

LM-63-02
ANSI APPROVED

IESNA Standard File Format for the Electronic Transfer of Photometric Data and Related Information



Prepared by: The Subcommittee on Photometry
of the IESNA Computer Committee

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by the IESNA. Suggestions for
revisions should be directed
to the IESNA.

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Standard File Format for the Electronic Transfer of Photometric Data and Related Information

1.0 INTRODUCTION

This is the fourth revision of this standard. Since its introduction in 1986 (IESNA LM-63-1986), this standard has proved to be very useful and powerful. This revision further clarifies the standard to make its use as simple as possible.

2.0 LIMITS OF SCOPE

This document describes the ANSI/IESNA LM-63-2002 data system and how to build a file using this system. This recommended standard addresses photometric data file formats specifically for data transfer, however, it is recognized that this standard is often used for data storage and retrieval.

3.0 KEY DEFINITIONS

Absolute (or direct) photometry – Consists of the simultaneous comparison of a standard lamp and an unknown light source.

Delimiter - Used to delineate data in a file. Acceptable delimiters are: a comma, a space, multiple spaces, or a carriage-return and line-feed character sequence.

Goniophotometer – A photometer for measuring the directional light distribution characteristics of sources, luminaires, media and surfaces.

Horizontal angles – Measurements in degrees of angular displacement measured counterclockwise in a horizontal plane for Type C photometry and clockwise for Type A and B photometry.

Keyword – Square bracketed words used in IESNA LM-63-2002 to label data.

Photometric horizontal – Refers to a horizontal direction from photometric center that is coincident with horizontal angle 0° and vertical angle 90° for Types B and C photometry. For Type A, the direction is coincident with horizontal angle 0° and vertical angle 0°.

Photometric plane – A plane, not a cone, upon which photometric data is measured. In Types A and C photometry, the planes are all vertical and share a common vertical axis. In Type B photometry, the planes share a common horizontal axis.

Photometric zero – Refers to a vertical direction from photometric center that is coincident with horizontal angle 0° and vertical angle 0° for Types B and C photometry. For Type A, the direction is coincident with horizontal angle 0° and vertical angle –90°.

Relative photometry – Consists of the evaluation of the photometric characteristic of a lamp by comparison with the assumed lumen or spectral output of a test lamp.

Search string – A group of characters created by the user of the photometric file located to the right of the keyword [SEARCH]. These strings may be used by software to locate photometric files based on encoded characteristics.

Vertical angles – The angular displacement in degrees from straight down (referred to as nadir in the IESNA Lighting Handbook).

Zero degree photometric plane – A vertical plane passing through photometric center containing photometric zero and photometric horizontal.

4.0 SUMMARY OF MODIFICATIONS FROM IESNA LM-63-1995

The following is a summary of the major changes from LM-63-1995 to LM-63-2002:

- The first line in the file is now IESNA:LM-63-2002 (see **Section 5.1**).
- All lines can now be 256 characters in length (see **Section 6**).
- All IESNA LM-63-2002 filenames shall now have the file extension **ies** or **IES**.
- The following keywords are now required: [TEST], [TESTLAB], [MANUFAC], and [ISSUEDATE] (see **Section 5.2**).
- [DATE] keyword replaced with [ISSUEDATE] (see **Annex B**).
- [BLOCK] and [ENDBLOCK] keywords have been removed.
- All tilt filenames (**TILT=<filename>**) shall now have the file extension **tilt** or **TLT** (tilt format moved to **Annex G**).
- Definitions of the Luminous Opening have been expanded and, in some cases, modified. The fol-