ANSI C136.17-1997
(Revision of ANSI C136.17-1985)

American National Standard for Roadway Lighting Equipment—Enclosed Side-Mounted Luminaires for Horizontal-Burning High-Intensity-Discharge Lamps—Mechanical Interchangeability of Refractors

Sponsor

Accredited Standards Committee on Roadway Lighting Equipment, C136

Accredited by the

American National Standards Institute

Secretariat

The Institute of Electrical and Electronics Engineers, Inc.

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American National Standards Institute

Abstract: The dimensional features and the material of refractors as described in ANSI C136.14-1988, American National Standard for Roadway Lighting Equipment—Enclosed Side-Mounted Luminaires for Horizontal-Burning High-Intensity Discharge Lamps, are covered.
Keywords: mechanical interchangeability, refractors, side-mounted luminaires

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Introduction

(This introduction is not a part of ANSI C136.17-1997, American National Standard for Roadway Lighting Equipment—Enclosed Side-Mounted Luminaires for Horizontal-Burning High-Intensity-Discharge Lamps—Mechanical Interchangeability of Refractors.)

This standard was prepared by the Roadway Luminaire Task Force of Subcommittee C136-1, Subcommittee on Luminaires and Light-Sensitive Control Devices.

Greg Steinman, *Chair*

The Accredited Standards Committee on Roadway Lighting, C136, had the following voting members at the time this standard was approved:

Richard E. Hildreth, *Chair* **Rosemary Tennis,** *Staff Liaison*

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American National Standard for Roadway Lighting Equipment—Enclosed Side-Mounted Luminaires for Horizontal-Burning High-Intensity-Discharge Lamps—Mechanical Interchangeability of Refractors

1. Overview

1.1 Scope

This standard covers the dimensional features and the material of refractors of the approximate shape shown in Figures 1 through 3, and as described in ANSI C136.14-1988, American National Standard for Roadway Lighting Equipment—Enclosed Side-Mounted Luminaires for Horizontal-Burning High-Intensity-Discharge Lamps.

1.2 Purpose

This standard provides

a) A description and diagrams of substitute refractors for the original refractor when replacement is necessary.

b) The dimensions for a good fit for the refractor at the points of contact, the points of attachment, or both, to the reflector or the housing, or to both the reflector and the housing.

c) Requirements for light distribution acceptable to the user, but not necessarily equal to the original optical system.

NOTE—The optics package consisting of the lamp, the reflector, and the refractor configuration is unique to the individual fixture. Replacement of a single fixture component will not guarantee the same optical performance.

The requirements and figures in this standard will help keep the number of refractors needed on service vehicles to a minimum.

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2. Physical dimensions

Figures 1 through 3 show the refractors' points of contact, points of attachment, or both, to the reflector, the housing, or both.

The dimensions given in these figures are for interchangeability, and other variants satisfying nondimentioned provisions may be capable of otherwise equivalent performance.

3. Materials

Refractors may be made of heat-resistant glass, polycarbonate, acrylics, or other suitable materials as specified by the user.

