BS EN 1838:2013

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Lighting applications — Emergency lighting

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National foreword

This British Standard is the UK implementation of EN 1838:2013. It supersedes BS EN 1838:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EL/1/1, Emergency lighting.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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English Version

Lighting applications - Emergency lighting

Éclairagisme - Eclairage de secours

Angewandte Lichttechnik - Notbeleuchtung

This European Standard was approved by CEN on 15 June 2013.

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Foreword

This document (EN 1838:2013) has been prepared by Technical Committee CEN/TC 169 “Light and lighting”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1838:1999.

Users of this European Standard, prepared in the field of application of Article 153 of the Treaty on the Functioning of the European Union TFEU, should be aware that standards have no formal legal relationship with Directives which may have been made under Article 153 of the Treaty on the Functioning of the European Union TFEU.

Significant changes between this document and EN 1838:1999 are:

a) Illumination of the points of emphasis have been clarified and improved and the external illumination has been clarified as needing to extend to a place of safety. Illumination of fire alarm call points and first aid posts are now consistent, regardless of their location, and are defined at the equipment to be operated;

b) The colour and style of safety signs is amended to the revised ISO format;

c) The A deviations of some countries have been amended.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Emergency lighting is provided for use when the supply to the normal lighting fails and is therefore powered from a source independent of that supplying the normal lighting.

For the purposes of this standard emergency lighting is regarded as a generic term of which there are a number of specific forms, as shown in Figure 1.

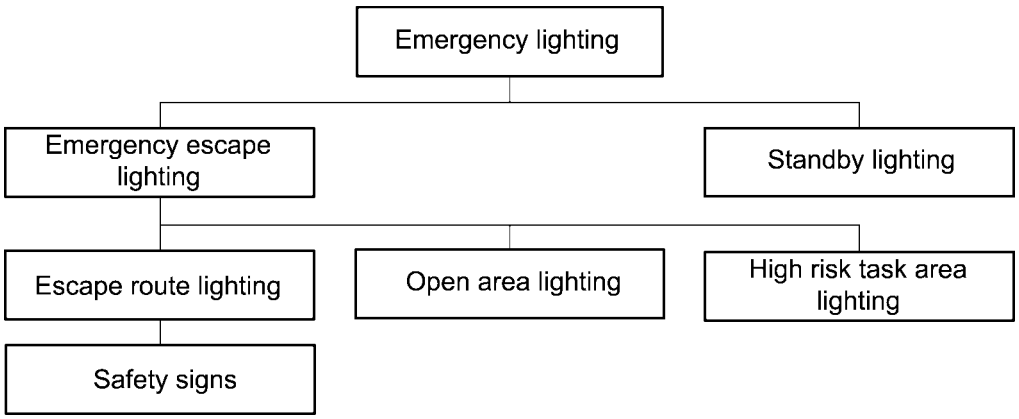

Figure 1 — Specific forms of emergency lighting

The overall objective of **emergency escape lighting** is to enable safe exit from a location in the event of failure of the normal supply. The objective of each form within this category is as follows.

- The objective of **escape route lighting** is to assist the safe exit from a location for occupants by providing appropriate visual conditions and direction finding on escape routes and in special locations, and to ensure that fire fighting and safety equipment can be readily located and used.

- The objective of emergency lighting of escape route **safety signs** is to provide appropriate visual conditions and direction finding to assist escape routes to be readily located and used.

- The objective of **open area (anti-panic) lighting** is to reduce the likelihood of panic and to enable safe movement of occupants towards escape routes by providing appropriate visual conditions and direction finding. The flow of light for escape routes or open areas should be downward to the working plane but illumination should also be provided to any obstruction up to 2 m height above that plane.

- The objective of **high risk task area lighting** is to contribute to the safety of people involved in a potentially dangerous process or situation and to assist proper shut down procedures to be carried out for the safety of other occupants of the location.

There are techniques that may be used as a supplement and when applied to escape routes in addition to conventional emergency lighting luminaires can enhance their effectiveness in an emergency. These techniques are not included in this standard.

Vision varies from person to person, both by the amount of light required to perceive an object clearly and in the time taken to adapt to changes in the illuminance. In general, older people need more light and take a longer time to adapt to low illuminance on a hazard or escape route.

Much anxiety and confusion can be alleviated by strategically placed signs indicating the way out of a location. It is very important that exits are clearly signposted and are visible, whenever the location is occupied.

1 Scope

This European Standard specifies the luminous requirements for emergency escape lighting and standby lighting systems installed in premises or locations where such systems are required. It is principally applicable to locations where the public or workers have access.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12665:2011, *Light and lighting – Basic terms and criteria for specifying lighting requirements*

EN 50172, *Emergency escape lighting systems*

EN 60598-2-22, *Luminaires – Part 2-22: Particular requirements – Luminaires for emergency lighting (IEC 60598-2-22)*

EN 62034, *Automated test systems for battery powered emergency escape lighting (IEC 62034)*

EN ISO 7010, *Graphical symbols – Safety colours and safety signs – Registered safety signs (ISO 7010)*

ISO 3864-1, *Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings*

ISO 3864-4, *Graphical symbols – Safety colours and safety signs – Part 4: Colorimetric and photometric properties of safety sign materials*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12665:2011 and the following apply.

3.1
emergency lighting
lighting provided for use when the supply to the normal lighting fails
[SOURCE: IEC 60050-845]

3.2
escape route
route used to evacuate in case of an emergency, starting where the evacuation starts and ending at a place of safety

3.3
emergency escape lighting
that part of emergency lighting that provides illumination for the safety of people leaving a location or attempting to terminate a potentially dangerous process before doing so

3.4
escape route lighting
that part of emergency escape lighting provided to ensure that the means of escape can be effectively identified and safely used when the location is occupied

3.5
open area lighting
that part of emergency escape lighting provided to avoid panic and provide illumination allowing people to reach a place where an escape route can be identified
Note 1 to entry: In some countries this is known as anti-panic lighting.