

The IES Lighting Library Standards Collection

Discover IES Standards through our cloud-based platform

Our standards library is unique in the lighting industry because of our attention to quality, topic breadth, and diversity of expertise. A full Lighting Library™ subscription includes access to all lighting standards in one place and access to illuminance recommendations from IES in our Illuminance Selector.



**Find illuminance values,
quickly**



Bookmark your favorites



Automatically updated



Fast cross-referencing



Links to reference materials



Always available online



Work more efficiently

HOW TO SUBSCRIBE

Subscriptions to the Lighting Library can be purchased by an individual, or as a Sustaining Member benefit.

Individual Lighting Library Subscription:

Lighting Library Subscription: IES Member rate: \$249 | Non-member rate: \$549. To purchase a Lighting Library subscription visit the [My IES portal](#).

SUBSCRIBE NOW

**Individual subscriptions to standalone collections are also available.*

Sustaining Member Access:

Provide Lighting Library access to multiple users within your organization, on a simultaneous basis, with an IES Sustaining Membership. Sustaining Members are able to collaborate within the Lighting Library, and share access to notes, attachments,

reports, and projects across the team. IES Sustaining Memberships feature several other educational and promotional benefits. Discover all of the benefits, and determine which level of membership best fits your organization.

SUSTAINING MEMBERSHIP

If you have any questions or need additional information, please contact lightinglibrary@ies.org.

Frequently Asked Questions

Do you have more questions about the Lighting Library? We have collected answers to common questions about the Lighting Library in our FAQ.

LEARN MORE

[Download Lighting Library and The Illuminance Selector Getting Started Guide \[PDF 788 KB\]](#)

COLLECTIONS: DESCRIPTION AND CONTENTS



Lighting Applications Standards Collection

How do I design a lighting system for a (fill in the blank)? This collection has detailed design criteria for commercial, residential, industrial, museum, healthcare and many other applications. Each standard also includes detailed recommended illuminance criteria, laid out in clear and concise tables, all designed to guide you to design a quality lighting installation.

ANSI/IES OL-IM-03

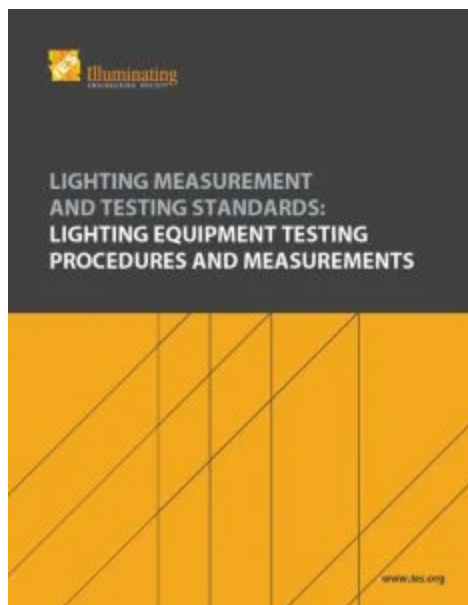
+ Standards Contained in this Collection

Document	Title
<u>ANSI/IES RP-1-24</u>	Recommended Practice: Lighting Offices Spaces
<u>ANSI/IES RP-2-20</u>	Recommended Practice: Lighting Retail Spaces
<u>ANSI/IES RP-3-20</u>	Recommended Practice: Lighting Educational Facilities
<u>ANSI/IES RP-4-20</u>	Recommended Practice: Lighting Library Spaces
<u>ANSI/IES RP-6-24</u>	Recommended Practice: Lighting Sports and Recreational Areas

