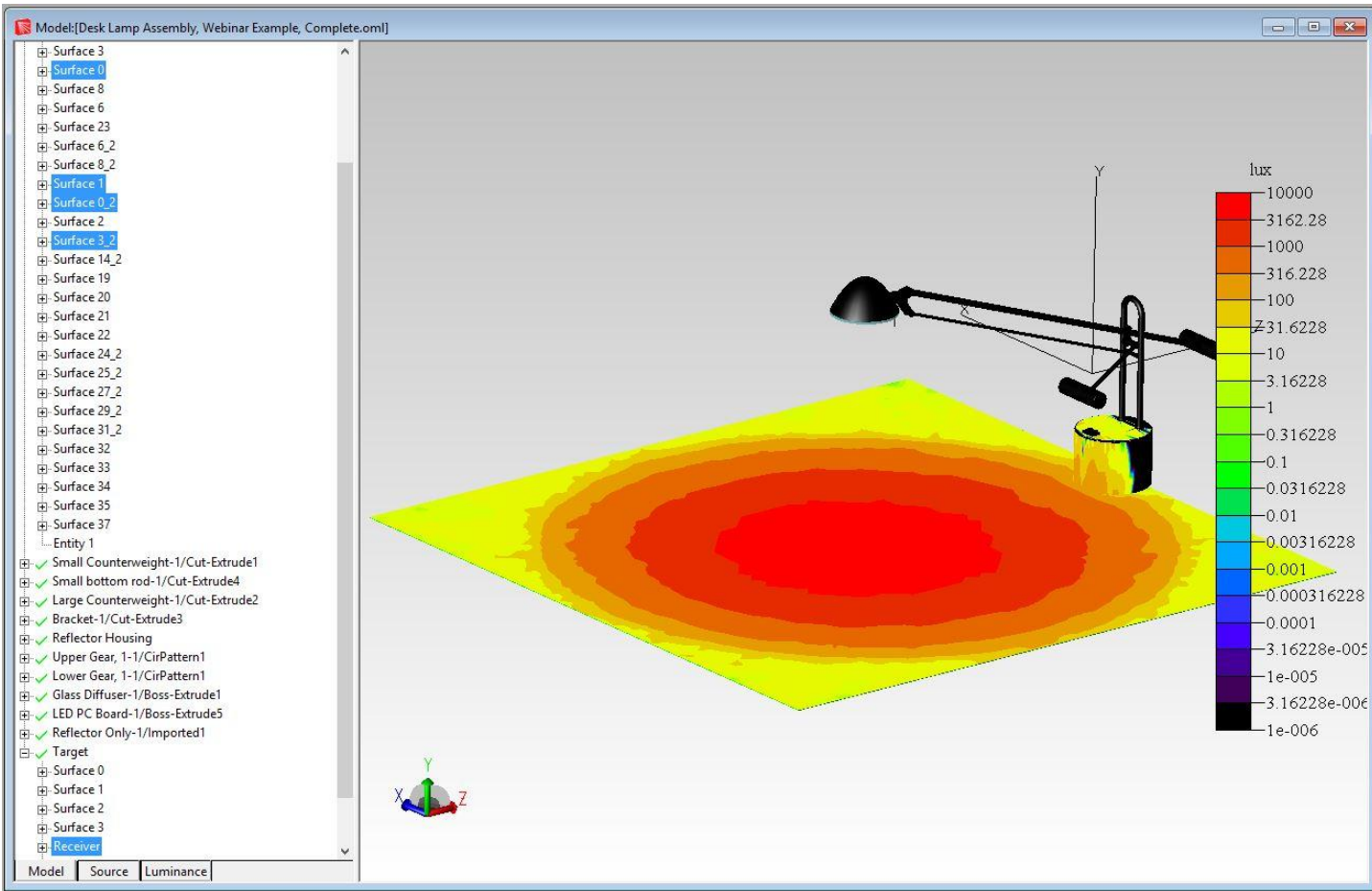
Luminaire Example

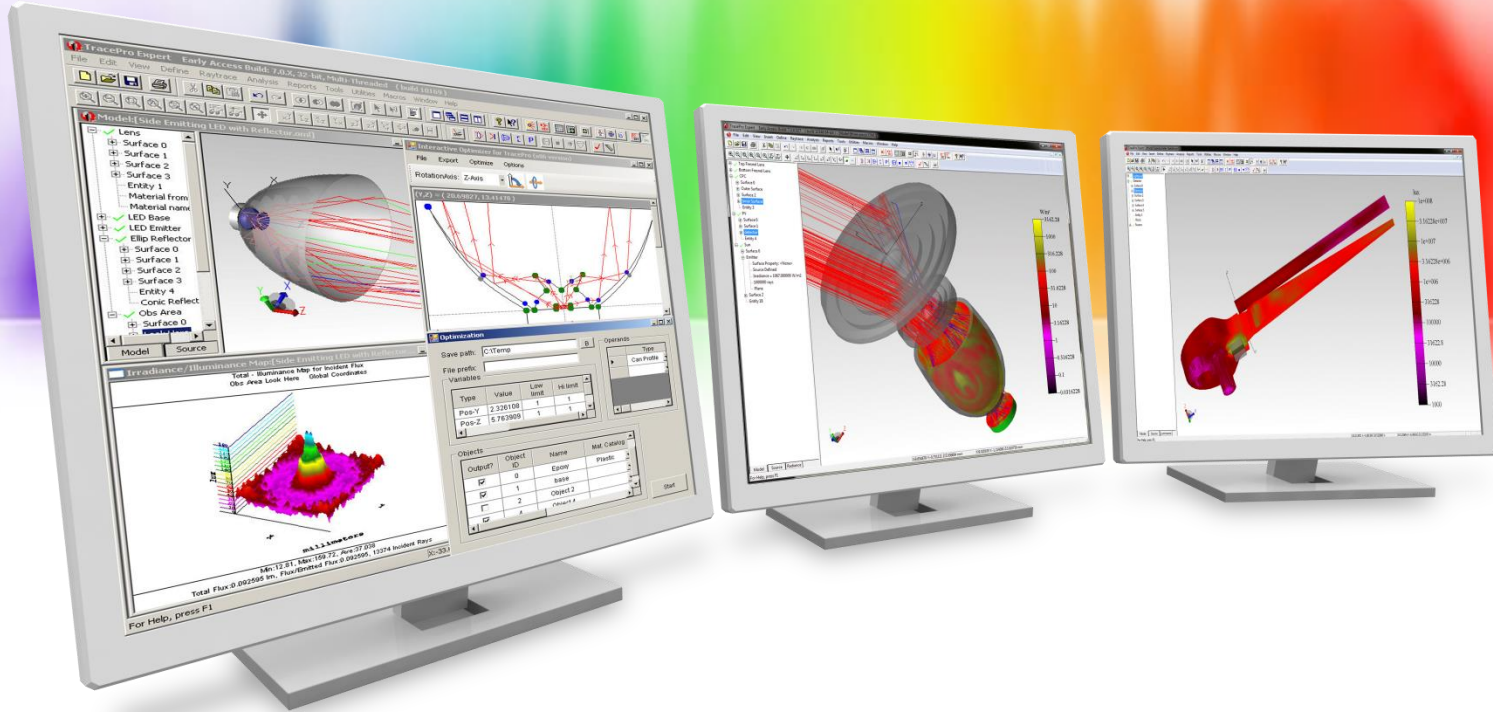
Candela Plot on "Receiver" surface



Luminaire Example

3D Illuminance on multiple surfaces – Log scale

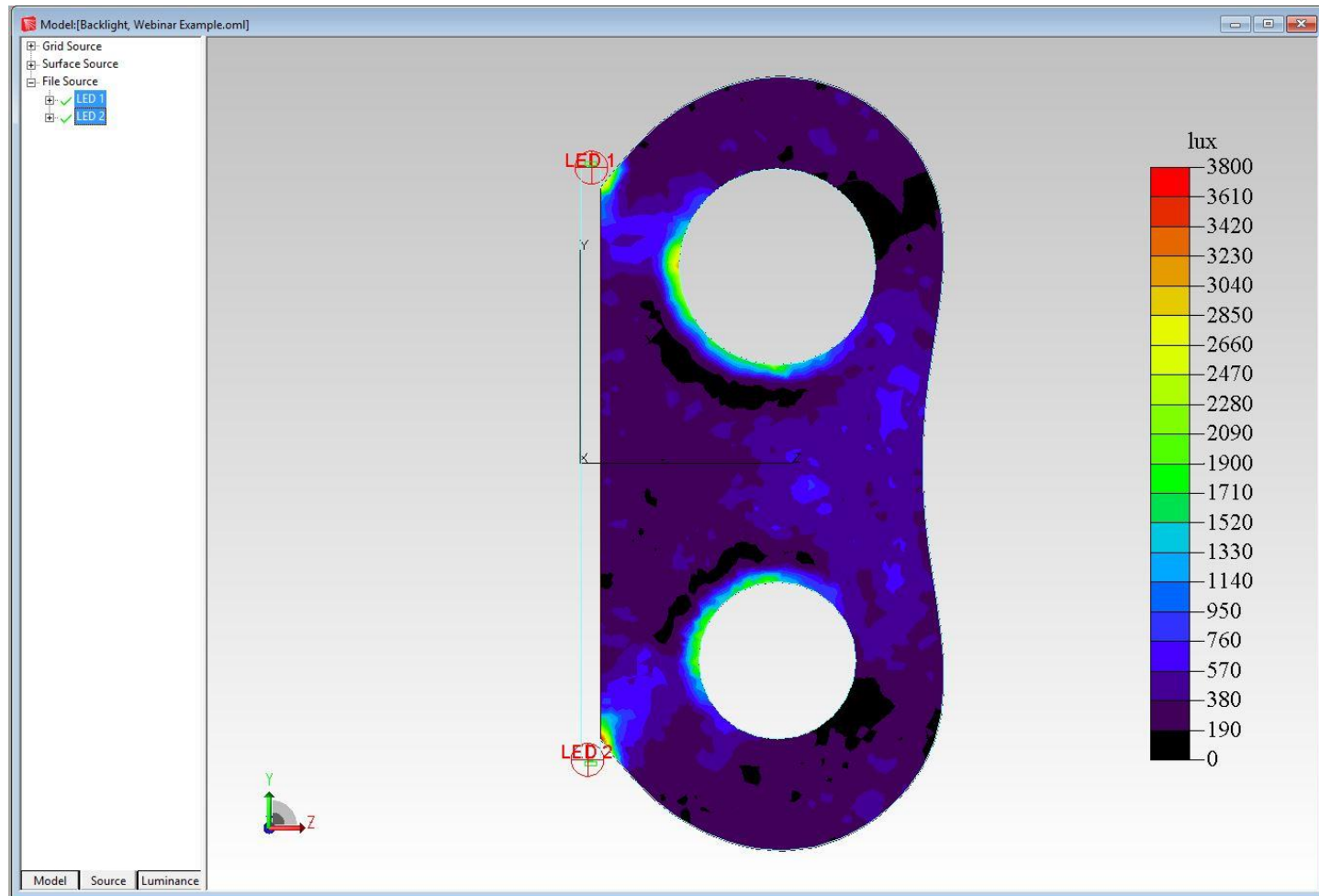




Light Guide/Backlight Example

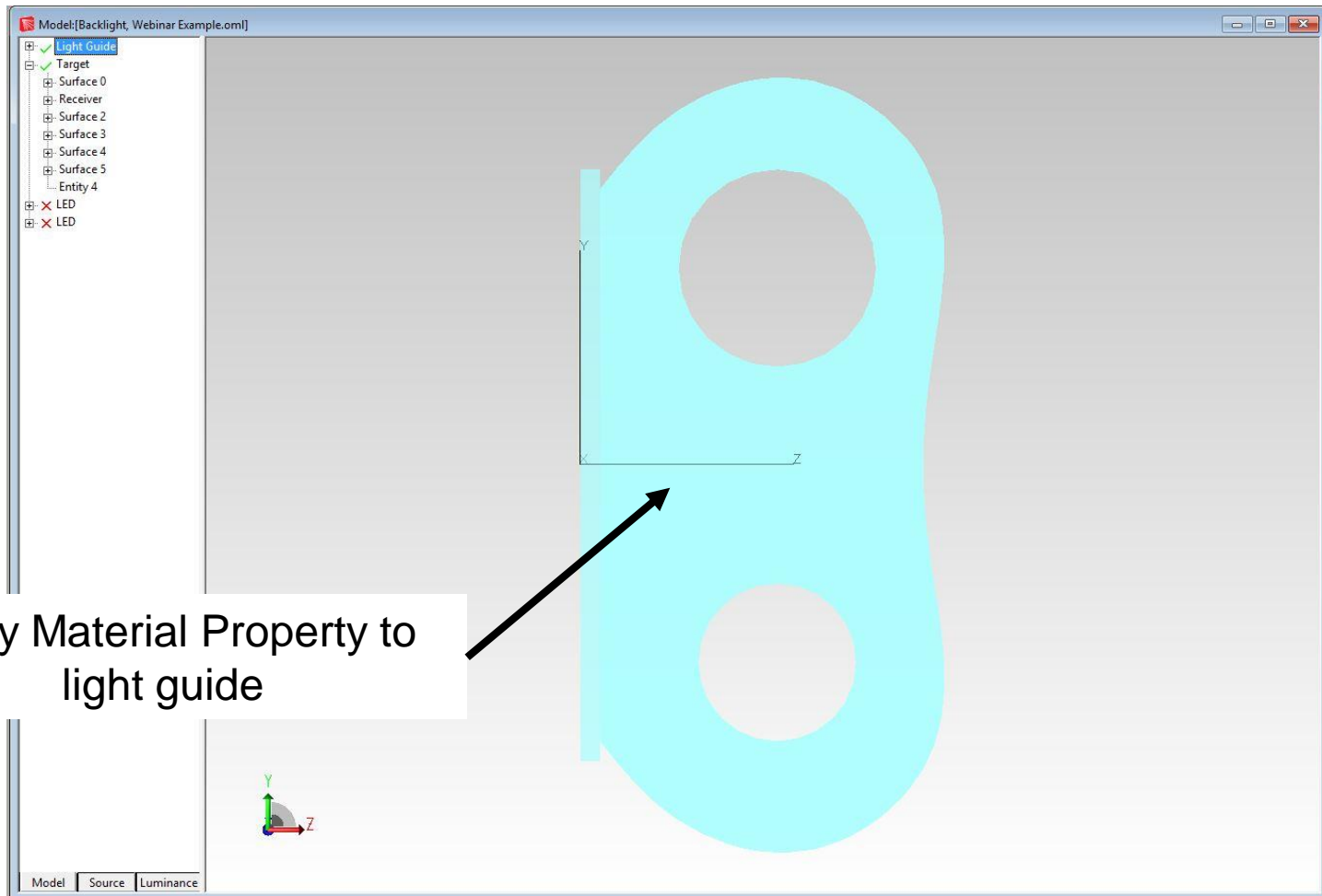
Light Guide / Backlight Example

