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# **Chapter 13 - Appendix 13.1**

Illuminance Meter Certificate of Calibration

October 2023

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# **Chapter 13 - Appendix 13.1**

**Illuminance Meter Certificate of Calibration**

October 2023

# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	20/10/2023	DS	JM	CS	Appendix 13.1 to ES Chapter 13 - Lighting. Illuminance Meter Certificate of Calibration.

**Information class: Standard**

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# 1 Illuminance Meter Certificate of Calibration

<b>Certificate of Calibration</b>		Certificate number STD_146944
Issued by:	BSRIA Instrument Solutions - A division of BSRIA Limited	Page 1 of 3 pages
Date of issue:	25 September 2023	

	
<b>Laboratory address:</b> Old Bracknell Lane West, Bracknell, Berkshire RG12 7AH T: +44 (0) 1344 459 314   0800 254 5566 E: instruments@bsria.co.uk W: www.bsria.com/uk/instrument/	DANIEL LINFIELD Approved signatory

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<b>Customer:</b>	Instrument Solutions Old Bracknell Lane West Bracknell Berkshire RG12 7AH
<b>Date received:</b>	04 July 2023
<b>Instrument:</b>	BSRIA I.D.: 202960 Description: Light meter Manufacturer: Konica Minolta Model: T-10A Serial number: 20017001 Procedure version: U6F11V4

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<b>Laboratory conditions:</b>	
Temperature: 20 °C ± 4 °C	Relative humidity: < 75 %rh
Mains voltage: 240 V ± 10 V	Mains frequency: 50 Hz ± 1 Hz


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<b>Comments:</b>
Instrument calibration conducted as found - no adjustments undertaken.
Instrument was zeroed prior to the start of the calibration.

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<b>Calibration information:</b>	
The instrument was calibrated by comparison against laboratory reference equipment whose values are traceable to recognised National Standards. This is an electronic document that has been signed digitally.	
The uncertainties quoted refer to the calibration only and are not intended to indicate any long-term instrument specification/performance. This certificate only relates to the items calibrated and was performed at the above laboratory address.	

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<b>Calibrated by:</b> M. Rule		<b>Date of calibration:</b> 25 September 2023
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This certificate provides traceability of measurement to recognised National Standards, and to the units of measurement realised at the National Physical Laboratory or other recognised National Standards laboratories.  
Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory. This certificate complies with the requirements of BS EN ISO 10012:2003.

Figure 1.1: Konica Minolta T-10A illuminance meter Certificate of Calibration Page 1

<h1 style="margin: 0;">Certificate of Calibration</h1> <p style="margin-top: 10px;">As Found Results</p>	<p style="margin: 0; font-size: small;">Certificate number <b>STD_146944</b></p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <p style="margin: 0; font-size: small;">Page 2 of 3 pages</p>
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**Reference equipment used in the calibration:**

Instrument description	Serial number	Certificate number	Last cal. date	Cal. period
Light Bench (ZZMLB02)	18425/2 & 18426/1	ZZMLB02 - 2023	02/03/2023	12 Months
Light Bench (ZZMLB03)	18425/1 & 18427/1	ZZMLB03 - 2023	02/03/2023	12 Months
Distance Measuring System (ZZMLB04)	4816	ZZMLB04 - FEB 2023	08/02/2023	12 Months

**Calibration uncertainties:**

The reported measurement uncertainty values shown have been calculated taking into account the device resolution and stability at the time of calibration.

**Instrument contents:**

Main unit	Yes
Detector head	Yes
Zero cap	Yes
Meter adapter head	Yes
Cat 5 cable	Yes
Receptor head	Yes
x2 batteries fitted	Yes
x2 batteries spare	Yes
Manual	Yes
Certificate	Yes
Soft case	Yes
Hard carry case	Yes

**Inspection results:**

Visual inspection	Pass
Integrity seals	Pass
Memory cleared	Pass
Mode set to lx	Pass

**Figure 1.2: Konica Minolta T-10A illuminance meter Certificate of Calibration Page 2**

<h1 style="margin: 0;">Certificate of Calibration</h1>	Certificate number <b>STD_146944</b>
<b>As Found Results</b>	Page 3 of 3 pages

**Calibration procedure:**

The instrument was calibrated against laboratory standards which are themselves traceable back to National Standards. The illuminance measurements were conducted in accordance with the methodology contained in BS667 using a tungsten filament lamp with a colour temperature of 2856 k. Illuminance levels were calculated using an inverse square law with respect to distance away from a tungsten filament lamp source.

**Calibration results:**

Illuminance - lux range

Unit under test display zeroed before test

Pass

Applied	Indicated	Correction	Specification	% of Spec.	Uncertainty
50.00 lux	51.0 lux	-1.00 lux	±2.50 lux	40.0 %	2.5 lux
100.0 lux	101.6 lux	-1.6 lux	±5.0 lux	32.0 %	5.0 lux
200.0 lux	201.5 lux	-1.5 lux	±10.0 lux	15.0 %	10 lux
500.0 lux	500 lux	0.0 lux	±25.0 lux	0.0 %	25 lux
1000.0 lux	985 lux	15.0 lux	±70.0 lux	21.4 %	50 lux
2000.0 lux	1945 lux	55.0 lux	±140.0 lux	39.3 %	100 lux

Any test points marked with a \* do not comply with instrument specification.

End.

**Figure 1.3: Konica Minolta T-10A illuminance meter Certificate of Calibration Page 3**