<u>ANSI/IES RP-7-21+E1</u>	Recommended Practice: Lighting Industrial Facilities
<u>ANSI/IES RP-8-25</u>	Recommended Practice: Lighting Roadway and Parking Facilities
<u>ANSI/IES RP-9-23</u>	Recommended Practice: Lighting Hospitality Spaces
<u>ANSI/IES RP-10-20</u>	Recommended Practice: Lighting Common Applications
<u>ANSI/IES/ALA RP-11-20</u>	Lighting for Interior and Exterior Residential Environments
<u>ANSI/IES RP-28-25</u>	Recommended Practice: Lighting and the Visual Environment for Older Adults and the Visually Impaired
<u>ANSI/IES RP-29-25</u>	Recommended Practice: Lighting Hospital and Healthcare Facilities
<u>ANSI/IES RP-30-25</u>	Recommended Practice: Lighting Museums
<u>ANSI/IES/NAL MCO RP-36-24</u>	Recommended Practice: Lighting Maintenance

<u>ANSI/IES RP-37-25</u>	Recommended Practice: Lighting Airport Outdoor Environments
<u>ANSI/IES/AVIX A RP-38-17 (R2022)</u>	Lighting Performance for Small to Medium Sized Videoconference Rooms
<u>ANSI/IES RP-39-19</u>	Recommended Practice: Off-Roadway Sign Luminance
<u>ANSI/IES RP-40-19</u>	Recommended Practice: Lighting Port Terminals
<u>ANSI/IES RP-41-20</u>	Recommended Practice: Lighting Theaters and Worship Spaces
<u>ANSI/IES RP-43-25</u>	Recommended Practice: Lighting Design for Outdoor Pedestrian Applications
<u>ANSI/IES RP-44-21</u>	Recommended Practice: Ultraviolet Germicidal Irradiation (UVGI)
<u>ANSI/IES RP-45-21</u>	Recommended Practice: Lighting Horticultural Facilities

<u>ANSI/IES TM-24-20</u>	Technical Memorandum: An Optional Method for Adjusting the Recommended Illuminance for Visually Demanding Tasks within IES Illuminance Categories P through Y Based on Light Source Spectrum
<u>ANSI/IES RP-46-25</u>	Recommended Practice: Supporting the Physiological and Behavioral Effects of Lighting in Interior Daytime Environments
<u>ANSI/IES RP-47-23</u>	Recommended Practice: Landscape Lighting



Lighting Measurements and Testing Standards Collection

This collection establishes the testing and measurement standards for light sources, with the goal of providing a reliable and consistent system for calculating and measuring designed and installed illumination systems. Photometric, optical and electrical, color and color maintenance, life testing, and thermal testing are all included in this Collection.

ANSI/IES OL-IM-04

+ Standards Contained in this Collection

Document	Title
<u>ANSI/IES LM-9-20(R23)</u>	Approved Method: Electrical and Photometric Measurement of Fluorescent Lamps

<u>ANSI/IES LM-10-20(R23)</u>	Approved Method: Photometric Testing of Roadway and Area Lighting Fluorescent Luminaires
<u>ANSI/IES LM-11-20(R23)</u>	Approved Method: Photometric Testing of Searchlights Using Incandescent or HID Sources
<u>ANSI/IES LM-20-20</u>	Photometry of Reflector Type Lamps
<u>ANSI/IES LM-45-20</u>	Approved Method: Electrical and Photometric Measurements of General Service Incandescent Filament Lamps
<u>ANSI/IES LM-51-20(R23)</u>	Approved Method: Electrical and Photometric Measurement of High Intensity Discharge Lamps
<u>ANSI/IES LM-66-20(R23)</u>	Approved Method: Electrical and Photometric Measurements of Single-Based Fluorescent Lamp
<u>ANSI/IES LM-83-23</u>	Approved Method: IES Spatial Daylight Autonomy (sDA) and Annual Sunlight Exposure (ASE)
<u>ANSI/IES LM-85-23</u>	Approved Method: Optical and Electrical Measurements of LED Sources
<u>ANSI/IES LM-86-20(R23)</u>	Approved Method: Measuring Luminous Flux and Color Maintenance of Remote Phosphor Components

