
**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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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).

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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.

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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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]

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.

4.2.2 GUID

In ISO 23386:2020, PA001 named “Globally unique identifier”.

Identifier given to a product that guarantees its uniqueness throughout its entire life (defined in 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 ISO 16739-1 (IFC) and 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 GUID.

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 ISO 23386:2020, PA016 named “Names in language en-EN”

The name of the property.

4.2.5 Description

In ISO 23386:2020, PA018 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 ISO 23386:2020, PA022 named “Symbols of the property in a given property group”.

Symbols for quantities are given in the ISO 80000 and IEC 80000 series. The symbols for quantities are written in italics. A given symbol can indicate different quantities. (ISO 80000-1:2022).

4.2.7 Format, Unit

In ISO 23386:2020, PA037 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 [ISO/IEC 60559:2020].

In ISO 23386:2020, PA033 named “Units”.

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

4.2.8 Value set

In ISO 23386:2020, PA039 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 ISO 23386:2020, PA019 named “Examples in language en-EN”.

Samples for a value of the specific property.

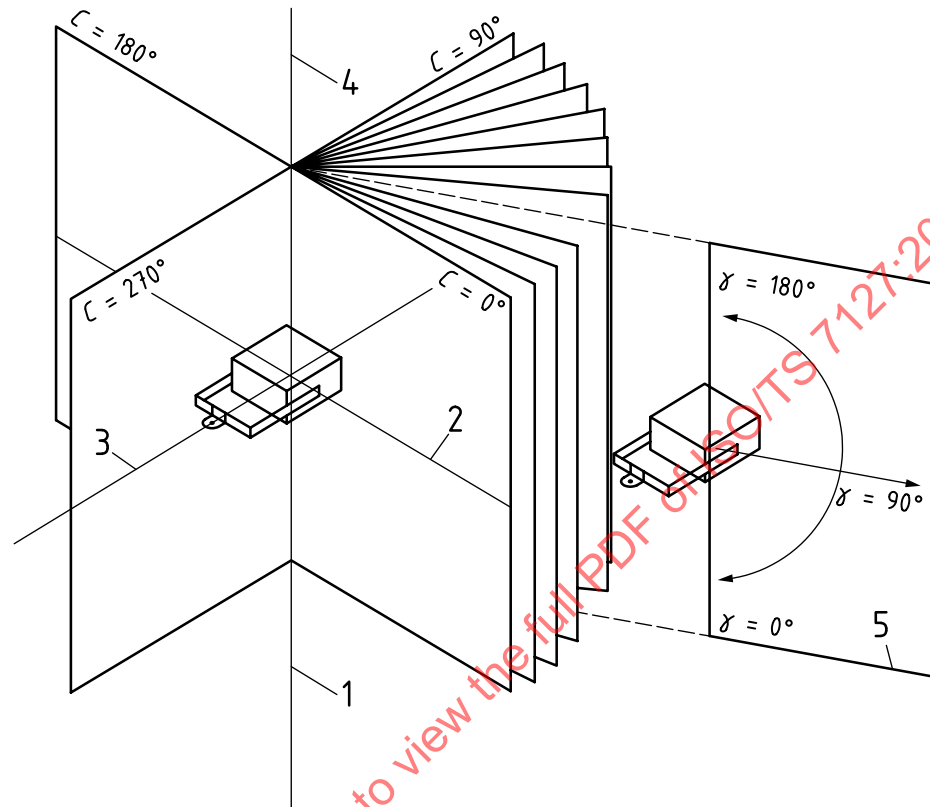
4.3 Further IT-related attributes

Where potential attributes are not specified in 4.2, they may be defined separately within a data dictionary. These attributes can be found in ISO 23386:2020:

- **Definitions in language en-EN (PA017):** A description of the attribute in order to define it unambiguously;
- **Method of measurement (PA029):** Evaluation of construction products to ensure their suitability according to requirements in harmonised technical specifications;
- **Name of the defining values (PA034):** In a table of values, this attribute provides the name of the column headers;
- **Data type (PA030):** Format for expressing the value of the property. This can be understood as the storage type from a software perspective. (ISO/IEC 11404:2007, 8.1) Examples: String, Float, Integer;
- **Status (PA002):** Status of the property during its life cycle. Example: Active;
- **Date of creation (PA003):** Date of validation of the property creation request. All dates in accordance with ISO 8601. Format=YYYY-MM-DDThh:mm:ssTZD. Example: 2014-04-30T10:39:53Z;
- **Date of activation (PA004):** Date after when the property can be used;
- **Date of last change (PA005):** Date of validation of the last change request;
- **Date of revision (PA006);**
- **Date of version (PA007);**
- **Date of deactivation (PA008):** Date when property becomes obsolete. The property is maintained in the dictionary;
- **Version number (PA009):** Enables tracking of major changes;
- **Revision number (PA010):** Enables tracking of minor changes. If the version number changes, the revision number starts again at 1. Examples: new translation, changes of typos;
- **List of replaced properties (PA011):** Identifier of the replaced property (or properties). List of GUIDs;
- **List of replacing properties (PA012):** Identifier of the replacing property (or properties). List of GUIDs;
- **Deprecation explanation (PA013):** 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 lighting systems

In [Table 1](#) the mechanical properties of a lighting system are described. [Figure 1](#) shows the orientation of a luminaire in the (C, γ) coordinate system according to CIE 121:1996 to clarify the location relationship.



Key

- 1 first axis of luminaire
- 2 second axis of luminaire
- 3 third axis of luminaire
- 4 polar axis of photometer
- 5 C half plane

Figure 1 — Orientation of a luminaire in the (C, γ) coordinate system according to CIE 121:1996; first axis of luminaire (γ) is in the IES LM-63-19, the vertical or the z-axis; second axis of luminaire (C0-C180) is in the IES LM-63-19, the 0° horizontal or the x-axis; third axis of luminaire (C90-C270) is in the IES LM-63-19, the 90° horizontal or the y-axis

Table 1 — Mechanical properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2GZ1YB8enFVhD-HOKgLc\$BU	01-0001	overall diameter	Overall diameter of the housing of the round lighting system.		1E0, mm	n.a.	200
2F38RxmOf3ow-0715Rf500	01-0053	overall radius	Overall radius of the housing of the lighting system. Suitable for circular luminaires or sensing devices or segment geometry. Not suitable for ellipsoid forms.		1E0, mm	n.a.	100
19Z9XKYDT-4p8HR0ZbD\$wO_	01-0002	overall height	Height of the housing of the lighting system. Measured over γ (Vertical). See Figure 1 – first axis of luminaire.		1E0, mm	n.a.	100
1uJgYpRnFpQ4tSt-HaR2Pf	01-0003	overall length	Length of the housing of the lighting system. Measured in the C90-C270 plane (90° Horizontal). See Figure 1 – third axis of luminaire.		1E0, mm	n.a.	1 500
1dPvrZN3vEIB0n-0vwYvDcX	01-0004	overall width	Width of the housing of the lighting system. Measured in the C0-C180 plane (0° Horizontal). See Figure 1 – second axis of luminaire.		1E0, mm	n.a.	200
1RPyGAgMf4hRTZ-0DogLFnU	01-0005	mass	Mass of the lighting system. Commonly used as “weight”.		1E-2, kg	n.a.	1,40
2A6xVIUTj9QP-1G\$qb4FiWv	01-0006	cut-out diameter	Diameter of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	180
1RIsLtoX1whNaYk-aCoHXJ	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.	130
2VEYAfd7j4FQt-JgAb_riA5	01-0008	cutting out length	Length of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	1 380
2pFFNB0uv1Tf_RTQpYktGL	01-0009	cutting out width	Width of the cut-out hole (for recessed or flush mount).		1E0, mm	n.a.	175

