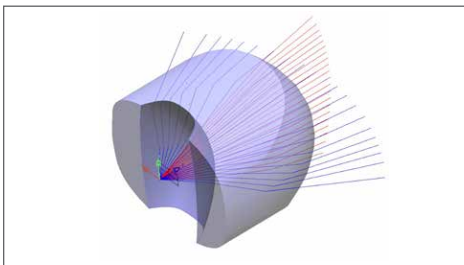
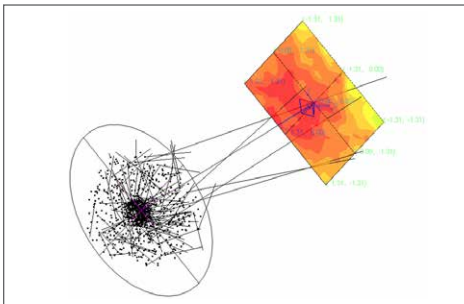
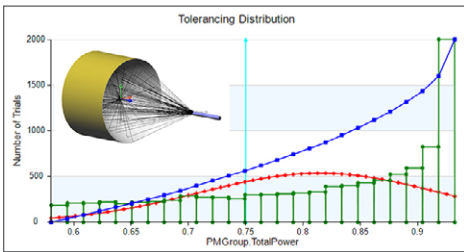
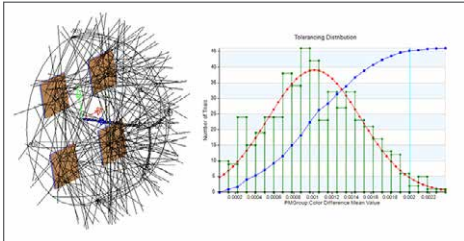


# What's New in LightTools Version 8.6

## Design, Optimize, and Deliver Superior Illumination Optics



For more information or to start your free 30-day evaluation, please contact Synopsys' Optical Solutions Group at (626) 795-9101, visit [synopsys.com/optical-solutions/lighttools](http://synopsys.com/optical-solutions/lighttools), or send an e-mail to [optics@synopsys.com](mailto:optics@synopsys.com).

### Tolerance Analysis

This release introduces a powerful new feature that can help you determine when your illumination design is ready for production: tolerance analysis. With tools for analyzing performance changes based on errors expected to be introduced in the manufacturing process, the LightTools tolerance analysis feature allows you to evaluate performance, adjust the required precision to achieve acceptable results, and predict manufacturability and production yields. Making adjustments before manufacturing allows you to control production costs and meet performance requirements for your illumination system.

Tolerance analysis is part of the LightTools Optimization Module and supports:

- Sensitivity analysis to evaluate how sensitive each performance measure is to changes in tolerances that affect the system
- Interactive tolerancing to fine tune tolerance limits and instantly see the impact of changes
- Monte Carlo tolerance analysis to predict system performance

### NURBS and Interpolated Curves Added to the 2D Objects Tools Palette

LightTools can now create native NURBS (Non-uniform rational basis spline) and interpolated curves. The new curves can be used for annotations like polylines and for swept light guides in place of imported geometry created in 3D CAD programs. The native curves are parametrized and available for optimization and tolerancing.

### Ray Data Source Support for Backward Simulations

To address the frequent need to use measured ray data files in illumination design, LightTools now supports ray data sources for backward simulations. This improvement allows designers to perform more efficient luminance calculations made possible with these types of simulations.

### Freeform Design Enhancements

LightTools freeform design has been enhanced to support disk, rectangle, sphere and ray file sources for evaluation.

### Light Guide Designer Enhancement

The Light Guide Designer now includes an option to enable path angle optimization during spatial optimization.