



SLOVENSKI STANDARD
SIST-TS CEN ISO/TS 7127:2025

01-marec-2025

Svetloba in razsvetljava - Informacijsko modeliranje gradenj za lastnosti razsvetljave - Sistemi razsvetljave (ISO/TS 7127:2023)

Light and lighting - Building information modelling properties for lighting - Lighting systems (ISO/TS 7127:2023)

Licht und Beleuchtung - BIM-Merkmale für die Beleuchtung - Beleuchtungssysteme (ISO/TS 7127:2023)

Lumière et éclairage - Propriétés de modélisation des informations de la construction pour l'éclairage - Systèmes d'éclairage (ISO/TS 7127:2023)

Ta slovenski standard je istoveten z: CEN ISO/TS 7127:2024

[SIST-TS CEN ISO/TS 7127:2025](http://standards.sist.si/standards/cen/7127/2025)

ICS:

35.240.67	Uporabniške rešitve IT v gradbeništvu	IT applications in building and construction industry
91.160.01	Razsvetljava na splošno	Lighting in general

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TECHNISCHE SPEZIFIKATION

CEN ISO/TS 7127

October 2024

ICS 35.240.67

Supersedes CEN/TS 17623:2021

English Version

**Light and lighting - Building information modelling
properties for lighting - Lighting systems (ISO/TS
7127:2023)**

Lumière et éclairage - Propriétés de modélisation des
informations de la construction pour l'éclairage -
Systèmes d'éclairage (ISO/TS 7127:2023)

Licht und Beleuchtung - BIM-Merkmale für die
Beleuchtung - Beleuchtungssysteme (ISO/TS
7127:2023)

This Technical Specification (CEN/TS) was approved by CEN on 30 September 2024 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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CEN ISO/TS 7127:2024 (E)

Contents	Page
European foreword.....	3

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[SIST-TS CEN ISO/TS 7127:2025](https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025)

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European foreword

The text of ISO/TS 7127:2023 has been prepared by Technical Committee ISO/TC 274 "Light and lighting" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TS 7127:2024 by Technical Committee CEN/TC 169 "Light and lighting" the secretariat of which is held by DIN.

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 CEN/TS 17623:2021.

CEN ISO/TS 7127:2024 includes the following significant technical changes with respect to CEN/TS 17623:2021:

- Title changed to "Light and lighting — Building information modelling properties for lighting — Lighting systems";
- For some properties names were changed, descriptions improved, and examples added; however, all properties keep the same GUID and ID to preserve compatibility;
- New properties added in Table 1 to Table 8;
- New Table 9 with environmental properties of lighting systems.

Any feedback and questions on this document should be directed to the users' national standards body. 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 announce this Technical Specification: 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/TS 7127:2023 has been approved by CEN as CEN ISO/TS 7127:2024 without any modification.

TECHNICAL SPECIFICATION

ISO/TS 7127

First edition
2023-08

Light and lighting — Building information modelling properties for lighting — Lighting systems

*Lumière et éclairage — Propriétés de modélisation des informations
de la construction pour l'éclairage — Systèmes d'éclairage*

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Document Preview

[SIST-TS CEN ISO/TS 7127:2025](https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025)

<https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025>



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[SIST-TS CEN ISO/TS 7127:2025](https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025)

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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principal structure	2
4.1 General.....	2
4.2 Detailed description of set of attributes.....	2
4.2.1 General.....	2
4.2.2 GUID.....	3
4.2.3 ID.....	3
4.2.4 Name.....	3
4.2.5 Description.....	3
4.2.6 Symbol.....	3
4.2.7 Format, Unit.....	3
4.2.8 Value set.....	3
4.2.9 Examples.....	4
4.3 Further IT-related attributes.....	4
5 Properties for lighting systems	5
Bibliography	58


 (https://standards.iteh.ai)
 Document Preview

[SIST-TS CEN ISO/TS 7127:2025](https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025)

<https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025>

ISO/TS 7127:2023(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 274, *Light and Lighting*.