Table 1 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1zs4Cj96j3d8TWAeeix-Jga	01-0010	luminaire housing shape 3D	Three-dimensional simplified shape of the lighting system.		n.a.	Cylinder, Cuboid, Cube, Cone, Pyramid, Sphere, Half-Sphere, User Defined	Cube
1Zek8UyXfE6gToN8_RDHfg	01-0011	shipping weight	Weight of the shipping package of the lighting system.		1E-2, kg	n.a.	2,40
1i_XY2Awj5RRadN-mgPS3yQ	01-0012	shipping height	Height of the packed lighting system as it is shipped.		1E0, mm	n.a.	150
10UDC\$GOvEHex-mf_I8j9xG	01-0013	shipping length	Length of the packed lighting system as it is shipped.		1E0, mm	n.a.	1 650
1ybyhd8TbACg99Ox-pWMoOg	01-0014	shipping width	Width of the packed lighting system as it is shipped.		1E0, mm	n.a.	260
0yvFhm4xvDggZv-Lzgzhlyq	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	Pallet

Table 1 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
16XdmXw8T3HOli-0TOcc8LH	01-0016	impact protection rating IK	Degree of protection provided by enclosures for electrical equipment against external mechanical impacts according to IEC 62262:2002 and IEC 60068-2-75:2014.		n.a.	IK00, IK01, IK02, IK03, IK04, IK05, IK06, IK07, IK08, IK09, IK10	IK 10
1LrBLaYtnCARK-perf_2Ykh	01-0017	glow wire resistance	The glow wire test for fire hazard according to IEC 60695-2:2014 to test electrical products, assemblies, or individual components.		1E0, °C	550 °C, 650 °C, 750 °C, 850 °C, 960 °C	750
1284Zyx8D4uR55X-2cRsWzu	01-0018	needle flame test	Method for testing and assessment of the fire hazard of plastic material using a needle flame according to IEC 60695-11-5:2017. "Yes" for the product has passed the test.		n.a.	Yes No	
1PMNxHS2z4tRu-wiQxyzRfs	01-0019	number of light outputs	Number of surfaces with light output. Equals the number of positions for light distribution curves of the luminaire.		1E0, n.a.	n.a.	1
1mHV_4yHLEFux-OaIDINmNn	01-0020	diameter of the luminous area	Identical with name.		1E0, mm	n.a.	190
0WXZRl6CD2KfL4xC1uuLBF	01-0021	height of the luminous area	Height measured over z-axis. See Figure 1 – first axis of luminaire.		1E0, mm	n.a.	4
1aulwSthrFvRTJgX-6NfO9Z	01-0022	length of the luminous area	Length measured aligned with the y-axis, in the C90-C270 plane. See Figure 1 – third axis of luminaire.		1E0, mm	n.a.	1 430

Table 1 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2SqBhDZKD1hBjG-WsV4q_GQ	01-0023	width of the luminous area	Width measured aligned with the x-axis, in the C0-C180 plane. See Figure 1 – second axis of luminaire.		1E0, mm	n.a.	192
2gBflnIcCgwR3hT_QVGtQ	01-0024	cable length	Cable for power supply. Zero means no cable supplied.		1E0, mm	n.a.	2 400
1oCak0l6v9Bew_SHOfRFnw	01-0025	Pliable	The luminaire body is flexible.		n.a.	Yes No	
3CckyLFxX8KxZV-vgilS7t	01-0026	ground recessed accessibility class	Specific application class for ground recessed luminaires according to temperature limits, dimensions, and static load resistance in kN according to IEC 60598-2-13.		n.a.	n.a.	In restricted accessible areas
3AgJzo7ND4zB4c3y-sHuewK	01-0054	ground recessed luminaire static load	Static load of ground recessed luminaire according to IEC 60598-2-13.		1E0, kN	n.a.	20
0f2af0EifB1Ql6x-alTs1Xn	01-0029	sealing material	Material of the sealing of a luminaire.		n.a.	n.a.	
0iACWRZ2HAFY7UB-nCGjHq	01-0057	reflector material	Material of the reflector of a luminaire.		n.a.	n.a.	Aluminium
3jAmXEF7Tn9oPIBD_oO4BfE	01-0030	silicone-free	States whether the luminaire is silicone-free.		n.a.	Yes No	
2DJLgonKH2zvtUyIG-DtoL3	01-0031	halogen-free	States whether the product is halogen-free according to IEC 61249-2-21:2004.		n.a.	Yes No	
3IPpBFdz17PBOW-0suiESss	01-0032	temperature on light aperture	Average temperature of light emitting surface of a luminaire.		1E0, °C	n.a.	
30M\$RN1TX7\$g-z008\$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.	-40 25
0jRoUrk2nF5QFen-mXXlBTS	01-0034	minimum distance	Describes the minimum required distance of the luminaire housing to other objects.		1E0, mm	n.a.	50

Table 1 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3GwYrPINbAYu8g-PAOJZgwc	01-0035	maximum orientation angle	Maximum of possible values for the orientation angle (around the z-axis). See Figure 1 – first axis of luminaire.		1E0, °	n.a.	
3qn7sE55H1FuwsBo-zcktbX	01-0036	minimum orientation angle	Minimum possible value for the orientation angle (around the z-axis). See Figure 1 – first axis of luminaire.		1E0, °	n.a.	
26KAJOVBvF8gIMO-ZaAOfTV	01-0037	orientation angle steps	Step width for the orientation angle (around the z-axis). See Figure 1 – first axis of luminaire.		1E0, °	n.a.	
2NmVhTtK4TffvwDN-SYyqj\$4	01-0038	orientation angle default	Default value for the orientation angle (around the z-axis). See Figure 1 – first axis of luminaire.		1E0, °	n.a.	
0qiz0v1kLAP-BRWAW6wO1PA	01-0039	orientation angle selected value	Selected value for the orientation angle (around the z-axis). See Figure 1 – first axis of luminaire.		1E0, °	n.a.	
05nmPIM-s186u1u1s5MSd23	01-0040	maximum tilt angle	Maximum possible value for the tilt angle (around the x-axis). See Figure 1 – second axis of luminaire.		1E0, °	n.a.	
3ZWzCOV090TukLT-sY8Vcua	01-0041	minimum tilt angle	Minimum possible value for the tilt angle (around the x-axis). See Figure 1 – second axis of luminaire.		1E0, °	n.a.	
0_ofQtZ.jB\$e1o-GoWeQWoV	01-0042	tilt angle steps	Step width for the tilt angle (around the x-axis). See Figure 1 – second axis of luminaire.		1E0, °	n.a.	
0w56LObA94iv-baiikyEXf2	01-0043	tilt angle default	Default value for the tilt angle (around the x-axis). See Figure 1 – second axis of luminaire.		1E0, °	n.a.	
3VHF0w-jl13sv6CBYkwU2wh	01-0044	tilt angle selected value	Selected value for the tilt angle (around the x-axis). See Figure 1 – second axis of luminaire.		1E0, °	n.a.	
3zsZztBEH9sPA-24POLsfWn	01-0045	maximum turn angle	Maximum possible value for the turn angle (around the y-axis). Turn can also be referred to as 'twist' or 'cant'. See Figure 1 – third axis of luminaire.		1E0, °	n.a.	
3WFOEtzHJE2gE-wlqwNt23B	01-0046	minimum turn angle	Minimum possible value for the turn angle (around the y-axis). Turn can also be referred to as 'twist' or 'cant'. See Figure 1 – third axis of luminaire.		1E0, °	n.a.	

