BS EN 40-3-2:2013

BSI Standards Publication

Lighting columns

Part 3-2: Design and verification — Verification by testing

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National foreword

This British Standard is the UK implementation of EN 40-3-2:2013. It supersedes BS EN 40-3-2:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/509/50, Street lighting columns.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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This European Standard was approved by CEN on 25 November 2012.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword **3**

1 Scope **4**

2 Normative references **4**

3 Terms and definitions **4**

4 Symbols **4**

5 Test loads **5**

6 Acceptance criteria **5**
6.1 General **5**
6.2 Serviceability requirements **5**
6.3 Structural requirements **5**
6.4 Minimum ultimate requirement **5**
6.5 Critical cross-sections **6**
6.6 Ultimate failure test (optional) **7**

7 Preparation for test **7**

8 Application of forces **7**
8.1 General **7**
8.2 Serviceability requirements **7**
8.2.1 Vertical deflection **7**
8.2.2 Horizontal deflection **7**
8.3 Structural requirements **8**
8.4 Minimum ultimate load test **8**
8.5 Ultimate failure test (optional) **8**

9 Test report **8**

10 Type test certificate **8**

11 Permissible modifications to type tested columns **8**

12 Fatigue requirements **8**

Annex A (normative) **Lighting columns: Report on type testing as specified in EN 40-3-2:2013** **9**

Annex B (normative) **Lighting columns: Certificate for the type test specified in EN 40-3-2:2013** **12**

Bibliography **14**

Foreword

This document (EN 40-3-2:2013) has been prepared by Technical Committee CEN/TC 50 “Lighting columns and spigots”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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 40-3-2:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

There are seven parts to the series of standards EN 40 - *Lighting columns*, as follows:

- *Part 1: Definitions and terms;*
- *Part 2 : General requirements and dimensions;*
- *Part 3: Design and verification:*
  - *Part 3-1: Specification for characteristic loads*;
  - *Part 3-2: Verification by testing*;
  - *Part 3-3: Verification by calculation*;
- *Part 4: Requirements for reinforced and prestressed concrete lighting columns,*
- *Part 5: Requirements for steel lighting columns;*
- *Part 6: Requirements for aluminium lighting columns;*
- *Part 7: Requirements for fibre reinforced polymer composite lighting columns.*

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, 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.

1 Scope

This European Standard specifies the requirements for the verification of the design of steel, aluminium, concrete and fibre reinforced polymer composite lighting columns by testing. It gives type tests and so does not cover testing for quality control purposes. It applies to lighting columns of nominal height (including any bracket) not exceeding 20 m. Special structural designs to permit the attachment of signs, overhead wires, etc. are not covered by this European Standard.

This European Standard includes a simplified method for testing steel and aluminium lighting columns. Refer to EN 40-4 for concrete lighting columns and to EN 40-7 for fibre reinforced polymer composite lighting columns.

NOTE For a more detailed test procedure, refer to Annex D of EN 1990:2002.

The requirements for lighting columns made from materials other than concrete, steel, aluminium or fibre reinforced polymer composite (for example wood, plastic and cast iron) are not specifically covered in this European Standard.

This European Standard includes performance requirements for horizontal loads due to wind. Passive safety and the behaviour of a lighting column under the impact of a vehicle are not addressed. Such lighting columns will have additional requirements (see EN 12767).

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 40-1:1991, *Lighting columns — Part 1: Definitions and terms*

EN 40-3-1:2013, *Lighting columns — Part 3-1: Design and verification —Specification for characteristic loads*

EN 40-3-3:2013, *Lighting columns — Part 3-3: Design and verification — Verification by calculation*

EN 40-4, *Lighting columns — Part 4: Requirements for reinforced and prestressed concrete lighting columns*

EN 40-7, *Lighting columns — Part 7: Requirements for fibre reinforced polymer composite lighting columns*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 40-1:1991 apply.

4 Symbols

The following symbols are used in this European Standard.

The definitions are abbreviated, the full definitions being given in the text.

a Overall door opening length
b Overall door opening width
c Dimension from ground level to bottom of door opening
f_y Characteristic strength of material for design
f_{yT} Actual strength of test sample material as tested