NEMA Standards Publication

ANSI C82.5-2010

American National Standard for Reference 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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American National Standards Institute, Inc.

American National Standard

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Contents

Foreword (This Foreword is not part of American National Standard C82.5-2010.)

In order to obtain satisfactory performance of high-intensity-discharge lamps and their associated ballasts, certain features of their designs must be properly coordinated. Specifications for the operation of either the lamps or the ballasts must naturally be written in terms of measurements made against some common reference.

Because of the inherent instability of gaseous discharge lamps, experience has shown them to be unsuited as a reference. A ballast, however, can be specially designed to provide a reasonably permanent and reproducible reference for measurements. Such ballasts are designated as "reference ballasts." This standard describes those ballast characteristics needed to ensure permanence and reproducibility.

American National Standards are constantly being reviewed and brought up to date. This standard is a revision of American National Standard *Specifications for High-intensity Discharge Lamp Reference Ballasts,* ANSI C82.5-1990.

There are four annexes in this standard. They are informative and are not considered part of this standard.

Suggestions for improvement of this standard will be welcome. They should be sent to the American National Standard Lighting Group, 1300 N. 17th Street, Suite 1752, Rosslyn, VA 22209.

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

This standard updates the 1990 version.

The revisions for ANSI C82.5-2010 are strictly editorial.

Information concerning the approval of this standard is based on the documents listed in the table below:

Amendment/Change	CDV	RV
Revision	C82_m723	C82_m724

Robert Erhardt, Chair, C82
Ernesto Mendoza, Technical Coordinator
Randolph N. Roy, ANSLG Secretariat
Matt Clark, Senior Editor

1. Scope

This standard describes the essential features and operating characteristics of reference ballasts for high-intensity discharge and low-pressure sodium lamps to operate on 60-Hz sinusoidal ballast systems. The items specified are those that have been found necessary to ensure accurate and reproducible results when either lamps or ballasts are being tested. The specific values of rated input voltage and impedance needed for each size of lamp are listed in the appropriate American National Standards for high-intensity-discharge and low pressure sodium lamps, ANSI C78.1300 series (ANSI C78.40-1992, *Specifications for Mercury Lamps,* ANSI C78.41-2006, *Guidelines for Low-Pressure Sodium Lamps,* ANSI C78.42-2007, *High-Pressure Sodium Lamps*, ANSI C78.43-2007, *Single-Ended Metal Halide Lamps*, and ANSI C78.44-2006, *Double-Ended Metal Halide Lamps*).

1.1 Important patent disclaimer

It is possible that some of the elements of this document may be the subject of patent rights. When this document was approved for publication, ANSLG did not know of any patent applications, patents pending, or existing patents. ANSLG shall not be held responsible for identifying any or all such patent rights.

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 C78.25-1991, *Electric Lamps - Methods of Measuring Lamp-Base Temperature Rise*

ANSI C78.40-1992, *Specifications for Mercury Lamps*

ANSI C78.41-2006, *Guidelines for Low-Pressure Sodium Lamps*

ANSI C78.42-2007, *High-Pressure Sodium Lamps*

ANSI C78.43-2007, *Single-Ended Metal Halide Lamps*,

ANSI C78.44-2008, *Double-Ended Metal Halide Lamps*

ANSI/UL 496-2008, *Safety Standard for Edison Base Lampholders*

ANSI/ISA S82.02.01-1999, *Electric and Electronic Test, Measuring, Controlling, and Related Equipment: General Requirements (revision and redesignation of ANSI/ISA S82.01-1994)*