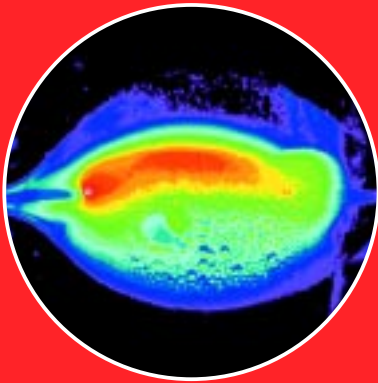


RADIANT SOURCE MODELS

RADIANT



Real Data for Realistic Raytracing

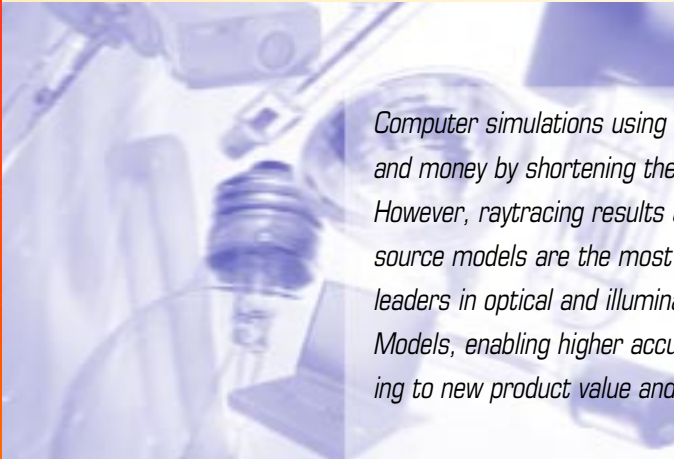


RADIANT
IMAGING

SEE THE DIFFERENCE

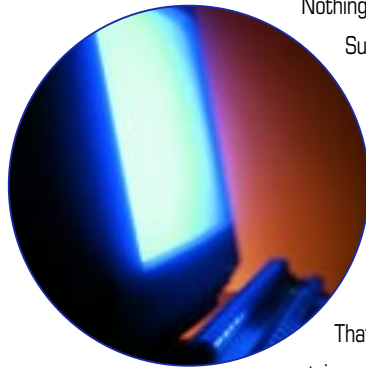


RADIANT SOURCE MODELS: YOUR COMPETITIVE EDGE



Computer simulations using raytracing with optical and illumination design software save time and money by shortening the development cycle—vital to delivering a competitive product. However, raytracing results are only as good as the source they're created from. Inaccurate source models are the most common cause of inaccuracy in illumination analysis. Worldwide, leaders in optical and illumination system design have turned to a better way—Radiant Source Models, enabling higher accuracy, speedier development and improved cost effectiveness leading to new product value and new market breakthroughs.

THERE'S NO SUBSTITUTE FOR THE REAL THING



Nothing can take the place of real data when it comes to predicting performance.

Success of an illumination product design depends on it. Radiant Source Models are light source characterization files containing the full spatial and angular data measured from a real light source, ready to raytrace—the most accurate light source models for optical raytracing software available.

TIME COUNTS

Radiant Source Models can help you dramatically reduce design time.

That not only means cost reductions, but faster time to market. Simple geometric sources are not accurate enough for high performance optical systems. It can take weeks to accurately model light sources in optical design software using Lambertian emitting surfaces and solids along with the appropriate scatter models and non-symmetric glass envelope geometry. Even then, it still requires accurate data to validate the light source model. Measured source models provide the most accurate model of the actual source—and the fastest path to a proper design solution.

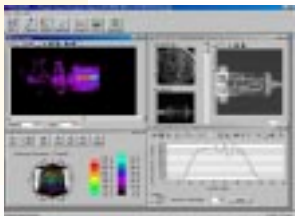
THE SCIENCE OF CHARACTERIZING LIGHT

The shape, brightness and location of light sources greatly affect their performance. Radiant Source Models are created with our completely automated Source Imaging Goniometer, a dedicated, precision laboratory instrument. Controlling the movements of a calibrated digital camera, it records images of the light source from a multitude of perspectives—profiling where the light came from within the light source volume and in what direction it was emitted. Scans in different wavelength ranges provide color or CCT characteristics. Data is compressed in a single, ready-to-raytrace, data file modeling the radiance (luminance) of the source from any perspective (view angle).

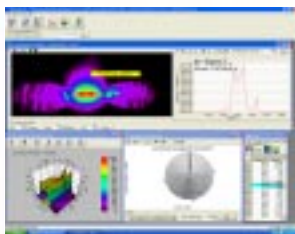
A Radiant Source Model can be quantitatively analyzed using our ProSource™ software. With ProSource, you can view animated sequences of the light source rotating in space, or plot 2-D and 3-D graphs showing its output characteristics.

