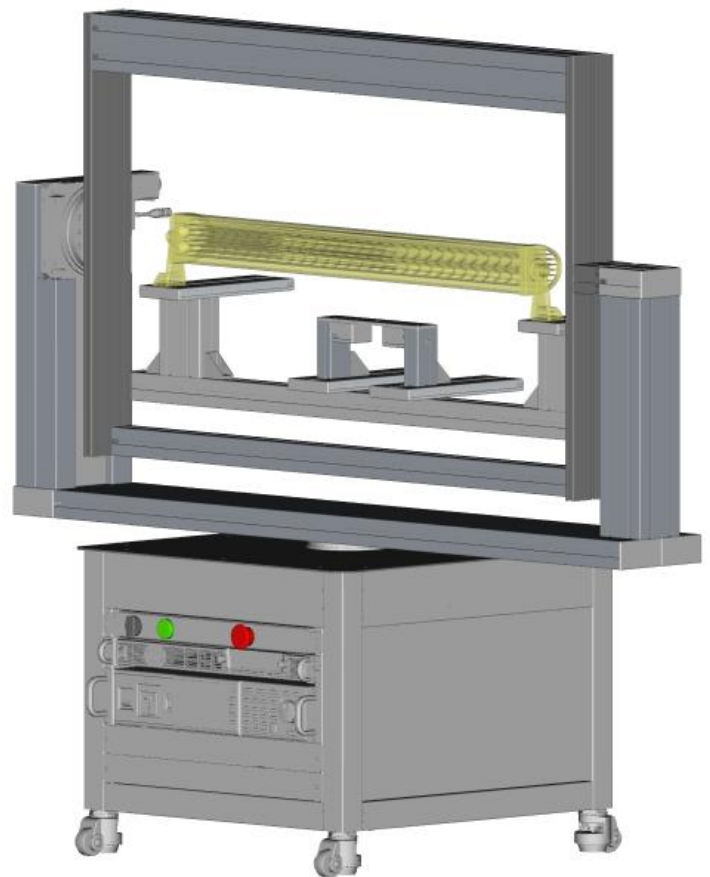


GONIOPHOTOMETER SSL AUTO 100

**TESTING SYSTEM FOR MEASURING ANGULAR LUMINOUS INTENSITY
DISTRIBUTION in H,V AXIS COORDINATES**



- ✓ **Auxiliary car lights**
- ✓ **Train headlamps, tail-lamps**
- ✓ **Airport taxiway/runway lights**
- ✓ **Bicycle lights**
- ✓ **Traffic lights (VMS)**

Type B GONIOPHOTOMETER SSL AUTO 100

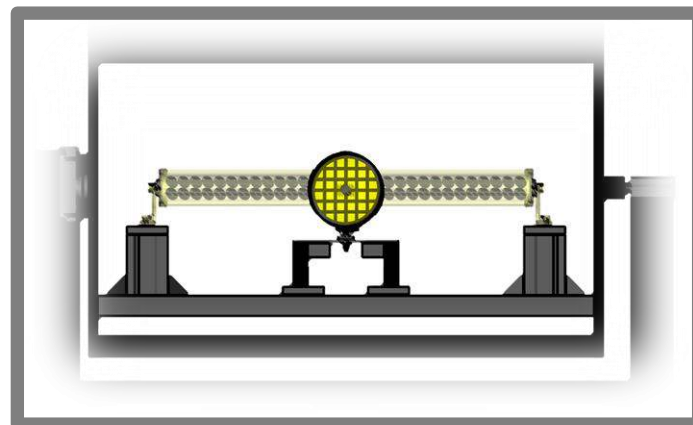
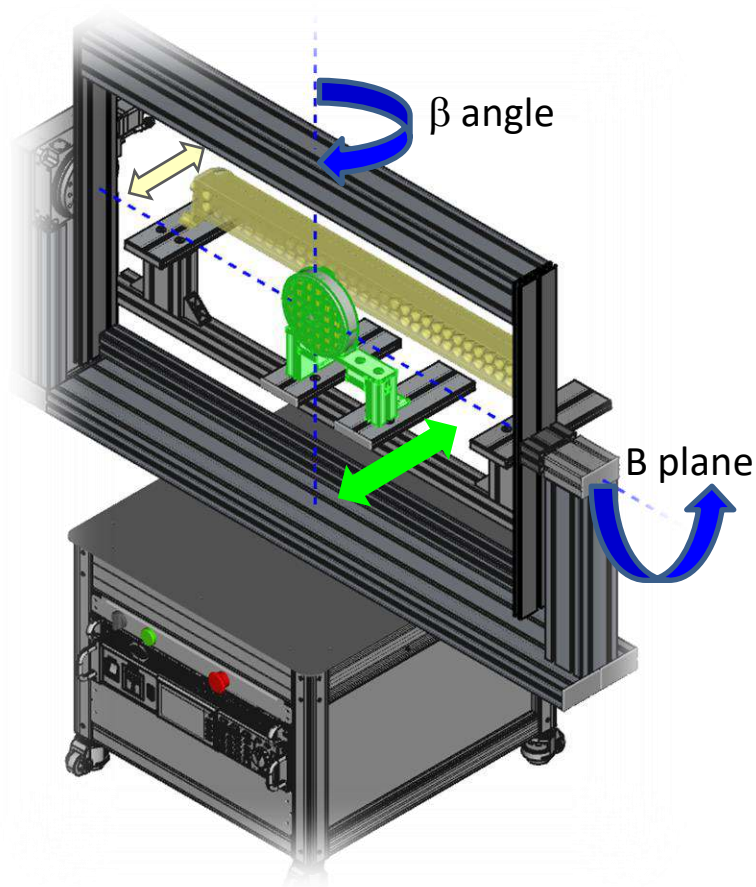


