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Introduction

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For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



34/1334/CD

COMMITTEE DRAFT (CD)

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SECRETARIAT: United Kingdom	SECRETARY: Mr Petar Luzajic
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 111	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED: Environment	

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TITLE: Environmental aspects for lighting - Product specific rules for luminaires

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IEC 63627 ED1 has been prepared by IEC technical committee 34: LIGHTING. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available

114 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
115 described in greater detail at www.iec.ch/publications.

116 The committee has decided that the contents of this document will remain unchanged until the
117 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
118 specific document. At this date, the document will be

- 119 • reconfirmed,
- 120 • withdrawn,
- 121 • replaced by a revised edition, or
- 122 • amended.

123

INTRODUCTION

124 The environmental impact of lighting products and systems has become increasingly important
125 to interested parties like customers and regulators.

126 In addition to qualitative approaches such as environmentally conscious design, there is an
127 increased demand for quantitative information about the potential environmental impact
128 throughout the full life cycle of lighting products and systems. This has generated the need for
129 globally harmonized rules for the underlying Life Cycle Assessment (LCA) to provide robust and
130 consistent quantitative environmental information about lighting products and systems.

131 To support this quantification, ISO 14025 “Environmental labels and declarations — Type III
132 environmental declarations — Principles and procedures” offers a high-level method for the
133 specification of Product Category Rules (PCR), which sets minimum quality standards for LCA
134 to create an Environmental Product Declaration (EPD). For Electrical and Electronic Products
135 and Systems (EEPS), IEC 63366 ED1 “Product category rules for life cycle assessment of
136 electrical and electronic products and systems” has been developed by IEC/TC 111 to serve as
137 a horizontal standard for PCR.

138 Internationally standardized Product Specific Rules (PSR) are needed for lighting products and
139 systems to complement the PCR specified in IEC 63366 ED1.

140 This document is the first lighting PSR standard in a series, specifically for luminaires.

141

ENVIRONMENTAL ASPECTS FOR LIGHTING

PRODUCT SPECIFIC RULES FOR LUMINAIRES

1 Scope

This part of the IEC 63627 series provides product specific rules (PSR), requirements and guidelines on how to conduct life cycle assessments (LCA) to prepare environmental product declarations (EPD) for luminaires.

This document does not include self-contained luminaires for emergency lighting where no light is provided under normal operating conditions.

This document complements the product category rules (PCR) for electronic and electrical products and systems (EEPS) of IEC 63366 ED1, further specifying e.g. functional units and default scenarios in the luminaire specific context.

This document provides common rules for:

- LCA
- the LCA report

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.

IEC 63366, *Product category rules for life cycle assessment of electrical and electronic products and systems*

DRAFTING NOTE: Additional normative references to be added, if applicable.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-845, ISO 14040, ISO 14044, and IEC 63366 and the following apply.

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

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

3.1 luminaire

apparatus which distributes, filters or transforms light from at least one source, and which includes all parts necessary for fixing and protecting the source and, where necessary, circuit auxiliaries together with the means for connecting them to the power supply

[SOURCE: IEC 60050-845; 845-30-001:2020 modified skipping explicit reference to source exclusion]

3.2**control gear****< for an electric light source >**

unit inserted between the power supply and at least one light source, which serves to supply the light source(s) with its (their) rated voltage or rated current, and which can consist of one or more separate components.

Note 1 to entry: A control gear can include means for igniting, dimming, correcting the power factor and suppressing radio interference, and further control functions.

Note 2 to entry: A control gear can consist of a power supply and a control unit.

Note 3 to entry: A control gear can be partly or totally integrated in the light source.

Note 4 to entry: The terms "control gear" and "controlgear" are interchangeable. In IEC standards, the term "controlgear" is commonly used.

[SOURCE: IEV ref 845-28-048]

3.3**functional unit****FU**

quantified performance of a product system for use as a reference unit in life cycle assessment

[SOURCE: ISO 14040:2006, 3.20, modified – The abbreviated term "FU" and "in life cycle assessment" have been added.]

3.4**declared unit**

quantity of the product used as a reference unit in a Type III environmental declaration or footprint communication, based on one or more information modules

Note 1 to entry: Information module is a compilation of data covering a unit process or a combination of unit processes that are part of the life cycle of a product.

[SOURCE: ISO 14050:2020, 3.7.11, modified – A note to entry had been added.]

3.5**reference flow**

measure of the outputs from processes in a given product system required to fulfil the function expressed by the functional unit

Note 1 to entry: The reference flows translate the abstract functional unit into specific product systems needed to fulfil the required function with a required level of performance.

[SOURCE: ISO 14040:2006, 3.29, modified – A note to entry has been added.]

