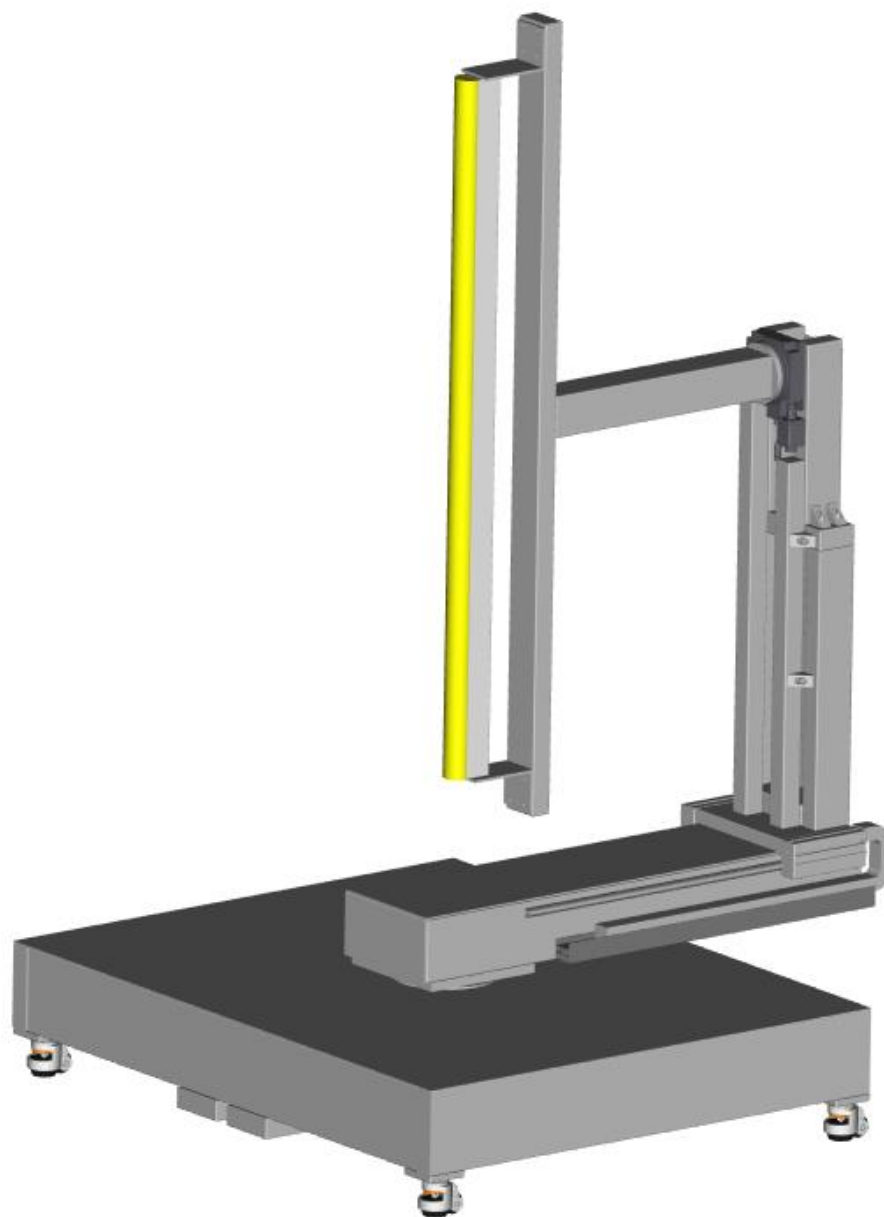


TURNING LUMINAIRE GONIOMETER SSL UNI 200

COST-EFFECTIVE GONIOPHOTOMETER

- ✓ Accurate characterization of spatial photometric features of luminaires
- ✓ Luminous flux and efficacy
- ✓ Input power and power factor
- ✓ No need for integrating spheres



TURNING LUMINAIRE GONIOMETER SSL UNI 200



EQUIPMENT HOLDER

SSL UNI 200 is equipped by a separate small device rack having a 8U space for all devices including gonio controller and DC / AC power sources.



