ADDENDA

ANSI/ASHRAE/IES Addendum bf to
ANSI/ASHRAE/IES Standard 90.1-2019

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on May 31, 2022, and by the Illuminating Engineering Society on May 19, 2022.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (https://www.ashrae.org/continuous-maintenance).

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FOREWORD

Addendum bf updates the values for decorative and retail lighting power allowances, adds an additional allowance for videoconferencing, and moves the additional power allowances and required controls to a table for easy reference.

Decorative lighting allowance was introduced to Standard 90.1 in 1999. Initially, most decorative lighting used halogen or incandescent sources. Since then, LED lighting has become much more widely used in both the lamps of decorative luminaires and the luminaires themselves. Addendum bd reduces decorative allowance to account for LED sources becoming commonplace. Not all decorative luminaires have integral LED sources, however, so the modified value also accounts for some decorative luminaires that use medium-base sockets and requires the project to use the rated wattage of the socket instead of the wattage of the installed lamp.

The modified allowance values reflect an approach based on the lighting model developed for Standard 90.1-2019. The previous model assumed Retail 3 and 4 used high-color incandescent sources. The proposed reductions in allowance for Retail 3 and 4 are the result of inclusion of high-color, quality, efficient LED sources.

Addendum bd also adds a new power allowance for the purpose of videoconferencing in interior spaces where the lighting in the space meets ANSI/IES/AVIXA RP-38.

These power allowances are optional. No cost analysis is necessary, though costs were considered. The modified decorative and retail allowances reflect changes in technology from incandescent, which is less efficient and less common as compared with LED.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum bf to Standard 90.1-2019

Modify Section 9.5.2.2 as shown (I-P and SI). (Note: This addendum reflects changes made previously by Addendum ad to Standard 90.1, which can be downloaded at https://www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda/addenda-to-standard-90-1-2019.)

9.5.2.2 Additional Interior Lighting Power. When using the Space-by-Space Method, an increase in the *interior lighting power allowance* is allowed for specific lighting functions. Additional power shall be allowed only if the specified lighting is installed and controlled independently of the *general* lighting in accordance with Table 9.5.2.2 ~~Section 9.4.1.1(j)~~. This additional power shall be used only for the specified *luminaires* and shall not be used for any other purpose unless otherwise indicated. Lighting control requirements referenced in Section 9.5.2.2 are the only required controls for these applications.

An increase in the *interior lighting power allowance* is permitted in the following cases:

a. For each *space* in which lighting is ~~specified to be~~ installed in addition to the *general lighting* for the purpose of decorative appearance or for highlighting art or exhibits not exempted in Table 9.2.2.1, ~~Item 11,~~ provided that the additional lighting power shall not exceed the value in Table 9.5.2.2 ~~0.75 W/ft^2 (8.1 W/m^2)~~ of such *spaces*.

b. For lighting *equipment* installed in sales areas and specifically designed and directed to highlight merchandise, provided that the additional lighting power shall not exceed the value in Table 9.5.2.2. ~~calculate the additional lighting power as follows:~~

~~Additional *Interior Lighting Power Allowance* =~~
~~1000 W + (Retail Area 1 × 0.45 W/ft^2) + (Retail Area 2 × 0.45 W/ft^2) +~~
~~(Retail Area 3 × 1.05 W/ft^2) + (Retail Area 4 × 1.88 W/ft^2)~~

c. For *spaces* in which lighting is installed for the purpose of videoconferencing and the lighting in that space meets ANSI/IES/AVIXA RP-38, additional lighting power shall be allowed per Table 9.5.2.2.

Table 9.5.2.2 Additional Lighting Power (I-P)

Section	Description	Additional Lighting Power	Required Controls
9.5.2.2(a)	Decorative	0.70 W/ft^2	9.4.1.1(j)
9.5.2.2(b)	Retail sales	750 W + (Retail Area 1 × 0.40 W/ft^2) + (Retail Area 2 × 0.40 W/ft^2) + (Retail Area 3 × 0.70 W/ft^2) + (Retail Area 4 × 1.00 W/ft^2)	9.4.1.1(j)
9.5.2.2(c)	Video conferencing	0.50 W/ft^2	See Table 9.5.2.1 *space* types for required controls.

Notes:
Retail Area 1 = the *floor* area for all products not listed in Retail Areas 2, 3, or 4
Retail Area 2 = the *floor* area used for the sale of vehicles, sporting goods, and small electronics
Retail Area 3 = the *floor* area used for the sale of furniture, clothing, cosmetics, and artwork
Retail Area 4 = the *floor* area used for the sale of jewelry, crystal, and china

Table 9.5.2.2 Additional Lighting Power (SI)

Section	Description	Additional Lighting Power	Required Controls
9.5.2.2(a)	Decorative	7.53 W/m^2	9.4.1.1(j)
9.5.2.2(b)	Retail sales	750 W + (Retail Area 1 × 4.30 W/ m^2) + (Retail Area 2 × 4.30 W/m^2) + (Retail Area 3 × 7.53 W/m^2) + (Retail Area 4 × 10.76 W/m^2)	9.4.1.1(j)
9.5.2.2(c)	Video conferencing	5.38 W/m^2	See Table 9.5.2.1 *space* types for required controls.

Notes:
Retail Area 1 = the *floor* area for all products not listed in Retail Areas 2, 3, or 4
Retail Area 2 = the *floor* area used for the sale of vehicles, sporting goods, and small electronics
Retail Area 3 = the *floor* area used for the sale of furniture, clothing, cosmetics, and artwork
Retail Area 4 = the *floor* area used for the sale of jewelry, crystal, and china

Exception to 9.5.2.2: Other merchandise categories may be included in Retail Areas 2 through 4 above, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display is approved by the *authority having jurisdiction*.

[. . .]

Modify Informative Appendix E as shown (I-P and SI).

Subsection No.	Reference	Title/Source
[. . .]		
9.5.2.2	ANSI/IES/AVIXA RP-38-17	Recommended Practice: Lighting Performance for Small to Medium Sized Videoconferencing Rooms
[. . .]		

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ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

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ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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