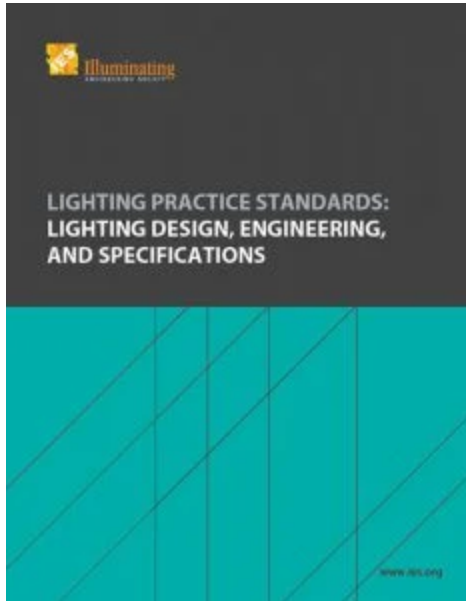
<u>ANSI/IES LM-88-18(R23)</u>	Approved Method Optical and Electrical Measurements of AC-LED Packages and Arrays or Modules
<u>ANSI/IES TM-31-20</u>	Technical Memorandum: Measurement Uncertainty for Lighting Equipment Calibration Using Integrating Spheres
<u>ANSI/IES LM-92-22</u>	Approved Method: Optical and Electrical Measurement of Ultraviolet LEDs
<u>ANSI/IES LM-93-22</u>	Optical and Electrical Measurements of Far UV-C Excimer Sources
<u>ANSI/IES LM-98-24</u>	Approved Method: Measuring In-Situ Temperature of Solid-State Lighting Components in Lamps and Luminaires
<u>ANSI/IES LM-10-20</u>	Approved Method: Photometric Testing of Roadway and Area Lighting Fluorescent Luminaires
<u>ANSI/IES LM-31-20(R23)</u>	Approved Method: Photometric Testing of Roadway and Area Lighting Luminaires Using Incandescent Filament or High Intensity Discharge Lamps
<u>ANSI/IES LM-35-20(R23)</u>	Approved Method: Photometric Testing of Floodlights Using High Intensity Discharge or Incandescent Filament Lamps
<u>ANSI/IES LM-37-20</u>	Approved Method: Guide for Determination of Average Luminance (Calculated) for Indoor Luminaires

<u>ANSI/IES LM-41-20</u>	Approved Method: Photometric Testing of Indoor Fluorescent Luminaires
<u>ANSI/IES LM-46-20(R23)</u>	Approved Method: Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps
<u>ANSI/IES LM-72-20</u>	Approved Method: Directional Positioning of Photometric Data
<u>ANSI/IES LM-73-18(R23)</u>	Photometric Testing of Entertainment Lighting Luminaires Using Incandescent Filament Lamps or High Intensity Discharge Lamps
<u>ANSI/IES LM-75-19</u>	Approved Method: Goniophotometer Types and Photometric Coordinates
<u>ANSI/IES LM-77-20</u>	Approved Method: Intensity Distribution Measurement of Luminaires and Lamps Using Digital Screen Imaging Photometry
<u>ANSI/IES LM-81-20</u>	Approved Method: Photometric Testing of Skylights and Tubular Daylighting Devices Under Hemispheric Sky Conditions
<u>ANSI/IES TM-15-20</u>	Approved Method: Photometric Testing of Skylights and Tubular Daylighting Devices under Hemispherical Sky Conditions
<u>ANSI/IES LM-91-22</u>	Approved Method: Application Distance Radiometry