Finished Model with 3D Irradiance/Illuminance



Light Guide / Backlight Example

Apply Properties

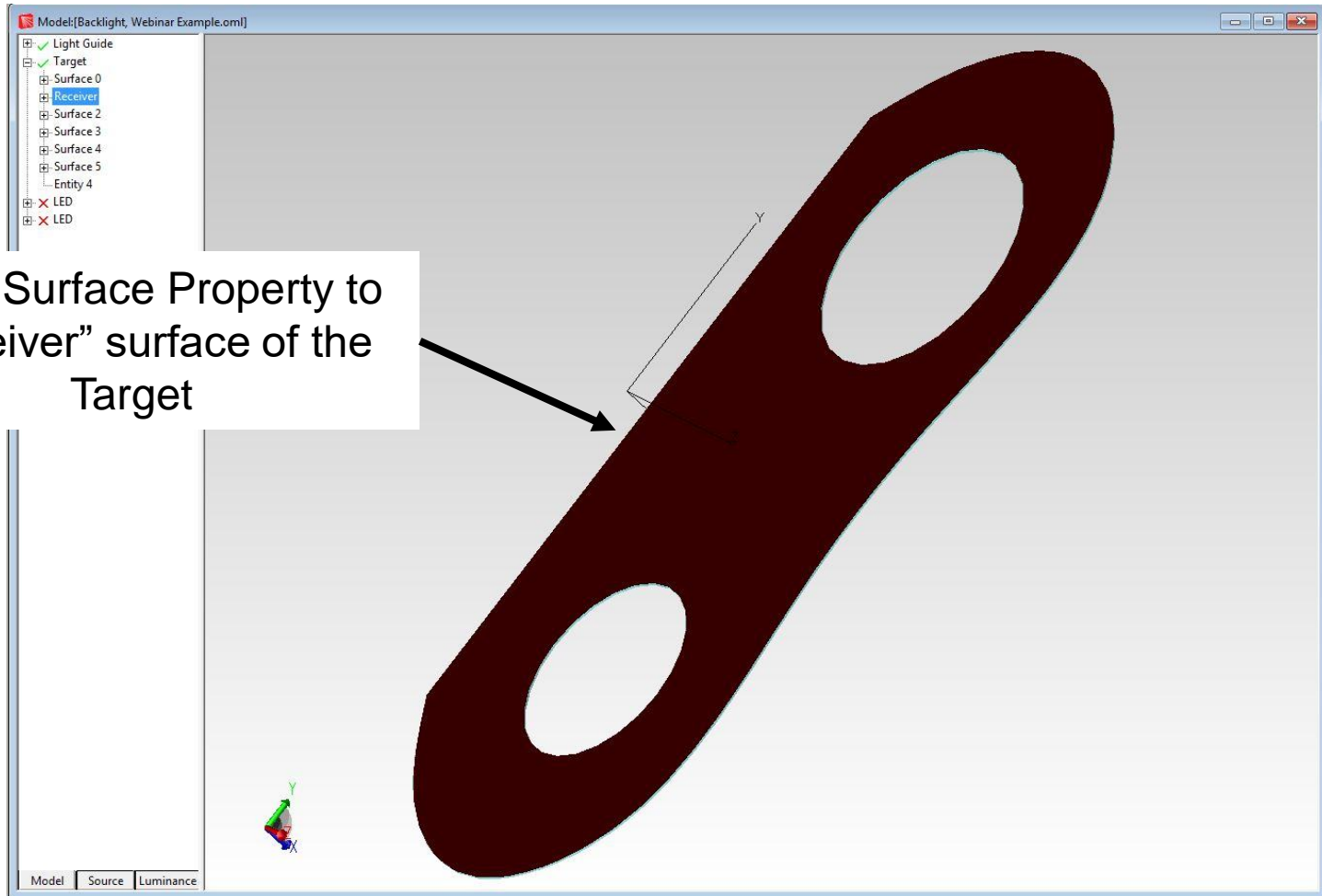


Apply Material Property to
light guide

Light Guide / Backlight Example

Apply Properties

Apply Surface Property to
"Receiver" surface of the
Target



Light Guide / Backlight Example

Apply Properties

