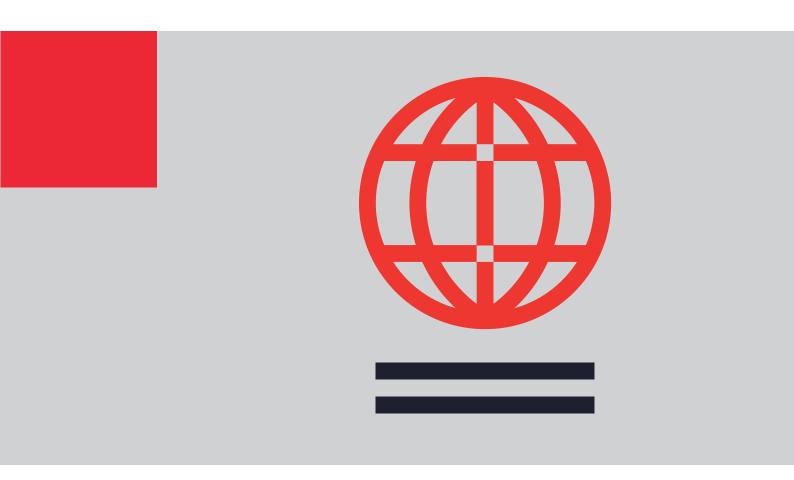# Teknisk specifikation
SIS-CEN/TS 17623:2021

BIM-egenskaper för belysning – armaturer och sensorer

BIM Properties for lighting – Luminaires and sensing devices

SIS Svenska Institutet för Standarder

Språk: engelska/English

Utgåva: 1

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Fastställd: 2021-05-27
ICS: 35.240.67

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Denna tekniska specifikation är inte en svensk standard. Detta dokument innehåller den engelska språkversionen av CEN/TS 17623:2021.

This Technical Specification is not a Swedish Standard. This document contains the English language version of CEN/TS 17623:2021.

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LÄSANVISNING

I dessa anvisningar behandlas huvudprinciperna för hur regler och yttre begränsningar anges i standardiseringsprodukter.

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Ett krav är ett uttryck i ett dokuments innehåll som anger objektivt verifierbara kriterier som ska uppfyllas och från vilka ingen avvikelse tillåts om efterlevnad av dokumentet ska kunna åberopas. Krav uttrycks med hjälpverbet **ska** (eller **ska inte** för förbud).

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En förklaring är ett uttryck i ett dokuments innehåll som förmedlar information. En förklaring kan uttrycka tillåtelse, möjlighet eller förmåga. Tillåtelse uttrycks med hjälpverbet **får** (eller motsatsen **behöver inte**). Möjlighet och förmåga uttrycks med hjälpverbet **kan** (eller motsatsen **kan inte**).

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These instructions cover the main principles for the use of provisions and external constraints in standardization deliverables.

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A requirement is an expression, in the content of a document, that conveys objectively verifiable criteria to be fulfilled, and from which no deviation is permitted if conformance with the document is to be claimed. Requirements are expressed by the auxiliary **shall** (or **shall not** for prohibition).

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A recommendation is an expression, in the content of a document, that conveys a suggested possible choice or course of action deemed to be particularly suitable, without necessarily mentioning or excluding others. Recommendations are expressed by the auxiliary **should** (or **should not** for dissuasion).

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An instruction is expressed in the imperative mood and is used in order to convey an action to be performed. It can be subordinated to another provision, such as a requirement or a recommendation. It can also be used independently and is then to be regarded as a requirement.

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A statement is an expression, in the content of a document, that conveys information. A statement can express permission, possibility or capability. Permission is expressed by the auxiliary **may** (its opposite being **need not**). Possibility and capability are expressed by the auxiliary **can** (its opposite being **cannot**).

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 17623

May 2021

ICS 35.240.67

English Version

BIM Properties for lighting - Luminaires and sensing devices

BIM Propriétés pour l'éclairage - Luminaires et capteurs

BIM Merkmale für die Beleuchtung - Leuchten und Sensoren

This Technical Specification (CEN/TS) was approved by CEN on 12 March 2021 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.

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

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SIS-CEN/TS 17623:2021 (E)

Contents

Page

European foreword

This document (CEN/TS 17623:2021) has been prepared by Technical Committee CEN/TC 169 "Light and lighting", the secretariat of which is held by DIN.

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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 standardization 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.

1   Scope

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

This document provides all the needed properties to design and to describe luminaires and sensing devices. These properties are intended to be used as mapping properties for property 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 improve the data quality, reduce misinterpretations and the processing time in digital environments. Therefore, the properties listed in this document establish the essential description of luminaires and sensing devices 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.

EN 12464-1:2011, *Light and lighting - Lighting of work places - Part 1: Indoor work places*

EN 60598-1, *Luminaires - Part 1: General requirements and tests*

EN 60598-2-13:2006,[1] *Luminaires - Part 2-13: Particular requirements - Ground recessed luminaires*

EN 60598-2-22:2014,[2] *Luminaires - Part 2-22: Particular requirements - Luminaires for emergency lighting*

EN 61231, *International lamp coding system (ILCOS) (IEC 61231)*

EN ISO 23386, *Building information modelling and other digital processes used in construction - Methodology to describe, author and maintain properties in interconnected data dictionaries (ISO 23386)*

ISO 8601-1, *Date and time - Representations for information interchange - Part 1: Basic rules*

3   Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- ISO Online browsing platform: available at https://www.iso.org/obp

- IEC Electropedia: available at http://www.electropedia.org/

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[1] As impacted by corrigendum EN 60598-2-13:2006/corrigendum Dec. 2006 and amendments
EN 60598-2-13:2006/A1:2012 and EN 60598-2-13:2006/A1:2016.
[2] As impacted by amendment EN 60598-2-22:2014/A1:2020.

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: EN ISO 29481-1:2017, 3.2]

3.2
data dictionary
information resource dictionary
database that contains metadata

[SOURCE: ISO/IEC 2382:2015, 2121501; modified: Notes to entry removed]

3.3
attribute
data element for the computer-sensible description of a property, a 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 name of a property, the definition of a group of properties.

[SOURCE: EN ISO 23386:2020, 3.4]

3.4
property
inherent or acquired feature of an item

EXAMPLE   Thermal efficiency, diameter, luminous flux.

[SOURCE: EN ISO 23386:2020, 3.17, modified: The example was modified.]

4   Principle structure

4.1 General

The properties for luminaires and sensing devices have been organized in eight 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 and accessory properties – ID 06 (Table 6)

— Marketing properties – ID 07 (Table 7)

— Operations and maintenance properties – ID 08 (Table 8)

4.2 Detailed description of set of attributes

4.2.1 General

The structure of the attributes is according to EN ISO 23386 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 structure and mandatory to the properties.

4.2.2 GUID

In EN ISO 23386 named "Globally unique identifier".

Identifier given to a product that guarantees its uniqueness throughout its entire life (see ISO 6707-2:2017, 3.2.46).

This attribute identifies the property unambiguously. A Globally Unique identifier GUID is generated using an algorithm. This machine-readable code will allow matching across databases, lists and data template.

In IFC and EN ISO 12006-3 the compressed version of GUID is used. It can be uncompressed to the standard GUID with open tools.

4.2.3 ID

This attribute identifies the property unambiguously. It is human-readable and corresponds to the globally unique identifier.

Note   The ID always starts with the table number from 4.1 followed by a dash and an individual serial number with four digits.

4.2.4 Name

In EN ISO 23386 named "Names in language en-EN".

The name of the property.

4.2.5 Description

In EN ISO 23386 named "Descriptions in language en-EN".

This attribute is used to provide a plain language description of the property.

For some descriptions the name is enough. To avoid the repeating of the name, just "*identical with name.*" is entered.

4.2.6 Symbol

In EN ISO 23386 named "Symbols of the property in a given property group".

Symbol of a property if existing. Character or combination of characters denoting a property (see the ISO/IEC 80000 series and the EN 60027 series).

4.2.7 Format, unit

In EN ISO 23386 named "Digital format".

Precision is the maximum number of significant digits that can be represented in a format, or the number of digits that a result is rounded to (see also ISO/IEC 60559).

In EN ISO 23386 named "Units".

Concept type representing a scale that enables a value to be measured. Properties that do not have a unit are be designated as not applicable (n.a.).

4.2.8 Value set

In EN ISO 23386 named "List of possible values in language en-EN".

Collection of acceptable values for a property. Values outside the value set are not permitted. Multiple values may be possible for some properties.

4.2.9 Examples

In EN ISO 23386 named "Examples in language en-EN".

A sample for a value of the specific property.

4.3 Further IT-related attributes

Where potential attributes are not specified in 4.2, they may be defined separately within a data-dictionary. These attributes can be found in EN ISO 23386:

— **Definitions in language en-EN:** A description of the attribute in order to define it unambiguously.

— **Method of measurement:** Evaluation of construction products to ensure their suitability according to requirements in harmonized technical specifications.

— **Number of values:** This attribute provides information about the number of values to specify. It may be one value or a table of values (ifcPropertyTableValue in EN ISO 16739-1). In case of a table value, the number of values represent the number of rows of a 2 columns table.

— **Name of the index values:** In a table of values, this attribute provides the name of the defining values (IfcPropertyTableValue in EN ISO 16739-1).

— **Data type:** Format for expressing the value of the property. This can be understood as the storage type from a software perspective (see also ISO/IEC 11404:2007, 8.1). Examples: String, Float, Integer.

— **Status:** Status of the property during its life cycle. Example: Active.

— **Date of creation:** Date of validation of the property creation request. All dates in accordance with ISO 8601-1. Format=YYYY-MM-DDThh:mm:ssZ. Example: 2014-04-30T10:39:53Z.

— **Date of activation:** Date after when the property can be used.

— **Date of last change:** Date of validation of the last change request.

— **Date of revision**

— **Date of version**

— **Date of deactivation:** Date when property becomes obsolete. The property is maintained in the dictionary.

— **Version number:** Enables tracking of major changes.

