



**SLOVENSKI STANDARD**  
**oSIST prEN 50172:2022**  
**01-julij-2022**

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**Sistemi za zasilno razsvetljavo evakuacijskih poti**

Emergency escape lighting systems

Sicherheitsbeleuchtungsanlagen

Systèmes d'éclairage de sécurité

**iTeh STANDARD PREVIEW**  
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**Ta slovenski standard je istoveten z: prEN 50172**

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**ICS:**

91.160.10      Notranja razsvetljava      Interior lighting

**oSIST prEN 50172:2022**

**en**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 50172**

May 2022

ICS 91.160

Will supersede EN 50172:2004

English Version

## Emergency escape lighting systems

Systèmes d'éclairage de sécurité

Sicherheitsbeleuchtungsanlagen

This draft European Standard is submitted to CENELEC members for enquiry.  
Deadline for CENELEC: 2022-08-19.

It has been drawn up by CLC/TC 34.

If this draft becomes a European Standard, CENELEC 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.

This draft European Standard was established by CENELEC in three official versions (English, French, German).  
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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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Project: 69240

Ref. No. prEN 50172 E

1	<b>Contents</b>	Page
2	European foreword .....	4
3	Introduction .....	5
4	Table 1 – emergency lighting forms, taken from EN 1838:2022 .....	5
5	1 Scope .....	6
6	2 Normative references .....	6
7	3 Terms and definitions .....	7
8	4 General .....	9
9	4.1 Normal lighting failures .....	9
10	4.2 Minimum requirements .....	9
11	4.3 Permanently occupied buildings .....	9
12	4.4 Electrical installation .....	10
13	4.5 Wiring systems.....	10
14	5 Emergency escape lighting system design .....	10
15	5.1 Plan of premises and documentation .....	10
16	5.2 Emergency escape lighting equipment.....	10
17	5.2.1 General .....	10
18	5.2.2 Emergency Luminaires .....	11
19	5.2.3 Central safety power supply systems .....	11
20	5.2.4 Automatic test systems.....	11
21	5.3 Identification marking.....	11
22	6 Handover of the Emergency Escape Lighting Systems .....	11
23	6.1 Responsibilities .....	11
24	6.2 Handover Documentation .....	11
25	7 Maintenance and verification .....	12
26	7.1 General .....	12
27	7.2 Logbook (Reporting) .....	12
28	7.3 Initial verification .....	13
29	7.4 Periodic inspections .....	14
30	7.4.1 General .....	14
31	7.4.2 Daily verification.....	14
32	7.4.3 Monthly verification .....	14
33	7.4.4 Bi-annual verification .....	15
34	7.4.5 Annual verification .....	15
35	7.4.6 The date of the annual verification and its results shall be recorded in the system	
36	logbook. Five-year verification.....	15
37	Annex A (informative) Rated duration and activation times.....	16
38	A.1 Rated Duration.....	16
39	A.2 Activation Times .....	16
40	Table A.1 - recommended rated durations by installation type .....	17

41	Annex B (informative) On-site luminance and illuminance measurements.....	18
42	B.1 Introduction.....	18
43	B.2 General.....	18
44	B.3 Illuminance and luminance meters.....	18
45	B.4 Measurement of Emergency Lighting Illuminance levels.....	19
46	B.4.1 General considerations.....	19
47	B.4.2 Method A .....	20
48	B.4.3 Method B .....	20
49	B.4.4 Method C .....	20
50	B.4.5 Method D .....	21
51	Figure B.1 – Overview of measurement correction methods.....	22
52	B.5 Illuminance measurements on site.....	22
53	B.5.1 General.....	22
54	B.5.2 Illuminance measurements of open area (anti panic) lighting, local area lighting and high	
55	risk task area lighting.....	23
56	B.5.2.1 Initial verification .....	23
57	B.5.2.2 Five-year verification .....	23
58	B.5.3 Illuminance measurement of escape route lighting.....	23
59	Table B.1 – Measuring grid for escape route lighting.....	24
60	B.6 Escape route safety signs.....	24
61	B.6.1 Internally illuminated escape route safety signs.....	24
62	B.6.1.1 Initial verification .....	24
63	B.6.1.2 Five-year verification .....	24
64	B.6.2 Externally illuminated escape route safety signs .....	24
65	B.6.2.1 Initial verification .....	24
66	B.6.2.2 Five-year verification .....	24
67	B.7 Conformity assessment.....	25
68	Annex C (Informative) Considerations for emergency lighting systems during and after a premises	
69	lockdown or prolonged periods where power is disconnected.....	26
70	C.1 Introduction.....	26
71	C.2 Disconnection of Power.....	26
72	C.3 Servicing and Testing.....	26
73	C.4 Reoccupation .....	26
74	Bibliography.....	27
75		