A POWERFUL PARTNER FOR YOUR EXISTING DESIGN SOFTWARE

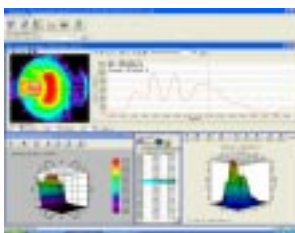
Radiant Source Models place data in an easy-to-use, standard format for raytracing. They are the accepted light source data file format for leading optical and illumination design programs such as LightTools®, TracePro®, ASAP, SOLSTIS, SPEOS, ZEMAX®, OSLO, OptiCAD®, Apilux, and LucidShape. A user needs only to specify initial



ProSource software evaluation and analysis of a head lamp.



ProSource software evaluation and analysis of an arc source.



ProSource software evaluation and analysis of an LED.

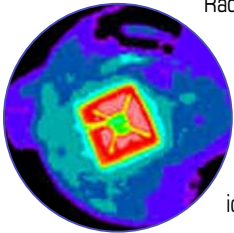


A partnership for productivity

Radiant Imaging brings you today's most advanced tools for the design, measurement and quality assurance of display and lighting products. Radiant's software and hardware products, application engineering support services, and consulting services are focused on enhancing your corporate design capabilities, product development efficiency, manufacturing productivity and competitive effectiveness in the world marketplace. Radiant Imaging is the partner of choice when your real success depends on advanced research, rapid product development, minimized design cycle time, accurate performance metrology, precise manufacturing processes, or fast and accurate quality assurance for display and lighting applications.

conditions (source orientation, source position, angular range, and the number of rays) to begin tracing rays that more accurately model light sources than ever before. Radiant Imaging can also help you implement Radiant Source Models in your own proprietary raytrace code.

RADIANT SOURCE™ MODEL FILE TYPES



Radiant Source Photopic Data Files are used as a basis for raytracing light sources when the spectral variation of the light emitted from the source is not a concern. Created using our Source Imaging Goniometer with a photopic filter that mimics the spectral response of the eye between 380 and 780 nm, light output characteristics may be recorded in photometric units or radiometric units. Radiant Source Models are also available in specific wavelength ranges from UV to IR.

Radiant Source Color Data Sets are used in raytrace simulations when the color of the light is important. They consist of a Photopic data file, plus data files created using a set of color filters that record angular and spatial information about a light source in the Red, Green, Blue regions of the spectrum. Arc discharge light sources such as metal halide lamps are particularly susceptible to color separation effects in illumination systems and for this reason most metal halide lamps are scanned as Radiant Source Color Data Sets.

RADIANT SOURCE MODELS

Radiant Source Models can also be obtained from leading light source manufacturers. To fully use Radiant Source Model data files, customers must have a valid license for ProSource OE Software.

The Radiant Source Model library offers hundreds of 16-bit Radiant Source Model data files, including LEDs, Arc Discharge Light Sources and filament-based light sources from manufacturers such as CEW, Cree, EG&G, GE Lighting, Gilway, Hamamatsu, Lumileds, Nichia, Osram, Osram-Sylvania, Philips Lighting, USHIO, Welch Allyn and more. By selecting and analyzing several light sources, a designer can tremendously increase the probability that the proper light source will be selected for further, in-depth analysis. A subscription gives you every Photopic and Color Radiant Source Model data file in the library.

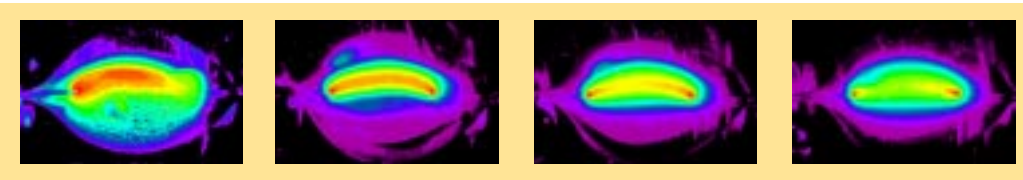
Before purchasing the full model itself, you can download a few Radiant Source mini models. View with any version of our ProSource 6 or higher software or by downloading free ProSource Demo software.

Custom Light Source Characterization Scans. We will scan your light source and provide you with a data file, a copy of our ProSource software for analysis, and a license to generate rays from the file.

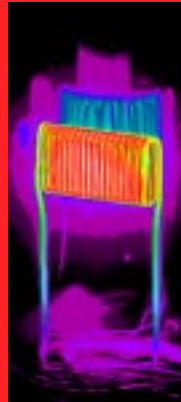


Source Imaging Goniometer manufactured by Radiant Imaging and used for creating Radiant Source Models

Examples of arc source data displaying angular and spatial differences in the luminance field by ProSource software.



Product information: The following products support Radiant Source Model technology: ASAP from Breault Research Organization, OptiCAD® from Opticad Corporation, ZEMAX® from Focus Software, Inc., LightTools® by Optical Research Associates, TracePro® and OSLO by Lambda Research, SOLSTIS & SPEOS by Optis, Apilux by O++, and LucidShape by Brandenburg GMBH.



RADIANT IMAGING

SEE THE DIFFERENCE

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