



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 40-3-1:2000

ICS 91.160.20

**LIGHTING COLUMNS - PART 3-1: DESIGN  
AND VERIFICATION - SPECIFICATION FOR  
CHARACTERISTIC LOADS**

National Standards  
Authority of Ireland  
Dublin 9  
Ireland

Tel: (01) 807 3800

Tel: (01) 807 3838

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 40-3-1**

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Will supersede EN 40-6:1982

English version

**Lighting columns - Part 3-1: Design and verification -  
Specification for characteristic loads**

Candélabres d'éclairage public - Partie 3-1: Conception et  
vérification - Spécification pour charges caractéristiques

This European Standard was approved by CEN on 11 December 1999.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 50 "Lighting columns and spigots", the secretariat of which is held by BSI.

This European Standard replaces EN 40-6:1982.

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of an identical text or by endorsement, at the latest by August 2000, and conflicting national standards shall be withdrawn at the latest by August 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

There are six Parts to this standard as follows:

- Part 1: Definitions and terms
- Part 2: General requirements and dimensions
- Part 3-1: Design and verification - Specification for characteristic loads
- Part 3-2: Design and verification - Verification by testing
- Part 3-3: Design and verification - Verification by calculation
- Part 4: Specification for reinforced and prestressed concrete lighting columns
- Part 5: Specification for steel lighting columns
- Part 6: Specification for aluminium lighting columns

## 1 Scope

This European Standard specifies design loads for lighting columns. It applies to post top columns not exceeding 20 m height for post top lanterns and to columns with brackets not exceeding 18 m height for side entry lanterns. Special structural designs to permit the attachment of signs, overhead wires, etc. are not covered by this standard.

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

This 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 included, this group of lighting columns will have additional requirements (see prEN 40-2:1999).

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

ENV 1991-2-4                      Eurocode 1: Basis of design and actions on structures - Part 2-4: Wind action

## 3 Basis of loads

### 3.1 Dead loads

The masses of the brackets and the lanterns shall be taken into consideration.

### 3.2 Wind pressures

#### 3.2.1 General

The characteristic wind pressure  $q(z)$ , in  $\text{N/m}^2$ , for any particular height above ground,  $z$ , shall be obtained from the following equation:

$$q(z) = \delta \times \beta \times f \times C_{e(z)} \times q_{(10)}$$

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