## prEN 50172 :2022 (E)

76 **European foreword**

77 This document [prEN 50172:2022] has been prepared by CLC/TC 34" Lighting".

78 This document is currently submitted to the Enquiry.

79 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

80 This document will supersede EN 50172:2004 and all of its amendments and corrigenda (if any).

81 EN 50172:2022 includes the following significant technical changes with respect to EN 50172:2004:

82  
83

DRAFTING NOTE (will be removed before publication)  
A list of change items will be made available at FprEN stage  
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/2c7a0c26-18e4-4179-862c-ceb84c2a4783/osist-pren-50172-2022>

84 **Introduction**

85 Table 1 shows an overview of the different forms of emergency lighting. Please refer to the introduction of  
86 EN 1838 for a more detailed explanation and description.

87 **Table 1 – emergency lighting forms, taken from EN 1838:20221**

Emergency lighting				
Emergency escape lighting			Standby lighting	
Escape route lighting	Open area (anti-panic) lighting	Safety lighting		
		Local area lighting		High risk task area lighting
Safety signs including adaptive safety signs				

88 While EN 1838 includes luminous requirements for emergency escape lighting systems (and standby lighting  
89 systems), this document provides electrical installation requirements specific for emergency escape lighting  
90 systems together with verification, operation and maintenance documentation and test requirements for such  
91 systems. Emergency lighting is a key element of building safety and of utmost importance to prevent harm and  
92 save lives in emergency situations. Such situations are rare, but their rarity is also the reason why issues may  
93 remain undetected and the functionality of the emergency lighting system may thus be impaired just in the very  
94 moment that emergency lighting is actually required. Such issues may be related to building layout updates or  
95 changes in use pattern, or simply the ageing of emergency lighting equipment over time, for instance. Therefore,  
96 maintenance of emergency lighting systems is just as essential as its initial proper installation.

97 Hence, this document does contain detailed requirements not only for the initial verification of emergency es-  
98 cape lighting systems, but also for its continuous monitoring and maintenance which is the only way to ensure  
99 that emergency escape lighting will adequately provided whenever required.

100 Note that legal requirements throughout Europe are not limited to the initial installation of emergency lighting,  
101 but also comprise requirements related to continuous monitoring and maintenance.

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## prEN 50172 :2022 (E)

102 **1 Scope**

103 DRAFTING NOTE (will be removed before publication)

104 National committees are kindly asked to prepare aligned comments to prEN 1838 and prEN 50172,  
105 for instance by a joint meeting of the relevant mirror committees.

106 This document specifies electrical installation requirements specific for emergency escape lighting systems to-  
107 gether with verification, operation and maintenance documentation and test requirements for such systems.

108 DRAFTING NOTE (will be removed before publication)

109 Electrical installation requirements specific for emergency escape lighting systems” may or may not  
110 be covered finally in the document – de-pending on the technical requirements as agreed for this doc-  
111 ument. Thus, corresponding technical requirements may be removed in which case also the scope  
112 would be amended accordingly

113 NOTE 1 Emergency escape lighting includes escape route lighting, open area (anti-panic) lighting, local area lighting  
114 and high risk task area lighting. Escape routesafety sings are part of emergency escape lighting.

115 NOTE 2 Emergency escape lighting systems include adaptive and non-adaptive, as well as high and low-mounted sys-  
116 tems.

117 This document does not apply to standby lighting.

118 NOTE 3 Systems used for standby lighting may also be used for emergency escape lighting, given the corresponding  
119 requirements are fulfilled, see prEN 1838:2022, Clause 4.