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.

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<https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025>

Introduction

Building information modelling (BIM) is a concurrent process that gives engineering and construction professionals the tools to more efficiently plan, construct, and manage buildings and infrastructure.

Within standardisation committees much work is being performed to define the fundamental principles of BIM that will allow this to happen in an effective and consistent manner.

For lighting applications, it is essential that this work is monitored and where required input is made to ensure that the requirements for lighting applications are considered.

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[SIST-TS CEN ISO/TS 7127:2025](https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025)

<https://standards.iteh.ai/catalog/standards/sist/d383989a-6c52-4e1b-a197-e53a311d08b0/sist-ts-cen-iso-ts-7127-2025>

Light and lighting — Building information modelling properties for lighting — Lighting systems

1 Scope

This technical specification identifies and clarifies lighting properties for digital building design and maintenance.

This document provides all the needed properties to design and to describe lighting systems. These properties are intended to be used for mapping between data providers and requesters. The mapping of the identifiers enables the exchange of luminaire and sensing device data within different databases.

The unambiguous mapping and description of properties improves the data quality, reduces misinterpretations and the processing time in digital environments. Therefore, the properties listed in this document establish the essential description of lighting systems in BIM systems and databases.

The listed properties in this document are used to structure the product data sheet which is complemented with real product information.

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.

ISO 23386:2020, *Building information modelling and other digital processes used in construction — Methodology to describe, author and maintain properties in interconnected data dictionaries*

CIE S 017:2020, *ILV: International Lighting Vocabulary*

ISO 80000-7, *Quantities and units — Part 7: Light*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in CIE S 017, ISO 80000-7 and the following 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/>

3.1 building information modelling BIM

use of a shared digital representation of a built object (including buildings, bridges, roads, process plants, etc.) to facilitate design, construction and operation processes to form a reliable basis for decisions

Note 1 to entry: The acronym BIM also stands for the shared digital representation of the physical and functional characteristics of any construction works.

[SOURCE: ISO 29481-1:2016, 3.2]

ISO/TS 7127:2023(E)

3.2 data dictionary

database that contains metadata

[SOURCE: ISO/IEC 2382:2015, 2121501]

3.3 attribute

data element for the computer-sensible description of a property, group of properties, etc.

Note 1 to entry: An attribute describes only one single detail of a property or a group of properties.

EXAMPLE The GUID of a property, the name of a property, the definition of a group of properties.

[SOURCE: ISO 23386:2020, 3.4, modified – Example extended]

3.4 property

inherent or acquired feature of an item

EXAMPLE Thermal efficiency, heat flow, sound reduction index, sound power level, colour.

[SOURCE: ISO 23386:2020, 3.17]

4 Principal structure

4.1 General

A lighting system (for example a luminaire or a sensing device) is described by specific properties, providing the possibility to communicate about it in an application or specification.

The properties for lighting systems have been organized in tables listed in [Clause 5](#) according to different disciplines. This sub-division is indicative only and not to be taken as exclusive:

- Mechanical properties – ID 01 ([Table 1](#));
- Electrical properties – ID 02 ([Table 2](#));
- Emergency lighting properties – ID 03 ([Table 3](#));
- Photometric properties – ID 04 ([Table 4](#));
- Sensing device properties – ID 05 ([Table 5](#));
- Mounting & Accessory properties – ID 06 ([Table 6](#));
- Marketing properties – ID 07 ([Table 7](#));
- Operations & Maintenance properties – ID 08 ([Table 8](#));
- Environmental properties – ID 09 ([Table 9](#)).

4.2 Detailed description of set of attributes

4.2.1 General

The structure of the attributes is according to ISO 23386:2020 and enhanced by the property ID.

The properties have no mandatory or optional aspect. All properties are equal in importance and hierarchy. The use case and the application provide a structure and are mandatory to the properties.