

# American National Standard

Approved: December, 2013

Secretariat: American National Standard Lighting Group

**for Electric Lamps**

## **Double-Capped Fluorescent Lamps- Dimensional and Electrical Characteristics**

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## American National Standard

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Printed in the United States of America

**FOREWORD** (This Foreword is not part of ANSI\_ANSLG C78.81-2010)

Suggestions for improvement of this standard will be welcome. They should be sent to the Secretariat, C78 Committee, American National Standard Lighting Group, 1300 North 17<sup>th</sup> Street, Suite 900, Rosslyn, VA 22209.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Electric lamps, C78, and its Work Group, C78WG02. Approval of the standard does not necessarily imply that all work group members voted for its approval.

**This revision supersedes ANSI\_IEC C78.81-2010. This revision also includes removal of “...IEC...” from the standard number designation. The acronym “IEC” was removed because it is copyright-protected in accordance with the latest edition of IEC Guide 21.**

**This standard features the following revisions:**

1. 17-Watt, 24-Inch T8, Fluorescent Lamp [7881-ANSI-1001-2]
2. 25-Watt 36-Inch T8, Fluorescent Lamp [7881-ANSI-1002-2]
3. 25-Watt 48-Inch T8, Fluorescent Lamp [7881-ANSI-1028-2]
4. 32-Watt 48-Inch T8, Fluorescent Lamp [7881-ANSI-1005-3]
5. 28-Watt, 48-Inch T8, Fluorescent Lamp [7881-ANSI-1029-2]
6. 30-Watt, 48-Inch T8, Fluorescent Lamp [7881-ANSI-1030-2]
7. 40-Watt, 60-Inch T8, Fluorescent Lamp [7881-ANSI-1007-2]
8. 59-Watt, 96-Inch T8, Single Pin Instant Start Fluorescent Lamp [7881-ANSI-1505-2]

**This standard features the following [new] additions:**

1. 15-Watt, 18-Inch T8, Fluorescent Lamp [7881-ANSI-1031-1]
2. 15-Watt, 24-Inch T8, Fluorescent Lamp [7881-ANSI-1032-1]
3. 21-Watt, 36-Inch T8, Fluorescent Lamp [7881-ANSI-1033-1]
4. 54-Watt, 96-Inch T8, Single Pin Instant Start Fluorescent Lamp [7881-ANSI-3015-1]

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

| Amendment / Change | CDV     | RV      |
|--------------------|---------|---------|
| Revision           | 78_4338 | 78_4339 |

**Andy Jackson, Chair, ASC C78**  
**Mark Duffy, Technical Coordinator**  
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DEDICATION:

**Edward Eugene Hammer**  
1931 – 2012

Who helped lay the foundation for American National Standards  
for fluorescent technology. May he rest in peace.

## PART I – General Information and Requirements

### 1 Scope

This standard sets forth the physical and electrical characteristics of the principal types of fluorescent lamps intended for application on conventional line frequency circuits, and electronic high frequency circuits. Some data sheets may specify more than one circuit application. Specifications for both the lamp itself and the interactive features of the lamp and ballast are given. Only double-based lamps of the regular linear shape are included. Single-based lamps including compact, circular, square shaped and U-shaped are found in ANSI C78.901.

Lamps for conventional systems relying on auxiliary support from external ballasts are described. These lamps are those designed for 60-Hz and/or high frequency operation.

Lamp color is not specified herein.

Certain lamp types covered in this standard may be similar to those in IEC 60081. However, additional types are included that are used only in North America and are not specified in the IEC standard.

#### 1.1 Important patent disclaimer

At the time of publication, it is possible that some of the elements of this document may be the subject of patent rights. When this Standard was approved for publication, the American National Standards Lighting Group (ANSLG) and the National Electrical Manufacturers Association (NEMA) 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 General

There are four parts to this standard:

- |                 |                                                                                                                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Part I</b>   | Contains requirements and general information. Detailed descriptions, references, and explanations of the terms used in the lamp data sheets are given in this part. It also defines the principles of dimensioning lamps, both as finished lamps and for maximum outline purposes. |
| <b>Part II</b>  | Contains dimensioning principles and lamp outline drawings.                                                                                                                                                                                                                         |
| <b>Part III</b> | Contains the annexes.                                                                                                                                                                                                                                                               |
| <b>Part IV</b>  | Contains the lamp data sheets for the lamp classes covered in this standard. Sheets adopted from IEC are not included but a source reference is listed.                                                                                                                             |