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Interested committees:

Title: Draft BS EN 63545 Ed. 1.0 Horticultural luminaires - Safety

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

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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Submission of Comments

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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	Commend (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.	

**34/1195/CD**

COMMITTEE DRAFT (CD)

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SUPERSEDES DOCUMENTS:

34/1094/NP, 34/1158A/RVN

IEC TC 34 : LIGHTING

SECRETARIAT:

United Kingdom

SECRETARY:

Mr Petar Luzajic

OF INTEREST TO THE FOLLOWING COMMITTEES:

SC 34D

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC☐ ENVIRONMENT☐ QUALITY ASSURANCE☒ SAFETY

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TITLE:

Horticultural luminaires - Safety

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Horticultural luminaires - Safety**FOREWORD**

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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 luminaires - 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*

ISO 178, *Plastics – Determination of flexible properties*

ISO 179-1, *Plastics – Determination of charpy impact properties – Part 1: Non-instrumented impact test*

ISO 180, *Plastics – Determination of izod impact strength*

ISO 527 (all parts), *Plastics – Determination of tensile properties*

ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance*

ISO 4892-2:2013, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 8256, *Plastics – Determination of tensile-impact strength*

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 and IEC 60598-2-21 apply except as follows.

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 hazards which optical radiation can create

[SOURCE: IEC 60050-826:2004, 826-18-01, modified – the words “electrically” and “electricity” have been changed in “optical radiation”]