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ANSI C78.42-2009 (R2016)

American National Standard for Electric Lamps—High-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.

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Foreword (This foreword is not part of American National Standard C78.42-2009)

Suggestions for improvement of this standard should be submitted to:

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This standard was processed and approved by the Accredited Standards Committee on Electric Lamps, C78. Work Group approval of the standard does not necessarily imply that all work group members voted for that approval.

CONTENTS

Organization of this Standard

This standard has been arranged in four parts:

Part I covers general requirements and information. It provides normative references and offers brief explanations of the meaning or the application of some of the numerical data given on the individual lamp data sheets in Part IV of this standard. It also provides requirements that are common to all high-pressure sodium (HPS) lamp types.

Part II contains three appendices which provide a) a method for determining trapezoidal diagrams, b) a method for determining dropout voltages, and c) a cross-reference list of the old ANSI C78.1350-series of standards.

Part III contains the maximum outline drawings of each lamp size.

Part IV contains individual lamp data sheets, which provide the specific lamp, ballast, and luminaire requirements of each HPS lamp type.

I. General Requirements and Information

1. Scope

This standard sets forth the physical and electrical requirements for HPS lamps, to ensure performance and interchangeability. The data given also provide the basis for the electrical requirements for ballasts and ignitors, as well as the lamp-related requirements for luminaires. This standard covers only single-ended HPS lamps. Lamps with internal starting devices are not covered. This standard does include "improved color" HPS lamps (those lamps that have a color rendering index ≥ 60 and that operate on the same ballasts as the conventional lamps that they are intended to replace). However, color is not a standardized parameter. Luminous flux is not a standardized parameter either. This standard covers only 60 Hz operation of HPS lamps, on ballasts designed for HPS lamps.

1.1 Important patent disclaimer

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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 C78.30-1997 *Procedure for use in preparation of lamp space drawings*
ANSI C78.379-2006 *Incandescent and high-intensity-discharge reflector lamps—classification of beam patterns*
ANSI C78.380-2007 *Electric lamps—High-intensity discharge lamps—Method of designation*
ANSI C78.389-2004 *Electric lamps—High-intensity discharge lamps—Methods of measuring characteristics*
ANSI C79.1-2002 *Nomenclature for glass bulbs intended for use with electric lamps*
ANSI_ANSLG C81.61-2009 *Electric lamp bases*
ANSI_ANSLG C81.62-2009 *Lampholders for electric lamps*
ANSI_ANSLG C81.63-2009 *Gauges for electric lamp bases and lampholders*
ANSI C81.64-2005 *Guidelines and general information for electric lamp bases and lampholders*