<u>ANSI/IES LM-28-20</u>	Approved Method: IES Guide for the Selection, Care, and Use of Electrical Instruments in the Photometric Laboratory
<u>ANSI/IES LM-48-20</u>	Approved Method: Testing the Calibration of Locking Type Photoelectric Control Devices Used in Outdoor Applications
<u>ANSI/IES LM-54-20</u>	Approved Method: IES Guide to Lamp Seasoning
<u>ANSI/IES LM-58-20</u>	Approved Method: Spectroradiometric Measurement Methods for Light Source
<u>ANSI/IES LM-61-20(R23)</u>	Approved Method: Identifying Operating Factors for Installed High Intensity Discharge Luminaires
<u>ANSI/IES LM-62-20(R23)</u>	Approved Method: Laboratory or Field Thermal Measurements of Fluorescent Lamps and Ballasts in Luminaires
<u>ANSI/IES LM-78-20</u>	Approved Method: Total Luminous Flux Measurement of Lamps using an Integrating Sphere Photometer
<u>ANSI/IES LM-79-19</u>	Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products
<u>ANSI/IES LM-82-20</u>	Approved Method: Characterization of Optical and Electrical Properties of Solid-State Lighting Products as a Function of Temperature

<u>ANSI/IES LM-90-20</u>	Approved Method: Measuring Luminous Flux Waveforms for Use in Temporal Light Artifact (TLA) Calculations
<u>ANSI/IES TM-38-21</u>	Photometric and Electrical Measurements of Tunable-White Solid-State Lighting Products
<u>ANSI/IES LM-40-20(R23)</u>	Approved Method: Life Testing of Fluorescent Lamps
<u>ANSI/IES LM-47-20(R23)</u>	Approved Method: Life Testing of High Intensity Discharge (HID) Lamps
<u>ANSI/IES LM-49-20(R23)</u>	Approved Method: Life Testing of Incandescent Filament Lamps
<u>ANSI/IES LM-61-20(R23)</u>	Approved Method: Identifying Operating Factors for Installed High Intensity Discharge Luminaires
<u>ANSI/IES LM-63-19</u>	IES Standard File Format for the Electronic Transfer of Photometric Data and Related Information
<u>ANSI/IES LM-65-20(R23)</u>	Approved Method: Life Testing of Single-Based Fluorescent Lamps
<u>ANSI/IES LM-80-21</u>	Approved Method: Measuring Maintenance of Light Output Characteristics of Solid State Light Sources

<u>ANSI/IES LM-84-20</u>	Approved Method: Measuring Optical Radiation Maintenance of LED Lamps, Light Engines, and Luminaires
<u>ANSI/IES LM-86-20</u>	Approved Method: Measuring Luminous Flux and Color Maintenance of Remote Phosphor Components
<u>ANSI/IES TM-21-21</u>	Technical Memorandum: Projecting Long-Term Lumen, Photon, and Radiant Flux Maintenance Of LED Light Sources
<u>ANSI/IES TM-26-20(R23)</u>	Technical Memorandum: Projecting Catastrophic Failure Rate of LED Packages
<u>ANSI/IES TM-28-20</u>	Technical Memorandum: Projecting Long-Term Luminous Flux Maintenance of LED Lamps and Luminaires
<u>ANSI/IES TM-35-19</u>	Technical Memorandum: Projecting Long-Term Chromaticity Coordinate Shift of LED Packages, Arrays, and Modules



Lighting Practice Standards Collection

The practice of lighting design and illuminating engineering are detailed in this collection, providing basic design principles for indoor and outdoor environments, descriptions light sources, luminaires, and control systems, lighting upgrades, lighting system commissioning, lighting economics, lighting maintenance and other aspects involved with the design, installation, and construction for lighting system.