Table 1 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1S1u11ho-b00AsYAUdvnB5e	01-0047	turn angle steps	Step width for the turn angle (around the y-axis). Turn can also be referred to as 'twist' or 'cant'. See Figure 1 – third axis of luminaire.		1E0, °	n.a.	
0Y3iFNjcH3Xh_0Ax-e6FRZy	01-0048	turn angle default	Default value for the turn angle (around the y-axis). Turn can also be referred to as 'twist' or 'cant'. See Figure 1 – third axis of luminaire.		1E0, °	n.a.	
0HKPIHCMX-FO0mtqPiFpiwZ	01-0049	turn angle selected value	Selected value for the turn angle (around the y-axis). Turn can also be referred to as 'twist' or 'cant'. See Figure 1 – third axis of luminaire.		1E0, °	n.a.	
3ejPldyc9Bau-0HaTHZMtva	01-0050	3D model file	The description of a location of the 3D model file.		n.a.	n.a.	C:\ URL
3p1kEeiDL4i8RySiT-GkUyU	01-0051	cable inlet	Cable inlet, type and count, free description		n.a.	n.a.	2xPG13.5
0fa4jPy7f3KhEr-An_5SUg7	01-0052	flush mounting box	Mechanical device to get the luminaire or sensor mounted into concrete.		n.a.	n.a.	
2hXE7M6N9DYec\$I-ZwiY3ia	01-0058	suspension height	Distance from ceiling to mounting point of the suspended lighting system.		1E0, mm	n.a.	500

Table 2 — Electrical properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2FA0ih18LF_uK-t46c5ErIv	02-0001	apparent power	Apparent Power of the product according to IEC 60050.	S	1E0, VA	n.a.	
17a067965Cqh-DelQ\$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.	
3LBrQkLDDFheB0xrGk8Zr_	02-0003	power factor	Under periodic conditions, ratio of the absolute value of the active power P to the apparent power S. See also IEC 80000-6:2008.	λ	1E0, n.a.	n.a.	0,92
0zjByQSTX24wsx-TI25Lzj\$	02-0004	dimming table / curve	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.	
3krkQTVbv0\$g9X-j9eYC6nh	02-0005	compensation type	Identifies the form of compensation used for power factor correction and radio interference suppression.		n.a.	Capacitive, Inductive, Other	
0TzE4sMDv1pwfyg-K1xxjm5	02-0006	standby power / networked standby power	Power consumption of luminaire in off mode, or in non-active mode. All electrical components including emergency and lighting controls components have to be considered. See also ISO/CIE 20086:2019 and IEC 63013:2017+A1:2021.		1E-2, W	n.a.	0,35
2wiaN2gSf0\$RFeAF-8d_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.	n.a.	0,20
0G4TAennPD5gzRo-G2rIZv_	02-0008	ILCOS light source type	Light Source type definition according ILCOS, IEC 61231:2010.		n.a.	n.a.	IAA/ C-40-220/ 230-E27-60

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1fBdd6YP208_JFT-CLHktp	02-0009	lamp holder	A device which mechanically supports and provides electrical connections for a compatible electric light source. See also IEC 60061:2018.		n.a.	n.a.	E27
1MkMercePCOufl-c60yDPFq	02-0071	luminaire socket	Connector and mechanical holder for accessories, LED, control or other modules		n.a.	n.a.	GH76p-2, zhaga book18, zhaga book20, NEMA
1nVrfHKzD-0TOacgThVW99r	02-0076	luminaire socket interface	Electrical interface on contact of socket.		n.a.	n.a.	D4i, DALI, 0-10V, 1-10V, PWM
1nKr7A75b8reM-NAfPW1iw1	02-0010	nominal light source output power	Approximate power output used to designate or identify the light source.		1E0, W	n.a.	60, 49, 80
1A3s\$Z4Sj7lQFfzb-fen7Yu	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.	35, 49, 80
018C_3ZRn5luf-wY89oB9NV	02-0012	light source included	States whether the luminaire is supplied with light source.		n.a.	Yes No	Yes
2LJHyobk57buK-gQhTXfFR_	02-0013	maximum nominal output power of light source	<i>Identical with name.</i>		1E0, W	n.a.	20
1RGMcZL0X4SvX-P9H1tpT7e	02-0014	default light source power	Recommended light source power by supplier or manufacturer.		1E0, W	n.a.	18
1ELEjwitTB-hANPTqofV2TI	02-0015	light source position of usage	Light Source usage position (Horizontal/Vertical) possibly with range of angle.		n.a.	Horizontal, Vertical	Horizontal
2U00chRyr2eQDX-abAwecx5	02-0016	light source count	Number of electric lamps (electric light source provided with at least one cap) in one luminaire.		1E0, n.a.	n.a.	2

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0FWc9hC5PEqgfN-0fVzc2Yo	02-0017	zhaga standard	Is the luminaire compliant with Zhaga, and if so state which Zhaga Books apply. See also PD IEC/PAS 63166.		n.a.	n.a.	
21GF1rRP4denY-C8o6ot\$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.	electromagnetic, electronic, electronic for LEDs, constant wattage, multi-channel
06Vbbmtwv85QA-rFTsBPUPQ	02-0019	control gear required	States if control gear is necessary.		n.a.	Yes No	
3kZ3Cj9Xb9DBPoZ-15k3vIQ	02-0020	control gear included	Shipped with or without control gear/drivers.		n.a.	Yes No	Yes
2mGS7VdXfBo8r-V8OFHuW7b	02-0021	control gear quantity	The quantity of control gears.		1E0, n.a.	n.a.	1
3M6mU\$FIP-6KQ80BVaK5PCO	02-0022	control gear location	Describes the location of the control gear: inside or outside of the luminaire or provide the distance to the light source.		n.a.	n.a.	
3d9jSb_z7WB2y0xbHeccR	02-0023	energy efficiency of control gear	IEC 62442-1:2018 defines the measurement methods for the total input power of the lighting system.		1E-2		0,86
2oaQ3AOnn40wmt6Zfp6ooy	02-0024	rated current	Electrical rated current according to IEC 60669-1.	I	1E0, A	n.a.	
3rfirTj9bgIELSX-4VRBz	02-0025	inrush current	Initial current after turning on. Base for quantity of luminaires per fuse or similar.		1E-2, A	n.a.	
2ENV\$TQoL31gD-SHIZyR4N	02-0026	inrush current time	Inrush current time after turning on.		1E0, µs	n.a.	

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
22IpUkOwD2i-O1Vugd8CAfb	02-0027	rated frequency	Rated frequency at which the product operates normally as specified by the supplier or manufacturer. See IEC 61293:2019.		1E0, Hz	50, 60, 0 <i>multiple option selection</i>	
3ERn8VgnjDjhulH-3MaG9yG	02-0028	supply voltage	The phase-to-phase or phase-to-neutral voltage at the supply terminals at which the product operates normally as specified by the supplier or manufacturer. See IEC 60038.		1E0, V	n.a.	230
3\$YlxYFj1E9zX-dzpVaCgt	02-0066	rated voltage	The voltage or range of voltages indicated on the luminaire according to IEC 60598-1:2020.		1E0, V	n.a.	
3bHsk\$G7n-05BgiaYUYUg6s	02-0067	2nd rated voltage	Rated output voltage on the secondary side (in the case of lighting using a voltage converter) according to IEC 61347 series.		1E0, V	n.a.	
3RRksINcn3IBF-myVoAyyMc	02-0029	voltage type	AC Alternating Current/DC Direct Current/UC Universal Current (Alternating or Direct Current).		n.a.	AC, DC, UC	
0las3th8D2c-g4EvP\$KqQcv	02-0030	electrical safety class	Indicates whether the electrical device has a protective earth connection or not. See IEC 61140:2015.		n.a.	0, I, II, III	I

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1K_1K1q6n7K-gOFJw5Cuc_i	02-0031	IP code	A coding system to indicate the degrees of protection provided by an enclosure against access to hazardous parts, ingress of solid foreign objects, ingress of water and to give additional information in connection with such protection. See also IEC 60529:2014.		n.a.	IP20, IP21, IP22, IP23, IP24, IP25, IP26, IP27, IP28, IP30, IP31, IP32, IP33, IP34, IP35, IP36, IP37, IP38, IP40, IP41, IP42, IP43, IP44, IP45, IP46, IP47, IP48,	20

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
						IP50, IP51, IP52, IP53, IP54, IP55, IP56, IP57, IP58, IP60, IP61, IP62, IP63, IP64, IP65, IP66, IP67, IP68, IP69, IP69K	
2sRMMfiv- vEvwH0LKqBmNoy	02-0032	impulse withstand voltage	Highest peak value of impulse voltage of prescribed form and polarity which does not cause breakdown of insulation under specified conditions. See IEC 60664-1.		1E0, kV	n.a.	
2Afk3AuoX0YfhIG- 9pMfb5q	02-0033	colour controllable	States if the colour is controllable.		n.a.	Yes No	No

