

## EEPLIANT - Energy Efficiency Compliant Products 2014

### Summary overview on LED testing

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[www.eepliant.eu](http://www.eepliant.eu)

#### EEPLIANT market surveillance action for LED lamps

The market surveillance action of EEPLIANT aims at coordinated inspection, verification and enforcement measures for LED lamps, subject to EU energy labelling and ecodesign regulations (Regulation 874/2012, supplementing Directive 2010/30/EU, and Regulations 1194/2012 and 244/2009). Measures involved the development of supporting tools for inspection and product testing and the use of best practice originating from a previous joint market surveillance project called ECOPLIANT.

Information on the packaging, as well as the declaration of conformity were checked, and the models considered as high risk of noncompliance were inspected and submitted to laboratory testing.

*Document inspection for 134 models has been conducted, including a screen exercise for 117 models. Full testing of 86 LED models is now under way, including the lifetime and other performance parameters, such as colour rendering, power factor, power, beam angle, etc.*

Some of the project partners – national surveillance authorities, have already started formal actions with suppliers, based on inconsistencies found in formal documentation.

More info: <http://www.eepliant.eu/index.php/work-packages/wp4-led>

#### Latest news on LED testing

In total 134 different lamp models were checked including both document inspection and product testing. All lamp models considered for physical testing were first of all checked by simplified screening tests to detect particularly suspicious lamps to be further tested in full laboratory tests according to EU regulations and standards.

The selection of lamp models from the market followed a “risk based” approach with the goal to efficiently detect and remove as many non-compliant products as possible within the project. Thus the aim was not to do a market assessment based on a statistical sampling approach. Thereby, the results of the action *cannot be used to draw statistical conclusions about compliance or non-compliance of products available on the market.*

Nevertheless the project was focused on popular LED lamp models with significant market relevance, typically available from supermarkets, electronics stores, furniture stores or online shops.

Lamp selection covered the popular lamp and socket types typically encountered for household lighting (as shown in the following table):

<b>Socket Type</b>	<b>Number of Samples</b>
E14	22
E27	67
G5.3	12
GU10	25
G9	8

### **Document inspection**

Document inspection included 124 different lamp models and covered inspection of the packaging, the CE Declaration of Conformity and the relevant technical documentation. Inspection of 10 products is still going on.

The results available so far can be summarised as follows:

Non-compliance with EU regulations was detected for 53 models concerning the packaging information, for 27 models concerning the CE Declaration of Conformity and for 49 models concerning the technical documentation.

Due to some lamp models showing several non-conformities at a time, in total 76 lamp models or their packages or the documentation showed to be non-compliant concerning one or more of the EU regulations mentioned.

### **Screening tests**

As full lab testing of LED-lamps according to the EU regulations and standards is both very costly and time-consuming, screening techniques with simplified testing methods were applied as a first step to detect suspicious products. The screening tests were performed in the laboratories of the MSAs in Germany, Denmark and Sweden. The screening was carried out partly with specialised test equipment for screening purposes (simplified near field goniophotometer) and with standard test equipment (Ulbricht-Sphere) and was limited to samples of 3 to 5 lamps of selected types.

Screening was done for 117 lamp models in total. For 60 models an indication for non-compliance was detected. 43 models showed satisfactory results. The remaining 14 models were borderline cases. Lamps with non-compliance indication and borderline cases were selected for subsequent full testing.

### **Full testing according to EU regulations**

Full testing according to EU regulations and standards was arranged by contracting of certified labs in Belgium and UK based on a standard tender procedure. 86 lamp models are tested in total including 62 non-directional and 24 directional lamps. Full testing started in March 2016 and will be finished in early 2017 for lifetime and lumen maintenance parameters (total testing time 6000hrs).

The initial measurements (excluding life time related parameters) already showed non-compliance **for 52 lamp** models. This number might still increase by the end of the testing period.

The most common defects encountered during testing concern the luminous flux, the rated input and the colour temperature that are in some cases significantly different from declared values.

### Conclusions

Already *at mid-term of the project* it is apparent that a relevant number of LED lamps and packages do not fulfil the requirements of the EU regulations. Several cases can be followed up by the market surveillance authorities already now in order to prevent further placing on the market. Fines will be issued according to the national laws.

The final report at the end of the lifetime laboratory tests will be able to focus more on technical faults, possibly showing frequent technical problems of LED lamps available as retrofit on the European market.

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### EEPLIANT project summary

The EEPLIANT project was designed to help deliver the intended economic and environment benefits of the Energy Labelling and Ecodesign Directives by increasing the rates of product compliance with them.

The EEPLIANT project team, consisting of 13 Market Surveillance Authorities from across the EU, organises coordinated **monitoring, verification** and **enforcement** activities, including product testing of **LED lamps, printers** and **heaters**.

In addition to the product testing activities, the project also ensures an inspection of the products' technical documentation, defines market surveillance best practices and shares these among the participating market surveillance authorities, but also the other national and regional authorities within the EU, and ensures regular communication and awareness activities, targeting e.g. the professional stakeholders, the civic society, governments, etc.

More about the project: [www.eepliant.eu](http://www.eepliant.eu) and [www.twitter.com/eepliant](https://www.twitter.com/eepliant)

### How EEPLIANT works

Each of the product categories selected by the project has the following set of activities undertaken throughout the project:

- **Document inspection** – verification of the technical documentation which the suppliers have to make available to authorities upon their request – relevant for LED and boiler testing, the imaging equipment is regulated by the Energy Star requirements;
- **Screen testing** – undertaking of preliminary tests to identify and assess the likelihood that a certain model would fail full compliance testing;

- **Coordinated compliance testing** – full scale testing of a selected number of models, in part preselected from the range of models failing the screen testing stage.

For more information, see: <http://www.eepliant.eu/index.php/about-eepliant/description>

### Background information

This information is issued by PROSAFE and the market surveillance authorities representing 12 EU Member States in the EEPLIANT 2014 Action.

The Action is coordinated by PROSAFE (Product Safety Forum of Europe), a non-profit organisation that brings together market surveillance officers from all over Europe and across the world. Visit [www.prosafe.org](http://www.prosafe.org) to learn more. On this website you will also find more information about the other Joint Actions coordinated by PROSAFE.

### Follow us!

Stay updated with the project activities, get in touch with the team for more details and do contact us for more information!

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Project website: <http://www.eepliant.eu/>

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### Disclaimer

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