

Large Light Source Performance Characterization System

PM-NFMS™

Applications

- Automotive headlamp characterization
- Architectural light source characterization
- Illumination distribution measurement

Benefits

- Generates Radiant Source Models for use in optical modeling
- Generates accurate illumination distributions in a compact measurement space

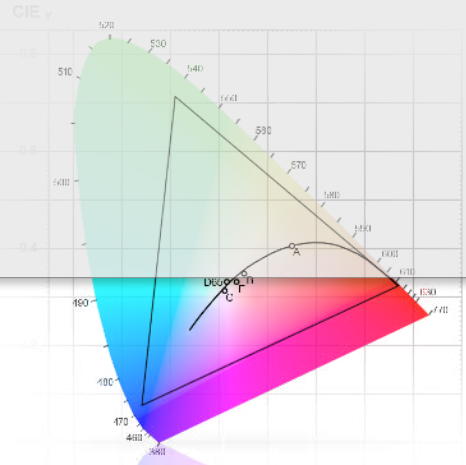
Comprehensive view angle performance characterization system for large light sources

The PM-NFMS™ system performs brightness and color measurements as a function of viewing angle for large light sources. It provides accurate near-field luminance distribution data for developers of large light sources, for automotive, transportation, architectural, and other applications. Because the PM-NFMS system captures a complete near-field model of the light source, it provides much more comprehensive information — in a much smaller measurement space — than can be obtained from traditional spotmeter-based measurements.

The PM-NFMS system consists of a PM Series™ Imaging Colorimeter, a PM-NFMS two-axis goniometer for precisely adjusting the display's angular position relative to the imaging colorimeter, and PM-NFMS software that controls both the imaging colorimeter and the goniometer during the measurement sequence, allowing definition and execution of a complete measurement sequence with minimal effort. The measurement data is preserved as a set of display images as a Radiant Source™ Model (RSM). The RSM can be analyzed directly to understand light source performance, or Radiant Imaging's ProSource software can be used to convert the RSM to a ray set for use in leading optical design software packages.

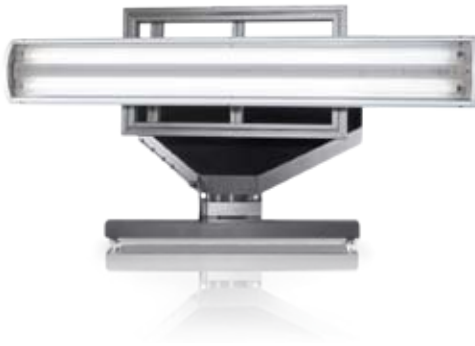
The PM-NFMS system software supports light source performance analysis through an extensive variety of quantitative analyses, including isoplots, CIE color analyses and radar plots. In addition, the PM-NFMS software can be used to extrapolate a far-field illumination distribution from the measured near-field RSM.

Any PM Series Imaging Colorimeter can be selected for use in the PM-NFMS system; the ultimate selection will be a function of the dynamic range, measurement resolution, and field of view required. The PM-NFMS goniometer is available in several sizes to support varying light source sizes, ranging from headlamps to architectural lighting systems.



Radiant Imaging, Inc.,
22908 NE Alder Crest Drive, Suite 100
Redmond, WA 98053, USA
T: +1 425 844-0152
F: +1 425 844-0153

Sales and marketing: sales@radiantimaging.com
Technical support: support@radiantimaging.com
Website: www.radiantimaging.com
Copyright © 2009 Radiant Imaging, Inc.,
All Rights Reserved



Key Features

- Automated measurement control
- Sophisticated data modeling and analysis functions
- Multiple configuration options
- Minimal measurement space required
- Integrated near-field to far-field extrapolation

Specifications*

Mechanical

Parameter	NFMS 400	NFMS 800	NFMS 1500
Maximum DUT Size (mm)	500 x 380	865 x 535	1325 x 760
Maximum DUT Diagonal (mm)	630	1000	1500
Overall Size (mm) (W x D x H)	900 x 360 x 600	1200 x 750 x 770	1200 x 800 x 1800
Operating Footprint (mm)	970 x 970	1400 x 1400	1780 x 1780
Maximum DUT Load (kg)	5	25	80
Precision (deg)	0.25	0.25	0.25
Range of Motion Upper Axis (deg)	+88 to -88	+88 to -88	+88 to -88
Range of Motion Lower Axis (deg)	+88 to -88	+88 to -88	+88 to -88
Approximate Unit Weight (kg)	25	40	360

Software

Performance Analysis:

- True Color as a function of view angle
- Luminance as a function of view angle
- Color (x, y, u', v') as a function of view angle
- Tristimulus (X, Y, Z) as a function of view angle
- CCT as a function of view angle
- Color Difference ($\Delta u'v'$) as a function of view angle
- Contrast as a function of view angle

Other

Intensity plots (near field and far field)

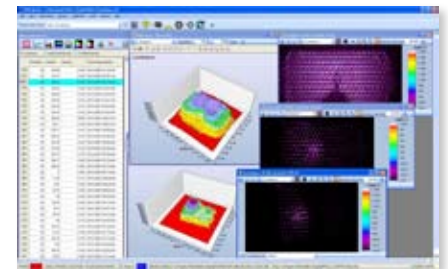
View animated images of DUT from different measurement angles

User interface with scan alignment and notes information

Simple software backup and installation

In-program documentation and help files Operating Software

* Specifications subject to change without notice



Measurement capabilities

- Luminance
- Color (x, y, u', v')
- Tristimulus (X, Y, Z)
- CCT
- Color Difference ($\Delta u'v'$)

Data representation

- Cross Section graphs
- Histogram (Luminance, CCT, or color)
- 3-Dimensional surface Plot
- 2-Dimensional Isometric surface Plot
- CIE Color Chart plots

System Requirements

- 2.0 GHz or faster processor
- 1GB or greater RAM
- Windows® 2000, XP or Vista
- USB 2.0 interface