



APPROVED METHOD:

**PHOTOMETRIC TESTING OF FLOODLIGHTS
USING HIGH INTENSITY DISCHARGE OR
INCANDESCENT FILAMENT LAMPS**

AN AMERICAN NATIONAL STANDARD

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ANSI/IES LM-35-20

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Publication of this document
has been approved by the IES.
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be directed to the IES.

**Prepared by
The IES Testing Procedures Committee**



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CONTENTS

Foreword	1
1.0 Introduction and Scope	1
1.1 Introduction.....	1
1.2 Scope	1
2.0 Normative References	1
2.1 ANSI/IES LS-1-20.....	1
2.2 ANSI/IES LM-45-20	1
2.3 ANSI/IES LM-51-20.....	1
2.4 ANSI/IES LM-54-20	1
3.0 Nomenclature and Definitions	1
3.1 units	1
3.2 auxiliary equipment.....	1
4.0 Physical and Environmental Test Conditions	1
4.1 General	1
4.2 Temperature	2
4.3 Airflow	2
4.4 Stray Light	2
4.5 Vibration	2
5.0 Electrical Test Conditions	2
5.1 Power Supply Requirements	2
5.1.1 Primary Source Voltage	2
5.1.2 Power Supply Wave Shape	2
5.1.3 Power Supply Regulation.....	2
5.2 Reference Circuit Requirements.....	2
5.3 Measurement Instrument Requirements	2
5.3.1 Electrical Instruments	2

6.0	Testing Procedure Requirements	3
6.1	General Procedure	3
6.1.1	Goniophotometer	3
6.1.1.1	General	3
6.1.1.2	Coordinate Systems	3
6.1.1.3	Photometric System	3
6.1.1.4	Repeatability of Light Readings	4
6.2	Test Distance	4
6.3	Selection and Preparation of the Equipment for Test	4
6.3.1	Selection	4
6.3.2	Mounting	5
6.3.3	Lamp Orientation	5
6.3.3.1	Discharge Lamps	5
6.3.3.2	Incandescent Filament Lamps	6
6.3.4	Focusing	6
6.3.5	Cleaning	7
6.4	Test Lamps	7
6.4.1	General	7
6.4.2	Lamp Seasoning	7
6.4.3	Test Lamp Operation	7
6.4.3.1	General	7
6.4.3.2	Incandescent Filament Lamps	7
6.4.3.3	HID lamps	7
6.5	Test Methodologies	8
6.5.1	General	8
6.5.2	Bare Lamp Measurement	8
6.5.3	Lamp Photometric Calibration Process	8
6.5.3.1	Relative Photometry Method	8
6.5.3.1.1	Vertically Mounted Lamps	9
6.5.3.1.2	Horizontally Mounted Lamps	9
6.5.3.2	Absolute Photometry Method	9
6.5.3.2.1	Method Using Luminous Intensity Standard	9
6.5.3.2.2	Method Using Luminous Flux Standard	10
6.5.3.2.3	Method Using Calibrated Photometer	11
6.5.4	Luminaire Photometry	11
6.5.4.1	Mounting	11
6.5.4.2	Angles for Photometric Measurements	12
6.5.4.2.1	General	12
6.5.4.2.2	Standard Set of Lateral Data Angles	12
6.5.4.2.3	Standard Set of Vertical Data Angles	12
6.5.4.3	Photometric Data Processing	12
6.5.4.3.1	Stray Light Cancellation	12
6.5.4.3.2	Symmetry and Averaging of Data	12
6.5.4.3.3	Zonal Lumens and Total Lumens	12
6.5.4.3.4	Field Angle	12
6.5.4.3.5	Field Lumens	12

6.5.4.3.6	Beam Angle	13
6.5.4.3.7	Beam Lumens	13
6.5.4.3.8	Measuring and Recording Spill Light.....	13
6.5.4.3.9	Classification of Floodlight Beam Types.....	13
6.5.4.3.10	Isocandela Plot	13
7.0	Test Report	13
7.1	General	13
7.2	Test Report Contents.....	13
8.0	Additional Reading.....	14
Annex A	– Zonal Constants.....	14
Annex B	– Photometric Report and Test Results	17
Annex C	– Data File Formatted for Electronic Media.....	21
Informative References	24

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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-1-20.¹ 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