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2kMc1GwgH1LAn-Z1huo7mq_	02-0034	colour temperature controllable	States if the colour temperature is controllable.		n.a.	Yes No	Yes
00aw6unKX0ghwx-ryKRoQm9	02-0035	control features	Description of control elements and features.		n.a.	n.a.	Touchdim, dynamic light, light management system
1rdcbmVG19Ug-Bf_YVdUo9f	02-0036	Dimmable	Determines if the luminaire is dimmable.		n.a.	Yes No	Yes
3YVv_4s1LA0u-iEUpMsRej9	02-0037	with dimmer	Determines whether the luminaire has a dimmer included.		n.a.	Yes No	No
0jGPV_emX0auTlyN-Qx4grP	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	Trailing edge
0DIY8lmBT8gx]-Cl04yS42z	02-0068	dimming control method	Determines which dimming control type is applicable for the luminaire.		n.a.	n.a.	Group, Step, Sequential
2SM664IlzBFOlcuH-C24iWz	02-0039	dimming range	Determines which range of dimming is possible for luminaire.		1E0 to 1E0, %	n.a.	1 to 100
3_eFt0HBf3Ugmfs-ROvHbly	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, PWM

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2a382qr4fB08W-b9xoufkaq	02-0041	quantity of addresses	Determines the quantity of addresses of the product.		1E0, n.a.	n.a.	4 DALI Addresses for Power Consumption, 2 DALI Addresses for Integrative Lighting, 20 DMX Channels needed for functions
24CkSPPCb8Fx0fU-WeZlnfW	02-0042	DALI DT support	Determines the DALI Device Types the luminaire is supporting.		n.a.	n.a.	DT1, DT5, DT6, DT7, DT8
0qBCPAI5j85ewts-RgzQ4Fw	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	Cable
05F825n2fBxfST-7DzrOuLm	02-0045	clamping range	The range of clamping.		1E-2 to 1E-2, mm ²	n.a.	0,75 to 1,50
11SZgYx5H3RvmoG-z9uTiTf	02-0046	cable cross-section	Value of acceptable minimum and maximum cable cross-section.		1E0, mm ²		
100MSXxt96iB-H86YJ6lECe	02-0047	number of phases	Specifies the number of phase that a luminaire can be connected to.		1E0, n.a.	1, 2, 3	3
1UrFPrHg-j2whM6TeNYn83l	02-0048	supply phase	Determines the number of supply phase used for the device electrical input.		n.a.	L1, L2, L3	L1

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2nKXmIuvb7_8cl-WogllEcr	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
1Uuzk8eSnF-9h\$NyNPIiShg	02-0050	with connecting cable	Determines whether the product involves connecting cable.		n.a.	Yes No	Yes
0jKxNcCffAl-ul5K\$HEbKak	02-0072	length of cable	Length of the connecting cable.		1E-2, m	n.a.	1,20
1oLuIWYPjClvI7d-qwEXdaN	02-0051	with power plug	Determines whether the luminaire includes a power plug.		n.a.	Yes No	No
0opNtWZG-zAAhb0SXXtC4px	02-0073	power plug type	Type of the included power plug		n.a.	n.a.	CEE 7/4
2RVwJxv\$TCN-B03cljqpK26	02-0052	with switch	Determines whether the luminaire has a switch included.		n.a.	Yes No	Yes
1h35yf0g10veX-dUQaAudI2	02-0053	with sensing device	Determines whether the luminaire contains an integrated sensing device.		n.a.	Yes No	No
3kbFNwkkb7gPU-snc_COBg4	02-0054	constant light output	Determines whether the luminous flux stays constant over the declared lifetime.		n.a.	Yes No	Yes
2d9pUf\$QXEtXHYd-BY0u0\$3	02-0055	constant light output start power	<i>Identical with name.</i>		1E-2, W	n.a.	56
3UEOcatIDEMf\$qd-vydAlfg	02-0056	constant light output end power	<i>Identical with name.</i>		1E-2, W	n.a.	60
3B8KQ1WqfC8x-5qTA1pA7PY	02-0064	constant light output average power	<i>Identical with name.</i>		1E-2, W	n.a.	58
1qhhuqyT4\$xT5g-ToocAE3	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
30Ko89Zdb53uyKz-RXpupJT	02-0058	radio transmitting power	Power of the wireless module expressed in decibel ratio of a power value.		1E0, dBm	n.a.	+4
3ETH0SOQH5DeS-9U\$Wj1Aa8	02-0059	radiation transmitting frequency	The frequency of radiation for wireless transmission.		1E-2, GHz	n.a.	2,40

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0WjAaRYTX8e0Zc-C3iDTL8b	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
12_LtdVG5D-qvZ\$R5Y3Ua8I	02-0061	LED module replaceable	<i>Identical with name.</i>		n.a.	User with tool, User without tool, Professional, Manufacturer, none	Professional
1hwc11pl-v2A90eCTHqW7ZB	02-0062	total harmonic distortion THD	Ratio of the effective value of the sum of all harmonic components to the effective value of the fundamental according to IEC 61000-3-2:2010.		1E0, %		4
0Rapt45z3S8Ef-ZIGBN061	02-0063	control gear replaceable	Control gear replaceable according to IEC 60598-1:2020.		n.a.	User with tool, User without tool, Professional, Manufacturer, none	none
3yprn4XcD-1CP0A67A\$WxFb	02-0065	surge protection	<i>Identical with name.</i>		n.a.	Yes No	Yes
0o1lm4BwLAQ0tx-a8Gd4wib	02-0069	surge protection CM – Common mode	Protection against lightning and overvoltages. Surges between live conductors and earth. Reference IEC 61547, IEC 61000-4-5		1E0, kV	2 ... 10	10
1y\$NA36xr8ox_l0U-BobviH	02-0070	surge protection DM – Differential mode	Protection against lightning and overvoltages. Surges between live conductors. IEC 61547, IEC 61000-4-5		1E0, kV	1 10	10
0kRq_cvcL1fvAzPU-jxL4lT	02-0072	wireless connection protocol	The connection protocol supported to connected sensors, controllers, luminaires in smart light system.		n.a.		ZigBee, Bluetooth, Wi-Fi, NB-IoT

Table 2 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3BhzIrD9nBcuAazT-kJEU36	02-0073	connection type	Smart light nodes (sensor, controller, or luminaires etc.) are connected by wire or wireless.		n.a.	wired wireless	wireless
0GyCmQC\$X3U8g-wlgUqh_z1	02-0074	control gear output range	Electrical output boundary defined by the minimum and maximum output currents $I_{\min}$ and $I_{\max}$, the minimum and maximum output voltages $U_{\min}$ and $U_{\max}$, and the minimum and maximum output powers $P_{\min}$ and $P_{\max}$.		n.a.		
0ybd7qvXn6Sh-HLt89\$HeGL	02-0075	control gear configuration	The options to connect to the control gear to configure the parameters of the control gear.		n.a.		USB cable, NFC, Bluetooth, RF

Table 3 — Emergency lighting properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0nXXpyMbD4Qg-zHiMoFE\$Kf	03-0001	suitable for emergency lighting	Determines whether emergency lighting is possible.		n.a.	Yes No	
3pJBuEixPAV9f0wT-nl2cOM	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	
3Q6UsxAKD-0Q8m00x0ZsmhD	03-0003	dedicated emergency lighting type	Product type for an application of the emergency lighting. Dedicated to emergency luminaires only.		n.a.		path lighting, evacuation lighting, guidance lighting, safety lighting, exit sign lighting, dynamic exit sign lighting
3\$hGY-wTMb2sQ53dzP\$G-jc9	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
2Yq5DQRXP7efr3c-Qyq8sq\$	03-0005	backup supply system	The type of backup supply system according to IEC 60598-2-22:2015.		n.a.	single battery, central battery, generator	
2qgqLIM2b91w-jREM3dUep2	03-0006	testing method	Testing method of emergency lighting. According to IEC 62034:2012.		n.a.	Manual Test, Self-Test, Central Test, S, P, ER, PER, PERC	

Table 3 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2XGbfN7gP1ugSmA-fQ0jln	03-0007	emergency operation type	Emergency operation type according to IEC 60598-2-22:2015, Annex B, b)		1E0, n.a.	0, 1, 2, 3, 4, 5, 6	
2UfXwD2hLDx-eeUzqPOjWhh	03-0008	emergency facilities	Emergency facilities code according to IEC 60598-2-22:2015, Annex B c)		n.a.	A, B, C, D, E, F, G	
1QFaMGG19Dh-wzoLgqvyyvv	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_2aQQD049K9w-6fm2THi	03-0011	current DC-operation	Identical with name.		1E0, mA	n.a.	
2sk0IXxZ93A-9vfVQArmqx0	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.	
1i4AYS799CBxV-0ZIYKoY1M	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.	