3.6**reference product**

product or product system, modelled in the life cycle assessment and taken as reference to extrapolate the environmental impact of other products or product systems matching the same functional unit (i.e. homogeneous product family) and covered by the environmental declaration

3.7**reference service life****RSL**

service life of a product, component, assembly or system which is known to be expected under a particular set, i.e. a reference set, of in-use conditions and which can form the basis for estimating the service life under other in-use conditions

226 [SOURCE: ISO 15686-1:2011, 3.22]

227 **3.8**

228 **cut-off criteria**

229 specification of the amount of material or energy flow or the level of environmental
230 significance associated with unit processes or product system to be excluded from a study

231 [SOURCE: ISO 14040:2006, 3.18]

232 **3.9**

233 **system boundary**

234 set of criteria specifying which unit processes are part of a product system

235 [SOURCE: ISO 14040:2006]

236 **3.10**

237 **life cycle inventory analysis**

238 **LCI**

239 phase of life cycle assessment involving the compilation and quantification of inputs and outputs
240 for a given product system throughout its life cycle

241 [SOURCE: ISO 14040:2006]

242 **3.11**

243 **environment**

244 surroundings in which a product or system exists, including air, water, land, natural
245 resources, flora, fauna, humans and their interrelation

246 [SOURCE: IEC Guide 109:2012, 3.3]

247 **3.12**

248 **environmental aspect**

249 element of an organization's activities or products that can interact with the environment

250 Note 1 to entry: A significant environmental aspect has or can have a significant environmental impact.

251 [SOURCE: IEC Guide 109:2012, 3.4]

252 **3.13**

253 **environmental impact**

254 change to the environment, whether adverse or beneficial, wholly or partly resulting
255 from environmental aspects

256 [SOURCE: IEC Guide 109:2012, 3.5, modified – In the definition, "an organization's" has
257 been omitted.]

258 **3.14**

259 **environmental product declaration**

260 **environmental declaration**

261 claim which indicates the environmental aspects of a product or service

262 Note 1 to entry: An environmental label or declaration may take the form of a statement, symbol or graphic
263 on a product or package label, in product literature, in technical bulletins, in advertising or in publicity,
264 amongst other things.

265 [SOURCE: ISO 6707-3:2022, 3.7.22]

3.15**homogenous product family**

subgroup of a product family based on the underlying technology or build where the environmental impacts can reasonably be expected to be similar and therefore scalable over the group through a function of certain physical characteristics, for example, power or weight

3.16**life cycle**

consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal

Note 1 to entry: The phrase "life cycle phase" is sometimes used interchangeably with "life cycle stage"

[SOURCE: ISO 14040:2006, 3.1, modified – A note to entry has been added.]

3.17**life cycle assessment****LCA**

compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

[SOURCE: ISO 14040:2006, 3.2]

3.18**LCA report**

accompanying document to the life cycle assessment, used as a complement to the environmental declaration giving further detailed information about the inputs, outputs, used LCI-data and assumptions in regard to this document

Note 1 to entry: This LCA report is to be kept for justification purposes in terms of environmental declaration verification or market surveillance.

3.19**packaging**

product that is used to protect or contain another product or part for one or several life cycle phases

[SOURCE: ISO 14050:2020, 3.5.26, modified – The words "during transportation, storage, marketing or use" have been replaced by "for one or several life cycle phases".]

3.20**product**

output of an organization that can be produced without any transaction taking place between the organization and the customer

Note 1 to entry: Production of a product is achieved without any transaction necessarily taking place between the provider and customer but can often involve this service element upon its delivery to the customer.

Note 2 to entry: The dominant element of a product is that it is generally tangible.

Note 3 to entry: Hardware is tangible and its amount is a countable characteristic (for example, tyres). Processed materials are tangible and their amount is a continuous characteristic (for example, fuel and soft drinks). Hardware and processed materials are often referred to as goods. Software consists of information regardless of delivery medium (for example, computer programme, mobile phone app, instruction manual, dictionary content, musical composition copyright, driver's license).

[SOURCE: ISO 9000:2015, 3.7.6]

3.21**product category**

group of products that can fulfil equivalent functions

Note 1 to entry: Product category is a general term; and it does not mean that all products within the product category have the same function.

[SOURCE: ISO 14025:2006, 3.12, modified – A note to entry has been added.]

3.22**product category rules****PCR**

set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories

[SOURCE: ISO 14025:2006, 3.5]

3.23**product group**

subgroup of a product category comprising technologically or functionally similar products

3.24**product specific rules****PSR**

set of specific rules, requirements and guidelines for developing Type III environmental declarations for a product category

Note 1 to entry: Product specific rules are developed based upon and complementing the PCR.

Note 2 to entry: PCR and PSR are comparable concepts. To ensure consistency in the IEC community, PCR refers to rules at EEPS level, and PSR refers to rules at product committee level.

[SOURCE: IEC TR 62839-1:2014, 3.2, modified – Notes 1 and 2 to entry have been added.]

3.25**co-product**

any of two or more products coming from the same unit process or product system

Note 1 to entry: Co-product, by-product and product have the same status and are used for identification of several distinguished flows of products from the same unit process. From co-product, by-product and product, waste is the only output to be distinguished as a non-product.

[SOURCE: ISO 14040:2006, 3.10, modified – A note to entry has been added.]

4 Product life cycle assessment**4.1 General**

To quantify the potential environmental impacts caused by luminaires, life cycle assessments (LCA) following the principles and requirements of ISO 14040 and ISO 14044 shall be performed. LCA results can then be used to identify improvement potentials in terms of, for example, environmentally conscious design for luminaires. The requirements of these product specific rules (PSR) shall be applied in case the LCA results are further intended to be used in external communication. This is valid when the form of an environmental product declaration (EPD), as laid out in ISO 14025, is used.