The screenshot shows the TracePro software interface with a 3D model of a light guide. The 'Apply Properties' dialog is open, showing the 'RepTile' property being applied to the 'Bottom' surface. The dialog includes the following sections:

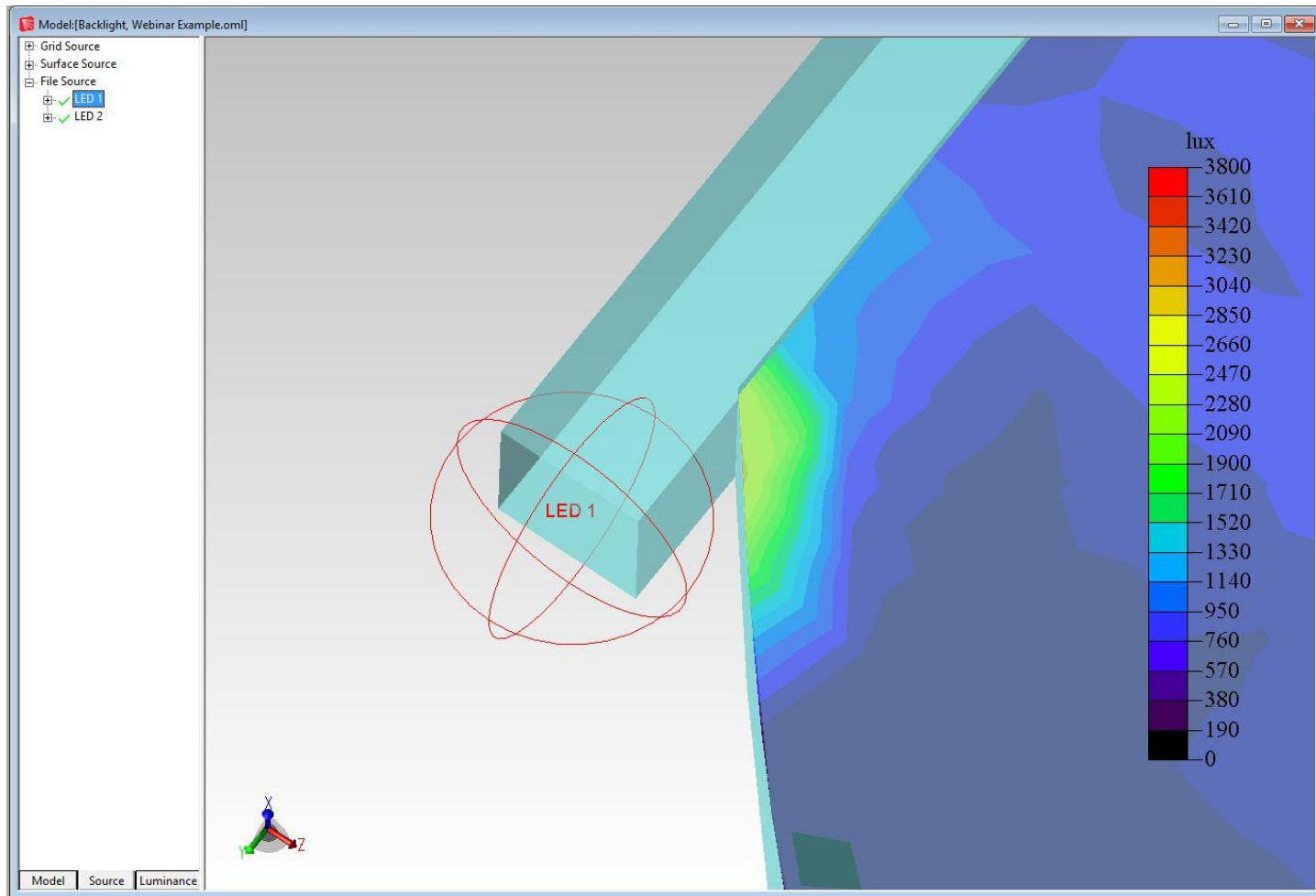
- Property Data:**
 - Catalog: Backlight Optimization
 - Name: Backlight Texture
 - Texture File: [Empty]
 - Surface Catalog: Default
 - Surface Name: Flat white paint
- Boundary and Orientation:**
 - Use Surface Bounds: [Checked]
 - Depth: 0.5
 - Boundary Center: X: 0, Y: 0, Z: 0
 - Texture Origin: X: -2.5, Y: 0, Z: 0
 - Texture Up: X: 0, Y: 1, Z: 0
 - Boundary Up: X: 0, Y: 1, Z: 0
- Pixel Dimensions:**
 - Width: 1
 - Height: 1
 - Hole: [Dropdown]