— **Revision number:** Enables tracking of minor changes. If the version number changes, the revision number starts again at 1. Examples: new translation, changes of typos.

— **Replaces:** Identifier of the replaced property (or properties). List of GUIDs.

— **Replaced by:** Identifier of the replacing property (or properties). List of GUIDs.

— **Deprecation explanation:** Reason of deprecation. Deprecated may indicate the property will be removed in the future. This explanation shall be written in international English (EN).

5 Properties for luminaires and sensing devices

5.1 Mechanical properties

Key

1 luminaire
2 length
3 photometric z-axis
4 intensity direction

Figure 1 — Orientation of a luminaire in C plane and gamma angle coordination system

Table 1 — Mechanical properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2GZ1YB8enFVhDHOKgLc$BU	01–0001	overall diameter	Overall diameter of the housing of the luminaire or sensing device.		1E0, mm	n.a.	
19Z9XKYDT4p8HR0ZbD$wO_	01–0002	height	Height of the housing of the luminaire or sensing device. Corresponds to z-axis, gamma angle 180° and 180° vertical of the light distribution curve. This definition is regardless of orientation of luminaires. See Figure 1.		1E0, mm	n.a.	
1uJglYpRnFpQ4tStHaR2Pf	01–0003	length	Length of the housing of the luminaire or sensing device. Length is set parallel to the C90-C270 plane. Corresponds to y-axis and with 90° horizontal of the Light Distribution Curve. This definition is regardless of orientation of luminaires. See Figure 1.		1E0, mm	n.a.	
1dPvrZN3vEIB0n0vwYvDcX	01–0004	width	Width of the housing of the luminaire or sensing device. Width is set parallel to the C0-C180 plane. Corresponds to the x-axis and with 0° horizontal of the Light Distribution Curve. This definition is regardless of orientation of luminaires. See Figure 1.		1E0, mm	n.a.	
1RPyGAgMf4hRTZ0DogLFnU	01–0005	weight	Weight of the luminaire or sensing device.		1E-2, kg	n.a.	
2A6xVlUTj9QP1G$qb4FiWv	01–0006	cut-out diameter	Diameter of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	
1RIsLltoX1whNaYkaCoHXJ	01–0007	recessed required depth	Required minimum installation depth, height of the invisible / hidden mounting part of the luminaire (for recessed or flush mount).		1E0, mm	n.a.	
2VEYAfd7j4FQtJgAb_riA5	01–0008	cutting out length	Length of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2pFfNBOuv1Tf_RTQpYktGL	01–0009	cutting out width	Width of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	
1zs4Cj96j3d8TWAeeixJga	01–0010	luminaire housing shape 3D	Three-dimensional simplified shape of luminaire or sensing device.		n.a.	Cylinder, Cuboid, Cube, Cone, Pyramid, Sphere, Half-Sphere, User Defined.	
1Zek8UyXfE6gToN8_RDHFg	01–0011	shipping weight	Weight of the shipping package of the luminaire or sensing device.		1E-2, kg	n.a.	
1i_XY2Awj5RRadNmgPS3yQ	01–0012	shipping height	Height of the packed luminaire or sensing device as it is shipped.		1E0, mm	n.a.	
10UDC$GOvEHexmf_I8j9xG	01–0013	shipping length	Length of the packed luminaire or sensing device as it is shipped.		1E0, mm	n.a.	
1ybyhd8TbACg99OxpWMoOg	01–0014	shipping width	Width of the packed luminaire or sensing device as it is shipped.		1E0, mm	n.a.	
0yvFhm4xvDggZvLzgzhiyq	01–0015	type of packaging	Type of packaging. Available types of packaging to be specified by the manufacturers.		n.a.	Carton, Pallet, Container, Without, Other	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
16XdmXw8T3HOIi0TOcc8LH	01–0016	impact protection rating IK	Degree of protection provided by enclosures for electrical equipment against external mechanical impacts (see EN 62262 and EN 60068-2-75).		n.a.	IK00, IK01, IK02, IK03, IK04, IK05, IK06, IK07, IK08, IK09, IK10.	
1LrBLaYtnCARKperF_2Ykh	01–0017	glow wire resistance	The glow wire test for fire hazard (see EN 60695-2-10) to test electrical products, assemblies or individual components.		1E0, °C	550°C, 650°C, 750°C, 850°C, 960°C	
1284Zyx8D4uR55X2cRsWzu	01–0018	needle flame test	Method for testing and assessment of the fire hazard of plastic material using a needle flame (see EN 60695-11-5).		n.a.	Yes No	
1PMNxHS2z4tRuwiQxyzRfs	01–0019	number of light outputs	Number of plane surfaces with light output.		1E0, n.a.	n.a.	
1mHV_4yHLEFuxOaIDlNmNn	01–0020	diameter of the luminous area	*Identical with name.*		1E0, mm	n.a.	
0WXZRI6CD2KfL4xC1uuLBF	01–0021	height of the luminous area	To be aligned with z-axis and gamma 180°.		1E0, mm	n.a.	
1auIwSthrFvRTJgX6NfO9Z	01–0022	length of the luminous area	Length is parallel to the C90-C270 plane. Aligned with the y-axis and with 90° horizontal.		1E0, mm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2SqBhDZKD1hBjGWsV4q_GQ	01–0023	width of the luminous area	Width is parallel to the C0-C180 plane. Aligned with the x-axis and with 0° horizontal.		1E0, mm	n.a.	
2gBflnlCfCgwR3hT_QVGtQ	01–0024	cable length	Cable for power supply. Zero means no cable supplied.		1E0, mm	n.a.	
1oCak0l6v9Bew_SHOfRFnw	01–0025	pliable	The luminaire body is flexible.		n.a.	Yes No	
3CckyLFxX8KxZVvgilS7Jt	01–0026	ground recessed accessibility class	Specific application class for ground recessed luminaries according to temperature limits, dimensions and static load resistance in kN, according to EN 60598-2-13:2006.		n.a.	A1-non-accessible A2-pedestrians A3-parking A4-snow-ploughs A5-particular	A2
0f2af0EifB1Qi6xalTs1Xn	01–0029	sealing material	Material of the sealing of a luminaire.		n.a.	n.a.	
3jAmXEFTn9oPlBD_oO4BfE	01–0030	silicon-free	States whether the luminaire is silicon-free.		n.a.	Yes No	
2DJLgonKH2zvtUylGDtoL3	01–0031	halogen-free	States whether the product is halogen-free (see EN 61249-2-21).		n.a.	Yes No	
3IPpBFdz17PB0W0suiESss	01–0032	temperature on light aperture	Average temperature of light emitting surface of a luminaire.		1E0, °C	n.a.	
30M$RN1TX7$gz0O8$bv0j4	01–0033	operating temperature	Range defined by the minimum and maximum operating temperatures at which the luminaire operates normally as specified by the supplier or manufacturer.		1E0, °C	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0jRoUrk2nF5QFenmXXlBTS	01–0034	minimum distance	Describes the minimum required distance of the luminaire housing to other objects.		1E0, mm	n.a.	
3GwYrPlNbAYu8gPAOJZgwc	01–0035	maximum orientation angle	Maximum of possible values for the rotation of the orientation angle (z-axis).		1E0, °	n.a.	
3qn7sE55H1FuwsBozcktbX	01–0036	minimum orientation angle	Minimum possible value for the rotation of the orientation angle (z-axis).		1E0, °	n.a.	
26KAJOVBvF8gIMOZaAOFTV	01–0037	orientation angle steps	Step width for the orientation angle (z-axis).		1E0, °	n.a.	
2NmVhTk4TFfvwDNSYyqj$4	01–0038	orientation angle default	Default value for the orientation angle (z-axis).		1E0, °	n.a.	
0qiz0v1kLAPBRWAW6wO1PA	01–0039	orientation angle selected value	Selected value for the orientation angle (z-axis).		1E0, °	n.a.	
05nmPIMs186u1u1s5MSd23	01–0040	maximum tilt angle	Maximum possible value for the rotation of the tilt angle (x-axis).		1E0, °	n.a.	
3ZWzCOV090TukLTsY8Vcua	01–0041	minimum tilt angle	Minimum possible value for the rotation of the tilt angle (x-axis).		1E0, °	n.a.	
0_oftQZ_jB$e1oGoWeQWoV	01–0042	tilt angle steps	Step width for the tilt angle (x-axis).		1E0, °	n.a.	
0w56LObA94ivbaiikyEXf2	01–0043	tilt angle default	Default value for the tilt angle (x-axis).		1E0, °	n.a.	
3VHFOwjl13sv6CBYkwU2wh	01–0044	tilt angle selected value	Selected value for the tilt angle (x-axis).		1E0, °	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3zsZztBEH9sPA24POLsfWn	01–0045	maximum turn angle	Maximum possible value for the rotation of the turn angle (y-axis). Turn can also be referred to as 'twist' or 'cant'.		1E0, °	n.a.	
3WFOEtzHjE2gEwIqwNt23B	01–0046	minimum turn angle	Minimum possible value for the rotation of the turn angle (y-axis). Turn can also be referred to as 'twist' or 'cant'.		1E0, °	n.a.	
1S1uI1hob0OAsYAUDvnB5e	01–0047	turn angle steps	Step width for the turn angle (y-axis). Turn can also be referred to as 'twist' or 'cant'.		1E0, °	n.a.	
0Y3iFNJcH3Xh_0Axe6FRZy	01–0048	turn angle default	Default value for the turn angle (y-axis). Turn can also be referred to as 'twist' or 'cant'.		1E0, °	n.a.	
0HKPlHCMXFOOmtqPiFpiwZ	01–0049	turn angle selected value	Selected value for the turn angle (y-axis). Turn can also be referred to as 'twist' or 'cant'.		1E0, °	n.a.	
3ejPldyc9Bau0HaTHZMtva	01–0050	3D model file	The description of a location of the 3D model file.		n.a.	n.a.	C:\, URL

