

Non-destructive testing - Industrial radiographic  
illuminators - Minimum requirements (ISO  
5580:2023)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 5580:2023 sisaldab Euroopa standardi EN ISO 5580:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.12.2023.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 5580:2023 consists of the English text of the European standard EN ISO 5580:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 06.12.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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English Version

## Non-destructive testing - Industrial radiographic illuminators - Minimum requirements (ISO 5580:2023)

Essais non destructifs - Négatoscopes utilisés en radiographie industrielle - Exigences minimales (ISO 5580:2023)

Zerstörungsfreie Prüfung - Betrachtungsgeräte für die industrielle Radiographie - Minimale Anforderungen (ISO 5580:2023)

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN ISO 5580:2023) has been prepared by Technical Committee ISO/TC 135 "Non-destructive testing" in collaboration with Technical Committee CEN/TC 138 "Non-destructive testing" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 25580:1992.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Endorsement notice

The text of ISO 5580:2023 has been approved by CEN as EN ISO 5580:2023 without any modification.

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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 5, *Radiographic testing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 5580:1985), which has been technically revised.

The main changes are as follows:

- normative references added to [Clause 2](#);
- exact specification for luminance measurement equipment required ([4.3](#));
- statements on luminance control of illuminators added ([4.3](#));
- range of permitted light colours has been added ([4.4](#));
- “Lamps” replaced by “Light sources”, so that LEDs can be used too ([7](#));
- “Film density” was replaced by “optical density” throughout the document;
- minor editorial corrections.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Non-destructive testing — Industrial radiographic illuminators — Minimum requirements

## 1 Scope

The function of an industrial radiographic illuminator is to provide sufficient diffuse light for viewing of developed radiographic films (radiographs).

This document specifies the minimum requirements for industrial radiographic illuminators used for viewing radiographs.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CIE S 017/E, *International Lighting Vocabulary*, 2<sup>nd</sup> Edition

ISO/CIE 19476, *Characterization of the performance of illuminance meters and luminance meters*

ISO 5576, *Non-destructive testing — Industrial X-ray and gamma-ray radiology — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in CIE S 017/E and ISO 5576 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Characteristics of radiographic illuminators

### 4.1 Mechanical and electrical construction

An illuminator consists of the housing with one of the sides being the viewing screen illuminated from the inside. This screen can itself be the diffusing screen. This housing may also contain a system for thermal protection of the radiographs; this system may or may not be ventilated.

Generally, dry radiographs should be viewed. For possible viewing of wet radiographs in the dark room, the illuminator shall be designed to prevent penetration of the liquid if the radiograph comes into contact with the screen.

The illuminator shall guarantee the same safety of personnel as an electric apparatus with maximum voltage, insulation and earthing which is required by corresponding safety standards of electro technics in each country where these are applied.

### 4.2 Viewing screen

The screen shall be easy to clean and shall be made of a material which is resistant to scratching during cleaning processes recommended by the manufacturer and during film viewing.