The advantages of LUVIS

- **LUVIS** meets the illuminance requirements of EN ISO 8598.
- **LUVIS** meets the European Union traffic legislation requirements.
- **LUVIS** allows standardised comparable and reproducible results.
- **LUVIS** can be moved on a height-adjustable stand with castors or can be mounted on the wall.
- **LUVIS** is illuminated with commercially available fluorescent long life tubes with a daylight-like spectrum.
- **LUVIS** is an innovative and simple solution for correct illumination of visual acuity charts.

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Do you have questions?

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LUVIS

Standardised Conditions
for examining visual contrast
and visual acuity

LUVIS

STZ eyetrial
TÜBINGEN

The Goal

Studies that require comparable measurements of visual acuity and contrast thresholds - for example in the framework of multicentre-studies or investigations complying with the European Union traffic legislation requirements - must be performed under standardized conditions.

The illuminance and contrast of the optotypes presented play a decisive role. However, a homogeneous lighting as required by EN ISO 8596 is not possible with conventional room lighting.

Our goal was to produce standardized test conditions with a homogeneous illumination of eye charts in the required luminance range. The result is LUVIS.

The Pelli Robson chart is often used for the examination of contrast vision and is even compulsory in numerous clinical studies. For the development of LUVIS we therefore used the size of this chart as the norm. With a case size of 70 cm X 95 cm X 18 cm (W X H X D) LUVIS can also be used for other charts.

The Method

Two fluorescent tubes with daylight-like spectrum are vertically attached at the left and right edge of the board. The diffuse incident light obtained with LUVIS provides a uniform light distribution over the entire eye chart.

The illuminance is controlled by dimmable HF-fluorescent ballast which ensures a flicker-free light.

In accordance with EN ISO 8596, a surrounding field illuminance (illuminance between optotypes) of between 80 and 320 cd/m^2 can be produced with a high contrast to the optotypes. This range is also recommended for the examination of the photopic contrast vision. The permissible range of tolerance is given as ± 25%. The deviation obtained with LUVIS is approximately a third of this permissible range and so well below the tolerance limits.