5.2 Electrical properties

Table 2 — Electrical properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2FA0ih18LF_uKt46e5ErIv	02–0001	apparent load	Apparent load of the product.	S	1E0, VA	n.a.	
17a067965CqhDelQ$Y3mcP	02–0002	rated input power	Input power consumed by the light source(s), control gear and control circuit in or associated with a luminaire including any standby power when the luminaire is turned on.		1E0, W	n.a.	
3LBrQkLDDFheBOxrGk8Zr_	02–0003	power factor	Ratio of the amount of the active power to the apparent power at 100 % load. See also IEC 80000-6.	cos φ	1E0, n.a.	n.a.	
0zjByQSTX24wsxTI25Lzj$	02–0004	active power	Consumption of the power corresponding to the dim level of the luminaire. It is presented as a table of power (W) related to the luminous flux emitted (lm) or the percentage of dimming (%).		1E-2, W 1E0, lm OR 1E0, %	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3krkQTVbv0$g9Xj9eYC6nh	02–0005	compensation type	Identifies the form of compensation used for power factor correction and radio interference suppression.		n.a.	Capacitive, Inductive, Other	
0TzE4sMDv1pwfygK1xxjm5	02–0006	standby power	Power consumption of switched off luminaire. All electrical components including emergency and lighting controls components have to be considered. Is also known as parasitic power. See also EN 15193-1.		1E-2, W	n.a.	
2wiaN2gSf0$RFeAF8d_51K	02–0007	power consumption of the controls	Power consumption of the detector with the light switched off and without motion detection / presence detection (idle state).		1E-2, W	n.a.	
0G4TAennPD5gzRoG2rlZv_	02–0008	ILCOS light source type	Light Source type definition according to ILCOS, EN 61231.		n.a.	n.a.	IAA/C-40–220/230-E27–60
1fBDdf6YP2O8_JFTCLHktp	02–0009	socket	A device which mechanically supports and provides electrical connections for a compatible electric light source. See also EN 60061.		n.a.	n.a.	E27

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1nKr7A75b8reMNAfPW1iw1	02–0010	nominal light source output power	Approximate power output used to designate or identify the light source.		1E0, W	n.a.	
1A3s$Z4Sj7jQFfzbfen7Yu	02–0011	multilamp light source wattage	Luminaires that could be equipped with more than one light source wattage. Selection of all possible nominal light source output wattage.		1E0, W	n.a.	
018C_3ZRn5IufwY89oB9NV	02–0012	light source included	States whether the luminaire is supplied with light source.		n.a.	Yes No	
2LJHyobk57buKgQhTXFfR_	02–0013	maximum nominal output power of light source	*Identical with name.*		1E0, W	n.a.	
1RGMcZL0X4SvXP9H1tpT7e	02–0014	default light source power	Recommended light source power by supplier or manufacturer.		1E0, W	n.a.	
1ELEjwitTBhANPTqofV2Tl	02–0015	light source position of usage	Light Source usage position (Horizontal/Vertical) possibly with range of angle.		n.a.	Horizontal, Vertical	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2UOOchRyr2eQDXabAwecx5	02–0016	light source count	Number of light sources in one luminaire. Not valid for LED luminaires.		1E0, n.a.	n.a.	
0FWc9hC5PEqgfN0fVzc2Yo	02–0017	Zhaga standard	*Identical with name.*		n.a.	Yes No	
21GF1lrRP4denYC8o6ot$N	02–0018	control gear	Type of control gear, which is required to control the electrical operation of the light source(s).		n.a.	n.a.	Magnetic, Electronic
06Vbbmtwv85QArFTsBPUPQ	02–0019	control gear required	States if control gear is necessary.		n.a.	Yes No	
3kZ3CJ9Xb9DBPoZ15k3vIQ	02–0020	control gear included	Shipped with or without ballast.		n.a.	Yes No	
2mGS7VdXfBo8rV8OFHuW7b	02–0021	control gear quantity	The quantity of control gears.		1E0, n.a.	n.a.	
3M6mU$FIP6KQ80BVaK5PCO	02–0022	control gear location	Describes the location of the control gear. Inside or outside of the luminaire. Or distance to light source.		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3d9jfSb_z7WB2y0xbHeccR	02–0023	energy efficiency rating of ballast	CELMA defines both energy classes and limit values for the ballast-light source combination of the common fluorescent light sources. EN 62442-1 defines the measuring methods for the total input power of the ballast–light source system.		n.a.	A1, A2, A3, B1, B2, C, D	
2oaQ3AOnn40wmt6Zfp6ooy	02–0024	nominal current	Electrical nominal current.	I	1E0, A	n.a.	
3rfirTJfj9bgIELSX4VRBz	02–0025	inrush current	Initial current after turning on. Base for quantity of luminaires per fuse or similar.		1E-2, A	n.a.	
2ENV$TQoL31gDSHIZzyR4N	02–0026	inrush current time	Inrush current time after turning on.		1E0, µs	n.a.	
22IpUkOwD2iOIVugd8CAfb	02–0027	nominal frequency	Nominal frequency at which the product operates normally as specified by the supplier or manufacturer.		1E0, Hz	50, 60, 0 multiple option selection	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3ERn8VgnjDjhulH3MaG9yG	02–0028	nominal mains voltage	Nominal voltage at which the product operates normally as specified by the supplier or manufacturer.		1E0, V	n.a.	In European Union is 230 V ± 10 %
3RRkslNcn3IBFmyVoAyyMc	02–0029	voltage type	AC Alternating Current / DC Direct Current / UC Universal Current (Alternating or Direct Current).		n.a.	AC, DC, UC	
0Ias3th8D2cg4EvP$KqQcv	02–0030	electrical safety class	Indicates whether the electrical device has a protective earth connection or not.		n.a.	I, II, III	
1K_1K1q6n7KgOFJw5Cuc_i	02–0031	ingress protection IP code	The IP code classifies and rates the degree of protection provided against intrusion (body parts such as hands and fingers), dust, accidental contact, and water by mechanical casings and electrical enclosures. See also EN 60529.		n.a.	IP20, IP21, IP22, IP23, IP24, IP25, IP26, IP27, IP28, IP30, IP31, IP32, IP33, IP34, IP35, IP36,	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
						IP37, IP38, IP40, IP41, IP42, IP43, IP44, IP45, IP46, IP47, IP48, IP50, IP51, IP52, IP53, IP54, IP55, IP56, IP57, IP58, IP60, IP61, IP62, IP63, IP64, IP65, IP66, IP67, IP68, IP69, IP69K	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2sRMMfIvvEvwH0LKqBmNoy	02–0032	impulse withstand voltage	*Identical with name.*		1E0, kV	n.a.	
2Afk3AuoX0YfhlG9pMfb5q	02–0033	colour controllable	States if the colour is controllable.		n.a.	Yes No	for RGB LED
2kMc1GwgH1LAnZ1huo7mq_	02–0034	colour temperature controllable	States if the colour temperature is controllable.		n.a.	Yes No	
00aw6unKX0ghwxryKRoQm9	02–0035	control features	Description of control elements and features.		n.a.	n.a.	Touchdim, dynamic light, light management system
1rdcbmVG19UgBf_YVdUo9f	02–0036	dimmable	Determines if the luminaire is dimmable.		n.a.	Yes No	
3YVv_4s1LA0uiEUpMsReJ9	02–0037	with dimmer	Determines whether the luminaire has a dimmer included.		n.a.	Yes No	
0jGPV_emX0auTlyNQx4grP	02–0038	dimming method	Determines which dimmer type is applicable for the luminaire.		n.a.	PWM, CCR, leading edge phase cut, trailing edge phase cut, other	
2SM664IIzBFOlcuHC24iWz	02–0039	dimming range	Determines which range of dimming is possible for luminaire.		1E0, %	n.a.	1 % to 100 %

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3_eFt0HBf3UgmfsROvHbly	02–0040	interface	Determines which communication or control interface is indicated for the luminaire or sensing device.		n.a.	n.a.	KNX, LON, DALI broadcast, DALI addressable, 0–10V, ArtNet, BacNet, DMX
2a382qr4fB08Wb9xoufkaq	02–0041	amount of addresses	Determines the amount of addresses of the product.		1E0, n.a.	n.a.	4 DALI Addresses for Power Consumption, 2 DALI Addresses for HCL, 20 DMX Channels needed for functions
24CkSPPcb8Fx0fUWeZlnfW	02–0042	DALI DT8	Determines whether the luminaire is DALI Device Type 8.		n.a.	Yes No	
0qBCPAI5j85ewtsRgzQ4Fw	02–0043	integral circuit protection	Determines whether the product involves an integrated circuit protection if not the zero should be stated.		1E-1, A	n.a.	fuse
1W6c2bUHL1jxn4_Jc4IGgo	02–0044	supply circuit conductor	Specifies the connection for a supply circuit.		n.a.	Cable, Plug-connector, Screw-connector, Connector with strain relief	
05F825n2fBxfST7DzrOuLm	02–0045	clamping range	The range of clamping.		1E-2 - 1E-2, mm^2	n.a.	0,75 mm^2 to 1,50 mm^2