Fig. Dedicated sample holder enables simultaneous usage for round and linear lights .

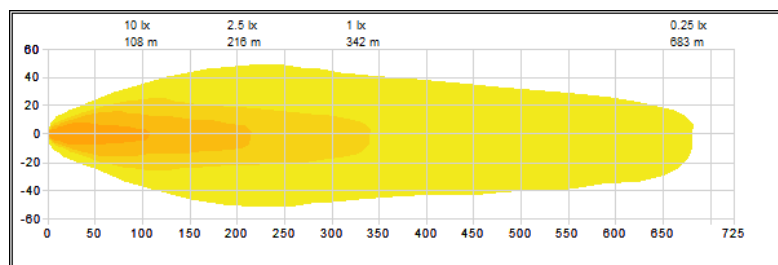


Fig. Simulation of horizontal isolux of auxiliary car light.

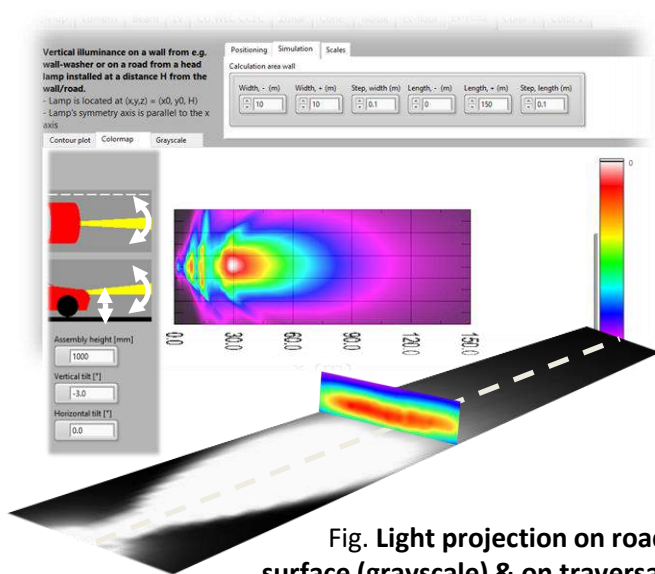


Fig. Light projection on road surface (grayscale) & on traversal plane at 50m distance (color).

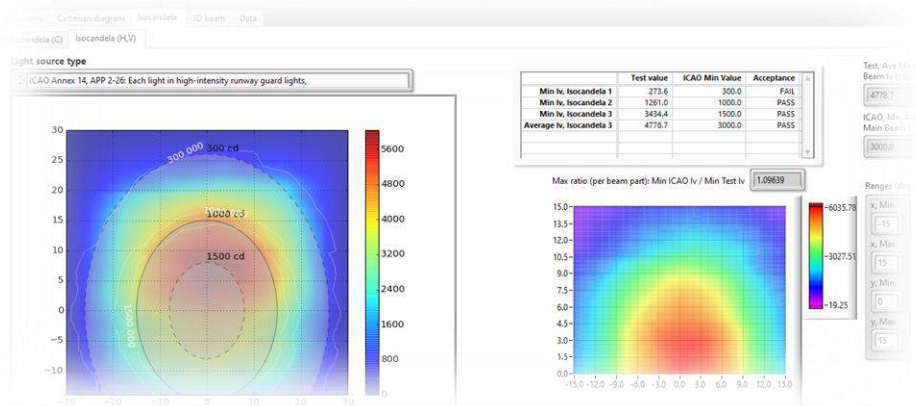


Fig. Pass-fail results of luminous intensity in specified H,V angles stated in test standards of e.g. FVMSS108, ECE, ICAO, FAA.

