



ANSI/NEMA C136.23-2006

American National
Standard for Roadway
and Area Lighting
Equipment-Enclosed
Architectural
Luminaires



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American National Standard



For Roadway and Area Lighting Equipment— Enclosed Architectural Luminaires

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Secretariat: National Electrical Manufacturers Association

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CONTENTS

1	Overview	1
2	References	1
3	Definition of “architectural” luminaire	3
ANNEX A	Enclosed side-mounted architectural luminaires for high-intensity discharge lamps used in roadway and area lighting	4

1 Overview

This standard is intended to cover physical, operating, maintenance, and light distribution features that permit use of architectural luminaires in roadway applications when so specified.

It is not intended that compliance with this standard will permit interchangeability with existing roadway equipment without thorough engineering review and evaluation.

Structural requirements for poles and brackets shall be evaluated with respect to both strength and vibration. Vibration dampers may be required.

Where specified, architectural luminaires of similar effective projected area and height meeting the requirements of this standard, based on appropriate engineering review and evaluation, may be used in roadway applications with the assurance that:

- They will fit the standard roadway bracket.
- Light distribution patterns and photometric data available from manufacturers will be consistent with standard roadway luminaires as specified in ANSI/IES R-8.
- Physical, operational, and maintenance characteristics will be similar to standard roadway luminaires.

Further, the scope of this standard is intended in the future, through the use of annexes, to prescribe specific features for horizontal, pendant, and vertical architectural luminaires, together with various type lamps to meet the individual needs of special architectural roadway lighting applications.

2 References

This standard shall be used in conjunction with the following publications. When any of these standards are superseded by an approved revision, the revision shall apply.

ANSI C78.40-1992, *American National Standard Specification for Mercury Lamps.*

ANSI C78.1300 series, *American National Standard for Electric and Mercury Lamps.*

ANSI C82.4-1991, *American National Standard for Ballasts—High-intensity Discharge and Low-pressure Sodium Lamps (multiple-supply type).*

ANSI C82.9-1988, *American National Standard for High-intensity Discharge and Low-pressure Sodium Lamps, Ballasts, and Transformers—Definitions.*

ANSI C136.2-2004, *American National Standard for Roadway and Area Lighting Equipment—Luminaire Voltage Classifications.*

ANSI C136.3-2005, *American National Standard for Roadway Lighting Equipment—Luminaire Attachments.*

ANSI C136.10-1996, *American National Standard for Roadway Lighting Equipment—Locking-type Photocontrol Devices and Mating Receptacle Physical and Electrical Interchangeability and Testing.*

ANSI C136.11-1995, *American National Standard for Roadway Lighting Equipment—Multiple Sockets.*

ANSI C136.12-2004, *American National Standard for Roadway Lighting Equipment—Mercury Lamps—Guide for Selection.*

ANSI C136.13-2004, *American National Standard for Roadway Lighting—Metal Brackets for Wood Poles.*

ANSI C136.15-2004, *American National Standard for Roadway Lighting Equipment—High-intensity Discharge and Low-pressure Sodium Lamps in Luminaires—Field Identification.*

ANSI C136.19-2004, *American National Standard for Roadway Lighting Equipment—High-pressure Sodium Lamps—Guide for Selection.*

ANSI C136.20-1990, *American National Standard for Roadway Lighting Equipment—Fiber-reinforced Plastic (FRP) Poles.*

ANSI C136.21-2004, *American National Standard for Roadway Lighting—Vertical Telescopes Used with Post-top-mounted Luminaires.*

ANSI C136.22-2004, *American National Standard for Roadway Lighting Equipment—Internal Labeling of Luminaires.*

ANSI C136.24-2004, *American National Standard for Roadway Lighting Equipment—Non-locking Type (Button) Photocontrols.*

ANSI/IESNA RP 8-2000, *American National Standard Practice for Roadway Lighting.*

3 Definition of “architectural” luminaire

For the purpose of this standard, “architectural” luminaire will be considered to be any significant deviation from the luminaire style that has evolved in the industry as predominantly (commonly) known as the “cobra head” style. Architectural luminaires include modern “decorative” variations, including the rectilinear (shoe box), curvilinear (hockey puck), spherical, and semispherical styles. It also includes the broad family of luminaires/lanterns proposed to duplicate or replicate “historical” or “nostalgic” styles of luminaires/lanterns for use on roadways.

**Annex A – Enclosed side-mounted architectural luminaires for high-intensity discharge lamps
used in roadway and area lighting
(Normative)**

A.1 Scope

The architectural luminaires covered by this annex include side-mounted, square, rectangular, cylindrical, spherical, and other types of decorative or nostalgic historical style luminaires proposed for use in roadway lighting applications.

A.2 Mounting provisions

A.2.1 General

Luminaires meeting the requirements of this standard shall:

- a) Accept a straight tubular section of 1-1/4 in. NPS pipe tenon not more than 19.05 cm (7.5 in.) long or a 2 in. NPS pipe tenon not more than 25.4 cm (10 in.) long in accordance with Table 1 of ANSI C136.3 and Clause 6 of ANSI C136.13.
- b) Provide a shoulder or stop to limit the depth of insertion of the pipe tenon during installation.
- c) Permit leveling through no less than ± 3 degrees from the horizontal axis of the attachment if applicable.
- d) Prevent entrance of wildlife by limiting opening around the pipe tenon mounting area to 0.635 cm (0.25 in.) over the range of tenon sizes and leveling adjustments. This may be accomplished by use of supplemental closures.
- e) A luminaire mounting method that incorporates a rectilinear arm direct to the pole or tenon adapter with a specified bolt pattern.

A.2.2 Tenon

Horizontal tenon mounting shall be furnished, unless otherwise specified by the user.

A.3 Terminal blocks

A terminal block with a minimum of two one-side pressure type wire connectors having slotted-head screws shall be securely mounted in the luminaire such that incoming conductors will clear all internal accessories. Each connector shall accept one conductor, either solid or stranded, from 8 to 14 AWG copper and from 6 to 10 AWG aluminum.

A.4 Latching and hinging

The luminaire shall be equipped with a latch-hinge combination to secure the lens door and permit access to the lamp compartment. Unless otherwise specified, the latch shall be operable with protective gloves, but without tools. The hinge shall be designed so that a free-swinging door will not accidentally disengage.

A.5 Voltage classification

The luminaire shall be of the 600 V classification, as defined in ANSI C136.2.

A.6 Socket

Luminaires shall be equipped with either a medium screw base socket or a multiple mogul socket meeting the requirements of ANSI C136.11.