

How to ensure that your IES files comply with the full V5.1 LM-79/distribution report requirements

While .IES files haven't changed, under V5.1, the DLC will review additional fields in submitted .IES files to ensure accuracy of data and to support UGR analyses for certain Primary Use Designations. When submitting an application under V5.1, be sure that your LM-79 .IES file follows the requirements below.

The samples from the .IES file shown below depict a generic version of a 2x2 LED troffer. The keyword text does not represent a real company or product.

1. The following keywords must be included and contain values that match the LM-79 test report: **TEST**, **TESTLAB**, **ISSUEDATE**, **MANUFAC**, and **LUMCAT**.



```
IESNA: LM-63-2002
[TEST]abc123
[TESTLAB]Lab123
[ISSUEDATE]12/01/18
[MANUFAC] Lighting Inc.
[LUMCAT]T22-40-3580-U
[LUMINAIRE]2' x 2' LED Troffer
[LAMPCAT] L3580
[LAMP]125 3500 K LEDs
```

A screenshot of an IES file header section. The text is as follows: IESNA: LM-63-2002, [TEST]abc123, [TESTLAB]Lab123, [ISSUEDATE]12/01/18, [MANUFAC] Lighting Inc., [LUMCAT]T22-40-3580-U, [LUMINAIRE]2' x 2' LED Troffer, [LAMPCAT] L3580, [LAMP]125 3500 K LEDs. A green rectangular box highlights the first five lines of text. A green circle with the number '1' is positioned to the right of the box, with a line pointing to the first line of the highlighted section.

2. The **<multiplier>** field must be 1 or 1.0; it cannot be a scaling multiplier. IES files must be the result of a tested luminaire. Scaled IES files will result in a multiple other than 1 or 1.0 and will not be accepted (*see image on page 2*).
3. The **<photometric type>** field must be 1 (i.e., the photometric type is in Type C format) or 2 (i.e. the photometric type is Type B, which may be used for spot and flood luminaire Primary Use Designations) (*see image on page 2*).
4. The **<length><width><height>** luminous opening fields must appropriately reflect the luminous opening of the luminaire shown in submitted documents. See the "Additional Reporting Requirements for LM-79, LM-80, and TM-21 Reports" subsection (p. 33) of [Technical Requirements V5.1](#) for more guidance (*see image on page 2*).

5. The **<input watts>** field must match the total input power specified in the LM-79 report (see image below).
6. The angular resolution for the **<vertical angles>** field must be at most 5 degrees. In this example it is 2.5 degrees (see image below).
7. The angular resolution for the **<horizontal angles>** field must be at most 22.5 degrees (see image below).

```

[LAMPCAT] L3580
[LAMP]125 3000 K LEDs
[BALLASTCAT]x123
[BALLAST]
TILT=NONE
1 -1 1 37 5 1 1 2 2 0
1 1 32
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 27.5 30 32.5 35
47.5 50 52.5 55 57.5 60 62.5 65 67.5 70 72.5 75 77.5 80
0 22.5 45 67.5 90

```

8. **Input voltage** must be provided from the goniophotometer test. Total harmonic distortion and power factor from the goniophotometer test may also be provided, but are not required. These may be included in the IES file using the **[MORE]**, **[OTHER]**, or user-defined keywords from LM-63-02 (for example, **[_VOLTAGE]**, **[_THD]**, and **[_PowerFactor]**). Other user-defined tags are also acceptable, as long as they clearly identify the necessary values. An example of these options is shown below.

```

[LUMINAIRE]2 X 2 LED Trotter
[LAMPCAT] L3580
[LAMP]125 3500 K LEDs
[BALLASTCAT]x123
[BALLAST]
[_VOLTAGE] 120V
[_INPUTWATTAGE] 107.2
[_LUMELEC] 120.0V 107.2W .996PF 4.5THD A%
TILT NONE

```

Note that if a PDF file of the goniophotometric test is provided, the electrical information may be included in that file instead of the IES file.