120 **2 Normative references**

121 The following documents are referred to in the text in such a way that some or all of their content constitutes  
122 requirements of this document. For dated references, only the edition cited applies. For undated references, the  
123 latest edition of the referenced document (including any amendments) applies.

124 <std>prEN 1838, *Lighting applications - Emergency lighting*</std>

125 <std>ISO 8528-12, *Reciprocating internal combustion engine driven alternating current generating sets - Part*  
126 *12: Emergency power supply to safety services*</std>

127 <std>EN 50171, *Central power supply systems*</std>

128 <std>HD 60364-5-56, *Low-voltage electrical installations - Part 5-56: Selection and erection of electrical equip-*  
129 *ment - Safety services*</std>

130 <std>HD 60364-6:2016, *Low-voltage electrical installations - Part 6: Verification*</std>

131 <std>EN 60598-2-22, *Luminaires - Part 2-22: Particular requirements - Luminaires for emergency lighting*</std>

132 <std>EN 62034, *Automatic test systems for battery powered emergency escape lighting*</std>

133 <std>EN IEC 62485-2, *Safety requirements for secondary batteries and battery installations - Part 2: Stationary*  
134 *batteries*</std>

135 <std>EN 62485-5, *Safety requirements for secondary batteries and battery installations - Part 5: Lithium-ion*  
136 *batteries for stationary applications*</std>



### 137 3 Terms and definitions

138 For the purposes of this document, the terms and definitions given in prEN 1838:2022 and the following apply.

#### 139 3.1

##### 140 **emergency lighting**

141 lighting (IEV 845-29-001) provided for use when the power supply to the normal electric lighting fails

142 [SOURCE: IEC 60050-845-29-010:2020, modified: The note was deleted]

#### 143 3.2

##### 144 **emergency escape lighting**

145 part of emergency lighting that provides illumination or visibility and escape route safety signage for the guid-  
146 ance and the safety of people leaving a location to a place of safety or attempting to terminate a potentially  
147 hazardous process before doing so

148 [SOURCE: EN 12665:2018, modified]

#### 149 3.3

##### 150 **emergency escape lighting system**

151 all items functioning together in order to provide emergency escape lighting

152 Note 1 to entry: This includes luminaires, controlgear, wiring etc.

#### 153 3.4

##### 154 **standby lighting**

155 part of emergency lighting provided to enable normal activities to continue substantially unchanged

156 [SOURCE: IEC 60050-845-29-013:2020, modified - The note was deleted]

#### 157 3.5

##### 158 **escape route lighting**

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

161 [SOURCE: EN 1838:2022<sup>1</sup>]

#### 162 3.6

##### 163 **open area (anti-panic) lighting**

164 part of emergency escape lighting provided to avoid panic and provide illumination allowing people to reach a  
165 place where an escape route can be identified

166 [SOURCE: EN 1838:2022<sup>1</sup>]

#### 167 3.7

##### 168 **local area lighting**

169 part of emergency escape lighting that provides illumination for people allowed to remain temporarily in a prem-  
170 ise during a mains supply failure if it is risk assessed for the activities that are allowed to be performed

171 [SOURCE: EN 1838:2022<sup>1</sup>]

#### 172 3.8

##### 173 **high risk task area lighting**

174 part of emergency escape lighting that provides illumination for the safety of people involved in a potentially  
175 dangerous process or situation and to enable proper shut down procedures for the safety of the operator and  
176 other occupants of the building

177 [Source: EN 1838:2022<sup>1</sup>]

## prEN 50172 :2022 (E)

178 **3.9**  
 179 **emergency luminaire**  
 180 luminaire which may or may not be provided with its own electrical source for safety services and which is used  
 181 for emergency lighting

182 Note 1 to entry: Emergency luminaires include internally illuminated escape route safety signs and luminaires providing light  
 183 for externally illuminated escape route safety signs.

