



**NSAI**  
Standards

Irish Standard  
I.S. EN 12464-1:2011

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

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## I.S. EN 12464-1:2011

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

Lumière et éclairage - Eclairage 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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## Foreword

This document (EN 12464-1:2011) 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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

This document supersedes EN 12464-1:2002.

The main technical changes in this revision are:

- importance of daylight is taken into account: Requirements for lighting are generally applicable independent if provided by artificial lighting, daylight or a combination of both;
- specification of a minimum illuminance on walls and ceilings;
- specification of cylindrical illuminance and detailed information on modelling;
- uniformity of illuminance is assigned to tasks and activities;
- definition of "background area" and lighting specification for this area;
- definition of an illuminance grid is in accordance with EN 12464-2;
- new luminance limits are set for luminaires used with Display Screen equipment (DSE), the description of display screens is according ISO 9214-307.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

Adequate and appropriate lighting enables people to perform visual tasks efficiently and accurately. The degree of visibility and comfort required in a wide range of work places is governed by the type and duration of the activity.

It is important that all clauses of this European Standard are followed although the specific requirements are tabulated in the schedule of lighting requirements (see Clause 5).

## 1 Scope

This European Standard specifies lighting requirements for humans in indoor work places, which meet the needs for visual comfort and performance of people having normal ophthalmic (visual) capacity. All usual visual tasks are considered, including Display Screen Equipment (DSE).

This European Standard specifies requirements for lighting solutions for most indoor work places and their associated areas in terms of quantity and quality of illumination. In addition recommendations are given for good lighting practice.

This European Standard does not specify lighting requirements with respect to the safety and health of people at work and has not been prepared in the field of application of Article 153 of the EC treaty, although the lighting requirements, as specified in this European Standard, usually fulfil safety needs. Lighting requirements with respect to the safety and health of workers at work can be contained in Directives based on Article 153 of the EC treaty, in national legislation of member states implementing these directives or in other national legislation of member states.

This European Standard neither provides specific solutions, nor restricts the designers' freedom from exploring new techniques nor restricts the use of innovative equipment. The illumination can be provided by daylight, artificial lighting or a combination of both.

This European Standard is not applicable for the lighting of outdoor work places and underground mining or emergency lighting. For outdoor work places, see EN 12464-2 and for emergency lighting, see EN 1838 and EN 13032-3.

## 2 Normative references

The following referenced documents 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 12193, *Light and lighting — Sports lighting*

EN 12464-2, *Light and lighting — Lighting of work places — Part 2: Outdoor work places*

EN 12665, *Light and lighting — Basic terms and criteria for specifying lighting requirements*

EN 13032-1, *Light and lighting — Measurement and presentation of photometric data of lamps and luminaires — Part 1: Measurement and file format*

EN 13032-2, *Light and lighting — Measurement and presentation of photometric data of lamps and luminaires — Part 2: Presentation of data for indoor and outdoor work places*

EN 15193, *Energy performance of buildings — Energy requirements for lighting*

EN ISO 9241-307, *Ergonomics of human-system interaction — Part 307: Analysis and compliance test methods for electronic visual displays (ISO 9241-307:2008)*

EN ISO 9680:2007, *Dentistry — Operating lights (ISO 9680:2007)*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs in workplaces and public areas*



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