Table 3 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3SPWY2QXj1Tve2T-7PA9Uw4	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.	
36Xu4jb_T9vQ3ZUe-Kan53F	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.	
0RTU7Kmn15Ax1t-SLCuIgSG	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.	
0nMEIVYcFAX-8eq7QEwZK1f	03-0018	emergency lighting recharge time	Duration (in h) in which the emergency lighting batteries are being re-charged.		1E-2, h	n.a.	
29ZiimATr4Q00B-4wwiQNa8	03-0019	battery type	Battery type, Cell type. See IEC 60086-1.		n.a.	n.a.	R14
3HSRRigDn3bwrPt-tqPraMV	03-0020	battery capacity	<i>Identical with name.</i>		1E-1, Ah	n.a.	
1hLQSaFhL7LOoW-Cue_qAOm	03-0021	battery voltage	<i>Identical with name.</i>		1E-1, V	n.a.	
3a5GdiFj1Czvy-jCholq9lh	03-0022	battery form factor	Battery form factor and dimension.		n.a.	n.a.	Stick 240 mm ø 33 mm
209HjwozH45uVF-7D5vCuN2	03-0028	battery ambient temperature range for charging	<i>Identical with name.</i>		1E0, °C to 1E0, °C	n.a.	-20 to 45
3lvvcB\$9vFevHjP-W5YB1Ph	03-0029	battery ambient temperature range for discharging	Ambient temperature range for discharging of battery in case the light is switched on.		1E0, °C to 1E0, °C	n.a.	-20 to 45

Table 3 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
20JyDptDT0\$V_ SOhLc5RgE	03-0030	battery charging and discharging cycles	<i>Identical with name.</i>		1E0, n.a.	n.a.	6 000
200Trg0X9FquhZp- 9ZMM4ud	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
3s3aB5AOr6Swmx- 1Bfi6E\$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_ wfGSgfi	03-0026	viewing distance	Viewing distance of pictogram according to ISO 80061:2007.		1E-2, m	n.a.	

Table 4 — Photometric properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
11Epo0LO16F-PpSj0jFwIOu	04-0001	luminous intensity distribution	Luminous intensity distribution curve as file. A luminaire can emit more than one luminous intensity distribution curves.		n.a.	n.a.	C:\, URL, Eulmdat, ANSI/IES LM-63, ANSI/IES TM-33, UNI 11733
26Cck1Shb27v-8JU1a1vgKV	04-0043	Photometry	Photometry is absolute or relative.		n.a.	absolute, relative	
0FYKiM4IT-7dAD13KWzXvsG	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 plane. Negative values are aligned with the C180 plane. Reference: CIE 121:1996.		1E0, mm	n.a.	
3HorBzYr10DBaLrb-gxq2fs	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 plane. Negative values are aligned with the C270 level. Reference: CIE 121:1996.		1E0, mm	n.a.	
2MDJxTVzv57ALN-nXX1bC1W	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 under the middle, at the bottom side, then this value is the negative half of the height. Reference: CIE 121:1996.		1E0, mm	n.a.	

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2oxTEZw7TCPPcnn-sapM01u	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. The definition of the term "luminous flux" is given in CIE S 017:2020.		1E0, lm	n.a.	3 430
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. The definition of the term "luminous flux" is given in CIE S 017:2020.		1E0, lm	n.a.	2 600
1QmFILGbX6-BfU63rC5mrh	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.	130
2gMYX1hk-HEE8kQmgimay3h	04-0008	optical light output ratio LOR	Quotient of the total luminous flux of the luminaire, measured under specified practical conditions with its own light source(s) and equipment, and 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. According to CIE S 017:2020, 17-29-052. Always 1 for LED luminaires with integrated light sources.		1E0, %	n.a.	0,79
28T0Q968jDwvyx-AshmZRwz	04-0009	type of distribution	The classification of luminaires regarding the amount of luminous flux emitted into upper or lower half-space. Upward flux fraction (UFF) of 10 % means direct. Upward flux fraction of 30 % means direct/indirect. Upward flux fraction of 70 % means indirect/direct. Upward flux fraction of 90 % means indirect. Reference: ISO/CIE 20086:2019.		n.a.	direct, indirect, direct /indirect, indirect /direct	direct/indirect

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
30711bRGpDp0k-4BrfOhVAO	04-0010	downward flux fraction	Quotient of the downward flux to the total flux of the luminaire.		1E0, %	n.a.	
3wGph6hnfEOu-WEuOMDd9mz	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.	
1sYsm6e7H82Ab-C_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.	
00NGdZChz3LACce-dAVtNNR	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.	0,26
0wVs5X-IEPE5gBsG3nTILKR	04-0014	photometric beam shape	Characteristic form of photometric distribution in a descriptive linguistic form.		n.a.	n.a.	Rotation-symmetrical, axial-symmetrical, narrow, medium, flood, linear, symmetrical, double asymmetrical

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3UBMXtZMP2ev8R-J6CTkBs	04-0015	tenth-value angle	Angle from the optical beam axis to the point where the luminous intensity is reduced to one tenth. Reference: IEC/TR 61341:2010 and CIE TN 010:2019 If the beam is not rotation symmetrical the photometric plane needs to be specified.		1E0, °	n.a.	60, C0-C180: 56 C90-C270: 64
1CGIIBHDEBgXIff-ouXTH	04-0016	half-value angle	Angle from the optical beam axis to the point where the luminous intensity is reduced to half. Reference: IEC/TR 61341:2010 and CIE TN 010:2019. If the beam is not rotation symmetrical the photometric plane needs to be specified.		1E0, °	n.a.	36, C0-C180: 48 C90-C270: 31
2BFsFYpCbFKfbt-jAMxZoc	04-0017	photometric code	A code consists of colour rendering index, correlated colour temperature, initial colour variation (MacAdam ellipse steps), colour variation through life (MacAdam ellipse steps) and luminous flux maintenance factor (Lx). According to "A Guide to the Specification of LED Lighting Products" from the Lighting Industry Liaison Group (2012).		n.a.	n.a.	830/359
1vsP4zxU-z78h3Ps8HNeoc	04-0018	IES LCS type	IES Luminaire Classification System (LCS) for Outdoor Luminaires. US Types of luminaire light distribution according to IESNA for street lighting. According to ANSI/IES TM-15-20.		n.a.	I, II, III, IV, V	II
1lh0A7J0P1yfpulvq-goATC	04-0019	IES BUG rating	The BUG classification (Backlight, Up-light, and Glare) according to ANSI/IES TM-15-20 evaluates the light output of outdoor lights regarding to glare, light pollution and light trespass.		n.a.	n.a.	B1-U0-G1

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0T1\$bRxzzEBPOscE-5oX3a3	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. Reference: CIE 40:1978 and CIE 052:1982.		n.a.	n.a.	45 79 99 100 79
3Naf15m1f91eUjON-0JbahC	04-0021	spectrum	The spectrum of radiation describes its composition with regard to wavelength. It is presented as a table of relative emission depending on wavelength (nm). Default steps 5 nm, default interval 380 nm to 780 nm. The photometric file formats ANSI/IES TM-33 or UNI 11733 also contain spectral distributions. Alternatively, to a list of values a file format could be used as asset. E.g., ANSI/IES TM-27-20 provides a XML based spectrum format.		1E-6, n.a @1E0, nm	n.a.	0,021 641@380 0,019 419@385 0,016 491@390 0,016 254@395 ...
24nX7s16TBMe_Qfk\$rKDn3	04-0022	chromaticity appearance	Monochromatic colour of light. As name or a description of the colour or as colour coordinate of a specific colour system (e.g. RGB, CIE 1931 XYZ color space).		n.a.	n.a.	blue, red, white
28UYB1MD91NhF-5F8uF6VCZ	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. Reference: CIE S 017:2020.	R_a	1E0, n.a.	n.a.	86
0XeHsouWz8PxAS-J4mpkdEY	04-0024	correlated colour temperature CCT	The correlated 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 nearest same chromaticity as the source of radiation. Reference: CIE S 017:2020.	T_{cp}	1E0, K	n.a.	3 100