STRAY LIGHT TUBE

With the attaching the photodetector to a stray light tube, the laboratory preparation is much easier. The stray light from the side wall, ceiling and floor is eliminated by a stray light tube having a couple of apertures with a knife edge land. The photometer can see reflections only from the back-wall behind the goniometer station, so only it needs to be covered by a special black surface. The stray light tube also allows use of roof lighting in the photometer end of the gonio lab making more more comfortable working area in the lab. The stray light tube is assembled at a fixed photometric distance according to the largest possible test sample. This reduces the risk of erroneous distance setting.

SPECIFICATION - SSL UNI 200

Goniometer	SSL UNI 200			
Product code	SSL C-1.30-200-80			
Application area	Up to large and heavy luminaires			
Height, Width, and Length	2.47 m, 1.42 m, 1.15 m			
Height of optical axis	Approximately 1.46 m			
Length, depth, mass of DUT ²	200 cm, 80 cm, 30kg			
Minimum room space (WxHxL)	3 m x 3 m x 13 m			
Goniometer type	C type with horizontal optical axis.			
Gonio driver and controller	2 axis Stepper motor controller with RS-232 interface, Worm gear drive system with deep groove ball bearings. Emergency stop switch.			
Goniometer arrangement	Goniometer station and the electrical device rack holder are in separate units. The rack holder is of size 19” rack integration (unoccupied 8U for AC/DC power supply / meter)			
Alignment laser	Red cross-line laser (1mW, 635 nm), portable laser distance meter (measurement range 0.5-25m)			
Resolution	<0.01° (C and γ axis)			
Reproducibility / Accuracy	<0.1° (C and γ axis)			
Photometer	SSL L-200			
Photometer measuring head	SSL LH1010-f3, Silicon photodiode with V(λ) filter. The spectral match to CIE photopic sensitivity curve f ₁ '<3% (class A)			
Min. luminous intensity accuracy	>± 2.5% (k=2), depends on the angular beam shape of DUT			
Luminous flux accuracy	± 3% (k=2)			
Luminous intensity range (measurement distance)	0.06 – 6 000 000 cd (8 m) 0.10 – 10 000 000 cd (10 m) 0.23 – 23 000 000 cd (15 m) 0.40 – 40 000 000 cd (20 m) 2.50 – 250 000 000 cd (50 m)			
Luminous flux range (measurement distance)	Measurement distance / Radiation type of the sample	Isotropic radiation (uniform over the γ range ±180°)	Lambertian radiation, γ range ±90°	Narrow beam radiation with 40° beam angle [cos ⁿ (θ) type beam], γ range ±90°
	8 m	0.8 – 80 000 000 lm	2.0 – 20 000 000 lm	0.4 – 3 200 000 lm
	10 m	1.2 – 120 000 000 lm	3.1 – 30 000 000 lm	0.6 – 5 100 000 lm
	15 m	2.8 – 270 000 000 lm	7.1 – 70 000 000 lm	1.2 – 11 000 000 lm
	20 m	5.0 – 490 000 000 lm	13 – 120 000 000 lm	2.0 – 20 000 000 lm
	50 m	31 – 3 000 000 000 lm	79 – 780 000 000 lm	13 – 120 000 000 lm
Viewing angle of stray light tube	±9.7°			