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
11SZgYx5H3RvmoGz9uTiTf	02–0046	cable cross-section	Value of acceptable minimum and maximum cable cross-section.		1E0, mm^2		
100MSXxt96iBH86YJ6lECo	02–0047	number of phases	Specifies the number of phase that a luminaire can be connected to.		1E0, n.a.	1, 2, 3	3
1UrfPrHgj2whM6TeNYn83l	02–0048	supply phase	Determines the number of supply phase used for the device electrical input.		n.a.	L1, L2, L3	L1
2nKXmluvb7_8clWogllEcr	02–0049	through wiring	Determines whether the luminaire is suitable for through wiring with the indication of the maximum current.		1E0, A	n.a.	16 A
1UUzk8eSnF9h$NyNPliShg	02–0050	with connecting cable	Determines whether the product involves connecting cable.		n.a.	Yes No	
1oLuIWYPjCIvl7dqwEXdaN	02–0051	with power plug	Determines whether the luminaire includes a power plug.		n.a.	Yes No	
2RVwJxv$TCNB03cljqpK26	02–0052	with switch	Determines whether the luminaire has a switch included.		n.a.	Yes No	
1h35yfOg10veXdUQaAudl2	02–0053	with sensing device	Determines whether the luminaire contains an integrated sensing device.		n.a.	Yes No	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3kbFNwkkb7gPUsnc_COBg4	02–0054	constant light output	Determines whether the luminous flux stays constant over the declared lifetime.		n.a.	Yes No	
2d9pUf$QXEtxHYdBYou0$3	02–0055	constant light output start power	*Identical with name.*		1E-2, W	n.a.	
3UEOcatIDEMf$qdvydAlfg	02–0056	constant light output end power	*Identical with name.*		1E-2, W	n.a.	
1qhhuqryT4$xTSgToocAE3	02–0057	radiation pattern file	File reference to pattern file which contains the radiation distribution similar to a Eulumdat file for light.		n.a.	n.a.	C:\, URL
30Ko89Zdb53uyKzRXpupJT	02–0058	radio-transmitting power	Power of the wireless module expressed in decibel ratio of a power value.		1E0, dBm	n.a.	+4 dBm
3ETH0SOQH5DeS9U$Wj1Aa8	02–0059	radiation transmitting frequency	The frequency of radiation for wireless transmission.		1E-2, GHz	n.a.	2,4 GHz
0WjAaRYTX8eOZcC3iDTL8b	02–0060	radiation transmitting standard	Determines whether the luminaire is in accordance with a wireless connection standard.		n.a.	n.a.	IEEE 802.15.1

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
12_LtdVG5DqvZ$R5Y3Ua8I	02–0061	LED module replaceable	*Identical with name.*		n.a.	User with tool User without tool Professional Manfacturer none	Professional

5.3 Emergency lighting properties

Table 3 — Emergency lighting properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0nXXpyMbD4Qgz HiMoFE$Kf	03–0001	Suitable for emergency lighting	Determines whether emergency lighting is possible.		n.a.	Yes No	
3pJBuEixPAV9f0 wTnl2cOM	03–0002	emergency unit integrated	Indicates if emergency lighting is integrated. Combined luminaire for standard and emergency lighting with one or multiple Light Distribution Curves.		n.a.	Yes No	
3Q6UsxAKD0Q8 mO0x0ZsmhD	03–0003	dedicated emergency lighting type	Product type for an application of the emergency lighting. Dedicated to emergency luminaires only.		n.a.	Exit light, Guide light, Evacuation light, Reference light, for signage, for lighting	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3$hGYwTMb2sQ5 3dzP$Gjc9	03–0004	emergency lighting light source type	Light source type of an additional separate emergency light source within the luminaire.		n.a.	n.a.	LED
2Yq5DQRXP7efr3 cQyq8sqS	03–0005	backup supply system	The type of backup supply system according to EN 60598-2-22:2014.		n.a.	single battery, central battery, generator	
2qgqLlM2b91wjR EM3dUep2	03–0006	testing method	Testing method of emergency lighting (see EN 62034).		n.a.	Manual Test, Self-Test, Central Test, S, P, ER, PER, PERC	
2XGbfN7gP1ugS mAfQOjIzn	03–0007	emergency operation type	Emergency operation type according to EN 60598-2-22:2014, Annex B, b).		1E0, n.a.	0, 1, 2, 3, 4, 5, 6	
2UfXwD2hLDxee UzqPOJWhh	03–0008	emergency facilities	Emergency facilities code according to EN 60598-2-22:2014, Annex B, c).		n.a.	A, B, C, D, E, F, G	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1QFaMGG19Dhw zoLgqvywvv	03–0009	emergency nominal voltage	Nominal voltage in emergency operation.		1E-2, V	n.a.	
0Wy67y94v1fhgh SU3mbcgU	03–0010	emergency lighting rated input power	Rated Input power consumed by the emergency lighting.		1E-2, W	n.a.	
3LN_2aQQD049K 9w6fm2THi	03–0011	current DC-operation	*Identical with name.*		1E0, mA	n.a.	
2sk0IXxZ93A9vfV QArmqx0	03–0012	emergency lighting inrush current	Initial current of emergency lighting after turning on (rated value). Needed for the correct sizing of AC/AC central systems.		1E-2, A	n.a.	
1i4AYS799CBxV0 ZlYKoY1M	03–0013	emergency lighting inrush current time	Inrush current time of emergency lighting after turning on. Needed for the correct sizing of AC/AC central systems.		1E0, µs	n.a.	
3SPWY2QXj1Tve 2T7PA9Uw4	03–0014	duration time and luminous flux of emergency lighting	Presentation of the variation of the emergency lighting output during the usage time. It is presented as a table of luminous flux emitted (lm) and corresponding duration times (h).		1E0, lm, 1E0, h	n.a.	
38wYgCHqr1A8v capxWfUmV	03–0027	maximum luminous flux of Emergency lighting	The maximum luminous flux from an emergency luminaire.		1E0, lm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
36Xu4jb_T9vQ3Z UeKan53F	03–0015	emergency LDC	Emergency lighting light distribution curve as file.		n.a.	n.a.	C:\, URL
2WGVMrEo99aP K$EDJPaPtF	03–0016	emergency lighting charging power	Input power to the charging circuit of emergency luminaires when the light sources are not operating.		1E-2, W	n.a.	
0RTU7Kmn15Ax 1tSLCuIgSG	03–0017	emergency lighting initial charge time	Duration (in h) in which the emergency lighting batteries are being charged for the first usage after the installation.		1E-2, h	n.a.	
0nMElVYCfAX8eq 7QEwZK1f	03–0018	emergency lighting recharge time	Duration (in h) in which the emergency lighting batteries are being re-charged.		1E-2, h	n.a.	
29ZiimATr4QO0B 4wwiQNa8	03–0019	battery type	Battery type, Cell type.		n.a.	n.a.	
3HSRRigDn3bwr PttqPraMV	03–0020	battery capacity	*Identical with name.*		1E-1, Ah	n.a.	
1hLQSaFhL7LOo WCue_qAOm	03–0021	battery voltage	*Identical with name.*		1E-1, V	n.a.	
3a5GdiFJ1CzvyjC hoIq9lh	03–0022	battery form factor	Battery form factor and dimension.		n.a.	n.a.	Stick 240mm Ø 33 mm
200Trg0X9FquhZ p9ZMM4ud	03–0024	pictogram escape direction	The direction of escape pictogram. Does not include the description of the pictogram.		n.a.	n.a.	Rightarrow, Leftarrow, Downarrow, Uparrow, Other, Not known, Unset

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3s3aB5AOr6Swm x1Bfi6E$Z	03–0025	addressability	The type of addressability of the emergency lighting controller.		n.a.	n.a.	Implemented, Upgradeable to, Not implemented, Other, Not known, Unset
3dyQmC$KHDfvD _wfGSgfji	03–0026	viewing distance	Viewing distance of pictogram (see EN 1838).		1E-2, m	n.a.	

