Illuminating ENGINEERING SOCIETY

IES LM-54-12

IES Guide to **Lamp Seasoning**

IES Guide to Lamp Seasoning

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

Prepared by:
The Subcommittee on Photometry of Light Sources
of the IES Testing Procedures Committee

Approved by the IES Board of Directors, October 22, 2012, as a Transaction of the Illuminating Engineering Society of North America

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

IES Standards and Guides are developed through committee consensus and produced by the IES Office in New York. Careful attention is given to style and accuracy. If any errors are noted in this document, please forward them to Rita Harrold, Director of Technology, at the above address for verification and correction. The IES welcomes and urges feedback and comments

ISBN # 978-0-87995-271-6

Printed in the United States of America.

Prepared by the Subcommittee on Photometry of Light Sources of the IES Testing Procedures Committee

Subcommittee on Photometry of Light Sources

Mark Sapcoe, *Chair*

L.M. Ayers
R. Bergman
R. Daubach
K. Dowling
D.J. Ellis
M. Huang
D. Karambelas
M. Kotrebai
K. Kruger
J. Marella
G. McKee
C. Miller
R.M. Low*
D.C. Mertz**

IES Testing Procedures Committee
Michael Grather, *Chair*

J.B. Arens
C. Andersen
L.M. Ayers
W.E. Beakes
R. Berger
R. Bergin
R. Bergman
R. Blanchette
R. Dahl
R. Daubach
K. Dowling
D.J. Ellis
T. Hernandez
R.E. Horan*
M. Huang
D.E. Husby**
M. Kalkas
D. Karembelas
M. Kotrebai
J. Lawton*
R. Levin*
I. Lewin*
R.M. Low*
L. Leetzow
K. Lerbs
G. McKee
S.W. McKnight*
C. Miller
D.C. Mertz**
B. Mosher*
W. Newland
Y. Ohno*
C. Ooyen*
D. Parkansky*
M. Sapcoe
G. Sternberg
D. Smith*
R.C. Speck**
L. Stafford*
N. Stuifer*
T.G. Thrasis
J. [illegible] Zheng*

*Advisory Member
**Honorary Member

Contents

FOREWORD

This Guide revises and replaces LM-54-99, IESNA Guide to Lamp Seasoning. With this revision, information specific to asymmetric cathode, liquid mercury (Hg) dosed fluorescent T5 lamps (**Section 4.2.2**) has been added to the discharge lamp section.

INTRODUCTION

This Guide is intended to provide clear recommendations and requirements on procedures for seasoning of lamps to attain a state of sufficient stability for reproducible measurement of initial photometric, colorimetric, and/or electrical characteristics.

1. SCOPE

This Guide applies to normal and accelerated seasoning of incandescent filament, cathode fluorescent lamps, and high intensity discharge (HID) lamps. Additional information on these lamp types may be found in the IES Lighting Handbook,10th Edition, 2011 and in other references 1–6 listed at the end of this document. Manufacturers' recommendations for seasoning should be followed for lamps of types other than listed above. Lamps intended for use as reference standards may require special or additional seasoning and should be selected from a pool of seasoned lamps.

2. NORMATIVE REFERENCES

IEC 60081 A2 Ed.5.1 2002-05, Double-capped Fluorescent Lamps Performance Specifications.

NEMA ANSI C82.3:2002 Lamp ballasts - reference ballasts for fluorescent lamps, American National Standards Institute, New York.

NEMA ANSI C82.1:2004 For lamp ballast - line frequency fluorescent lamp ballast, American National Standards Institute, New York.

NEMA ANSI C82.4:2002 Ballasts for high - intensity - discharge and low pressure sodium lamps (multiple-supply type) (includes supplement ANSI C82.4a1988), New York: American National Standards Institute.

ANSI/ANSLG C82.9-2010, American National Standard for Lamp Ballasts - High-Intensity Discharge and Low-Pressure Sodium Lamps - Definitions, New York: American National Standards Institute.

NEMA ANSI C78.375:1997 Fluorescent lamps - guide for electrical measurements, New York: American National Standards Institute.

3. DEFINITIONS

There are no other definitions for this document than those contained in ANSI/IES RP-16-2010 or ANSI document C82.13.

4. PHYSICAL/ENVIRONMENTAL TEST CONDITIONS

4.1 General and Cautions

It is good laboratory practice that the storage and testing of lamps should be undertaken in a relatively clean environment.

Some lamps covered in this Guide operate at high temperature, emit hazardous levels of optical radiation when operated, or when not operated properly, when not suitably enclosed, and/or can fail violently. Accelerated seasoning increases these hazards. Lamp manufacturers' recommendations for safety, where available, shall be followed to insure the safety of test personnel.

4.2 Vibration

Lamps shall not be subjected to excessive vibration or shock during seasoning.

4.3 Temperature

The ambient temperature is not a critical consideration for the seasoning of incandescent lamps. Bulb wall temperature and seal temperature for tungsten halogen lamps should remain within the specifications of the manufacturer.

Ambient temperature for discharge lamps shall be controlled within the limits set by the lamp manufacturer and ballast manufacturer. These are usually between 15°C (60°F) and 35°C (95°F). Ballast case temperature at the test point specified by the manufacturer shall