OPTIONS

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

Dimensions – SSL UNI 200

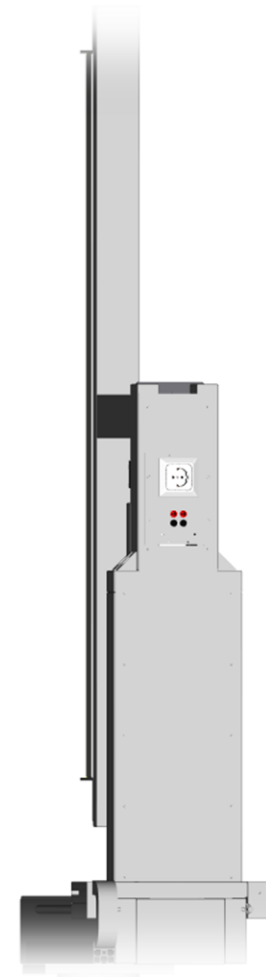
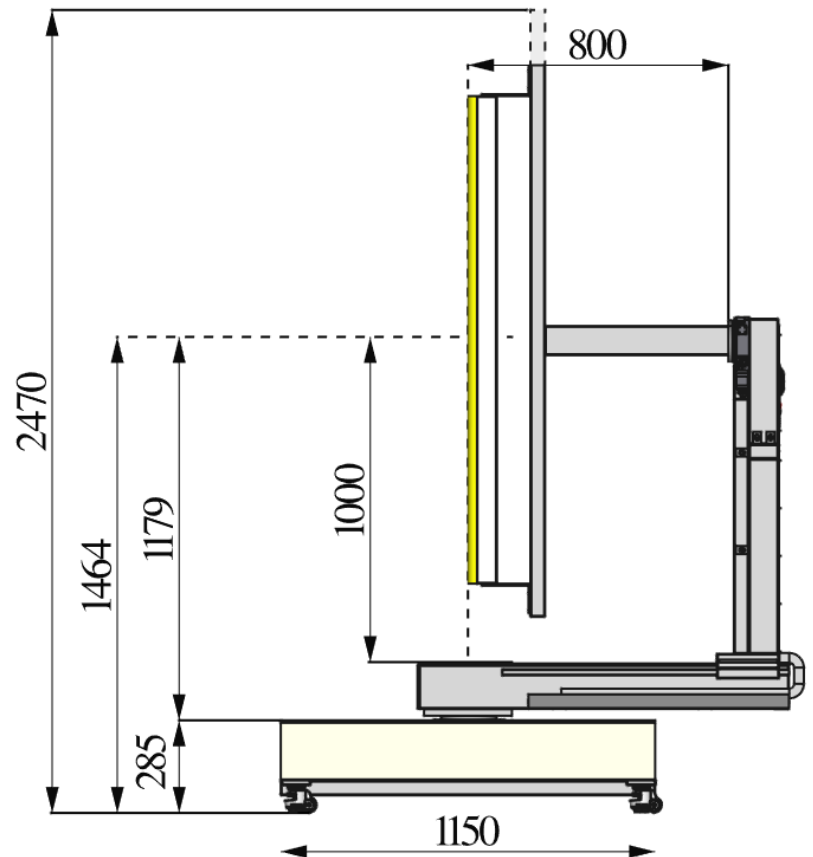
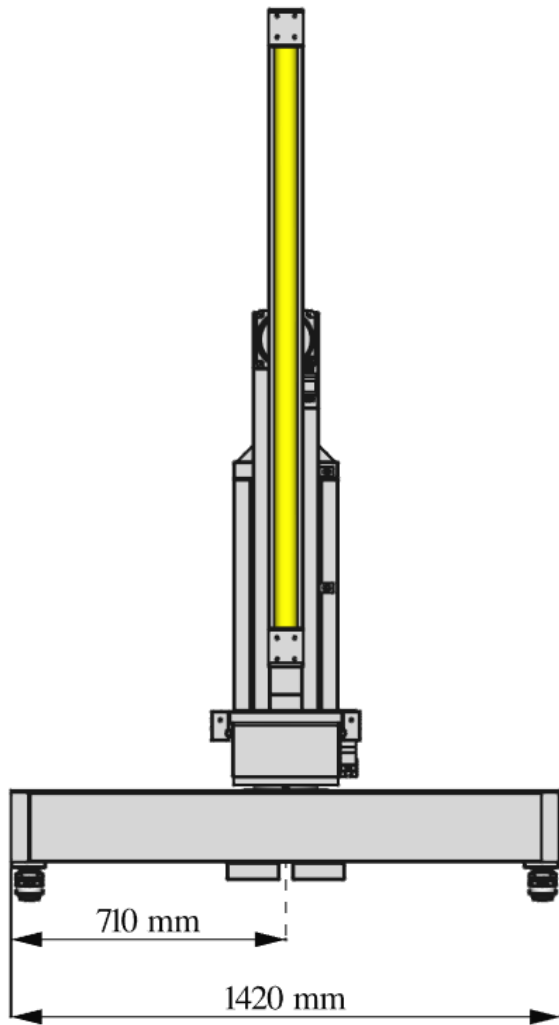


