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Lys og belysning – Lys ved arbejds-pladser – Del 2: Udendørs arbejds-pladser

Light and lighting – Lighting of work places – Part 2: Outdoor work places

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EUROPÄISCHE NORM

January 2014

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Supersedes EN 12464-2:2007

English Version

Light and lighting - Lighting of work places - Part 2: Outdoor work places

Lumière et éclairage - Éclairage des lieux de travail - Partie 2: Lieux de travail extérieurs

Licht und Beleuchtung - Beleuchtung von Arbeitsstätten - Teil 2: Arbeitsplätze im Freien

This European Standard was approved by CEN on 7 December 2013.

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Foreword

This document (EN 12464-2:2014) 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of an identical text or by endorsement, at the latest by July 2014, and conflicting national standards shall be withdrawn at the latest by July 2014.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 12464-2:2007.

Significant changes between this document and EN 12464-2:2007 are:

a) the terms and definitions were deleted to avoid duplication with EN 12665;

b) symbols were aligned with EN 12665;

c) Figure 1 was corrected;

d) 4.4.2 “Glare rating”, the reflectance has a default value of ρ = 0,15;

e) 4.7.3 “colour rendering”, aligned with EN 12464-1;

f) 4.10 “energy considerations”, aligned with EN 12464-1 and extended;

g) subclause 5.1, insertion of requirements regarding routine cleaning of work spaces;

h) Table 5.1 “General requirements for areas and for cleaning at outdoor work places”, title changed and new activity added;

i) Table 5.12 “Railways and tramways”, updated and extended;

j) Clause 6 “Verification procedures”, revised and harmonized with EN 12464-1.

EN 12464, *Light and lighting - Lighting of work places* consists of the following parts:

— *Part 1: Indoor work places*

— *Part 2: Outdoor work places*

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, 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.

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Introduction

To enable people to perform outdoor visual tasks efficiently and accurately, especially during the night, adequate and appropriate lighting should be provided.

The degree of visibility and comfort required in a wide range of outdoor work places is governed by the type and duration of activity.

This standard specifies requirements for lighting of tasks in most outdoor work places and their associated areas in terms of quantity and quality of illumination. In addition recommendations are given for good lighting practice.

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

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1 Scope

This European Standard specifies lighting requirements for outdoor work places, which meet the needs for visual comfort and performance. All usual visual tasks are considered. This European Standard is not applicable for emergency lighting; see EN 1838 and EN 13032-3.

This European Standard does not specify lighting requirements with respect to the safety and health of workers 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 standard, usually fulfil safety needs. Lighting requirements with respect to the safety and health of workers at work may 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 designer's freedom from exploring new techniques nor restricts the use of innovative equipment.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 13201-2, *Road lighting - Part 2: Performance requirements*

EN 13201-3, *Road lighting - Part 3: Calculation of performance*

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

3 Terms and definitions

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

4 Lighting design criteria

4.1 Luminous environment

For good lighting practice it is essential that, in addition to the required illuminance, other qualitative and quantitative needs are satisfied.

Lighting requirements are determined by the satisfaction of three basic human needs:

— visual comfort, where the workers have a feeling of well-being; in an indirect way also contributing to a high productivity level,

— visual performance, where the workers are able to perform their visual tasks, even under difficult circumstances and during longer periods,

— safety.

Main parameters determining the luminous environment are:

— luminance distribution,