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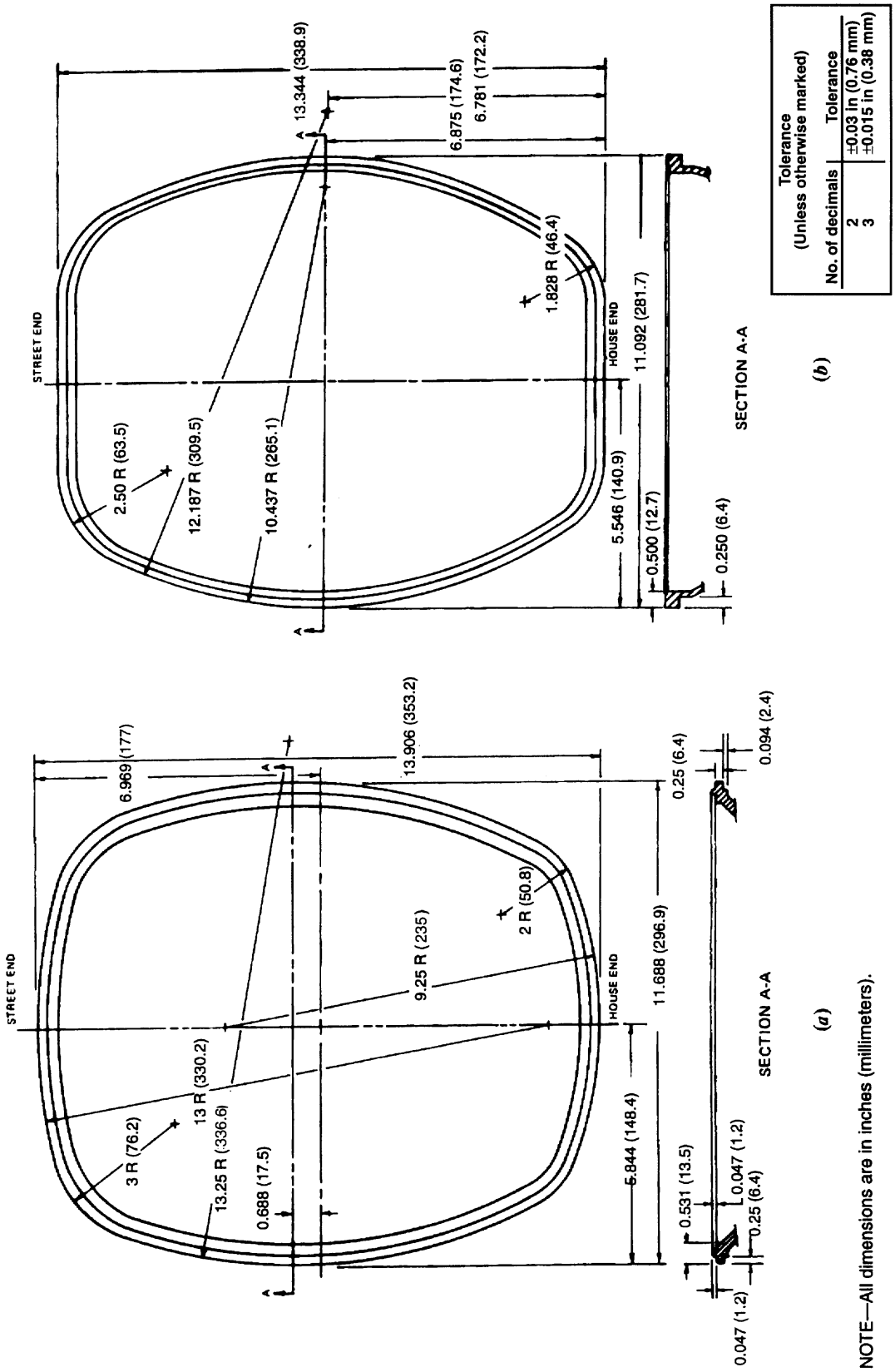