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1BRqnx6Qr6G8K-JpH\$WYYPD_	04-0025	colour temperature adjusting range	Lower and upper border of an adjustable colour temperature of a light source.		1E0 to 1E0, K	n.a.	2 700 to 6 500
1Se8FifF5JBgGu-Ax706W1	04-0047	correlated colour temperature change characteristics with dimming	Table of amounts of a correlated colour temperature shift characteristic with dimming value.		1E0, K @1E0, %	n.a.	-100@20 -150@40
0RSzTijYH0M-f1Je5KswHaY	04-0048	correlated colour temperature value after dimming	Identical with name.		1E0, K @1E0, %	n.a.	2 900@10
1nKsvotTzD-d8KNoXJvcrO4	04-0049	distance to the Planckian locus D_{uv}	The distance to the Planckian locus, D_{uv} , which is the closest distance of the chromaticity coordinates of a light source from the Planckian locus on the (u' , $2/3 v'$) chromaticity diagram and is positive if the chromaticity coordinate of the light source is above the Planckian locus or negative if it is below the Planckian locus. According to CIE 015:2018.		1E-2, n.a.	n.a.	0,03
1am96tJsj0_e6AMEqEh3sq	04-0026	CIE Colour Fidelity Index	The CIE 224:2017 TR include Fidelity-Index R_f that uses 99 reference colours (CES = Colour Evaluation Samples) to estimate colour rendering and quality Gamut-Index R_g to estimate colour saturation. Also includes a Colour Vector Graphic to see color specific saturations. See also ANSI/IES TM-30-20.	R_f R_g $R_{cs,h1}$	n.a.	n.a.	$R_f=93, R_g=99$
1dN7YuSk56zRdAl-0GO075q	04-0027	TLCI	Television Lighting Consistency Index (TLCI) evaluate the spectral power distribution of luminaires for television purposes. The higher result the better colour rendering quality from range 0 to 100. Reference: EBU TECH 3353.		1E0, n.a.	n.a.	90

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3JqWxX_JPBdPKVY-VZAezD6	04-0028	α -opic ELR Melanopic	Melanopic efficacy of luminous radiation for daylight equivalent based on CIE standard illuminant D65. Reference: CIE S 026:2018	$\alpha_{\text{mel}, v, D65}$	1E-4, mW/lm	n.a.	0,838 7
1\$yRX7no1Augiol-bcsIOI4	04-0050	α -opic ELR S-cone-optic	S-cone-optic efficacy of luminous radiation for daylight equivalent based on CIE standard illuminant D65. Reference: CIE S 026:2018	$\alpha_{S, v, D65}$	1E-4, mW/lm	n.a.	0,505 7
3\$\$X8uEFLDP9S-W0EI61esp	04-0051	α -opic ELR M-cone-optic	M-cone-optic efficacy of luminous radiation for daylight equivalent based on CIE standard illuminant D65. Reference: CIE S 026:2018	$\alpha_{M, v, D65}$	1E-4, mW/lm	n.a.	1,287 0
2KgZY\$6qj2aBpG-JUE0V_Od	04-0052	α -opic ELR L-cone-optic	L-cone-optic efficacy of luminous radiation for daylight equivalent based on CIE standard illuminant D65. Reference: CIE S 026:2018	$\alpha_{L, v, D65}$	1E-4, mW/lm	n.a.	1,625 3
2eGShsv\$j349G-tIpheYUF1	04-0053	α -opic ELR Rhodopic	Rhodopic efficacy of luminous radiation for daylight equivalent based on CIE standard illuminant D65. Reference: CIE S 026:2018	$\alpha_{\text{Rhodopic}, v, D65}$	1E-4, mW/lm	n.a.	1,012 6
21jRpyk419WuBLx-jfSqXoY	04-0029	PAR	Photosynthetically Active Radiation in the 400 nm to 700 nm waveband.		1E-2, W·m ⁻²		
1NvFrN1kP1MBnw-jfcEtZS9	04-0030	initial colour tolerance	Initial Colour Tolerance in Standard Deviation of Colour Matching (SDCM). The ANSI standard (American National Standards Institute) defines colour value deviations using MacAdam ellipses (also called Standard Deviation of Colour Matching, SDCM). They describe areas in the CIE colour diagram and define just perceptible colour differences. See also ANSI C78.377-2008.		n.a.	1 SDCM, 2 SDCM, 3 SDCM, 4 SDCM, 5 SDCM, 6 SDCM, 7 SDCM	2 SDCM

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2XiNAY- 0D121wETmb0Am- ovG	04-0031	maintained colour tolerance	Maintained Colour Tolerance after 6 000 h in Standard Deviation of Colour Matching (SDCM). The ANSI standard (American National Standards Institute) defines colour value deviations using MacAdam ellipses (also called Standard Deviation of Colour Matching, SDCM). They describe areas in the CIE colour diagram and define just perceptible colour differences. See also ANSI C78.377-2008.		n.a.	1 SDCM, 2 SDCM, 3 SDCM, 4 SDCM, 5 SDCM, 6 SDCM, 7 SDCM	3 SDCM
2VsGUEC0v62AXk- p0i8pFrI	04-0032	rated chromaticity coordinate values	Chromaticity coordinates ratio of each of a set of 3 tristimulus values to their sum according ISO/CIE 11664-1:2019. 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 x_{10}, y_{10}, z_{10} .		1E-3, n.a.	n.a.	x:0,458, y:0,411
0J5hwLgUf4YAvWr- E2XCwq4	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.	40
0plc23S- 8D6o0MzeqDx58d1	04-0034	UGR 4H8H 70/50/20 L/Q	Unified glare rating (UGR) table value of the room width of $4 \times H$ and the room length of $8 \times H$ and reflection factors of 70/50/20 for transverse and parallel to light source axis.		L1E0, n.a. Q1E0, n.a.	n.a.	L24 Q25

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0ncEfeE8r1tAcki-u\$03ei2	04-0035	luminaire luminance	Maximum of the luminaire surface luminance with a radiation angle of $\geq 65^\circ$. Reference: CIE 117-1995, 4.3 This value is needed to apply EN 12464-1:2021, 5.9.2 and ISO 8995-1:2002.		1E0, cd/m ²	n.a.	1 835
2h_4l\$zWjAF-8gO8u\$1m5iL	04-0036	DSE workplaces approve	Display Screen Equipment workplaces approve according to IEC 62471:2006/ CIE S 009:2002.		n.a.	Yes No	Yes
1PL17P9t53oeZk-soRkx7Y	04-0037	photobiology class	The required measurement methods and the calculation methodology are set in the harmonized standard IEC 62471:2009/CIE S 009:2006 "Photobiological safety of lamps and lamp systems". The standard 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	0
3weB85rrjD-BOfsW2DojyA8	04-0038	photometric class according to DIN 5040	Photometric classification according to German standard DIN 5040. The contributions to the effective luminous flux are then rated and summed up per room segment.		n.a.	n.a.	B53
3bKRB3yaT3s-8fMSl_u6Kyb	04-0040	photometric class according to UTE	Photometric classification according to French standard NF (UTE) C71-121 (1995) in France, "Méthode simplifiée de prédétermination des éclairagements dans les espaces clos et classification correspondante des luminaires".		n.a.	n.a.	0,54 B + 0,26 T
2EYqu_hCHFE-O0cQ_qv5wD\$	04-0042	flicker predictor	Impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time.		n.a.	n.a.	PstLM, flicker index