5.4 Photometric properties

Table 4 — Photometric properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1lEpo0LO16FPp Sj0jFwIOu	04–0001	light distribution curve LDC	Light distribution curve LDC as photometric file format. A luminaire can emit more than one light distribution curves.		n.a.	n.a.	C:\, URL
26Cck1Shb27v8 JU1a1vgKV	04–0043	photometry	Photometry is absolute or relative.		n.a.	absolute, relative	
0FYKiM4lT7dA D13KWzXvsG	04–0002	photometric centre position x direction	x position of the point used as origin for photometric measurements and calculations in relation to the middle of the bounding box. Positive values are aligned with the C0 level. Negative values are aligned with the C180 level. See EN 13032-4.		1E0, mm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3HorBzYr10DBaLrbgxq2fS	04–0003	photometric centre position y direction	y position of the point used as origin for photometric measurements and calculations in relation to the middle of the bounding box. Positive values are aligned with the C90 level. Negative values are aligned with the C270 level. See EN 13032-4.		1E0, mm	n.a.	
2MDJxTVzv57ALNnXX1bC1W	04–0004	photometric centre position z direction	z position of the point used as origin for photometric measurements and calculations in relation to the middle of the bounding box. Positive values are aligned with the gamma angle 180° (up). Negative values are aligned with the gamma angle 0° (down). If the light centre point is at the bottom side, then this value is the negative half of the height. See also EN 13032-4.		1E0, mm	n.a.	
2oxTEZw7TCPPcnnsapMO1u	04–0005	rated luminous flux of the luminaire	Value of the initial luminous flux of a given type of luminaire declared by the manufacturer or the responsible vendor, the luminaire being operated at an ambient temperature of 25 °C See also EN 13032-4.		1E0, lm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2gmo70bVX90u Jh2YAvS62s	04–0006	rated luminous flux of the light source	Value of the initial luminous flux of a given type of light source declared by the manufacturer or the responsible vendor, the light source being operated at an ambient temperature of 25 °C See also EN 13032-4.		1E0, lm	n.a.	
1QmFILGbX6_Bf U63rG5mrh	04–0007	luminous efficacy	Quotient of the luminous flux emitted by the luminaire and the power absorbed by the light source and associated circuits of the luminaire.		1E0, lm/W	n.a.	
2gMYX1hkHEE 8kQmgimay3h	04–0008	light output ratio LOR	Ratio of the luminous flux of the luminaire, measured under specified practical conditions with its own light source(s) and equipment, to the sum of the individual luminous fluxes of the same conventional light source(s), see also EN 12665:2018. Always 1 for absolute photometry.		1E0, %	n.a.	
28T0Q968jDwv yxAshmZRwz	04–0009	type of distribution	The classification of luminaires regarding the amount of light flux emitted into upper or lower half-space. See also EN 15193-1:2017.		n.a.	direct, indirect, direct and in-direct	
3O71lbRGPDpO k4BrfOhVAO	04–0010	downward flux fraction	Ratio of the downward flux to the total flux of the luminaire.		1E0, %	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3wGph6hnfEOuWEuOMDd9mz	04–0011	downward light output ratio DLOR	Ratio of the downward luminous flux of the luminaire, measured under specified practical conditions with its own light source(s) and equipment, to the sum of the individual luminous fluxes of the same light source(s) when operated outside the luminaire with the same equipment, under specified conditions. Not valid for absolute photometry.		1E0, %	n.a.	
1sYsm6e7H82AbC_0tk06XB	04–0012	upward light ratio ULR	Ratio of the total luminaire flux that is emitted above the horizontal by all luminaires to the total luminaire flux from all luminaires in an installation, when the luminaires are mounted in their mounting position.		1E0, %	n.a.	
00NGdZChz3LACcedAVtNNR	04–0013	upward light output ratio ULOR	Ratio of the upward luminous flux of the luminaire, measured under specified practical conditions with its own light source(s) and equipment, to the sum of the individual luminous fluxes of the same light source(s) when operated outside the luminaire with the same equipment, under specified conditions. Not valid for absolute photometry.		1E0, %	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0wVs5XlEPE5gBsG3nTILKR	04–0014	photometric beam shape	Description of photometric beam typical shape.		n.a.	n.a.	Rotation-symmetrical, axial-symmetrical, narrow, medium, flood, linear, symmetrical, asymmetrical, double asymmetrical
3UBMXTzMP2ev8RJ6CTkBmS	04–0015	tenth-value angle	Angle of the beam centre to the point where the luminous intensity is reduced to one tenth. See also EN 61341. If the beam is not rotation symmetrical the photometric plane needs to be specified.		1E0, °	n.a.	
1CGllDBHDEBgXIfKouXTHT	04–0016	half-value angle	Angle of the beam centre to the point where the luminous intensity is reduced to half. See also EN 61341. If the beam is not rotation symmetrical the photometric plane needs to be specified.		1E0, °	n.a.	
2BFsFYpCbFKfkbtjAMxZOc	04–0017	photometric code	A code consists out of CRI, CCT, initial colour variation (MacAdam ellipse steps), colour variation through life (MacAdam ellipse steps) and lumen maintenance value (Lx).		n.a.	n.a.	830/359
1vsP4zxUz78h3Ps8HNeo2c	04–0018	US-types of luminaire light distribution	US-Types of luminaire light distribution according to IESNA for street lighting. NOTE These types are used in IES photometry files.		n.a.	I, II, III, IV, V	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1lh0A7J0P1yfpu JvqgOATC	04–0019	BUG rating of light distribution	The BUG classification (Backlight, Uplight, and Glare) according to IDA/IESNA evaluates the light output of outdoor lights regarding to glare, light pollution and light trespass.		n.a.	n.a.	B1-U0-G1
0TI$bRxzzEBPO scE5oX3a3	04–0020	CIE flux code	Set of values of flux triplet, downward flux fraction and light output ratio, representative of the relative flux distribution of the luminaire, used in the calculation of utilization factors and/or utilances.		n.a.	n.a.	45 79 99 100 79
3Nafl5m1f91eU jON0JbahC	04–0021	spectrum	The spectrum of radiation describes its composition with regard to wavelength. It is presented as a table of energy (eV) depending on wavelength (nm). Default steps 5nm, default interval 380 nm to 780nm.		1E0, eV 1E0, nm	n.a.	
24nX7s16TBMe _Qfk$rKDn3	04–0022	colour appearance	Monochromatic colour of light (e.g. blue, red, white). As name or a description of the colour or as colour coordinate of a specific colour system (e.g. RGB, CIE 1931 XYZ colour space).		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
28UYB1MD91N hF5F8uF6VCZ	04–0023	colour rendering index (CRI)	Coefficient that indicates how well the colour of a lit object is perceived by the human eye. The CRI scale ranges from 1 to 100, where 100 means the perfect rendering properties for a specified set of 8 test colour samples. See also EN 12665.	R_a	1E0, n.a.	n.a.	86
0XeHsouWz8Px ASJ4mpkdEY	04–0024	correlated colour temperature (CCT)	The colour temperature of any source of radiation is defined as the temperature (in Kelvin) of a black-body or Planckian radiator whose radiation has the same chromaticity as the source of radiation. See also EN 12665.	T_b	1E0, K	n.a.	3 100K
1BRqnx6Qr6G8 KJpH$WYPD_	04–0025	colour temperature adjusting range	Lower and upper border of an adjustable colour temperature of a light source.		1E0, K	n.a.	2 700 K to 6 500 K
1am96tJSj0_e6A MEqEh3sq	04–0026	IES TM-30-15	Includes the color fidelity Index R_f that uses 99 reference colours (CES, colour evaluation samples) to estimate colour rendering (see also CIE 224:2017) and quality Gamut-Index R_g to estimate colour saturation. Also includes a colour vector graphic to see colour specific saturations.	R_f R_g	n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1dN7YuSk56zRdAl0GO075q	04–0027	TLCI	The television lighting consistency index (TLCI) evaluates the spectral power distribution of luminaires for television purposes. The higher result the better colour rendering quality from range 0 to 100. See also EN 12193.		1E0, n.a.	n.a.	90
3JqWxX_JPBDPKVYVZAezD6	04–0028	melanopic factor	Melanopic factor of luminous radiation daylight equivalent based on CIE standard illuminant D65. See also CEN/TR 16791.	$a_{mel, v, D65}$	1E-3, n.a.	n.a.	0,619
21jRpyk419WuBLxjfSqXoY	04–0029	PAR	Total photon exposure in the 400 nm to 700 nm waveband.		1E-2, $W \cdot m^{-2}$		
1NvFrN1kP1MBnwjfcEtZS9	04–0030	initial colour tolerance	Initial Colour Tolerance in step MacAdam ellipses (SDCM).		n.a.	1 SDCM, 2 SDCM, 3 SDCM, 4 SDCM, 5 SDCM, 6 SDCM, 7 SDCM	2 SDCM
2XiNAY0D121wETmb0AmovG	04–0031	maintained colour tolerance	Maintained colour tolerance after 6 000 h in step MacAdam ellipses (SDCM).		n.a.	1 SDCM, 2 SDCM, 3 SDCM, 4 SDCM, 5 SDCM, 6 SDCM, 7 SDCM	3 SDCM

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2VsGUEC0v62AXkp0i8pFrI	04–0032	rated chromaticity coordinate values	Chromaticity coordinates ratio of each of a set of 3 tristimulus values to their sum (see EN ISO/CIE 11664-1). As the sum of the 3 chromaticity coordinates is equal to 1, two of them are sufficient to define a chromaticity. In the CIE standard colorimetric systems, the chromaticity coordinates are represented by the symbols x, y, z and x10, y10, z10.		1E-2, n.a.	n.a.	x:0,46 y:0,41
0J5hwLgUf4YAvWrE2XCwq4	04–0033	cut-off angle	Angle, measured up from nadir, between the vertical axis and the first line of sight at which the light sources and the surfaces of high luminance are not visible. If the beam is not rotation symmetrical the photometric plane needs to be specified.		1E0, °	n.a.	
0plc23S8D6oOMzeqDx58d1	04–0034	UGR 4H8H 70/50/20 L/Q	UGR table value of the room width of 4 x H and the room length of 8 x H and reflexion factors of 70/50/20 for transverse and parallel to light source axis.		1E0, n.a.	n.a.	24 25
0ncEfeE8r1tAckiu$03ei2	04–0035	luminaire luminance	Average of the luminaire surface luminance. See also EN 13032-1.		1E0, cd/m^2	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2h_4I$zWjAF8g O8u$1m5iL	04–0036	DSE workplaces	Display screen equipment workplaces according to EN 12464-1:2011.		n.a.	n.a.	
1PL17P9t53oex ZksoRkx7Y	04–0037	photobiology class	See EN 62471 for measurement methods and the calculation methodology. EN 62471 divides the sources of incoherent optical radiation into four groups: in the Exempt Group (no photobiological risk) and the Risk Groups 1 to 3 with increasing hazard potential.		1E0, n.a.	0, 1, 2, 3	
3weB85rrjDBOf sW2DojyA8	04–0038	photometric class DIN 5040	German standard with photometric classification. The contributions to the effective luminous flux are then rated and summed up per room segment.		n.a.	n.a.	B53
3bKRB3yaT3s8f MSl_u6Kyb	04–0040	photometric class UTE	French standard with photometric classification. The standard NF (UTE) C71–121 (1995) in France, "Méthode simplifiée de prédétermination des éclairements dans les espaces clos et classification correspondante des luminaires".		n.a.	n.a.	0,54 B + 0,26 T
2EYqu_hCHFEO 0cQ_qv5wD$	04–0042	flicker	Impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time.		n.a.	n.a.	Modulation Depth (MD), Flicker-Index (FI), (Short-term flicker severity) P_{st} Values