184 **3.10**  
 185 **self-contained emergency luminaire**  
 186 luminaire providing maintained or non-maintained emergency lighting in which all the elements, such as the  
 187 battery, the lamp, the control unit and the test and monitoring facilities, where provided, are contained within the  
 188 luminaire or adjacent to it (that is, within 1 m cable length)

189 [SOURCE: IEC 60598-2-22:2014]

190 **3.11**  
 191 **escape route safety sign**  
 192 sign that gives a general safety message, obtained by a combination of colour and geometric shape and which,  
 193 by the addition of a graphical symbol, gives a particular safety message

194 [SOURCE: EN 1838:2022]

195 **3.12**  
 196 **internally illuminated escape route safety sign**  
 197 escape route safety sign that is illuminated, when it is required, by an internal source

198 [SOURCE: EN 1838:2022]

199 **3.13**  
 200 **externally illuminated escape route safety sign**  
 201 escape route safety sign that is illuminated, when it is required, by an external emergency luminaire

202 [SOURCE: EN 1838:2022]

203 **3.14**  
 204 **central safety power supply system**  
 205 central power supply system which supplies the required power to essential safety equipment with any rated  
 206 power output

207 [SOURCE: FprEN 50171:2021]

208 **3.15**  
 209 **electrical source for safety services**  
 210 electrical source intended to be used as part of an electrical supply system for safety services

211 [SOURCE: IEC 60364-5-56:2018]

212 **3.16**  
 213 **automatic test system**  
 214 **ATS**  
 215 automated test system that may be manually initiated, consisting of parts (such as timers, current detectors,  
 216 light detectors, changeover switches) which, when connected together, make a system that can carry out the  
 217 routine testing requirements of emergency luminaires, and indicate the test results

218 [Source: IEC 62034:2012, modified: "emergency lighting luminaires" was replaced by "emergency luminaires"]

219 **3.17**  
 220 **rated duration <of an emergency escape lighting system>**  
 221 declared period of time that the luminous requirements of the emergency lighting system are met

222 **3.18**  
 223 **activation time <of an emergency escape lighting system>**  
 224 time between failure of the supply to the normal lighting and emergency lighting reaching the required level of  
 225 illuminance

## 226 **4 General**

### 227 **4.1 Normal lighting failures**

228 Emergency escape lighting shall be provided promptly, automatically and for a suitable time in a specified area  
 229 when the power supply to the normal lighting fails.

230 This further includes:

- 231 – Operation/tripping of circuit protection devices. However, where an area is served by multiple lighting cir-  
 232 cuits, monitoring of all circuits or circuit protection devices may not be required, if the failure of one or more  
 233 circuits or operation of circuit protection devices is not expected to cause the normal lighting in this specified  
 234 area to fall below the illuminance levels required for emergency escape lighting.
- 235 – Failures of the lighting control system where this is expected to cause the normal lighting in this specified  
 236 area to fall below the illuminance levels required for emergency escape lighting.

237 NOTE 1 Normal lighting supply failures include interruptions of the power supply from the electricity supplier.

238 NOTE 2 Required illuminance levels are given in EN 1838.

239 NOTE 3 Lighting control system refers to a networked system of devices related to lighting control only, that incorporates  
 240 communication between various system inputs and outputs, with the use of one or more central computing device(s).

### 241 **4.2 Minimum requirements**

242 To facilitate the evacuation of a building during emergency operation, sufficient minimum illuminance, an ade-  
 243 quate activation time and rated duration are required.

244 Annex A gives guidance on factors that should be considered in relation to the rated duration and activation  
 245 times of emergency escape lighting systems.

246 Compliance is checked by designing and installing the emergency escape lighting system in accordance with  
 247 the applicable standards and regulations and according to the requirements in this document including mainte-  
 248 nance and verifications.

### 249 **4.3 Permanently occupied buildings**

250 For permanently occupied buildings that provide sleeping accommodation and require a rated duration greater  
 251 than three hours, the duration may be reduced to three hours where the emergency escape lighting is not  
 252 required continuously in all areas, under the following conditions:

- 253 – The risk assessment, if required, and regulation allows for such a reduction
- 254 – In case of a power failure, the emergency escape lighting shall be activated for at least the time required  
 255 for the evacuation of the building after which it shall switch off automatically
- 256 – Emergency escape lighting can be reactivated for at least the time required for the evacuation of the build-  
 257 ing by permanently illuminated push buttons, powered from the electrical source for safety services (ESSS),  
 258 which shall be installed as local switching devices in such a way that at least one button can be discerned  
 259 from any location