Table 4 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3m2sildQf5vfjMpD-BjRm7A	04-0054	light waveform	Temporal light modulation of a light source or lighting system according to CIE TN 012:2021.		n.a.	n.a.	dominant frequency (Hz), modulation depth (%), duty cycle (%), waveform shape (rectangular, sinusoidal, irregular)
1rOlzi\$gb9FQAY3I-zwGIQH	04-0044	glare index classes	Glare index classes according to EN 13201-2:2015/A.2.		n.a.	D0, D1, D2, D3, D4, D5, D6	D4
1ulcTlh-3v58Qk62qqSVp9Q	04-0045	luminous intensity classes	Luminous intensity classes according to CIE 115:2010, Table D.1.		n.a.	G1, G2, G3, G4, G5, G6	G3
0DEC0slYfE\$vgGu-ckv0i7w	04-0046	stroboscopic visibility measure SVM	The stroboscopic visibility measure (SVM) metric aims to assess the stroboscopic effect which can occur in conjunction with moving objects and light modulation in the frequency range 80 Hz to 2 000 Hz.		n.a.	without	0,9

Table 5 — Sensing device properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2eE6ivKdb3xANg-8HGEDFZH	05-0001	detector characteristics	Shape of the detection area.		n.a.	round, square, other	
2C6Bl_wyb9muBf-d\$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
1nkkObIH5CxeBD-CDq2WvX	05-0003	detection area adjustable	The type of the adjustment of the detection area		n.a.	no, cover, label, integrated, mechanism, electronic <i>multiple option selection</i>	
2iV9K3GCTD9Aw-DRJQ2QaSP	05-0004	type of detector	The type of detection possible for sensing device.		n.a.	Motion Detector, Presence Detector, Daylight Detector <i>multiple option selection</i>	
0eq8jpPhf2mxsbyx-HgN4rg	05-0005	detection method	Applied technology for detection.		n.a.	Passive Infrared, High Frequency, Microwave, Ultrasonic, Camera, other <i>multiple option selection</i>	

Table 5 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0fafA0Xg17xAy-phZUB6DEj	05-0006	radiation power	<i>Identical with name.</i>		1E-2, W	n.a.	
3ce0GuHgZ4Px_qL3kqmnLB	05-0007	HF frequency	The frequency of High Frequency radiation for sensing devices/radar sensors.		1E-2, GHz	n.a.	5,8
02qYRg2w-1BRufMbYctgnox	05-0008	major motion detection area	Movement of a person walking into an area or walking within an area. For round area: the angular range from 1° to 360° and radius [m]. For rectangular area: L × W [m]. See IEC 63180:2020.		1E0, ° 1E0, m	n.a.	
3E7MzAVgHDIB-QldGhHFHL1	05-0010	minor motion detection area	Small movements of a person or a part of a person within an area. For round area: the angular range from 1° to 360° and radius [m]. For rectangular area: L × W [m]. See IEC 63180:2020.		1E0, ° 1E0, m	n.a.	
1ymgRlSerBqBwAL-giHgX7j	05-0011	testing method	The testing of the detection area was done according to IEC 63180:2020.		n.a.	Yes No	Automatic Manual No
1MWULf\$c11YB-SMTdevnV\$G	05-0012	detection range adjustable	The method of adjustment of detection range.		n.a.	no, cover, label, integrated mechanism, electronic multiple option selection	
24tpZAXPBef5VI-4064p98	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

Table 5 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1P_6Ftq01BW4HT-GTurOn8	05-0014	number of detection areas	Number of individually analysable detection areas.		1E0, n.a.	n.a.	
0ZLLxjlvv6i9vtR-cuL17nh	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 <i>multiple option selection</i>	
0yWXemifLBGBnz-VtqC_b8Q	05-0016	illuminance range	Determines the illuminance range that can be measured by sensing device.		1E0 to 1E0, lx	n.a.	0 to 400
3xgdt_HlZ889E-k6KSUeCE5	05-0017	operation mode	Mode of operation like full automatic or half automatic.		n.a.	full automatic, half automatic, constant light control, on/off <i>multiple option selection</i>	
3rSw5_7y94zx-vrAini0W2u	05-0019	inter-connection mode	Interconnection with other sensing devices.			Master/Slave, Master/Master	

Table 5 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
18DBbGWjXFbRcO-Rysjk7TX	05-0020	channel <i>n</i>	Channel <i>n</i> function.			no, Light, HVAC, other	
2MMb3d\$6fDdxWo-q1W\$ZGln	05-0021	switch input channel <i>n</i>	Directly connectable switch for channel <i>n</i> .		n.a.	Yes No	
3csxKAakP79PFF8_VH6_b4	05-0022	output channel <i>n</i>	Identical with name.			Relay floating, Relay non-floating, Dim	
1wCN2A\$WbE-8fKo62d91E_m	05-0023	separate light measurement <i>n</i>	Sensing device channel <i>n</i> has a separate light measurement.		n.a.	Yes No	
28uWq1nqP3XgcT-zLzylewL	05-0024	delay time channel <i>n</i>	Switch-off delay after last detection for channel <i>n</i> .		1E0, s	n.a.	
07VBqU4vn4ouin-VL_JTUt	05-0025	delay time orientation light	Switch-off delay after delay time.		1E0, s	n.a.	
1M2v5GMAj-ByhRQPjDnZjSf	05-0026	on delay time channel <i>n</i>	Switch-on delay after last detection for channel <i>n</i> .		1E0, s	n.a.	
3waXMP9nLE3BiT-n9dGUiFj	05-0027	orientation light	Reduced artificial light after the delay-time passed.		min % to max %	n.a.	
0Lb\$H8dJ52Zvf9Y-SL5M6i	05-0028	remote control	Operation/settings with remote control.		n.a.	no, IR, RF, Bluetooth, WiFi multiple option selection	
3l5DBp\$G5BYgD-3F40Zha26	05-0029	remote control deactivateable	Operation/settings with remote control deactivateable.		n.a.	Yes No	

Table 5 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
10FyhmRzL5cx-5mPB_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.	
2ogWrMo6H5Gxfzo-DEWfaui	05-0031	sensing device position	Relative position of luminaire and sensing device.		1E0, m	n.a.	

Table 6 — Mounting & Accessory properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
2Js\$Q5CD1r9USP-JVLD951	06-0001	typical assembly site	Typical assembly site in indoor or outdoor premises.		n.a.	indoor, outdoor, indoor and outdoor	Indoor
1j\$UsOSPP4NBI-LY9q7mCWW	06-0002	mounting place	Place, where the luminaire or the detector can be mounted. Multiple selections are possible.		n.a.	Ceiling, Grid ceiling, Conductor rail, Wall, Floor, Pole, Desk, Catenary, other	Ceiling or Wall
3m5UX0NuH4YR-PUJ1EmzXz7	06-0003	mounting type	Type of mounting used for the luminaire or sensing device. Multiple selections are possible.		n.a.	Surface Mounted, Pendant, Free Standing, Recessed, Partly recessed, Trim-less-recessed, Pole-top, Pole-side entry, Pole-integrated, Conductor rail, connector, other	Pole-top or Pole-side entry

Table 6 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3y6XZJ_WfAuRm3f-gIIBh0R	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.	
1yEEzJyufC8uErTH-hzqxUF	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.	
34itbruFnDWgv-jgUmwG\$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.	
2ebPfCuzP6euRypn-hmgpDH	06-0007	default mounting height	Default distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
3b4KsrGcb2dw20r-1JqfnoW	06-0008	default mounting distance	Default distance from ceiling to luminaire or sensing device.		1E0, mm	n.a.	
3gpXB3oaLA8Bk-chUDMfQDm	06-0009	minimum mounting height	Minimum distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
33Kd_d\$Xv1GgCDg-5DDP5vn	06-0010	maximum mounting height	Maximum distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	
3hG4MOE1n7S8A-B5aJLRMVj	06-0011	applied mounting height	Selected distance from floor to mounting point of the luminaire or sensing device.		1E0, mm	n.a.	