SPECIFICATION

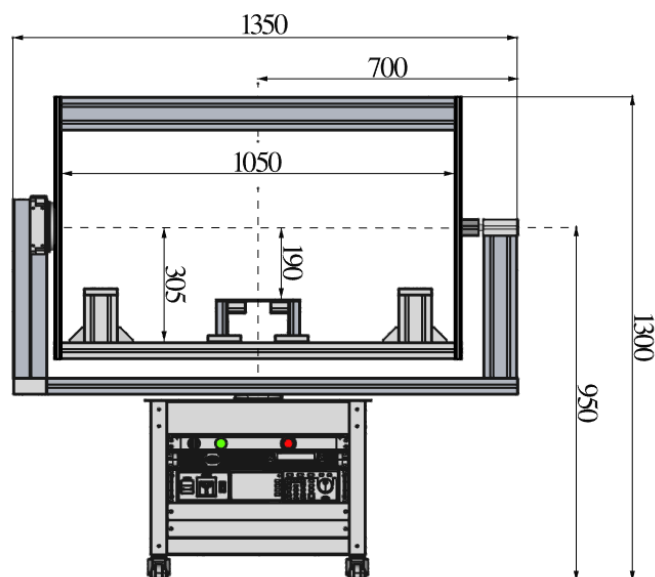
Goniometer	SSL AUTO 100 (Prodcut code SSL B.100)
Goniometer type	B type, CIE type 1.1
Gonio driver and controller	2 axis Stepper motor controller with RS-232 / USB interface, Worm gear drive system with deep groove ball bearings. Emergency stop switch.
Goniometer arrangement	Electrical devices are integrated into Goniometer station. It has 4U spaces for 19" rack devices.
Alignment laser	Red cross-line laser
Height, diameter of rotation	1.4 m, D=1.4 m
Height of optical axis	Approximately 1.0 m
Max total length, height and mass of DUT ²	1000 mm, 560 mm, 15kg
Resolution	<0.01° (B and β axis)
Reproducibility / Accuracy	<0.1° (B and β axis)
Turning range, B plane ¹⁾	±90°
Turning range, β angle ²⁾	±90°, effective dead angle in 80°...85° depending on the source size
Movement range, Z-direction	None
Minimum room space (WxHxL)	1.7 m x 1.7 m x >11 m
Photometer	SSL L-200
Photometer measuring head	SSL LH-1010-f3, Silicon photodiode with V(λ) filter. The spectral match to CIE photopic sensitivity curve $f_1' < 3\%$ (class A)
Luminous intensity range (measurement distance)	0.01 – 5 000 000 cd (3.16 m) 0.1 – 50 000 000 cd (10 m) 0.3 – 170 000 000 cd (18.3 m) 0.6 – 310 000 000 cd (25 m) 0.9 – 470 000 000 cd (30.5 m)
Viewing angle of stray light tube	±4.5° (SSL tube-270-32)

¹⁾ B plane = Vertical plane / Horizontal measurement axis

²⁾ β angle = Horizontal plane / Vertical measurement axis



Fig. SSL Stand-1. Al-profile tripod.
 – height and tilt angle adjustable
 photometer stray light tube.
 – Photometer electronics holder.
 – Mount angle for floor installation



Gonio System Delivery

OPTION 1: Standard package

Description: The goniometer station and accessories are tightly packed into a relatively small transport wooden box. The laboratory room is prepared by black before the gonio delivery and installation using convenient materials.

Advantages:

- Cheaper transportation costs.

Disadvantages:

- More unpacking and assembly work.
- Roof, floor and walls of Gonio Laboratory room needs to be covered by low reflectance diffuse black material.
- Laboratory lighting needs to be constructed.

