WHITE PAPER

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IES LIGHTING FILE DECODING

Understanding basics of IES file

What is an IES File?

The Illuminating Engineering Society or IES file type is primarily associated with photometric data files. Illumination Engineering Society of North America (IESNA) created the standard file format for electronic transfers of photometric data.

Photometric data files are saved as .ies files, which are composed of light quantities and measurements. They depict lighting intensity and luminosity. IES files are records of measurement of light in terms of perceived brightness to the human eye. They are commonly used by engineers, architects, and 3D game makers.

The .ies files are useful for simulating lighting systems before they are installed on different infrastructures. Furthermore, IES files are likewise useful for the examination of light source illumination for outdoor sites like roadways and parks. It helps engineers and architects determine what light fixtures are best for a specific structure. And since .ies file deals mainly with lighting and photometry data, many 3D programs can open and support this file type in creating computer- aided design projects.

How to Open IES Files?

You will need a program compatible with the specific file you are trying to open, as different programs may use files with file extension IES for different purposes.

There are different IES openers which you will find listed below:

- Photometrics Pro

- IES Viewer

- Photometric Viewer

How to Decode IES Files?

Other than the programs we have listed above, there is another approach to open the IES by Notepad.

When the file is opened, you can see following (as example):

```
IESNA:LM-63-2002
[TESTLAB] EVERFINE
[TESTDATE] 2014-02-27
[ISSUEDATE] 2014-02-27 15:04:02
[LAMPPOSITION] 0,0
[OTHER] EVERFINE GO-2000B_V1
[MANUFAC] SPARK
[LUMCAT] LED Street Light
[LUMINAIRE] SPL-D40
[LAMP] Pure White
TILT=NONE
1 4402.0 1.000 19 73 1 2 0.000 0.000 0.000 1.000 1 41.0
0.0     5.0     10.0    15.0    20.0    25.0    30.0    35.0    40.0    45.0    50.0    55.0
60.0    65.0    70.0    75.0    80.0    85.0    90.0
0.0     5.0     10.0    15.0    20.0    25.0    30.0    35.0    40.0    45.0    50.0    55.0
```

According to the IES standard file format, the letters and numbers above stand for the following meanings respectively:

IESNA:LM-63-2002 represents the standard that the testing was conducted by.

[TESTLAB] represents the photometric testing laboratory

[ISSUEDATE] represents the date of issue

[MANUFAC] represents the manufacturer of the luminaire

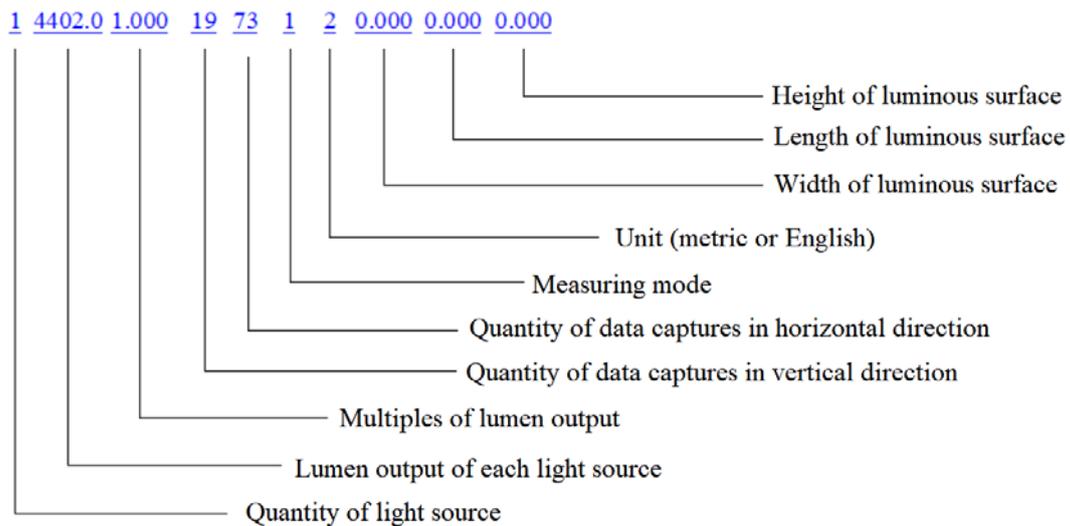*[LUMCAT] represents the luminaire catalog number*

[LUMINAIRE] represents the luminaire description

[LAMPCAT] represents the lamp catalog number

[LAMP] represents the lamp description

The data right after TILT=NONE represents the basic specification of the luminaire, including wattage, lumen output, size and etc, see following description:

TILT=NONE

1 4402.0 1.000   19 73 1   2 0.000 0.000 0.000

- Height of luminous surface
- Length of luminous surface
- Width of luminous surface
- Unit (metric or English)
- Measuring mode
- Quantity of data captures in horizontal direction
- Quantity of data captures in vertical direction
- Multiples of lumen output
- Lumen output of each light source
- Quantity of light source

All data after represents the captured data at each data capturing point.