Table 6 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0nqhEfCr249N-vE9Fv2yTf	06-0012	maximum pendant length	<i>Identical with name.</i>		1E0, mm	n.a.	
22ydbaQRPEC9lt_tK6Qw4Q	06-0013	applied pendant length	Selected pendant length in current situation.		1E0, mm	n.a.	
1x76Uc_LbDVh6m-rLtcSUNS	06-0014	spacing between fixing points	Distance between two fixing points.		1E0, mm	n.a.	
3BBcl8ACb3Ff6\$2n-Rfx7Cg	06-0015	mounting outside the arms reach	The mounting of the lighting system happens outside the normal reach of an installers arm's length. Extra tooling is needed.		n.a.	Yes No	
2IRl_DnFt97P6CA-O2kfYEp	06-0016	windage	Projected area which is used calculate wind resistance for structural calculations.		1E-2, m ²	n.a.	
3T\$XxssuTf-27PO4Ye\$SVikp	06-0017	ball impact resistant	Ball impact resistant according to VDE 0710-13:1981.		n.a.	Yes No	
0uHyOzAgvCyRqsN-VDKfTFI	06-0018	EX classification properties	Specifies whether the fitting is intended for installation in an explosive environment. According to IEC 60079-0:2017, IEC 60079-15:2017, IEC 60079-7:2015.		n.a.	n.a.	Ex d e IIC T4 Gb
1PHo3fKGj5Vfdmyy-1dCzYd	06-0019	type and function of mandatory accessory	Type and function of mandatory electrical, optical or mechanical accessory.		n.a.	n.a.	
2IlcSlkhzBQvi6jClb-KMm\$	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 Shielding
1ebB1Zyww92L8aun-jbTiNu1	06-0021	applied accessory	Selected accessory.		n.a.	n.a.	
2IG7sF6af5sRrHY-USubDNV	06-0022	thickness of ceiling minimum	The minimum thickness of the ceiling for recessed or flush mount.		1E0, mm	n.a.	
3bww1seCDA3x-O1TXuKRla5	06-0023	thickness of ceiling maximum	The maximum thickness of the ceiling for recessed installation.		1E0, mm	n.a.	

Table 6 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
0DRBpoc\$LC0x-VU4CNwfUgl	06-0024	required space in ceiling	The minimum needed space in a ceiling for recessed luminaires e.g. for thermal aspects.		1E0, m ³	n.a.	
20q5QYgMf06gdSX-n61YqDa	06-0025	covering of insulation allowed	Covering of Insulation in a ceiling is allowed for the luminaire.		n.a.	Yes No	
33M24NjTn3Sx-pLaPp27aqY	06-0026	wall thickness	The minimum required wall thickness for mounting.		1E0, mm	n.a.	
2qdqZ6NbnCfOA-JFXNAjkhW	06-0027	with starter	The luminaire has a starter.		n.a.	Yes No	
2gr49_xaP46O1yRd-Kp3PXXW	06-0028	min. ambient temperature	Minimal ambient temperature.	$T_{a,min}$	1E0, °C	n.a.	-5
0f2B86WL1Dau-qVXMD\$Svdh	06-0041	max. ambient temperature	Maximal ambient temperature.	$T_{a,max}$	1E0, °C	n.a.	40
2Hn3h7rK-b0RhRhIOAzSkNR	06-0029	relative humidity range RH	The relative humidity of environment that enables product to function.		1E0 to 1E0, %	n.a.	0 to 85
3m_7Bd74r4Pw-fVU5h_M3Cc	06-0030	conductor rail type	Conductor rail type, if needed.		n.a.	n.a.	conductor rail type RA
3Kg5x8k-Wr1zhsZyRr30Ovs	06-0031	Bracket	The luminaire has a boom.		n.a.	Yes No	
36UJpsfZD7a8lw-8fvXDofT	06-0043	bracket to luminaire diameter	Diameter of arm or mounting bracket for fixation of a luminaire		1E0, mm	n.a.	60
2P36C2ZwH7cuGia-RJlyiCQ	06-0032	bracket length	Length of the boom.		1E0, mm	n.a.	
1xemg75ajBT-PMS5G7a6XYC	06-0033	Pole	Specifies which type of pole is suitable.		n.a.	Conical, Cylindrical, System pole, Bollard base element, Other	
3sUm8npDPCLwP-blKJjzmT_	06-0034	pole height	The height of the pole.		1E-2, m	n.a.	

Table 6 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
13nvJo5TjBevj9X-q8d0d_k	06-0035	pole material	The material of which the pole is mainly made of.		n.a.	Aluminium, Galvanised steel, Timber, Other	
14NxmcBlnDDg-k6xXOL9Ydl	06-0036	pole accessory	Specifies which extra accessory are required for pole.		n.a.	Pole door, other	
2SWE7gcPD5VO-e7RpsLynyc	06-0037	with ascending aid	Specifies whether the pole has an ascending aid.		n.a.	Yes No	
2rhswpHMv6jx-nu7t2SG\$8a	06-0038	with base plate	Specifies whether the pole has a base plate.		n.a.	Yes No	
1HwoGGCU51GuZ-cYqOLj23B	06-0039	Foldable	Specifies whether the pole is foldable.		n.a.	Yes No	
3ZohUj9if8EBuv-5LU5H7s9	06-0040	tenon diameter	The size of tenon for mounting on the pole.		1E0, mm	n.a.	60
0RUiuKsU90ifoI-hj4jl6z1	06-0042	installation specification	Installation specification file.		n.a.	n.a.	

Table 7 — Marketing properties

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
3pjicXRst9mAFf-cOBnThlw	07-0001	product name	Luminaire name.		n.a.	n.a.	
3gmbhSJFD4JOP-QZ7_I\$HzY	07-0002	Manufacturer	<i>Identical with name.</i>		n.a.	n.a.	
322VYxGFH-6DOZH0mPOqDqO	07-0003	URL manufacturer	Manufacturer website address.		n.a.	n.a.	
29UfpgwX5Eyu\$K-CZlxfjZy	07-0004	item number	Product number.		1E0, n.a.	n.a.	
1UbCUUp8z5Cg3dm-IqQ4lsq	07-0005	product picture	Picture of the product as file.		n.a.	n.a.	
020_6q4Jj-7f0641UbZtyld	07-0006	2D symbol	Symbol in floor plan.		n.a.	n.a.	
0uHyDd8Gb9\$fp-0seVNo6UJ	07-0007	URL product web-site	Product page website address. Deeplink.		n.a.	n.a.	
2SIvCAZun4Wxd4kh-WGmURU	07-0008	product data sheet	<i>Identical with name.</i>		n.a.	n.a.	
3sfcCPOKnB5f2vY_zitAto	07-0009	product group	<i>Identical with name.</i>		n.a.	n.a.	
3Im9FC0mL7guh-zlonQ2RjN	07-0010	Application	Field of application for the luminaire.		n.a.	Indoor, Outdoor, Domestic Lighting, Office, Retail, Health, Sport, Hospital, Architectural, Others <i>multiple option selection</i>	
1H6f7P7l571P_cjMg7gPxK	07-0011	product family	Manufacturer specific product groups or modular systems.		n.a.	n.a.	

Table 7 (continued)

GUID	ID	Name	Description	Symbol	Format, Unit	Value set	Examples
1u894\$Gsj3PPXX-6m5zKlOG	07-0012	Description	Description or comments.		n.a.	n.a.	
1PP9ePMOD2Cg-8c791pC_V3	07-0013	Features	Free text to describe product.		n.a.	n.a.	
2miHlOa8z7qwVd3X-UvTBLm	07-0059	special function	Special function or extra function.		n.a.	n.a.	Horticulture
1PfnLpEVb-6493m0a03614o	07-0014	tender text	Tender text of the product.		n.a.	n.a.	
20f18_YFT4IOFQwk-92MRwM	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
0ZQK4SN5b1_OlheX6xr9TZ	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.	
0t3b9jtWP9uxX-2ceuaW31x	07-0017	EBKP number	EBKP number for Swiss tenders.		n.a.	n.a.	
0A07nhSa9Fz-BQWUu\$Q4E5D	07-0018	EFO class number	EFO class number. http://efobasen.efo.no/		n.a.	n.a.	
1BRkxPEZ94jwUm-qiTtK6xv	07-0019	conformity mark	Specifies which conformity mark a product has.		n.a.	n.a.	CE, CCC, EAC
3AdnhhX2L3bB-C6l6oSZU6O	07-0020	approval mark	Specifies which approval marks a product has.		n.a.	n.a.	ENEC, VDE, UL, IFS Food, Certificate, D sign, IDA