OPTION 2. Dark chamber package (Figures below)

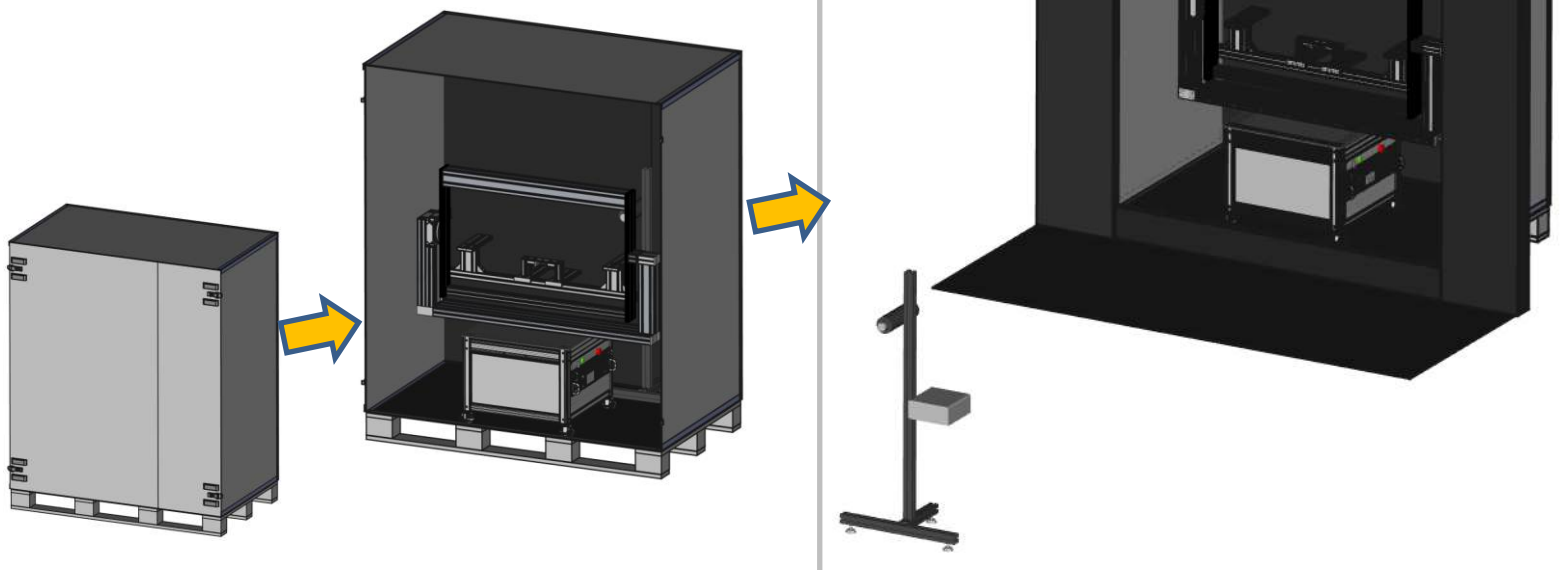
Description: The goniometer station and accessories are transported in the Dark chamber box. The Dark chamber has luminaires inside. Lighting is controlled by gonio software. Additional construction work of the laboratory room is not required. All needed stuff are delivered in the dark chamber. When setuping the Dark chamber, the front wall of the dark chamber is removed and the additional side walls and carpet are installed around the dark chamber.

Advantages:

- No need for separate transportation box and additional unpacking work.
- No need for making laboratory room by black or building illumination to the laboratory room
- Automatic switch on/off of ambient lighting during measurements
- No need for gonio assembly.

Disadvantages:

- More expensive transportation costs.



ORDERING INFORMATION

Goniometers

SSL B.100 SSL AUTO-100, 2-axis Goniometer station (B, β), GPM-sw-B, Stray light tube and Al-profile stand, Alignment laser, MC-200-BT gonio controller, Sample holders SSL SH-B.Linear and SH-B.Round

Options

SSL L-200	LH1010-f3	Photometer SSL L-200 and measuring head LH1010-f3 ($f_1' < 3\%$), alternative photopic measuring heads available for different illuminance ranges.
SSL SecPhm		Secondary photometer for measuring low luminous intensity levels / flicker in a short distance (SSL L-40 photometer + additional stray light tube and Al-profile stand)
SSL C-600	CH66-4	Tristimulus colorimeter equipped with 4-channel measuring head CH66-4 having the $f_1' < 3\%$ for X,Y and $< 3.5\%$ for Z. Dynamic range 1e8. (SSL L-200 can be replaced by C-600 to become the primary photometer.) Alternative colorimetric measuring heads available for other illuminance ranges and for f_1' .
SSL GSM_VIS		Spectrometer, bandwidth $< 5\text{nm}$, WL range 380-780nm. Includes an additional stray light tube and stand + Goniospectrometer sw + Irradiance calibration
SSL BPC-B		Burning position corrector setup of B type gonio including a L-10 photometer (Bluetooth communication) and a related software tool
SSL DarkBox-1017		Dark chamber for the transportation and laboratory build. Inner dimensions 1m x 1.7m x 1.9m (height).

OPTIONS

- ✓ Computer controllable DC / AC Power supply
- ✓ Spectrometer / colorimeter