

## **Valgustehnika. Hädavalgustus**

Lighting application - Emergency lighting

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1838:2000 sisaldab Euroopa standardi EN 1838:1999 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 06.09.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 21.04.1999.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1838:2000 consists of the English text of the European standard EN 1838:1999.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 06.09.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 21.04.1999.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** evakuatsioonivalgustus, ohutusmärgid, paanikavältimisvalgustus, riskialavalgustus, turvalgustus, varuvalgustus

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ICS 91.160.10

**English version**

Lighting applications  
**Emergency lighting**

Éclairagisme – Éclairage de secours

Angewandte Lichttechnik –  
Notbeleuchtung

This European Standard was approved by CEN on 1999-03-22.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

Contents

	Page
Foreword .....	3
Introduction .....	3
1 Scope .....	4
2 Normative references .....	4
3 Definitions .....	4
4 Emergency escape lighting .....	5
4.1 General .....	5
4.2 Escape route lighting .....	5
4.3 Open area (anti-panic) lighting .....	6
4.4 High risk task area lighting .....	7
4.5 Stand-by lighting .....	7
5 Safety signs .....	7
Annex A (normative) Luminance and illuminance measurements .....	9
Annex B (informative) Countries requiring different light levels .....	10
Annex C (informative) Bibliography .....	12

## Foreword

This European Standard 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 October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

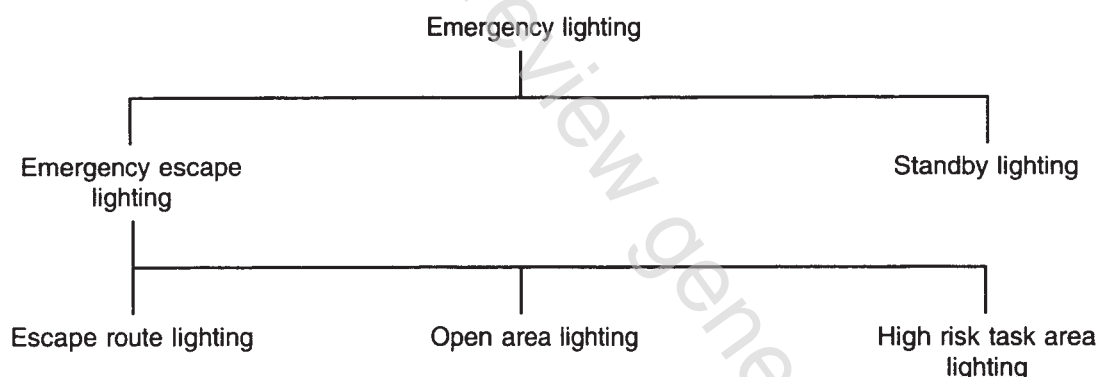
It is intended to replace in part national standards relating to emergency lighting luminous requirements. It should be read in conjunction with the standards being produced by CEN/TC 169 WG7 "Measurement and presentation of photometric data" and in conjunction with prEN 50172 "Emergency escape lighting systems".

Users of this EN, prepared in the field of application of Article 118 A of the EC Treaty, should be aware that standards have no formal legal relationship with Directives which may have been made under Article 118 A of the Treaty. In addition, national legislation in the Member states may contain more stringent requirements than the minimum requirements of a Directive based on Article 118 A. Information on the relationship between the national legislation implementing Directives based on Article 118 A and this EN may be given in a national foreword of the national standard implementing this EN.

## 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 requirements given in this standard are a minimum for design purposes and are calculated for the full rated duration period and end of design life of the equipment; the contribution to illumination by reflected light is ignored.

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 escape route lighting is to enable 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 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 enable proper shut down procedures to be carried out for the safety of other occupants of the location.

There are emerging techniques that 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 standard specifies the luminous requirements for emergency 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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 60598-2-22	Luminaires – Part 2-22: Particular requirements – Luminaires for emergency lighting (IEC 60598-2-22:1997, modified)
prEN 50172	Emergency escape lighting systems
ISO 3864 : 1984	Safety colours and safety signs
IEC 50 - Chapter 845	International Electrotechnical Vocabulary - Chapter 845: Lighting

## 3 Definitions

For the purposes of this standard the following definitions apply:

**3.1 emergency lighting:** Lighting provided for use when the supply to the normal lighting fails. [IEC 50 - Chapter 845]

**3.2 escape route:** A route designated for escape in the event of an emergency.

**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** (in some countries known as anti-panic 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.

**3.6 high risk task area lighting:** That part of emergency escape lighting that provides illumination for the safety of people involved in a potentially dangerous process or situation and to enable proper shut down procedures for the safety of the operator and other occupants of the premises.

**3.7 stand-by lighting:** That part of emergency lighting provided to enable normal activities to continue substantially unchanged. [IEC 50 - Chapter 845]

**3.8 emergency exit:** A way out that is intended to be used during an emergency.

**3.9 safety sign:** A sign which gives a general safety message, obtained by a combination of colour and geometric shape and which, by the addition of a graphic symbol or text, gives a particular safety message. [ISO 3864 : 1984]

**3.10 externally illuminated safety sign:** A sign that is illuminated, when it is required, by an external source.