ANSI/IES LM-10-20

Illuminating ENGINEERING SOCIETY

APPROVED METHOD:
PHOTOMETRIC TESTING OF ROADWAY AND AREA LIGHTING FLUORESCENT LUMINAIRES

AN AMERICAN NATIONAL STANDARD

Approved American National Standard ANSI

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Publication of this document has
been approved by the IES.
Suggestions for revision should
be directed to the IES.

Prepared by
The IES Testing Procedures Committee

Approved by the IES Standards Committee September 9, 2019 as a Transaction of the Illuminating Engineering Society.

Approved February 7, 2020 as an American National Standard.

Published by the Illuminating Engineering Society, 120 Wall Street, New York, New York 10005.

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Printed in the United States of America.

ISBN# 978-0-87995-008-8

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Prepared by the IES Testing Procedures Committee

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Foreword

This approved testing methods guide is an update of LM-10-1996. The guide has been updated to coordinate with *ANSI/IES LM-31-20, Approved Method: Photometric Testing of Roadway Luminaires Using High Intensity Discharge and Incandescent Filament Lamps*, and *ANSI/IES LM-41-20, Approved Method: Photometric Testing of Indoor Fluorescent Luminaires*.[1]

1.0 Introduction and Scope

1.1 Introduction

Exterior illumination provided by luminaires generally falls into the standard Type I, II, III, IV, V and VS classifications. Distribution patterns are typically bisymmetric, quadrilaterally symmetric, or completely symmetric. Illumination provided by luminaires such as outdoor wall packs, bollards, and unique cases of general area lighting may not be designed to fit into the standard classifications and may have completely asymmetric distribution patterns.

The test procedures for luminaires using fluorescent lamps described herein can utilize either absolute or relative photometry methods. In both cases, general conditions of suitability such as test distance should be assessed for adequacy to ensure the validity of the test results.

1.2 Scope

This Lighting Measurement (LM) guide defines adequate and uniform methods for measuring and reporting the photometric characteristics of roadway and area lighting fluorescent luminaires. It describes characteristics of these luminaires and some components, as well as the requirements for the thermal environment and proper control of the electrical and mechanical systems involved. General test conditions and the testing procedure best suited for achieving accurate and consistent photometric results are defined.

2.0 Normative References

2.1 ANSI/IES LM-9-20

Illuminating Engineering Society. Approved Method: Electrical and Photometric Measurements of Fluorescent Lamps. New York: IES; 2020.

2.2 ANSI/IES LM-28-20

Illuminating Engineering Society. Approved Method: Guide for the Selection, Care and Use of Electrical Instruments in the Photometric Laboratory. New York: IES; 2020.

2.3 ANSI/IES LM-54-20

Illuminating Engineering Society. Approved Method: Guide to Lamp Seasoning. New York: IES; 2020.

2.4 ANSI/IES LM 66-20

Illuminating Engineering Society. Approved Method: Electrical and Photometric Measurements of Single Based Fluorescent Lamps. New York: The Society; 2020.

2.5 ANSI/IES LS-1-20

Illuminating Engineering Society. Nomenclature and Definitions for Illuminating Engineering. New York: IES; 2020. Online: https://www.ies.org/standards/definitions/. (Accessed 2019 Sep 18).

3.0 Nomenclature and Definitions

The terms used in this document follow the definitions given in **Normative Reference 2.5**. Additional terms are defined below.

3.1 area lighting

In this document, *area lighting* refers to exterior illumination provided by luminaires (such as outdoor wall packs, bollards, and general area lighting luminaires) that may not be designed to fit into the standard Type I, II, III, IV, V, or VS classifications.[2]

3.2 pre-burning

Pre-burning is defined as operating a previously seasoned lamp for a sufficient period of time such that it reaches thermal equilibrium, the mercury locates at