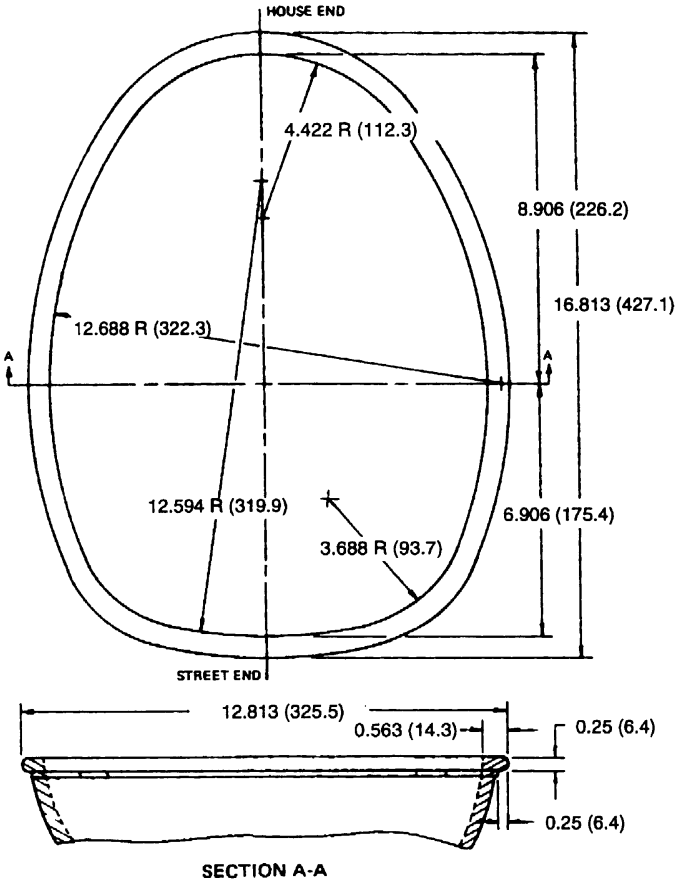
Figure 1—Flange dimensions for refractors for small horizontal-burning HID luminaires

NOTE—All dimensions are in inches (millimeters).

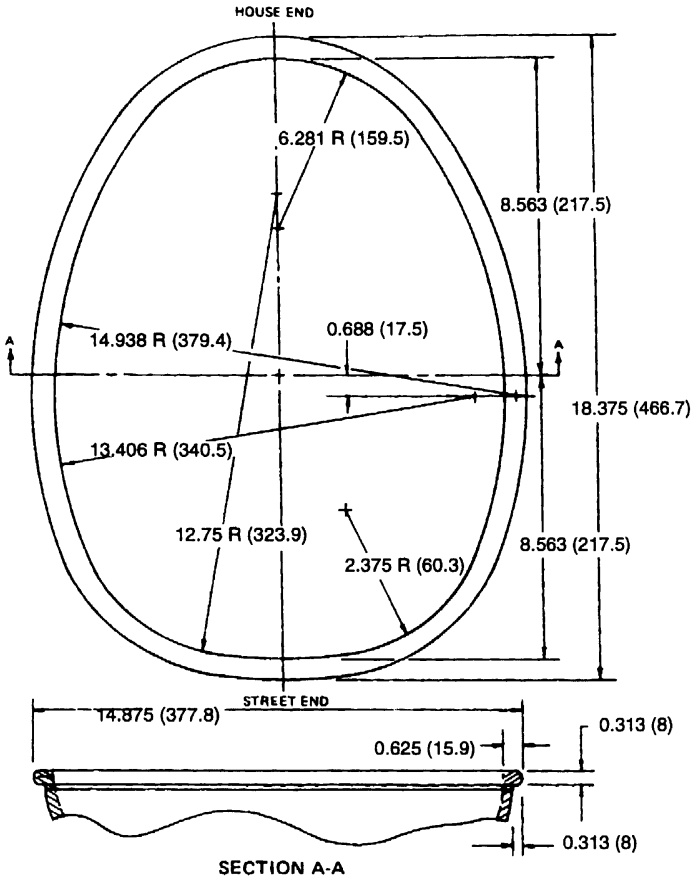
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(*a*)

