SLOVENSKI STANDARD
oSIST prEN IEC 63545:2025

01-marec-2025

Vrtnarska razsvetljava - Svetilke za vrtnarsko razsvetljavo - Varnost

Horticultural lighting - Luminaires for horticultural lighting - Safety

Ta slovenski standard je istoveten z: **prEN IEC 63545:2024**

ICS:

29.140.40	Svetila	Luminaires
65.060.70	Vrtnarska oprema	Horticultural equipment

oSIST prEN IEC 63545:2025 **en**

34/1278/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 63545 ED1**	
DATE OF CIRCULATION: **2024-12-27**	CLOSING DATE FOR VOTING: **2025-03-21**
SUPERSEDES DOCUMENTS: **34/1195/CD, 34/1214A/CC**	

IEC TC 34 : LIGHTING	
SECRETARIAT: United Kingdom	SECRETARY: Mr Petar Luzajic
OF INTEREST TO THE FOLLOWING COMMITTEES: SC 34D	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED: Safety	
☒ SUBMITTED FOR CENELEC PARALLEL VOTING	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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TITLE:

Horticultural lighting – Luminaires for horticultural lighting – Safety

PROPOSED STABILITY DATE: 2028

NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Horticultural lighting – Luminaires for horticultural lighting – Safety

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IEC 63545 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
34/XX/FDIS	34/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 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with the latest edition of IEC 60598-1 and its amendment(s); and also the corresponding IEC 60598 part 2 series for general lighting purpose, as follows:

- Part 2-1 Fixed general purpose luminaires,
- Part 2-2 Recessed luminaires,
- Part 2-4 Portable general purpose luminaires,
- Part 2-5 Floodlights,
- Part 2-20 Lighting chains,
- Part 2-21 Rope lights.

Where this document states "*addition*", "*modification*" or "*replacement*", the relevant text of IEC 60598-1 and IEC 60598 Part 2 series is to be adapted accordingly.

NOTE 2 In this document, the following print type is used:

– Compliance statements: *in italic type.*

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This document acknowledges the need for safety specification for horticultural luminaires, which are considered as additional requirements or deviated requirements comparing with the similar type of luminaires used for general lighting purpose.

Compared with the safety requirements for general lighting purpose luminaires, the differences for horticultural luminaires are mainly derived based on following consideration:

- Changing of environmental conditions for the application. Horticultural luminaires are normally indoor used, but with horticulture cultivation purpose, the environmental conditions are normally severe.
- Changing of application purpose from vision sensation to horticulture use. Photobiological safety requirements and UV resistance requirements are developed based on this nature.

The provisions in this document represent the technical knowledge of experts from the field of the horticultural lighting, and are developed in close context with IEC 60598-1 (the Safety standard for luminaires in general) and the corresponding Part 2 of IEC 60598 (the particular safety standard of corresponding type of luminaires for general lighting purpose).

Horticultural lighting – Luminaires for horticultural lighting – Safety

1 Scope

This document specifies safety requirements for horticultural luminaires, incorporating electric light sources for operation from supply voltage up to 1000 V.

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 60068-2-11, *Environmental testing - Part 2-11: Tests - Test Ka: Salt mist*

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

IEC 60598-2-1, *Luminaires - Part 2-1: Particular requirements - Fixed general purpose luminaires*

IEC 60598-2-2, *Luminaires - Part 2-2: Particular requirements - Recessed luminaires*

IEC 60598-2-4, *Luminaires - Part 2-4: Particular requirements - Portable general purpose luminaires*

IEC 60598-2-5, *Luminaires - Part 2-5: Particular requirements - Floodlights*

IEC 60598-2-20, *Luminaires - Part 2-20: Particular requirements - Lighting chains*

IEC 60598-2-21, *Luminaires - Part 2-21: Particular requirements - Rope lights*

IEC 60730-1, *Automatic electrical controls - Part 1: General requirements*

IEC 62471:2006, *Photobiological safety of lamps and lamp systems*

IEC 62471-7, *Photobiological safety of lamps and lamp systems - Part 7: Light sources and luminaires primarily emitting visible radiation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60598-1, IEC 60598-2-1, IEC 60598-2-2, IEC 60598-2-4, IEC 60598-2-5, IEC 60598-2-20, IEC 60598-2-21 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

horticultural lighting

application of optical radiation to stimulate biological response of plants and the plant tissues

Note 1 to entry: Examples of the application scenarios are plant factory, greenhouse, field application and home application.

Note 2 to entry: Examples of the application manners are top lighting and inter-plant lighting.

3.2

inter-plant lighting

horticultural lighting applied within the foliage of plants

Note 1 to entry: Supplemental inter-plant lighting is normally used in greenhouses.

3.3

horticultural luminaire

luminaire designed to incorporate sources of optical radiation for horticultural lighting

3.4

skilled person <photobiological safety>

person with relevant education and experience to enable him or her to perceive risks and to avoid photobiological hazards

3.5

instructed person <photobiological safety>

person adequately advised or supervised by optical radiation skilled persons to enable him or her to perceive risks and to avoid photobiological hazards

3.6

ordinary person

person who is neither a skilled person nor an instructed person

[SOURCE: IEC 60050-826:2004, 826-18-03]

3.7

industrial and professional use

use intended only for skilled or instructed persons

[SOURCE: IEC 60050-851:2008, 851-11-12, modified – the word “experts” has been changed in “skilled”]

3.8

without restriction for use

use applicable for skilled persons, instructed persons, and also ordinary persons