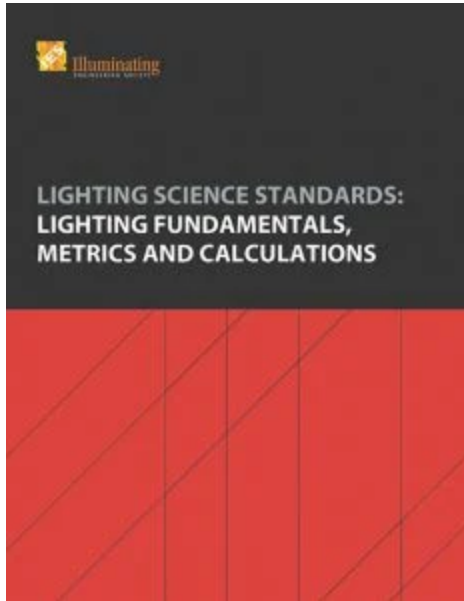
ANSI/IES OL-1M-02

+ Standards Contained in this Collection

Document	Title
<u>ANSI/IES LP-1-20</u>	Lighting Practice: Designing Quality Lighting for People and Buildings
<u>ANSI/IES LP-2-20</u>	Lighting Practice: Designing Quality Lighting for People in Outdoor Environments
<u>ANSI/IES LP-3-20</u>	Lighting Practice: Designing and Specifying Daylighting for Buildings
<u>ANSI/IES LP-4-20</u>	Lighting Practice: Electric Light Sources – Properties, Selection, and Specification

<u>ANSI/IES LP-6-25</u>	Lighting Practice: Lighting Control Systems – Properties, Selection, and Specification
<u>ANSI/IES LP-7-20</u>	The Lighting Design and Construction Process
<u>ANSI/IES LP-8-20</u>	Lighting Practice: The Commissioning Process Applied to Lighting and Control Systems
<u>ANSI/IES LP-9-25</u>	Lighting Practice: Upgrading Lighting Systems in Nonresidential Spaces
<u>ANSI/IES LP-10-20</u>	Lighting Practice: Sustainable Lighting – An Introduction to the Environmental Impacts of Lighting
<u>ANSI/IES LP-11-20</u>	Lighting Practice: Environmental Considerations for Outdoor Lighting
<u>ANSI/IES LP-12-21</u>	Lighting Practice: IoT Connected Lighting
<u>ANSI/IES LP-13-21</u>	Lighting Practice: Introduction to Resilient Lighting Systems
<u>ANSI/IES LP-16-22</u>	Lighting Practice: Control Narrative

<u>ANSI/IES LS-8-25</u>	Lighting Practice: A Comprehensive Guide to Specifying Color Rendition Concepts, Criteria, and Implementation
<u>ANSI/IES RP-31-20</u>	Recommended Practice: Economic Analysis of Lighting
<u>ANSI/IES/NAL MCO RP-36-20</u>	Recommended Practice: Lighting Maintenance
<u>ANSI/IES RP-42-20</u>	Recommended Practice: Dimming and Control Method Designations
<u>ANSI/IES TM-25-20</u>	Technical Memorandum: Ray File Format for the Description of the Emission Properties of Light Sources
<u>ANSI/IES TM-27-20</u>	Technical Memorandum: IES Standard Format for the Electronic Transfer of Spectral Data
<u>ANSI/IES TM-32-19</u>	Lighting Practice: Lighting Parameters for Building Information Modeling
<u>ANSI/IES TM-33-23</u>	Technical Memorandum: Standard Format for the Electronic Transfer of Luminaire Optical Data
<u>IES TM-34-19</u>	Calculation Procedures and Specification Criteria for Lighting Calculations



Lighting Science Standards Collection

Every engineering discipline requires a solid scientific foundation. This collection of standards includes the language and physics of lighting, vision and visual performance, color science, color appearance and rendition, photometry, non-visual effects of lighting, photobiology, lighting calculations and more

ANSI/IES OL-IM-01

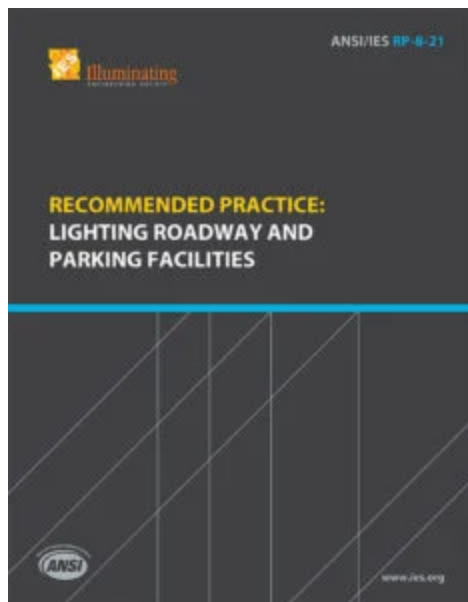
✂️ Free for IES members!