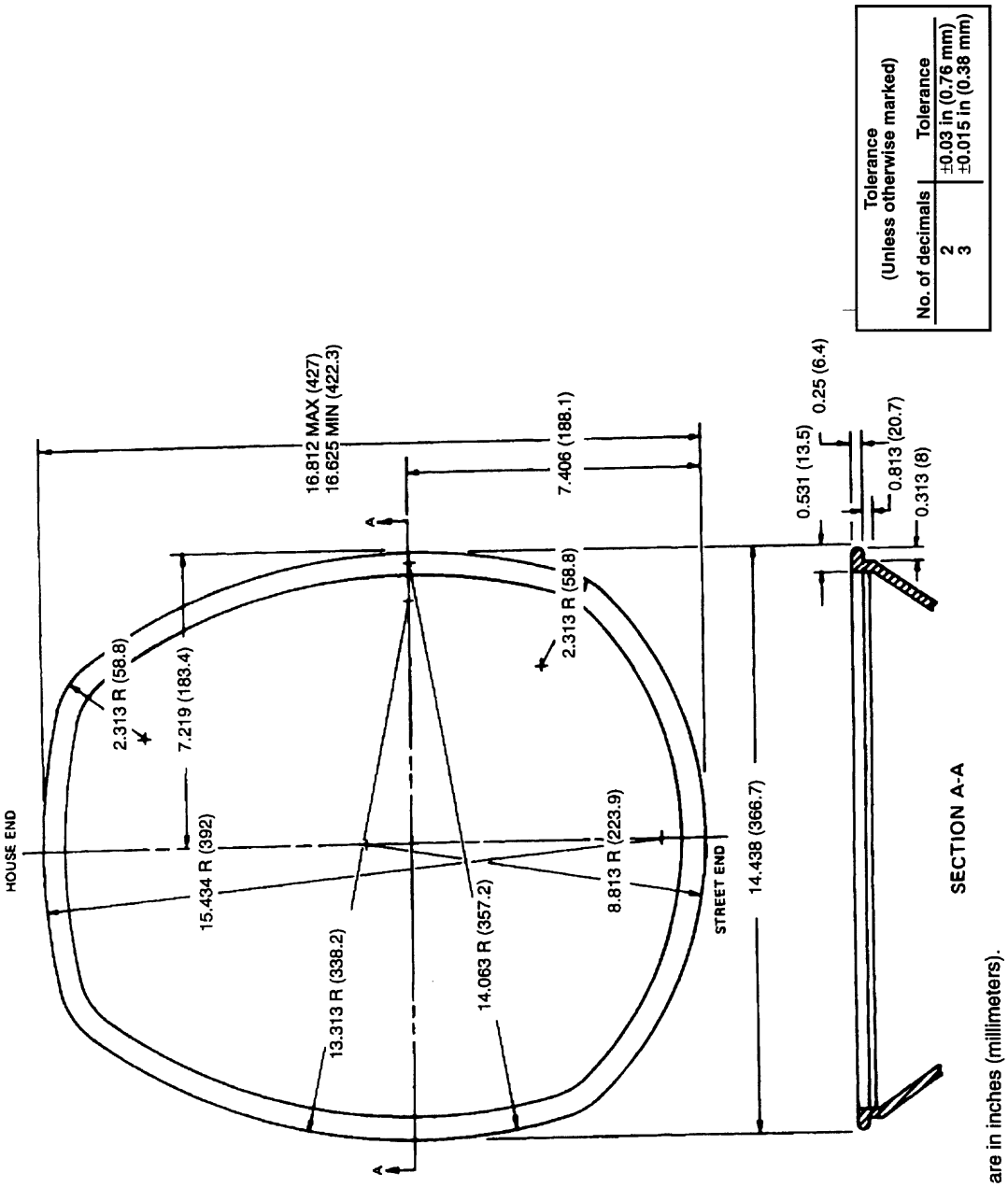


(*b*)

NOTE—All dimensions are in inches (millimeters).

Tolerance (Unless otherwise marked)	
No. of decimals	Tolerance
2	±0.03 in (0.76 mm)
3	±0.015 in (0.38 mm)

Figure 2—Flange dimensions for refractors for medium horizontal-burning HID luminaires