Buttons: Export, Apply, View Data

Apply a RepTile property to the "Bottom" surface of the Light Guide – RepTile requires TracePro Expert

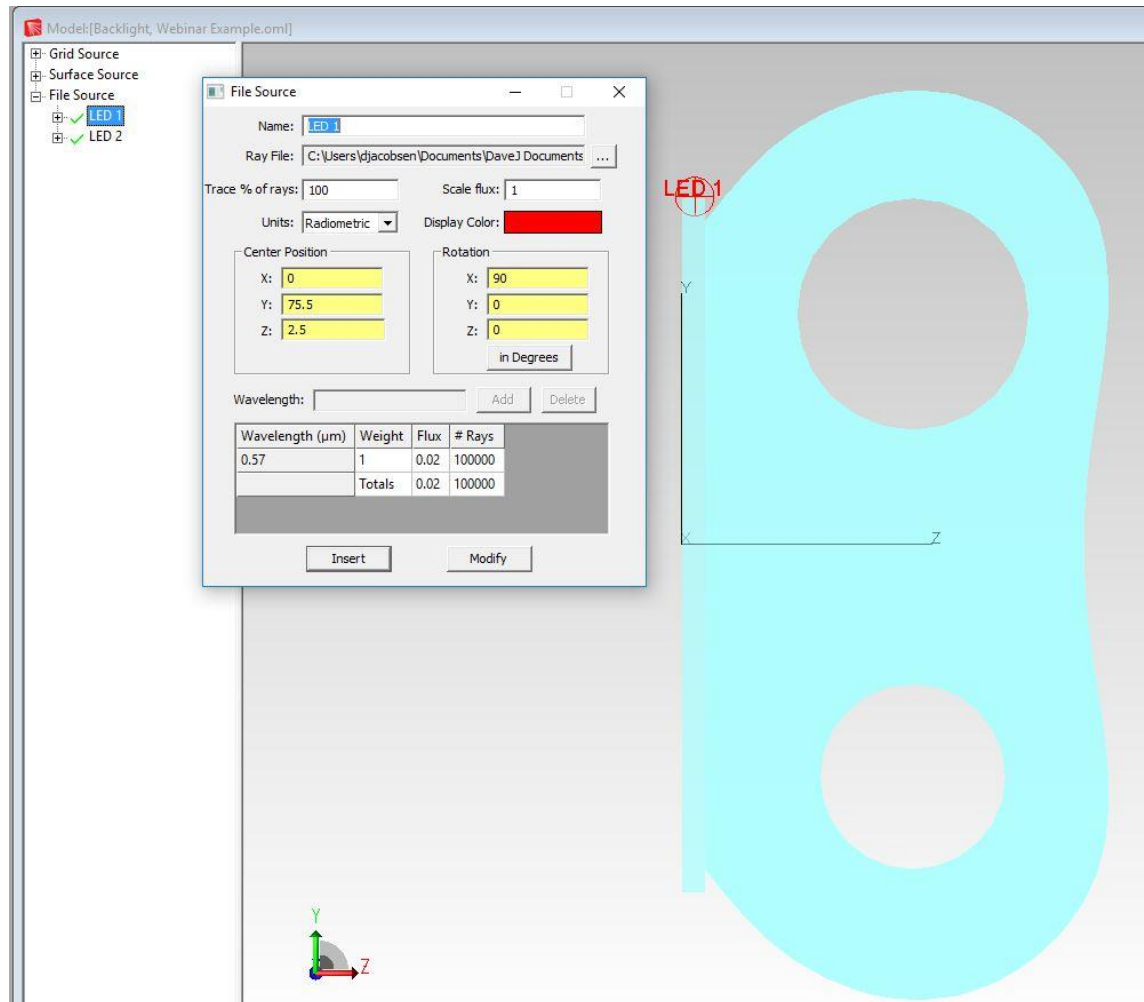
Light Guide / Backlight Example

This example uses rayfiles to model the LEDs as File Sources



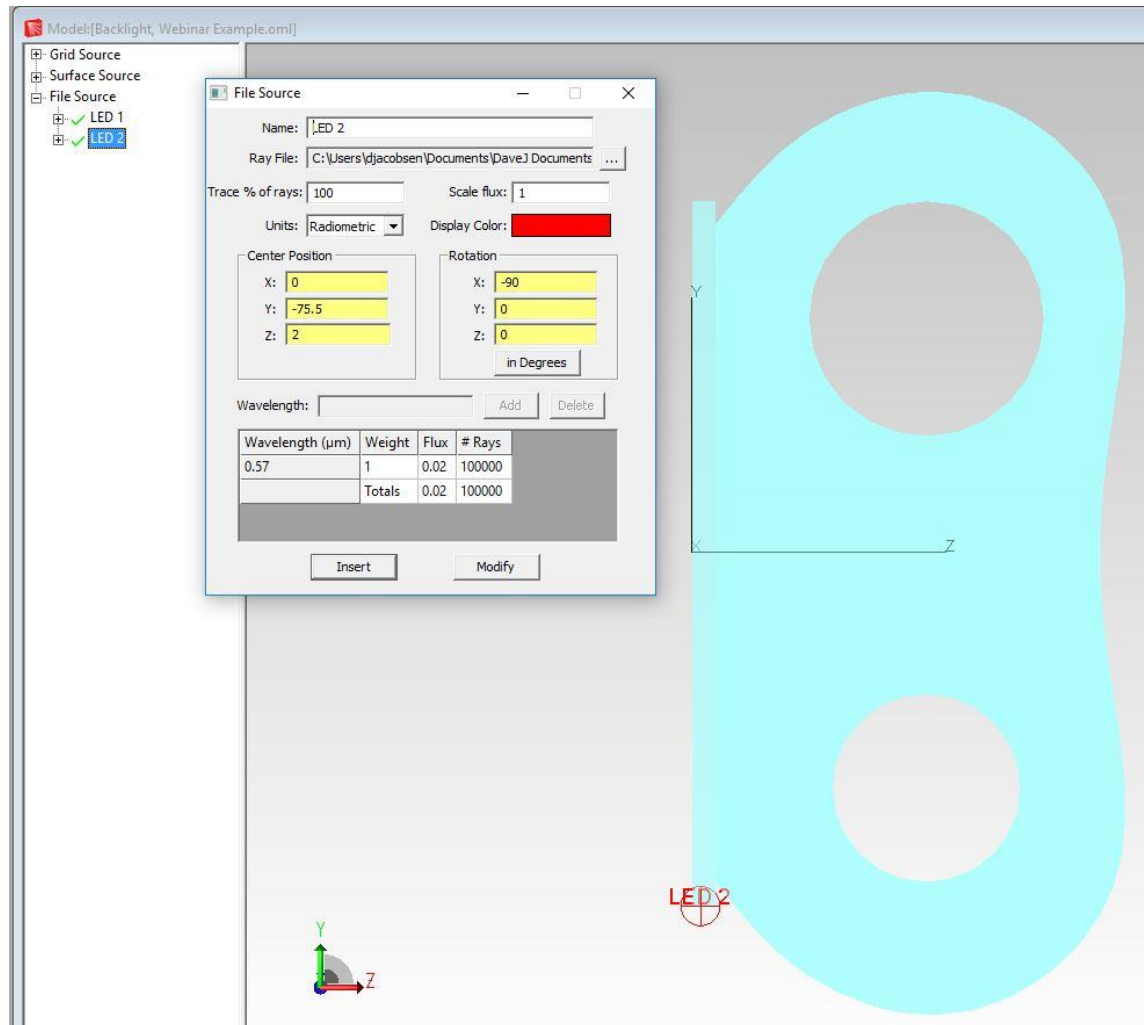
Light Guide / Backlight Example

Insert rayfile for LED1