5.5 Sensing device properties

Table 5 — Sensing device properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2eE6ivKdb3xANg8HGEDFZH	05–0001	detector characteristics	Shape of the detection area.		n.a.	round, square, other	
2C6Bl_wyb9muBfd$Z_MZiE	05–0002	detection area	Defines the detection angle or the detection area for the standard mounting height. For round area: the angular range from 1° to 360° and radius (m). For rectangular area: L × W (m).		1E0, ° 1E0, m	n.a.	4 × 5
1nkkOblIH5CxeBDCDq2WyX	05–0003	detection area adjustable	The type of the adjustment of the detection area.		n.a.	no, cover, label, integrated, mechanism, electronic *multiple option selection*	
2iV9K3GCTD9AwDRJQ2QaSP	05–0004	type of detector	The type of detection possible for sensing device.		n.a.	Motion Detector, Presence Detector, Daylight Detector *multiple option selection*	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0eq8JpPhf2mxsbyxHgN4rg	05–0005	detection method	Applied technology for detection.		n.a.	Passive Infrared, High Frequency, Microwave, Ultrasonic, Camera, other multiple option selection	
0fafA0Xg17xAyphZUB6DEj	05–0006	radiation power	*Identical with name.*		1E-2, W	n.a.	
3ceOGuHgz4Px_qL3kqmnLB	05–0007	HF frequency	The frequency of High Frequency radiation.		1E-2, GHz	n.a.	5,8 GHz
02qYRg2w1BRufMbYctgnox	05–0008	movement detection area	Detection area for walking for the standard mounting height. For round area: the angular range from 1° to 360° and radius (m). For rectangular area: L × W (m).		1E0, ° 1E0, m	n.a.	
3E7MzAVgHDlBQIdGhHFHL1	05–0010	presence detection area	Detection area for minor movement for the standard mounting height. For round area: the angular range from 1° to 360° and radius (m). For rectangular area: L × W (m).		1E0, ° 1E0, m	n.a.	
1ymgRlSerBqBwALgiHgX7j	05–0011	measurement method	The measurement of the presence detection area was done according to standard. Currently sensNORM is the only recognized standard.		n.a.	Yes No	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1MWULf$c11YBSMTdevnV$G	05–0012	detection range adjustable	The method of adjustment of detection range.		n.a.	no, cover, label, integrated mechanism, electronic *multiple option selection*	
24jtpZAXPBEf5VI4O64p98	05–0013	number of PIR switching zones	Number of PIR switching zones indicates how sensitive the sensing device is for detection of small movement.		1E0, n.a.	n.a.	1 400
1P_6Ftq01BWh4HTGTurOn8	05–0014	number of detection areas	Number of individually analysable detection areas.		1E0, n.a.	n.a.	
0ZLLxjlvv6i9vtRcuL17nh	05–0015	other sensing devices	Features to measure other parameters by sensing device.		n.a.	Illuminance, Temperature on ceiling, Temperature on surface below, Volatile, Organic Compounds, Humidity, CO_2, Noise, Number of persons *multiple option selection*	
0yWXemifLBGBnzVtqC_b8Q	05–0016	illuminance range	Determines the illuminance range that can be measured by sensing device.		1E0, lx	n.a.	0 lx to 400lx

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3xgdt_Hlz889Ek6KSUeCE5	05–0017	operation mode	Mode of operation like full automatic or half automatic.		n.a.	full automatic, half automatic, constant light control, on/off *multiple option selection*	
3rSw5_7y94zxvrAini0W2u	05–0019	inter-connection mode	Interconnection with other sensing devices.			Master/Slave, Master/ Master	
18DBbGWJXFbRcORysjk7TX	05–0020	channel n	Channel n function.			no, Light, HVAC, other	
2MMb3d$6fDdxWoq1W$ZGln	05–0021	switch input channel n	Directly connectable switch for channel n.		n.a.	Yes No	
3csxKAakP79PFF8_VH6_b4	05–0022	output channel n	*Identical with name.*			Relay floating, Relay non-floating, Dim	
1wCN2A$WbE8fKo62d91E_m	05–0023	separate light measurement n	Sensing device channel n has a separate light measurement.		n.a.	Yes No	
28uWq1nqP3XgcTzLzylewL	05–0024	delay time	Switch-off delay after last detection.		1E0, s	n.a.	
07VBqU4vn4ouinVL_JTUta	05–0025	delay time orientation light	Switch-off delay after delay time.		1E0, s	n.a.	
1M2v5GMAjByhRQPjDnZjSf	05–0026	delay time	Switch-off delay after last detection.		1E0, s	n.a.	
3waXMP9nLE3BiTn9dGUiFJ	05–0027	orientation light	Reduced artificial light after the delay-time passed.		min % to max %	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0Lb$H8dJ52Zvfl9YSL5M6i	05–0028	remote control	Operation/ settings with remote control.		n.a.	no, IR, RF, Bluetooth, WiFi *multiple option selection*	
3l5DBp$G5BYgD3F40Zha26	05–0029	remote control deactivateable	Operation/ settings with remote control deactivate able.		n.a.	Yes No	
10FyhmRzL5cx5mPB_MdfTB	05–0030	switching capacity of sensing device	Switching capacity of sensing device. Power and cos phi.		1E-1, W 1E0, n.a.	n.a.	
2ogWrMo6H5GxfzoDEWfaui	05–0031	sensing device position	Relative position of luminaire and sensing device.		1E0, m	n.a.	

5.6 Mounting and accessory properties

Table 6 — Mounting and accessory properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2Js$jQ5CD1r9USPJVLD951	06–0001	typical assembly site	Typical assembly site in indoor or outdoor premises.		n.a.	indoor, outdoor, indoor and outdoor	
1j$UsOSPP4NBILY9q7mCWW	06–0002	mounting place	Place, where the luminaire or the detector can be mounted.		n.a.	Ceiling, Grid ceiling, Conductor rail, Wall, Floor, Pole, Desk, Catenary, other	
3m5UX0NuH4YRPUJ1EmzXz7	06–0003	mounting type	Type of mounting used for the luminaire or sensing device.		n.a.	Surface Mounted, Pendant, Free Standing, Recessed, Partly recessed, Trimless-rescessed, Pole-top, Pole-side entry, Pole-integrated, Conductor rail, connector, other	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3y6XZJ_WfAuRm3fgIIBh0R	06–0004	mounting point offset position x direction	x position of the point used as origin for the mounting in relation to the middle of the bounding box. Positive values are aligned with the C0 level. Negative values are aligned with the C180 level.		1E0, mm	n.a.	
1yEEzJyufC8uEtTHhzqxUF	06–0005	mounting point offset position y direction	y position of the point used as origin for the mounting in relation to the middle of the bounding box. Positive values are aligned with the C90 level. Negative values are aligned with the C270 level.		1E0, mm	n.a.	
34itbruFnDWgvJgUmwG$rq	06–0006	mounting point offset position z direction	z position of the point used as origin for the mounting in relation to the middle of the bounding box. Positive values are aligned with the gamma angle 180° (up). Negative values are aligned with the gamma angle 0° (down). If the mounting point is at the upper side then this value has to be the half of the height.		1E0, mm	n.a.	
2ebPfCuzP6euRypnhmgpDH	06–0007	default mounting height	Default distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
3b4KsrGCb2dw2Or1JqfnoW	06–0008	default mounting distance	Default distance from ceiling to luminaire or sensing device.		1E0, mm	n.a.	
3gpxb3oaLA8BkchUDMfQDm	06–0009	minimum mounting height	Minimum distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
33Kd_d$Xv1GgCDg5DDP5vn	06–0010	maximum mounting height	Maximum distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
3hG4MOE1n7S8AB5aJLRMVj	06–0011	applied mounting height	Selected distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
0nqhEfiCr249NvE9Fv2yTf	06–0012	maximum pendant length	*Identical with name.*		1E0, mm	n.a.	
22ydbaQRPEC9lt_tK6Qw4Q	06–0013	applied pendant length	Selected pendant length in current situation.		1E0, mm	n.a.	
1x76Uc_LbDVh6mrLtcsUNS	06–0014	spacing between fixing points	Distance between two fixing points.		1E0, mm	n.a.	
3BBcI8ACb3Ff6$2nRfx7Cg	06–0015	mounting outside the arms reach	Mounting outside the hand area.		n.a.	Yes No	
2lRl_DnFf97P6CAO2kfYEp	06–0016	windage	Projected area which is used calculate wind resistance for structural calculations.		1E-2, m^2	n.a.	
0uHyOzAgvCyRqsNVDKfTFl	06–0018	EX classification properties	Specifies whether the fitting is intended for installation in an explosive environment. (see ATEX directive (2014/34/EU), EN 60079-0, EN 60079-15, EN 60079-7).		n.a.	n.a.	Zone 2 II 3GD EEx nA T3

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1PHo3fKGj5Vfdmyy1dCzYd	06–0019	type and function of mandatory accessory	Type and function of mandatory electrical, optical or mechanical accessory.		n.a.	n.a.	
2IIcSIkhzBQvi6jCIbKMm$	06–0020	type and function of optional accessory	Type and function of optional electrical, optical or mechanical accessory.		n.a.	n.a.	Barndoors, Ring Louver, Softener, Snoose, Cut Off Shilding
1ebB1Zyw92L8aunjbTiNu1	06–0021	applied accessory	Selected accessory.		n.a.	n.a.	
2lG7sF6af5sRrHYUSubDNV	06–0022	thickness of ceiling minimum	The minimum thickness of the ceiling for recessed or flush mount.		1E0, mm	n.a.	
3bww1seCDA3xO1TXuKRIa5	06–0023	thickness of ceiling maximum	The maximum thickness of the ceiling for recessed installation.		1E0, mm	n.a.	
0DRBpoc$LCOxVU4CNwfUgl	06–0024	required space in ceiling	The minimum needed space in a ceiling for recessed luminaires for e.g. for thermal aspects.		1E0, m^3	n.a.	
2Oq5QYgMf06gdSXn61YqDa	06–0025	covering of insulation not allowed	Covering of Insulation in a ceiling is not allowed for the luminaire.		n.a.	Yes No	
33M24NjTn3SxpLaPp27aqY	06–0026	wall thickness	The minimum required wall thickness for mounting.		1E0, mm	n.a.	
2qdgZ6NbnCfOAJFXNAjkhw	06–0027	with starter	The luminaire has a starter.		n.a.	Yes No	
2gr49_xaP46O1yRdKp3PXW	06–0028	ambient temperature	Ambient temperature range.	T_a	1E0, °C	n.a.	−5°C to 40°C

