TENTH EDITION HANDBOOK ERRATA

If you, as a user of the *IES Lighting Handbook, 10th Edition*, believe you have located an error not covered by the following revisions, you should e-mail your information to Pat McGillicuddy at: pmcgillicuddy@ies.org or send a letter to: Pat McGillicuddy, Manager of Technology, IES, 120 Wall Street. 17th Floor, New York, NY 10005. Additions will be posted to this list as they become available. This errata list was last updated on **November 23, 2015**. Color headings indicate the latest postings.

Please confine your comments to specific typographical errors or misstatements of fact in the *Handbook* text and/or graphics. Do not attempt to revise or update the *Handbook* itself.

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**Chapter 1, page 1.12**

Following Equation 1.8: The term “Kelvin” should be pluralized and the “k” should only be uppercase when the abbreviation is used.

**Chapter 2, page 2.3, section 2.1.1.6**

The text here says that the photosensitive ganglion cells do not receive signals from classical photoreceptors. Elsewhere in the Handbook it is stated (i.e., section 2.1.3.4, p. 2.7), correctly, that they do.

**Page 2.6, Figure 2.5 Distribution of Rods and Cones in the Human Retina**

*Replace the original Figure 2.5:*

![Distribution of Rods and Cones in the Human Retina](image-url)
With this revised image, showing that there is no visual cone receptor response in the retina where the optic nerve exits the eye:

**Page 2.15, Figure 2.11**

The Red-Green Channel \([(L + S \text{ vs. } S)]\) should be \([(L + S \text{ vs. } M)]\)

**Page 2.23**

**Chapter 4, page 4.14, section 4.4.2**

In the second to the last sentence the word “decreases” should be “decreased.”

**Page 4.23**

References in first paragraph (39, 50, 51, 52) should be (39, 40, 41, 42)

**Chapter 5, page 5.9**

The equation in Section 5.5.2 Scotopic Luminous Flux

Current Equation

\[
\phi \equiv 1700 \int_0^\infty \phi_{e\lambda} (\lambda) v'(\lambda) d\lambda \approx 1700 \sum_{\lambda=400}^{750} \phi_{e\lambda} (\lambda) v'(\lambda) \Delta \lambda
\]

New Version

\[
\phi' \equiv 1700 \int_0^\infty \phi_{e\lambda} (\lambda) v'(\lambda) d\lambda \approx 1700 \sum_{\lambda=400}^{750} \phi_{e\lambda} (\lambda) v'(\lambda) \Delta \lambda
\]

**Chapter 6, page 6.18**

In the third paragraphs 7th line, the term “kelvin” should be pluralized. In the sidebar adjacent to this text, the phrase “kelvin scale” should use an uppercase “K” (“Kelvin scale”) to be consistent with NIST and SI usage.

**Chapter 6, page 6.25**

In equation (6.2), the constant is now listed as 0.0547. The correct value for the constant is 0.0547.

**Chapter 6, page 6.26**

Table 6.8, Colorimetric Properties for Some Lamps; the second column title, “Fig. 6.21 Label” should read, “Fig. 20 Label”.

**Chapter 7, page 7.1, section 7.1.1**

In the first sentence the number in scientific notation should be superscripted \(10^9\).

**Chapter 7, Figure 7.12**

Reverse \(E_{kh}\) Clear and \(E_{kh}\) Overcast in the diagram.

**Chapter 8, page 8.13, Table 8.2**
The Secondary Solid Angle UM should be UL.

**Chapter 10, page 10.35, Section 10.9.2, Equation 10.36**

The equation number (10.36) appears in error as the 1\textsuperscript{st} term on the left side. The equation should begin:

\[
\exp(\ldots) \text{Rather than } 10.36 \exp(\ldots)
\]

**Page 10.7, Equation 10.8**

Remove \( D^2 \) in the middle expression.

**Chapter 10, Section 10.9.1 Calculating Average Illuminance, page 10.33**

Equation (10.28)

\[
\bar{E}_{\text{maintained}} = \frac{(\text{total lamp lumens}) \times \text{CU} \times \text{LLF}}{\text{workplane area}}
\]

Should be reversed with Equation (10.29)

\[
\bar{E}_{\text{initial}} = \frac{(\text{total lamp lumens}) \times \text{CU}}{\text{workplane area}}
\]

**Page 10.39, Equation 10F10.2**

Reverse y’s and z’s in diagram

**Page 10.43, Equation F10.22**

Current equation

\[
SC_2 = \frac{h(\tan(\theta_2))}{h} = \tan(\theta_2)
\]

New version

\[
SC_2 = \frac{h(\tan(\theta_2) \times 2}{h} = \tan(\theta_2) \times 2
\]

**Page 10.44, Equation F10.24**
Current equation
\[ SC_{42} = \frac{h(\tan(\theta_4))}{h} = \tan(\theta_4) \]

New version
\[ SC_4 = \frac{h(\tan(\theta_{24}) \cdot 2 \cos(45^0))}{h} = \tan(\theta_4) \cdot (2)(\cos(45^0)) \]

**Chapter 13, page 13.12, Figure 13.3**

The labeling of the blue and green lines is reversed.

The blue line (the system having longest lifetime, no matter the operating cycle) should be for “Program start ballast with high performance T8 lamps.”

The green line should be for “instant start ballast with high performance T8 lamps.”

**Chapter 14, page 14.61, Equation F14.8**

In equation F14.8 the middle term \( R_w \) in the numerator should be replaced with \( R_b \).

**Chapter 18, page 18.4**

In equation 18.2 the ‘i’ and “A” are switched. It should be \( ROR = \frac{A}{I} \times 100\% \)

**Chapter 18, page 18.10, Table 18.3**

In equation (25.7) the (1-r) in the denominator should be (i-r);

Current Equation
\[ P = A \cdot x \cdot \frac{(1+r)[(1+i)^Y-(1+r)^Y]}{(1+r)(1+i)^Y} \quad (18.7) \]

New Equation
\[ P = A \cdot y \cdot \frac{(1+r)[(1+i)^Y-(1+r)^Y]}{(1+r)(1+i)^Y} \quad (18.7) \]

In the case where \( i=r \), the equation reduces to: \( P=A \cdot y \)

The equation numbers in Table 18.3 are incorrect. Equation (25.5) should be (18.5), equation (25.6) should be (18.6), equation (25.7) should be (18.7), equation (25.8) should be (18.8), and equation (25.9) should be (18.9).

**Chapter 27, Table 27.2, page 27.16, Health Care Facilities Illuminance Recommendations**
Nurse’s Stations: Work Surface

Current recommendation $E_{h}@\text{floor;}E_{v}^{5'} \text{ AFF}$

Change to $E_{h}@\text{work surface;} \ E_{v}^{5'} \text{ AFF}$

Under Nurses' Stations/Surgery Pre- and Post Op/Work Station, the horizontal illuminance should read, "$E_{h}@\text{work surface}$".