

Lamps, lighting and signalisation equipment

Accredited tests and calibrations

■ Meeting standards and specifications

Lamps, lighting and signalisation equipment, and other optical products are subject to countless standards and quality indicators which we can find in private and public sector specifications. As a manufacturer or importer you need objective proof that your equipment meets these specifications. As a buyer you may doubt whether certain products actually meet your specifications. In both cases you need the neutral opinion of a renowned expert.

■ Accredited laboratory

For an opinion of this kind it is best that you use a BELTEST accredited laboratory. This will guarantee the quality of the tests and the neutrality of the results. Our laboratory is BELTEST accredited and can take account of all the major standards (NBN, EN, IEC and CIE) and specifications (SB-250 Flemish Region, RW-99 Walloon Region, CDC-400 Belgian State, 005 of FPE-BFE, etc.). Our OBE/BKO accreditation additionally guarantees the quality of the calibrations of lamps and measuring equipment.

■ Accurate measurements, fast service

Not only is the present quality of the product an important factor, but keeping this quality after ageing is important too. And since you are on the point of a purchase or sale, obviously you would like to receive the results as quickly as possible. Laborelec can offer the fast and complete service you are looking for. Our Laborelec experts will carry out all the relevant tests and describe the results in a clear report. We can also offer customised services.

■ For a wide range of products

Laborelec can check the characteristics of a product, and their evolution after ageing, for :

- lamps (light bulbs, fluorescent tubes, discharge lamps)
- signalisation and safety equipment (lights, signboards, reflectors, cat's eyes, warning triangles, fluorescent and reflective materials, etc.)
- lighting equipment (outdoor and indoor lighting, street lighting, emergency lighting, etc.)
- transparent materials (glass, plexiglass, PMMA, etc.)
- etc.

We can also calibrate:

- light sources (for light flux, light intensity or light colour)
- luxmeters and luminancemeters.

■ Accurate, reproducible measurements

To test the products against the relevant criteria, we will employ one or more of the following tests. We have extremely reliable measurement devices, which we calibrate on a regular basis.



The technical Competence Center
in energy processes and energy use.
From innovation to operational assistance.



We will help you and provide you with an objective guarantee that your equipment meets your particular specifications.

■ **Flux measurements.** The flux is the total quantity of light emitted by a source. It is measured in an Ulbricht sphere, using a method adapted to the type of lamp, the light spectrum and the stability of the lamp.

■ **Intensity measurements.** The intensity is the quantity of light emitted by an object in one direction. It is measured using photometric banks. In particular, we have at our disposal:

- a gonio-photometer with rotating mirror and measuring distance up to 33 m to determine the spatial light intensity distribution of lighting fixtures
- a gonio-photometer to determine the spatial light intensity distribution of car and motorcycle lights and signalisation equipment

We can measure the light emitted by a source, as well as the light reflected by a material. We can also measure the diffuse reflection coefficient and the total reflection coefficient.

■ **Spectral measurements.** The light energy in function of the wavelength determines the colorimetric properties of the light source or reflective material. The spectrum is measured with the help of reference lamps and of a spectrophotometer with double monochromator. This covers a wavelength range of 200 to 760 nm (UV and visible light). From this determination of the spectrum we can derive other colorimetric characteristics, such as the chromatic coordinates, the colour temperature (T_c) and the colour rendering index (R_a).

We measure the above characteristics **before and after ageing**. Ageing can be artificially generated by means of UV radiation or salt water spraying. Lamps are aged in special rooms under controlled operating conditions.

■ Electrical safety tests too

Laborelec can also carry out safety tests on lighting appliances. These tests cover electrical safety and resistance to heating, shocks, dust, moisture (IP and IK grade), etc.



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Five reasons for you to choose Laborelec:

- you have one-stop shopping for your energy needs;
- you get access to more than 40 years of experience;
- you get rapid service with reliable solutions;
- you increase the profitability of your installations;
- you benefit from independent and confidential advice.