+ Standards Contained in this Collection

Document	Title
ANSI/IES LS-1-22	Lighting Science: Nomenclature and Definitions for Illuminating Engineering
ANSI/IES LS-2-20(R23)	Lighting Science: Concepts and Language of Lighting
ANSI/IES LS-3-20(R23)	Lighting Science: Physics and Optics of Radiant Power

<u>ANSI/IES LS-4-20(R23)</u>	Lighting Science: Measurement of Light – The Science of Photometry
<u>ANSI/IES LS-5-21</u>	Lighting Science: Color
<u>ANSI/IES LS-6-20(R25)</u>	Lighting Science: Calculation of Light and Its Effects
<u>ANSI/IES LS-7-20</u>	Lighting Science: Vision – Eye and Brain
<u>ANSI/IES LS-8-25</u>	Lighting Science: Vision – Perception and Performance
<u>ANSI/IES RP-27-20</u>	Recommended Practice: Photobiological Safety for Lighting Systems
<u>ANSI/IES RP-27.1-22</u>	Risk Group Classification and Minimization of Photobiological Hazards From Ultraviolet Lamps and Lamp Systems
<u>IES TM-18-18</u>	Light and Human Health – An Overview of the Impact of Optical Radiation on Visual, Circadian, Neuroendocrine, and Neurobehavioral Responses
<u>ANSI/IES TM-30-24</u>	Technical Memorandum: IES Method for Evaluating Light Source Color Rendition

<u>ANSI/IES TM-37-21</u>	Technical Memorandum: Description, Measurement, and Estimation of Sky Glow
<u>ANSI/IES TM-39-25</u>	Technical Memorandum: Quantification and Specification of Visual Responses to Temporal Light Modulation (a.k.a. Flicker)
<u>ANSI/IES TM-40-24</u>	Technical Memorandum: IES Method for Determining Correlated Color Temperature (CCT) and Distance from the Planckian Locus of Light Sources
<u>ANSI/IES TM-41-24</u>	Technical Memorandum: Standard Format for the Electronic Data Transfer of Light Output Maintenance Characteristics of Solid-State Light Sources



Lighting Roadway and Parking Facilities Standards Collection

Roadway Lighting design and engineering is unique due to the visual needs at night and the vehicle-to-vehicle and vehicle-to-pedestrian interaction. This standard covers all aspects of roadway lighting including streets and roadways, parking lots, intersections, toll plazas, tunnels, and work zones in addition to the environmental issues of light trespass and sky glow.

ANSI/IES OL-1M-05

+ Standards Contained in this Collection

Document	Title



Illuminating Engineering Society
85 Broad Street, Floor 17, New York, NY 10004
+1 212-248-5000

IMPROVING LIFE THROUGH QUALITY OF LIGHT™



MEMBERSHIP

[Join](#)

[Renew](#)

[Committees](#)

[Section Directory](#)

[Diversity, Equity, Inclusion
and Respect](#)

QUICK LINKS

[Advertise](#)

[Newsroom](#)

[Employment at IES](#)

[IES Ethics Reporting](#)

[Support](#)

[Contact Us](#)

POLICIES

[Terms of Use](#)

[Privacy Policy](#)

[Cookie Policy](#)

[Refund Policy](#)

[Code of Conduct](#)

© 1906-2026 Illuminating Engineering Society

IES, The Lighting Authority, LD+A, Leukos, Street and Area Lighting Conference (SALC), Light for Life, and Lighting Library are registered trademarks of the Illuminating Engineering Society.