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2Hn3h7rKb0RhRhIOAzSkNR	06–0029	relative humidity range	The relative humidity of environment that enables product to function.	RH	1E0, %	n.a.	0 % to 85 %
3m_7Bd74r4PwfVU5h_M3Cc	06–0030	conductor rail type	Conductor rail type, if needed.		n.a.	n.a.	conductor rail type RA
3Kg5x8kWr1zhsZyRr30Ovs	06–0031	bracket	The Luminaire has a boom.		n.a.	Yes No	
2P36C2ZwH7cuGiaRJIyiCQ	06–0032	bracket length	Length of the boom.		1E0, mm	n.a.	
1xemg75ajBTPMS5G7a6XYC	06–0033	pole	Specifies which type of pole is suitable.		n.a.	Conical, Cylindrical, System pole, Bollard base element, Other	
3sUm8npDPCLwPblKJJzmT_	06–0034	pole height	The height of the pole.		1E-2, m	n.a.	
13nvJo5TjBevj9Xq8d0d_k	06–0035	pole material	The material of which the pole is mainly made of.		n.a.	Aluminium, Galvanised steel, Powdered, Timber, Other	
14NxmCBlnDDgk6xXOL9Ydl	06–0036	pole accessory	Specifies which extra accessory are required for pole.		n.a.	Pole door, casika, other	
2SWE7gcPD5VOe7RpsLynyc	06–0037	with ascending aid	Specifies whether the pole has an ascending aid.		n.a.	Yes No	
2rhswpHMv6jxnu7t2SG$8a	06–0038	with base plate	Specifies whether the pole has a base plate.		n.a.	Yes No	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1HwoGGCU51GuZcYqOLj23B	06–0039	foldable	Specifies whether the pole is foldable.		n.a.	Yes No	
3ZohUj9if8EBuv5LU5H7s9	06–0040	spigot diameter	The size of spigot for mounting on the pole.		1E0, mm	n.a.	60 mm

5.7 Marketing properties

Table 7 — Marketing properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3pijcXRsT9mAFfcOBnThIw	07–0001	product name	Luminaire name.		n.a.	n.a.	
3gmbhSjFD4JOPQZ7_I$HzY	07–0002	manufacturer	*Identical with name.*		n.a.	n.a.	
322VYxGfH6DOZHOmPOqDqO	07–0003	URL manufacturer	Manufacturer website address.		n.a.	n.a.	
29UfpgwX5Eyu$KCZIxfJZy	07–0004	item number	Product number.		1E0, n.a.	n.a.	
1UbCUUp8z5Cg3dmIqQ4lsq	07–0005	product picture	Picture of the product as file.		n.a.	n.a.	
020_6qAJj7fO641UbZtyld	07–0006	2D symbol	Symbol in floor plan.		n.a.	n.a.	
0uHyDd8Gb9$fp0seVNo6UJ	07–0007	URL product website	Product page website address. Deeplink.		n.a.	n.a.	
2SIvCAZun4Wxd4khWGmURU	07–0008	product data sheet	*Identical with name.*		n.a.	n.a.	
3sfcCPOKnB5f2vY_zitAto	07–0009	product group	*Identical with name.*		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3Im9FC0mL7guhzlonQ2RjN	07–0010	application	Field of application for the luminaire.		n.a.	Indoor, Outdoor, Domestic Lighting, Office, Retail, Health, Sport, Hospital, Architectural, Others multiple option selection	
1H6f7P7l571P_cjMg7gPxK	07–0011	product family	Manufacturer specific product groups or modular systems.		n.a.	n.a.	
1u894$Gsj3PPXX6m5zKlOG	07–0012	description	Description or comments.		n.a.	n.a.	
1PP9ePMOD2Cg8c791pC_V3	07–0013	features	Free text to describe product.		n.a.	n.a.	
1PfnLpEVb6493m0aO3614o	07–0014	tender text	Tender text of the product.		n.a.	n.a.	
2Ofl8_YFT4IOfQwk92MRwM	07–0015	GTIN number	GTIN number (previously EAN) is a unique product/article number for handling, tracking, and identification of products. GTIN (Global Trade Item Number) is issued by GS1.		n.a.	n.a.	4158352058930

52

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0ZQK4SN5b1_OIheX6xr9TZ	07–0016	EL-number	EL-number is a product/ article number for electrical material providing efficient handling and identification of products in the electrical industry. Country specific.		n.a.	n.a.	
0t3b9jtWP9uxX2ceuaw31x	07–0017	EBKP number	EBKP number for Swiss tenders.		n.a.	n.a.	
0AO7nhSa9FzBQWUu$Q4E5D	07–0018	EFO class number	EFO class number. https://efobasen.efo.no/		n.a.	n.a.	
1BRkxPEZ94jwUmqiTtK6xv	07–0019	conformity mark	Specifies which conformity mark a product has.		n.a.	n.a.	CE, CCC, EAC
3AdnhhX2L3bBC6l6oSZU6O	07–0020	approval mark	Specifies which approval marks a product has.		n.a.	n.a.	ENEC, VDE, UL, IFS Food, Certificate, D sign, IDA

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3ZYG5CttLDKh1KDatlaH_w	07–0021	fire protection labelling	Fire protection labelling according to EN 60598-1.		n.a.	Not allowed to install at normal flammable material (surface), Not allowed to install at normal flammable material (recessed), Not allowed to cover with insulation (recessed)	
3ACN_DHdbCURKfz1ZxjzME	07–0022	fire protection	Fire protection classification for flame retardant and self-extinguishing (UL 94 classification).		n.a.	n.a.	UL 94 V-0
2AbG9j5jXCaOYPDNWeOM7T	07–0023	chemical resistance	Chemical resistance of the product.		n.a.	n.a.	
1Wn0GwUE1FnAiLZx7prEfj	07–0024	radio interference suppression	Specifies whether the product is able to suppress radio interference.		n.a.	Yes No	
33Dkxr2dX6s8LZdwlS$DiR	07–0025	RoHs directive	Specifies whether product satisfies the RoHS Directive (2011/65/EU).		n.a.	Yes No	
3wvXOhA3DA3xJZfFWVhAEE	07–0026	energy efficiency class	*Identical with name.*		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
25PgdtZ3T1Jg2kDytRpy4U	07–0027	CO_2 footprint	Total emissions caused by product manufacturing, expressed in CO_2 equivalents.		n.a.	n.a.	
0TsI8tu$n8ZPVg19uWpkrI	07–0028	omniclass number	*Identical with name.*		n.a.	n.a.	23.80.70.11
2$EwGC$sz7aAg8lhZu5Bhj	07–0029	assembly code	*Identical with name.*		n.a.	n.a.	D5020230
0UNN88etzCERr47ME5ygfW	07–0030	assembly place	A designation where the product was assembled.		n.a.	n.a.	London
2LRta8up516AVL46ac887F	07–0031	production year	Production year of the final assembly.		n.a.	n.a.	01.12.2000
2VyjV_tdrECAYMwT1$nafE	07–0032	price	Price per unit.		1E-2, currency	n.a.	79,19 GBP
31u6SnYpz4Bw32mCwGONyo	07–0033	basic unit	Basic unit of the product in pieces.		1E0, n.a.	n.a.	
2dcn2m0XXFA88QqxxSsTnG	07–0034	lead time	Expected lead time from placement of order to delivery.		n.a.	n.a.	two weeks
2Lel0vZXj7QhDuUJYQqOEc	07–0035	delivery	Delivery details including time and date.		n.a.	n.a.	01.12.2000
0vrx8v9OT8OA5U0yeMudCa	07–0036	logistics	Logistical details including storage and placement on site/holding area.		n.a.	n.a.	
0Svsivsef3cA_xQc5SiL_b	07–0037	execution	Installation sequencing including start date, end date and duration.		n.a.	n.a.	
2stqdB0GP4nxzyYpEVWwqt	07–0038	risk management	Risk management plan details associated with the object.		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1eSA4uAT143wt25u696up8	07–0039	construction design and management	Health and safety issues associated with the safe construction of the object prior to completion.		n.a.	n.a.	
1VfpYas4LATPhtnD2ceh_Z	07–0040	environmental assessment rating	Summary of achieved ratings for the object. The protocol followed and the result of the environmental assessment rating to be indicated.		n.a.	n.a.	
1yXI0s7ePEcuYBBrfpkEq9	07–0041	standards	Product standard dependant on type of luminaire.		n.a.	n.a.	
13i4dlOM1FvhfPVt5JElgA	07–0042	housing colour	The name of colour of the housing. Standardized colour classification systems may be used.		n.a.	n.a.	white
18_K3PHM50sAUN6OEG2oCA	07–0043	housing material	The main material which the housing is made of.		n.a.	n.a.	Cast Aluminium, Stainless Steel, GFK
1e7TJk_HfAhhcTKI19SL1I	07–0044	housing surface	The surface finish of the housing material.		n.a.	n.a.	Matt, Polished, Brushed

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1LMif8MLv7ZPUtU0223RaG	07–0045	luminaire type CIE 97	The luminaire types presented in CIE 97 according to calculation of the luminaire maintenance factor.		n.a.	A Bare batten, B Open top housing (natural ventilated and so called "self-cleaning" types), C Closed top housing (unventilated), D Enclosed IP2X, E Dust proof IP5X, F Indirect lighting and uplight, G Air handling and forced ventilated	
0nxCXUkH97wPwN9azBYbMv	07–0046	optical system	Description of the optical system used in the luminaire including surface texture.		n.a.	n.a.	Reflector Pure aluminium or plastic aluminium vaporized, Louver, Raster, Prisms, Refractor, Free-form lens, Collimator, Hybrid
2gWWkY9bz7dOFB4Pgn6h7G	07–0047	light transmitting surface material	The material the light transmitting surface is made of.		n.a.	n.a.	Glass, ESG, VSG, PMMA, PC

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1G6UMbjabF6Orb_N36O2Sf	07–0048	timecode of manufacture data creation	Timecode of manufacture data creation.		n.a.	n.a.	
2x$3cuweH5LO5HlpN3AB5I	07–0049	update cycle of manufacture data creation	Update cycle of manufacture data creation.		n.a.	n.a.	
3NVB__G3H5NRiaJlgbbc_9	07–0052	assembly description	*Identical with name.*		n.a.	n.a.	Lighting - High Intensity
2vu3$oP75AvhGsrUczduBw	07–0053	Omniclass title	*Identical with name.*		n.a.	n.a.	Luminaries for Internal Lighting
2vKQ_e3oT6txePlhDBTVpL	07–0054	Uniclass code	*Identical with name.*		n.a.	n.a.	
3r0wL8u3P6_uzIMJ4Mi8q2	07–0055	cuneco cassification system CCS code	*Identical with name.*		n.a.	n.a.	
1rmuEdFRv8kRsnF7G5uiWM	07–0056	NBS code	*Identical with name.*		n.a.	n.a.	
2V7FGx16L3rBlzByIwOg8P	07–0057	BIP code	Type ID for different luminaire categories, used in Sweden. http://www.bipkoder.se/#/beteckningar		n.a.	n.a.	