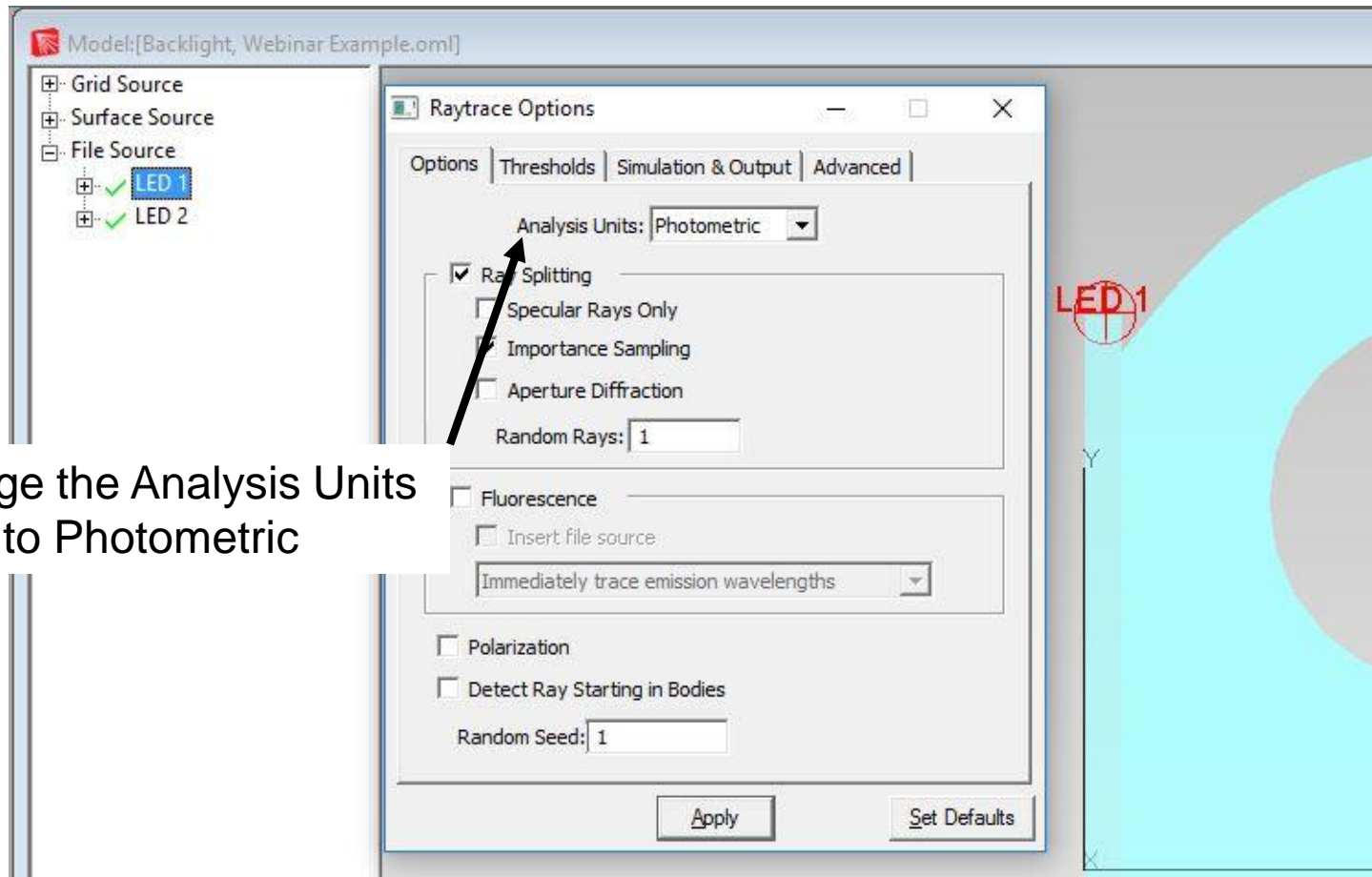
Light Guide / Backlight Example

Insert rayfile for LED2



Light Guide / Backlight Example

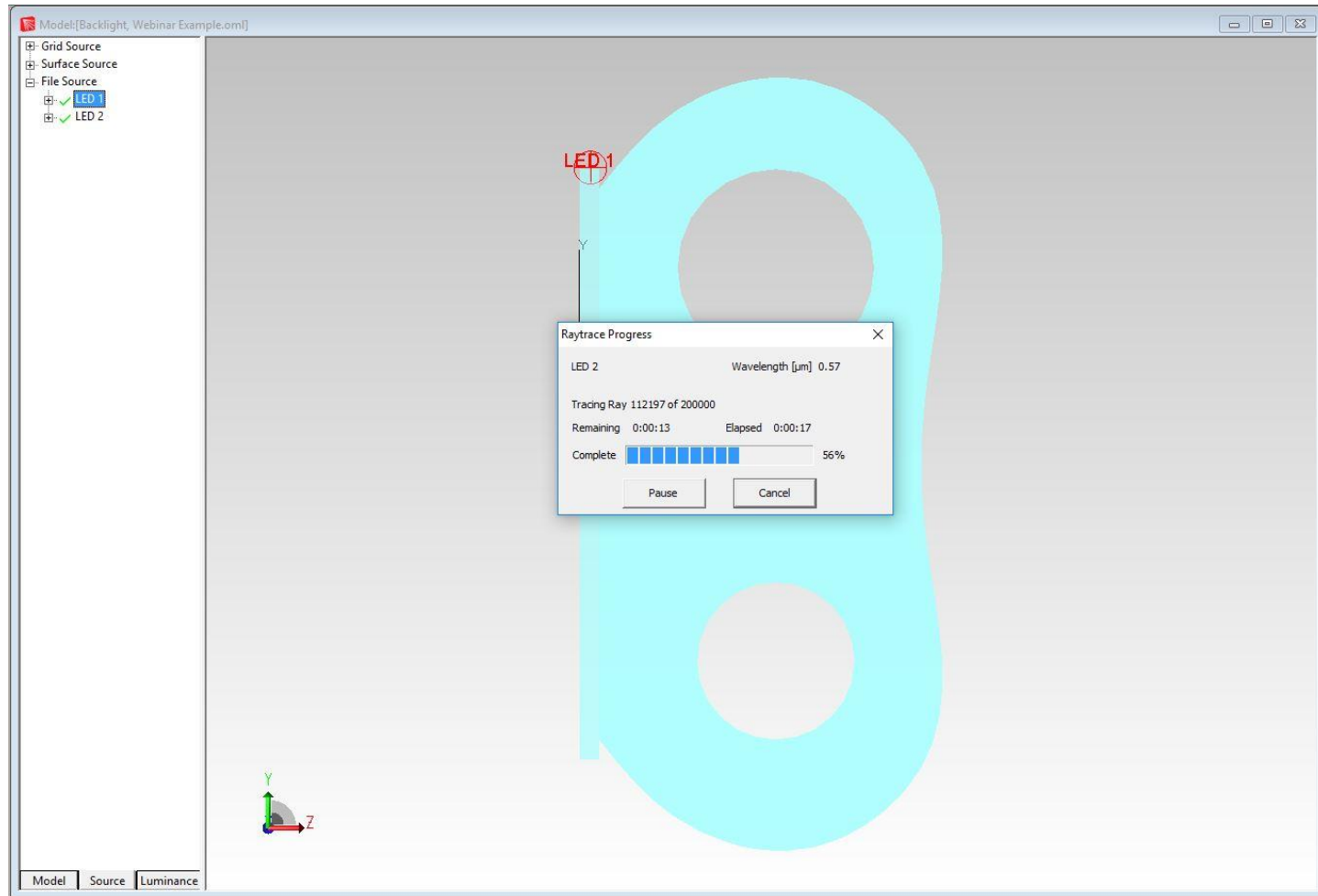
Raytrace Settings



Change the Analysis Units
to Photometric

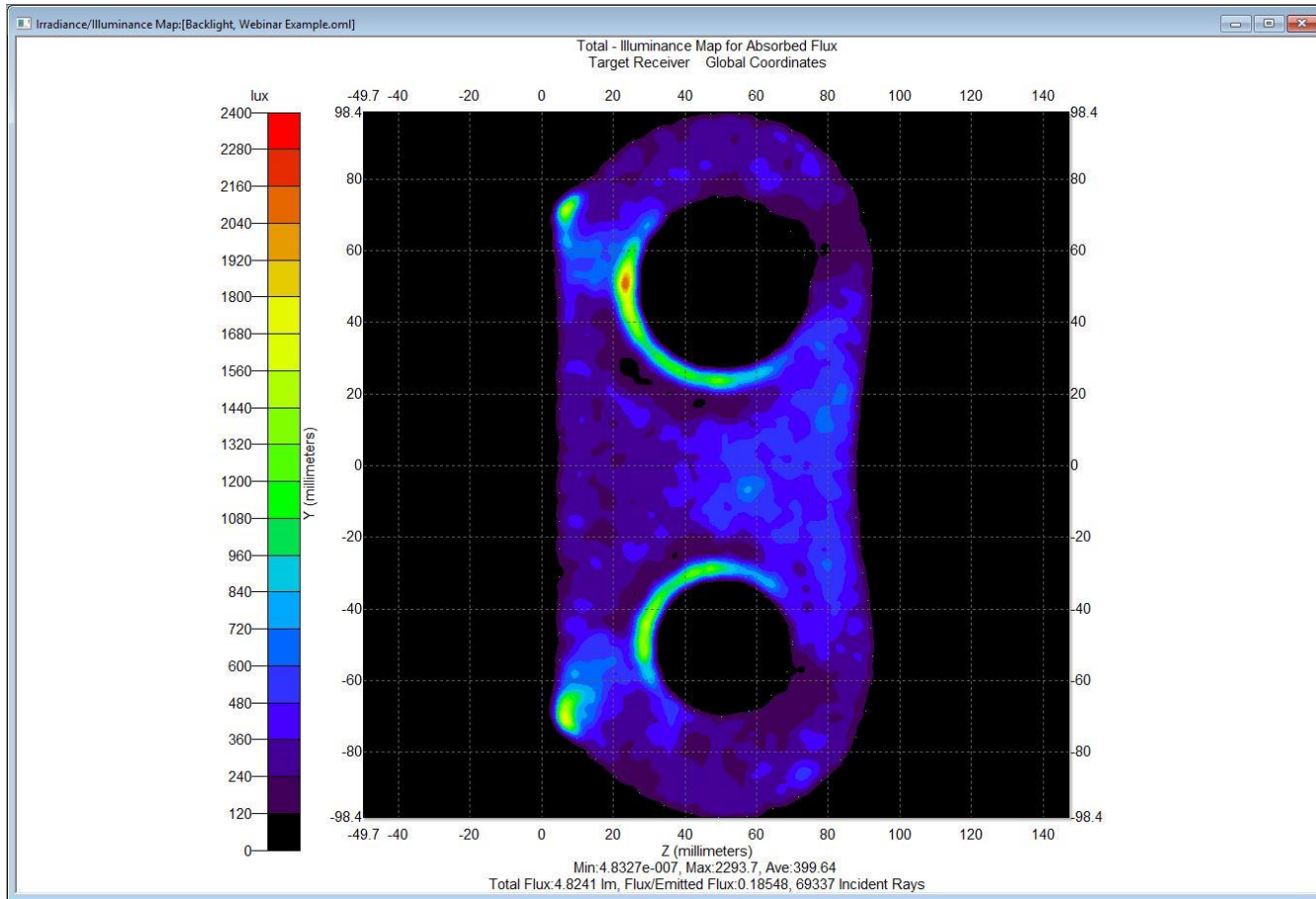
Light Guide / Backlight Example

Run the raytrace



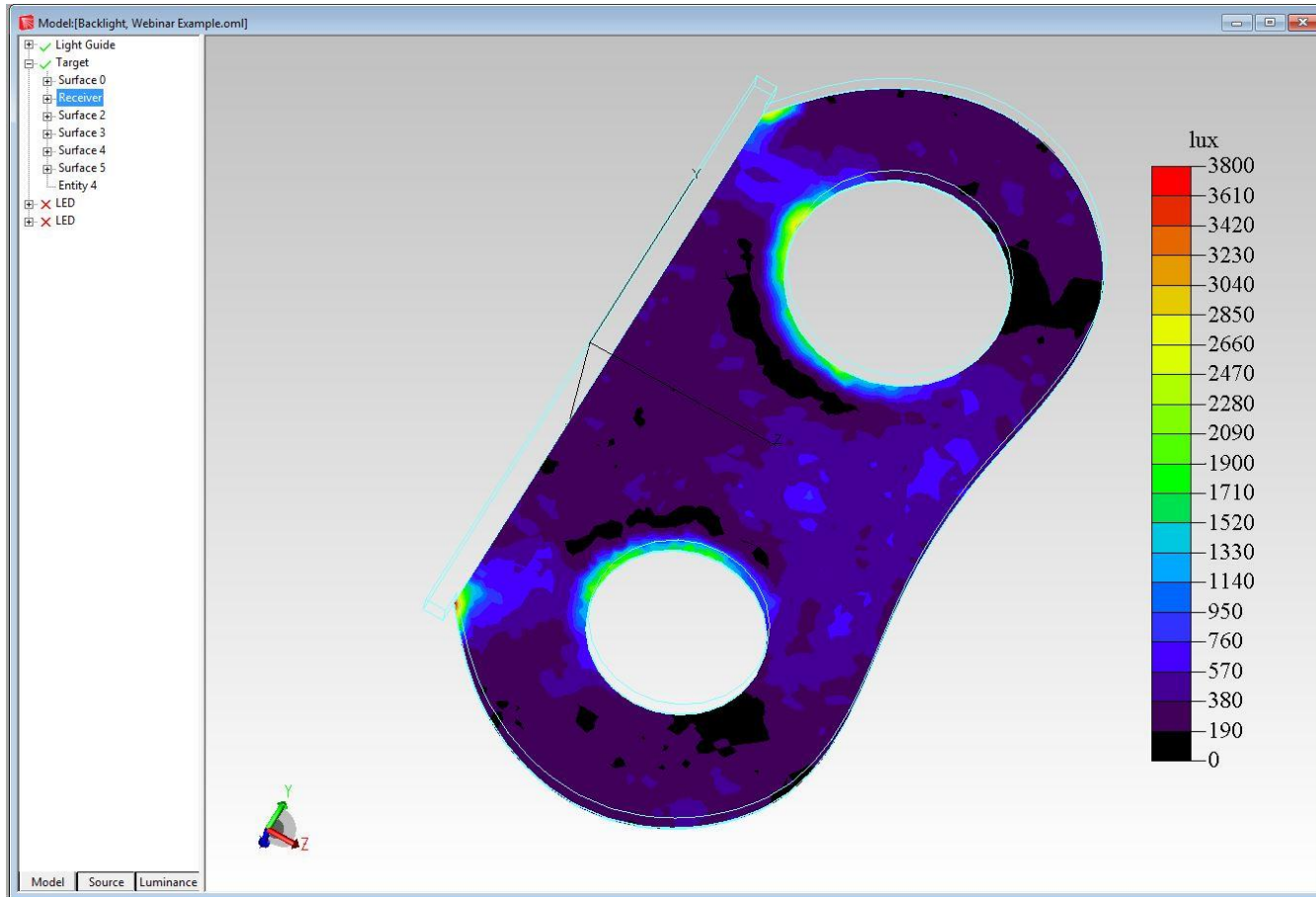
Light Guide / Backlight Example

Illuminance on “Receiver” surface



Light Guide / Backlight Example

3D Illuminance on “Receiver” surface



Summary and Questions

TracePro is easy learn and use and will allow you quickly get up to speed with analyzing and improving your designs:

- ✓ Design process time can be shortened considerably
- ✓ Designs can be tested “virtually”, cutting down on the need for physical prototypes
- ✓ Models can be imported from CAD programs or built directly in TracePro
- ✓ Numerous analysis tools are available and the analysis process is easy and straightforward
- ✓ Logical and organized menu structure

For more information or to sign up for our free 30-day trial please visit us at:

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