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ILNAS-EN 12464-1:2021

Light and lighting - Lighting of work places - Part 1: Indoor work places

Lumière et éclairage - Éclairage des lieux
de travail - Partie 1 : Lieux de travail
intérieurs

Licht und Beleuchtung - Beleuchtung von
Arbeitsstätten - Teil 1: Arbeitsstätten in
Innenräumen

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National Foreword

This European Standard EN 12464-1:2021 was adopted as Luxembourgish Standard ILNAS-EN 12464-1:2021.

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Partie 1 : Lieux de travail intérieurs

Licht und Beleuchtung - Beleuchtung von
Arbeitsstätten - Teil 1: Arbeitsstätten in Innenräumen

This European Standard was approved by CEN on 9 May 2021.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 12464-1:2021) 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of an identical text or by endorsement, at the latest by February 2022, and conflicting national standards shall be withdrawn at the latest by February 2022.

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

This document supersedes EN 12464-1:2011.

The original standard EN 12464-1:2002 was already further developed in its first revision EN 12464-1:2011. It specifies the requirements for good lighting solutions rather than giving design guidelines. With the experience of applying the standard next steps are taken in the development of this new edition and human and user needs are given broader acknowledgement. Lighting requirements for task areas to fulfil visual tasks are given a close relation to the space in which they are carried out. Technologically LED has taken over as the main light source from previous technologies. The main changes with respect to the previous edition are:

- The recommendations given in the tables in Clause 7 take user needs more into account than in the past. Thus, the requirements for necessary illuminance according to Clause 7 are more differentiated.
- The impact of visual and non-visual (non-image forming) effects of light on people's performance and well-being are elaborated in the new informative Annex B.
- Requirements for walls, ceilings and cylindrical illuminances are moved from the main text to the tables in Clause 7 for increased visibility and usability.
- A new chapter on design considerations (Clause 6) gives advice on how to apply the requirements when designing lighting for visual tasks and activities within a space.
- Relation between task area and its immediate surround and the background area is more detailed (5.3.3, 5.3.4, 5.3.5).
- Glare requirements have been clarified for improved usability including clarification for shielding in 5.5 and recommended practices for UGR in non-standard situations has been added in a new informative Annex A.
- Flicker and stroboscopic effect is updated (5.8).
- A new informative Annex C is introduced including examples on how to derive the requirements in different applications (office/industry) for designing lighting.
- A new informative Annex D is introduced to provide additional information on the specific requirements for railway installations that are given in Table 61.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Adequate and appropriate lighting enables people to perform visual tasks efficiently and accurately including tasks performed over a prolonged time period or of a repetitive nature. The degree of visibility and comfort required in a wide range of work places is governed by the type and duration of the activity. The lighting also affects circadian rhythms and mood as well as improving our performance and well-being.

The final designed, installed and operated lighting system should provide efficient and effective good quality lighting for the user needs tailored to their visual capacity, e.g. elderly users in workplaces.

It is important that all clauses of this document are followed although the target values for lighting criteria and specific requirements, depending of each type of task/activity, are tabulated in the schedule of lighting requirements (see Clause 7).

This document reflects the generally recognized best practice.