Fig. Minimal dead-angle of moderate omnidirectional lighting fixtures (in figure $\gamma = 170^\circ$).

ORDERING INFORMATION

Goniometers

SSL UNI 200	2-axis Type (C, γ) Goniometer station SSL C-1.30-200-80, GPM-sw-full, Stray light tube and stand, Alignment laser, SSL-rack-1
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Options

SSL-SH-xx	Sample holder of linear LUT (xxcm long x 60cm wide): two alternatives attaching mechanisms: (1) by squeezing the LUT with four angle brackets (2) by screwing the LUT using square nuts (M4/M6/M8) in the grooves (angle brackets are removed)
SSL-SH-park	Sample holder of park lights : Mounting by squeezing a park light from its edges, max. Ø70 cm, a top of the park light can be located into center hole diameter 12 cm
SSL-SH-panel	Sample holder of panel lights and down lights : Mounting by squeezing a LED panel from its edges, compatible for different sizes LED panels with thicknesses of >7.5 mm
SSL-SH-street	Sample holder of street luminaires with pole mounting system : 60mm tube, fixation by two screws in radial orientation, max. distance between mounting hole and the roof of the LUT 13cm
SSL-black	Special low reflectance black material for a back wall and floor of gonio laboratory room
SSL-computer	Measurement computer with needed communication cards and installation work (drivers and software)
SSL-GSM	Goniospectrometer measurement system: Spectrometer (6nm bandwidth, in 380-760nm) with Tripod and mechanics adapters, GSM sw measures all the total and angular dependent spectral and colorimetric quantities
SSL L-200	Photometer with RS-232 interface
SSL C-600	Tristimulus Colorimeter with RS-232interface
SSL pow-8213	Automatic input power measurement in GPM software, GW Instek GPM-8213, AC plug adapter, 19" 2U
SSL pow-66205	Automatic input power measurement in GPM software, Chroma 66205, AC plug adapter, 19" 2U
SSL AC-7050	APS-7050, 500W: a stable programmable AC power & automatic powering through the GPM software, 19" 2U
SSL AC-61601	Chroma 61601 500W: a stable programmable AC power & automatic powering through the GPM software, 19" 2U
SSL-DC sw	DC power control software: Automatic control and measurement of input power together with the light output
SSL-DC-750	TDK GEN 750W, programmable DC power supply, 19" 1U
SSL CAL-LED-3	Set of calibration lamps for luminous flux and luminous intensity (3 pcs, GU10 LED 2700K, 4000K, 6500K)
SSL CAL-HAL-2	Set of calibration lamps for spectral irradiance (2 pcs, G4 halogen)
SSL ALI-2	Add-on setup for Absolute lumen integrator, CIE S025 compatibility, luminous intensity distribution measurement directly in nominal burning position of small lighting fixtures.
SSL BPC-C	Add-on Setup for burning position corrector for type C goniometer including a related software tool, CIE S025 compatibility
SSL-service	Goniometer system first installation and basic training including example measurements on customer site (2-3 days)
SSL-rack-2	19" device rack with wooden table top for placing the computer, display, and keyboard. Delivery instead of SSL-rack-1