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American National Standard for Lamp Ballasts— Low-Frequency Square Wave Electronic Ballasts —for Metal Halide Lamps

National Electrical Manufacturers Association

National Electrical Manufacturers Association
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Secretariat:

National Electrical Manufacturers Association

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American National Standards Institute, Inc.

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Foreword (This foreword is not part of American National Standard C82.14-2016)

Suggestions for improvement of this standard are welcome. They should be sent to Secretariat, C82 Committee, NEMA, 1300 North 17th Street, Suite 900, Rosslyn, Virginia 22209.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Lamp Ballasts, C82. Approval of the standard does not necessarily imply that all work group members voted for its approval.

CONTENTS

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1 Scope

This standard provides specifications for and operating characteristics of low-frequency square wave electronic ballasts for metal halide lamps. Electronic ballasts are devices that use semiconductors to control lamp starting and operation. The ballasts operate from multiple supply sources of 600 V maximum at a frequency of 60 Hz. The output frequency of electronic ballasts may be of some frequency other than 60 Hz. This standard covers only lamp operating current frequencies from greater than 60 Hz up to 400 Hz (some exclusionary frequency ranges may apply). An electronic square wave ballast is defined as an electronic ballast whose operating lamp current waveform is essentially a square wave with defined rise/fall times stated in the ANSI C78.43 lamp standards.

2 Normative References

The following standards contain provisions, which through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. 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 C82.77-10-2014 *American National Standard for Lighting Equipment—Harmonic Emission Limits—Related Power Quality Requirements*

ANSI C78.380-2016 *American National Standard for Electric Lamps—High-Intensity Discharge (HID)—Method of Designation*

ANSI C78.389-2004 (R2009) *American National Standard for Electric Lamps—High-Intensity Discharge (HID)—Methods of Measuring Characteristics*

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

ANSI C82.5-2010 *American National Standard for Reference Ballasts—High-Intensity-Discharge and Low-Pressure Sodium 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*

ANSI C84.1-2016 *American National Standard for Electric Power Systems and Equipment—Voltage Ratings (60 Hz)*

ANSI C92.1-198[illegible] *Power Systems—Insulation Coordination*

ANSI C136.[illegible]-2014 *American National Standard for Roadway and Area Lighting Equipment—Luminaire Attachments*