Calibration Certificate

Measuring Object	Photometer-Unit with photometer head of Mirror Goniophotometer GO-DS 2000 No. 05B245
Manufacturer	LMT Lichtmesstechnik GmbH Berlin
Type	**Photometer Unit** with **SP 30 S0T-1S**
Instrument No.	**05B2451** with **05B2452**
Customer	BELINTEGRA, 220124 Minsk, Republic of Belarus
Order No.	**05B245**
Date of calibration	January 2013
Kind of Measurement	Calibration of photometer with known illuminance
Measurement Conditions / Calibration method	The photometer head of the photometer was mounted on an optical bench. A luminous intensity standard lamp type OSRAM Wi41/G lamp-no. 306 produced a known illuminance with perpendicular light incidence on the surface of the photometer heads. A mirror sample taken from the mirror goniophotometer with light incidence under 45° was used within the light path. The luminous intensity of this lamp has been evaluated before by use of a standard lamp type OSRAM Wi41/G with calibration mark 3889 PTB 84 and certificate of PTB (Physikalisch-Technische Bundesanstalt, D-Braunschweig), reference no. PTB 4.12 – 4055931 from 01-23-2012, for distribution temperature of 2856 K. The LMT reference photometer no. KALLI 81 was used as transfer standard. The luminous intensity standard lamp was driven in a way that the correlated color temperature of the lamp was according to Standard Illuminant A (T_{cp} = 2856 K) and the reference photometer KALLi 81 showed the evaluated readout. The distance between the standard lamp and the photometer head was ≥ 3.5 m. The nominal illuminance was **19.10 lx**. The outside of the entrance window (glass or turbid material) is the reference plane for light incidence. The calibration temperature was 25 °C ± 1 °C. The measurement was adjusted to the nominal value.
Measurement Results	The measurement was: **19.10 lx** The relative expanded measurement uncertainty is 1.2 %. The reported expanded uncertainty of measurement is stated as the relative standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95 %.
Remark	It is recommended to recalibrate the photometer at least after two years.

Berlin, January 17, 2013

LMT LICHTMESSTECHNIK GMBH BERLIN

Dr.-Ing. Horst-Günter Ulrich
Head of the calibration laboratory

Technician

LMT LICHTMESSTECHNIK GMBH BERLIN · HELMHOLTZSTR. 2–9 · 10587 BERLIN GERMANY
TEL. (+4930) 393 40 28 · FAX (+4930) 391 80 01 · E-MAIL LMT@LMT.DE · HTTP://WWW.LMT.DE