5.8 Operations and maintenance properties

Table 8 — Operations and maintenance properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
34PG7VadHC1QphPcsq0gLM	08–0001	operation and maintenance manual	Hyperlink to operation and maintenance data.		n.a.	n.a.	
3v5OARYZT1YPVKbbszPFRk	08–0002	burn-in time	Burn-in time for the used light source technology.		1E0, h	n.a.	
029GIxceb34PwAvq2yhDdT	08–0003	warranty ID	*Identical with name.*		n.a.	n.a.	
31uC3C$W1CZgyILMlF1ZAl	08–0004	maintenance and cleaning	The object's maintenance and cleaning requirements.		n.a.	n.a.	
1LMicN7VzFIhNU67UsE5xV	08–0005	health and safety information	The object's health and safety information.		n.a.	n.a.	
2pJ0x1y_L22u4JkKPyw8n7	08–0006	assembly place	Defining where the assembly is intended to take place, on the building site, a room number or others.		n.a.	n.a.	
2vwn75Kg55RuoCwjIK1l_l	08–0007	circuit number	*Identical with name.*		1E0, n.a.	n.a.	18
2xTmgI4Kz07w8ouThMxNae	08–0008	maintenance tasks according to SFG20	Maintenance tasks or SFG20 codes to time interval.		n.a.	n.a.	
18n9980eTBYQhPpZr2K$$d	08–0009	maintenance required during an operation time	Maintenance tasks required during a specific operation time frame.		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
39JfcO9AbAr9oN6p6vcFzd	08–0010	useful life	Useful life of the luminaire with declaration of L*x*, B*y* and ambient temperature.		n.a.	n.a.	L80B50 50 000 h 25 °C
3e4zxIOO5EZu5szfTou0vU	08–0011	average rated life of light source	Expected lifetime of a light source. Not allowed at LED.	ARL	1E0, h	n.a.	20 000 h
3sOx4EgST3axh5ZPV$lkbS	08–0012	control gear lifetime	Expected lifetime of a control gear.		1E0, h	n.a.	
0NMpOQzNH679doR_IuOYUl	08–0013	median useful life	Median useful life (of LED modules). Length of time during which 50 % (B50) of a population of operating LED modules of the same type have parametrically failed to provide at least percentage Lx of the initial luminous flux. Recommend in fixed time value for median useful life 35 000, 50 000, 75 000, and/or 100 000 h according to application.	Lx	n.a.	n.a.	L80 50 000 h
0bitv3Ynz53umOYqdoyGy7	08–0014	rated ambient temperature	Rated ambient performance temperature, highest ambient temperature around the luminaire related to a rated performance of the luminaire under normal operating conditions.	T_q	1E0, °C	n.a.	40 °C

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
19BQiuhJj8qgDgvk6nbxxB	08–0015	abrupt failure value	Abrupt failure value AFV percentile of LED modules failing to operate at median useful life, Lx. AFV depended significantly on the control gear failure.	AFV	1E0, %	n.a.	
2Ys5wBTunE_AZBAQnsTadY	08–0016	lamp lumen maintenance factor	The lamp lumen maintenance factor is the ratio of luminous flux at a specific time compared to a new light source. It is describing the aging of the light source or the reduction of light intensity over time.	LLMF	1E-2, n.a.	n.a.	0,96
3i22ssv3nDYAGDmO9prt0t	08–0017	lamp survival factor	The lamp survival factor depends on the service lifetime of a light source. LSF = 1 is saying that there will be no loss of light because of light source failure.	LSF	1E-2, n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3zQynANFH5AxO46k9nGJV_	08–0018	luminaire maintenance factor	The luminaire maintenance factor is the ratio of the luminaires luminous flux before and after cleaning. It is presented as a table of environmental conditions depending on the cleaning period of the luminaire in years. Classification of the environmental conditions based on CIE 97:2005: VC Very clean, C Clean, N Normal, D Dirty.	LMF	1E-1, years n.a.	n.a.	
1HsN$oJ6j5chUD_Pqk7bYq	08–0019	amount of switching cycles	Amount of switching cycles.		1E0, n.a.	n.a.	
0M6duWSxD2KBE3HH3CEdiB	08–0020	disposal symbol	*Identical with name.*		n.a.	n.a.	
2wGK64QFXCNBTJGIZ9W9T3	08–0021	replace cover glass	*Identical with name.*		n.a.	Yes No	
3Kn4FA4wT8fwq6TqMs8LSq	08–0022	battery exchange possible	*Identical with name.*		n.a.	Yes No	
2hiYLf6991OwJ7Ra5hI8RK	08–0023	battery exchange after x years	The battery's service life.		1E0, years	n.a.	
2AvYrjYPr0sRr1MihNFaSY	08–0024	access clearance bottom	Access required for maintenance of this item.		n.a.	n.a.	

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3fYv9z7yf7cwK81XdvBN10	08–0025	access clearance left	Access required for maintenance of this item.		n.a.	n.a.	
0I4OByNdDC4BHSKOAD8s5t	08–0026	access clearance right	Access required for maintenance of this item.		n.a.	n.a.	
1aiuNjGlP5CeuWyc0dii8P	08–0027	access clearance front	Access required for maintenance of this item.		n.a.	n.a.	
05kD42GYbEFQDgWG2CHKt5	08–0028	access clearance rear	Access required for maintenance of this item.		n.a.	n.a.	
1_oAxKXSb5R97lfGHcRkN8	08–0029	access clearance top	Access required for maintenance of this item.		n.a.	n.a.	
03XhO08LHDWvZXteTHjOi9	08–0030	acoustic absorption table	The sound absorption coefficient (see ISO 354:2003) presented in table depending on frequencies in the human hearable range.		1E-2, n.a. 1E0, Hz	n.a.	1,6 at 500Hz
1Kv1pLf6D1dA85JgnKKPT1	08–0031	acoustic absorption average	Acoustic absorption in average over the audible range.		Factor	n.a.	1,2

Bibliography

BS 1192-4:2014, *Collaborative production of information. Fulfilling employer's information exchange requirements using COBie. Code of practice*

CIE 97, *Guide on the Maintenance of Indoor Electric Lighting Systems*

CIE S 017, *ILV: International Lighting Vocabulary*

CEN/TR 16791, *Quantifying irradiance for eye-mediated non-image-forming effects of light in humans*

EN 12193, *Light and lighting - Sports lighting*

EN 12665, *Light and lighting - Basic terms and criteria for specifying lighting requirements*

EN 13032-1, *Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 1: Measurement and file format*

EN 13032-4, *Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 4: LED lamps, modules and luminaires*

EN 15193-1, *Energy performance of buildings - Energy requirements for lighting - Part 1: Specifications, Module M9*

EN 1838, *Lighting applications - Emergency lighting*

EN 60027 (all parts), *Letter symbols to be used in electrical technology (IEC 60027)*

EN 60061 (all parts), *Lamp caps and holders together with gauges for the control of interchangeability and safety (IEC 60061)*

EN 60079-0, *Explosive atmospheres - Part 0: Equipment - General requirements*

EN 60079-7, *Explosive atmospheres - Part 7: Equipment protection by increased safety "e"*

EN 60079-15, *Explosive atmospheres - Part 15: Equipment protection by type of protection "n"*

EN 60068-2-75, *Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests*

EN 60529, *Degrees of protection provided by enclosures (IP Code)*

EN 60598-2-22, *Luminaires - Part 2-22: Particular requirements - Luminaires for emergency lighting*

EN 60695-2-10, *Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure*

EN 60695-11-5, *Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance*

EN 61249-2-21, *Materials for printed boards and other interconnecting structures - Part 2-21: Reinforced base materials, clad and unclad - Non-halogenated epoxide woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad*

EN 61341, *Method of measurement of centre beam intensity and beam angle(s) of reflector lamps*

EN 62034, *Automatic test systems for battery powered emergency escape lighting*

EN 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

EN 62442-1, *Energy performance of lamp controlgear - Part 1: Controlgear for fluorescent lamps - Method of measurement to determine the total input power of controlgear circuits and the efficiency of the controlgear*

EN 62471, *Photobiological safety of lamps and lamp systems*

EN ISO 354, *Acoustics - Measurement of sound absorption in a reverberation room (ISO 354)*

EN ISO/CIE 11664-1, *Colorimetry - Part 1: CIE standard colorimetric observers (ISO/CIE 11664-1)*

EN ISO 16739-1, *Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries - Part 1: Data schema (ISO 16739-1)*

EN ISO 29481-1:2017, *Building information models - Information delivery manual - Part 1: Methodology and format (ISO 29481-1:2016)*

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

EN ISO 12006-3, *Building construction - Organization of information about construction works - Part 3: Framework for object-oriented information (ISO 12006-3)*

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)*

ISO 6707-2:2017, *Buildings and civil engineering works - Vocabulary - Part 2: Contract and communication terms)*

ISO/IEC 11404:2007, *Information technology - General-Purpose Datatypes (GPD)*

ISO/IEC 80000 (all parts), *Quantities and units*

ISO/IEC 2382:2015, *Information technology - Vocabulary*

ISO/IEC 60559, *Information technology - Microprocessor Systems - Floating-Point arithmetic*

PAS 1192-2:2013, *Specification for information management for the capital/delivery phase of construction projects using building information modelling*

PAS 1192-3:2014, *Specification for information management for the operational phase of assets using building information modelling*

PAS 1192-5:2015, *Specification for security-minded building information modelling, digital built environments and smart asset management*

PAS 1192-6:2018, *Specification for collaborative sharing and use of structured Health and Safety information using BIM*

UNI 11337-1:2017, *Building and civil engineering works – Digital management of the informative processes – Part 1: Models, documents and informative objects for products and processes*

UNI/TS 11337-3:2015, *Building and civil engineering works – Codification criteria for construction products and works, activities and resources – Part 3: Models of collecting, organizing and recording the technical information for construction products*

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres

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