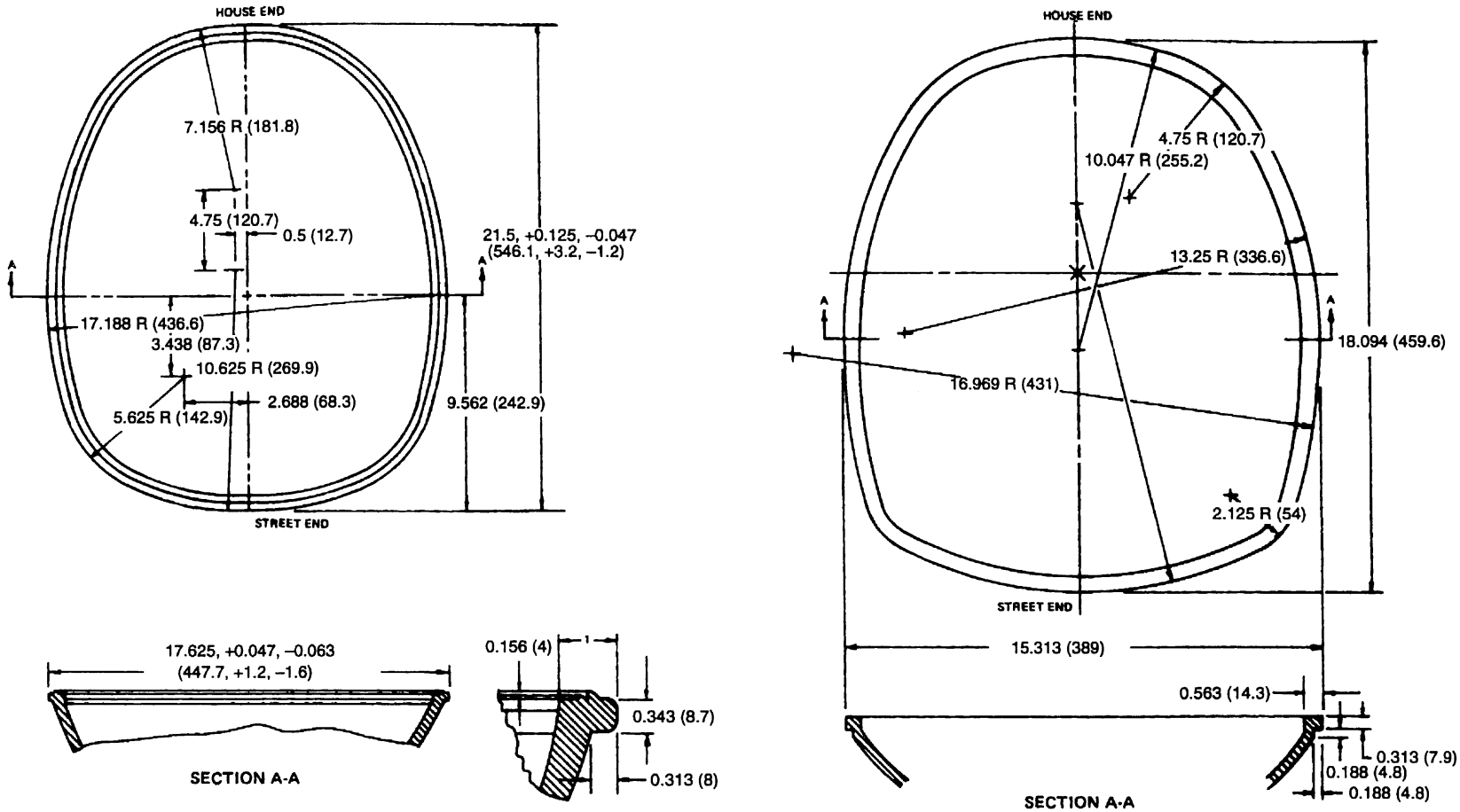


NOTE—All dimensions are in inches (millimeters).

Figure 2—Flange dimensions for refractors for medium horizontal-burning HID luminaires (Continued)

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NOTE—All dimensions are in inches (millimeters).

Tolerance (Unless otherwise marked)	
No. of decimals	Tolerance
2	±0.03 in (0.76 mm)
3	±0.015 in (0.38 mm)

Figure 3—Flange dimensions for refractors for large horizontal-burning HID luminaries