ANSI/IES LM-35-20

Illuminating ENGINEERING SOCIETY

APPROVED METHOD:
PHOTOMETRIC TESTING OF FLOODLIGHTS USING HIGH INTENSITY DISCHARGE OR INCANDESCENT FILAMENT LAMPS

AN AMERICAN NATIONAL STANDARD

Approved American National Standard ANSI

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Foreword

This approved method is a revision of and replacement for *LM-35-02, IES Approved Method for Photometric Testing of Floodlights Using High Intensity Discharge or Incandescent Filament Lamps*. This version has been revised primarily to update the photometric, electrical, and environmental requirements in order to make them more consistent with current laboratory practice. The floodlight is aimed horizontally on either a C-type or B-type goniometer. The report (and *.IES photometric data file) continues to be presented in the traditional B-type format.

1.0 Introduction and Scope

1.1 Introduction

The objective of this Approved Method is to promote uniformity in measuring and reporting of the optical performance of floodlights and similar luminaires having a field angle equal to or greater than 10 degrees in any cross section.

1.2 Scope

This Approved Method applies to luminaires having a total field angle greater than or equal to 10 degrees. The method applies to luminaires that utilize a variety of light sources, including tungsten filament, tungsten-halogen, and high intensity discharge (HID) lamps. It does not apply to luminaires using low pressure sodium (LPS), fluorescent, or solid state lighting (SSL) sources. (For luminaires where the total field spread is less than 10 degrees, refer to ANSI/IES LM-11-20.[1] Photometric testing of reflector-type lamps is described in ANSI/IES LM-20-20.[2])

2.0 Normative References

2.1 ANSI/IES LS-1-20

Lighting Science: Nomenclature and Definitions for Illuminating Engineering. New York: Illuminating Engineering Society; 2020.

2.2 ANSI/IES LM-45-20

Approved Method: Electrical and Photometric Measurement of General Service Incandescent Filament Lamps. New York: Illuminating Engineering Society; 2020.

2.3 ANSI/IES LM-51-20

Approved Method: Electrical and Photometric Measurement of High Intensity Discharge Lamps. New York: Illuminating Engineering Society; 2020.

2.4 ANSI/IES LM-54-20

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

3.0 Nomenclature and Definitions

The terms used in this document follow the definitions given in **Normative Reference 2.1**. Additional terms are defined in the subsections below.

3.1 units

The units of electrical measurement used in this Approved Method are the volt, the ampere, and the watt. The units of photometric measurement are the lumen and the candela. Color is specified in terms of the CIE recommended systems.

3.2 auxiliary equipment

The ballast and the igniter needed for the proper operation of discharge lamps.

4.0 Physical and Environmental Test Conditions

4.1 General

Changes in ambient temperature or air movement have little influence on the electrical and photometric characteristics of incandescent filament and HID lamps. In the case of HID lamps, the discharge tube is encapsulated inside an outer bulb, which provides a level of thermal and airflow isolation. Thus, the luminous