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## LIF Technical Statement No. 41

### **T5 Lamp Adaptors for T8 Luminaires: Do they ensure energy saving and conformance with relevant standards and legislation?**

LIF has examined the product publicity information of a number of products which are intended to be retro fitted to existing T8 fluorescent lamp luminaires and has the following concerns regarding the samples examined:

#### **Legal Marking**

- The CE marking and therefore the legal liabilities of the manufacture of the original luminaire are made void when this product is fitted. There are no instructions for the installer to obliterate or remove the original markings and apply new markings of the converter company.
- There is no evidence that the manufacturer of the adaptor will take on the responsibilities under CE marking legislation for the “refurbished” luminaire combination (combo).

#### **Safety**

- There may be adverse changes to the thermal characteristics of the original luminaire?
- Are the lamp holders of the original luminaire over stressed by the weight of the adaptor units?
- Do the converted luminaires comply with the requirements of the luminaire safety standard BSEN 60598-1?

#### **EMC**

- What are the EMC characteristics of the new “combo”? Do they comply with the limits of electromagnetic compatibility specified in EN 55015 and required by the EMC Directive?

#### **Illuminance**

- The lumen output will change. Will the installation still provide the required maintained illuminance for the tasks? Will the installation comply with BSEN 12464-1 Lighting of indoor workplaces and/or CIBSE Lighting Code?

- Have additional luminaires been added to the installation to ensure that there is sufficient illuminance for the visual tasks?

### **Light Distribution**

- The light centre of the lamp is displaced. This will affect the light distribution.
- Will the Glare Index (and in the future Unified Glare Rating) still comply for the installation?
- Will the luminance limits of the luminaire still comply for usage with Display Screen Equipment?

### **Compatibility**

- Are the adaptor units suitable for fitting to emergency lighting versions of mains luminaires?

### **Energy Efficiency**

- Do the adaptors comply with the requirements of the Ballast Directive which was implemented in the UK as Statutory Instrument 2001 No 3316: The Energy Efficiency (Ballasts for Fluorescent Lighting) Regulations 2001?
- Has the energy efficiency of the adaptor been measured in compliance with BSEN 50294 which can only be carried out in the luminaire which it is being used to convert?

### **Environmental Considerations**

- The Waste Electrical and Electronic Equipment Directive, will be implemented in the UK as Statutory Instrument XXX and will apply a recycling obligation on the luminaire manufacturer regarding the equipment he has supplied. It is questionable whether this obligation is maintained when his luminaire has been modified and this obligation may be moved to the user who has made the modification. Only a test case in law will prove this.
- Does the T5- Lamp Adaptor comply with the requirements of the RoHS Directive which has been implemented in the UK as Statutory Instrument 2005 No. 2748: The Restriction of the use of Certain Hazardous Substances Electrical and Electronic Equipment Regulations 2005?

### **Conclusion**

The aspects presented here demonstrate that conversion of a T8 fluorescent lamped luminaire by T5 Lamp Adaptors is not the “quick and cheap solution” it is promoted to be. If the converted luminaire does not meet the same compliance criteria as the original luminaire, you should reconsider how to achieve energy savings in your lighting installation. For further guidance on the manufacturers of energy efficient lighting products, consult the Lighting Industry Federation web site [www.lif.co.uk](http://www.lif.co.uk).

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