AS 1798—1992

Australian Standard®

Lighting poles and bracket arms—Preferred dimensions

This Australian Standard was prepared by Committee LG/2, Street Lighting. It was approved on behalf of the Council of Standards Australia on 6 December 1991 and published on 15 May 1992.

The following interests are represented on Committee LG/2:

Australian Automobile Association

Australian Electrical and Electronic Manufacturers Association

Australian Local Government Engineers Association

Austroads

Electricity Supply Association of Australia

Illuminating Engineering Society of Australia and New Zealand

The University of New South Wales

Additional interests participating in preparation of Standard:

Manufacturers of lighting poles

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PREFACE

This Standard was prepared by the Standards Australia Committee on Street Lighting to supersede AS 1798—1975, *Preferred dimensions for lighting columns and bracket arms*.

The Standard specifies a series of preferred dimensions for lighting poles and for separate bracket arms of a type designed for mounting onto electricity distribution poles, walls or other supporting surfaces. It will be necessary for the purchaser to select from the range the particular dimensions required to provide the desired luminaire mounting height and outreach, having regard to the actual site conditions.

For the application of this Standard, reference is made to the general lighting categories defined in AS 1158.1, *SAA Public Lighting Code*, Part 1: *Performance and installation design requirements*. These categories may broadly be described as follows:

(a) *Category A lighting:* applicable to arterial roads, including freeways.

(b) *Category B lighting:* applicable to minor roads, including those used for residential purposes.

(c) *Category C lighting:* applicable to outdoor public spaces other than roads, e.g. shopping precincts, car parks.

The most significant changes introduced in this Standard are as follows:

(i) Introduction of two classes of lighting poles with outreach arms (see Clauses 1.4.9 and 1.4.10).

(ii) Specification of a radius of curvature for outreach arms which are of a curved shape (see Table 2.1).

(iii) An increase in the planting depth required for certain sizes of buried poles (see Table 2.2).

(iv) The addition of two new types of baseplates for baseplate-mounted poles (see Figures 2.4 and 2.5).

(v) Inclusion of new requirements for door openings and cable entry holes (see Clauses 2.5 and 2.6, and Figures 2.1 and 2.2).

(vi) Alterations to requirements for the angle and dimensions of luminaire fixing spigots (see Section 4).

Consideration has been given to the dimensional requirements for various forms of frangible lighting poles. Although this Standard does not cover the functional performance of such poles, the dimensions specified herein will generally be applicable; however, particular dimensional requirements have been specified for slip-base lighting poles based on a design of proven type which has been in use in Australia for many years.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies preferred dimensions for poles which are designed to support luminaires and ancillary equipment for the lighting of roads and other outdoor public spaces. The dimensions specified also apply to joint-use lighting poles and sections of joint-use mast arms which are designed to support luminaires.

The Standard sets out a range of sizes for use in providing the general categories of lighting defined in AS 1158.1, namely, Categories A, B and C (see Preface of this Standard).

The requirements apply to poles of both the rigid and frangible type. No requirements are specified covering—

(a) aesthetic considerations of design or shape, except where these matters are controlled by the preferred dimensions;

(b) structural design, performance or testing; or

(c) the installation of the poles.

NOTES:

1 Advice should be sought on appropriate installation practices, particularly for poles of the slip-base design where special installation requirements apply to ensure operation in the intended manner.

2 It is recognized that dimensions other than those specified in this Standard will sometimes be required to cater for special conditions or applications.

3 Appendix A provides a guide to the information which should be provided with an enquiry or order for lighting poles and bracket arms complying with this Standard.

1.2 APPLICATION The nominal dimensions of lighting poles and of bracket arms shall be in accordance with the appropriate requirements of Sections 2, 3 and 4. The dimensions of individual lighting poles and bracket arms shall be within the tolerances specified in Section 5.

1.3 REFERENCED DOCUMENTS The documents below are referred to in this Standard:

AS
1074 Steel tubes and tubulars for ordinary service

1158 SAA Public Lighting Code
1158.1 Part 1: Performance and installation design requirements

1397 Steel sheet and strip—Hot-dipped zinc-coated or aluminium/zinc-coated

1650 Hot-dipped galvanized coatings on ferrous articles

2979 Traffic signal mast arms

1.4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 1158.1 and those below apply. Figures B1 and B2 of Appendix B illustrate some of the defined terms.

1.4.1 Arm projection—the horizontal distance between—

(a) *for lighting poles with outreach arms*—the centre of vertical section of the pole and the extremity of the outreach arm, excluding the luminaire fixing spigot; or

(b) *for bracket arms*—the supporting surface of the mounting plate and the extremity of the bracket arm, excluding the luminaire fixing spigot.

1.4.2 Bracket arm—a mounting bracket which incorporates an outreach arm for the support of a luminaire, and is designed for attachment to an electricity distribution pole, wall or other supporting surface.

1.4.3 Frangible pole—a lighting pole which is designed so that the action of the pole, during and after a vehicle impact into the pole, is such that the forces on the occupants of the impacting vehicle are lower than those at which human beings suffer internal injuries.

1.4.4 Ground line—the position on the lighting pole at a distance from the butt end equal to the manufacturer's stated planting depth.

1.4.5 Impact absorbing pole—a frangible pole which is designed to deform progressively so as to slow an impacting vehicle at a controlled rate and collapse in a predictable and acceptable manner.