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American National Standard for Lamp Ballasts— High-Intensity Discharge and Low-Pressure Sodium Lamps

National Electrical Manufacturers Association

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Secretariat

National Electrical Manufacturers Association

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1 Scope

This standard describes the essential features and operating characteristics of reference ballasts for high-intensity discharge and low-pressure sodium lamps operating on 60 Hz sinusoidal ballast systems. The items specified are those necessary to ensure accurate and reproducible results when lamps or ballasts are being tested. The specific values of rated input voltage and impedance for each lamp type are listed in the appropriate American National Standards for high-intensity discharge and low-pressure sodium lamps.

1.1 Important Patent Disclaimer

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2 Normative References

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI C78.40-2016 *American National Standard for Electric Lamps—Specifications for Mercury Lamps*

ANSI C78.41-2006 *American National Standard for Electric Lamps—Guidelines for Low-Pressure (LPS) Sodium Lamps*

ANSI C78.42-2009 (R2016), *American National Standard for Electric Lamps—High-Pressure Sodium (HPS) Lamps*

ANSI C78.43-2013 *American National Standard for Electric Lamps—Single-Ended Metal Halide Lamps*

ANSI C78.44-2016, *American National Standard for Electric Lamps—Double-Ended Metal Halide Lamps*

ANSI C82.6-2015, *American National Standard for Lamp Ballasts—Ballasts for High-Intensity Discharge (HID) Lamps—Methods of Measurement*

ANSI C82.9-2016, *American National Standard for Lamp Ballasts—High-Intensity Discharge (HID) and Low-Pressure Sodium (LPS) Lamps—Definitions*

3 Definitions

Definitions of terms that apply specifically to the subject treated in this standard are provided in ANSI C82.9.

4 Types of Reference Ballasts

There are two types of reference ballasts. The fixed-impedance type is adjusted and calibrated at the time of manufacture and is permanently set at a particular value of impedance. It can be used for only the type of lamp for which it was calibrated. The variable-impedance type of reference ballast consists of an adjustable reactor, usually of the moving core type, and a separate variable resistor connected in series.