

**ANSI/ASHRAE/ICC/USGBC/IES Addendum bh to  
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020**

# **Standard for the Design of High-Performance Green Buildings**

**Except Low-Rise  
Residential Buildings**

*The Complete Technical Content of the International Green Construction Code®*

Approved by ASHRAE and the American National Standards Institute on October 31, 2023; by the International Code Council on October 9, 2023; by the Illuminating Engineering Society on September 26, 2023; and by the U.S. Green Building Council on September 13, 2023.

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## FOREWORD

*This proposal addresses two issues in response to committee member comments concerning ASHRAE Standard 189.1-2020 Addendum ag:*

- *Even more savings are possible if residential lighting were segmented by lamp type and luminaire type and set specific luminous efficacies for those segments of the lamp and luminaire market.*
- *The current additional lighting power allowances for decorative lighting are too broadly applied. Many types of spaces do not need additional decorative lighting above that already permitted by the base power allowance.*

*Because the more specific allowances vary by space type, for ease of compliance, the additional lighting allowances are added as extra columns in Tables 7.4.6.1B and 7.4.6.1C.*

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

## Addendum bh to Standard 189.1-2020

**Modify Section 3.2 as shown.**

**color tunable:** a light source capable of emitting light of varying hues to create white or colored light.

**Modify Section 7.3.6 as shown.**

**7.3.6 Dwelling Unit Lighting Efficacy.** This section supersedes ANSI/ASHRAE/IES Standard 90.1, Section 9.4.3.1. ~~Not less than 90% of the~~ Permanently installed lighting serving *dwelling units* shall be provided by light sources capable of operating with the applicable minimum lamp efficacy or minimum luminaire efficacy in accordance with Table 7.3.6 ~~an efficacy of not less than 85 lm/W or luminaires with an efficacy of not less than 65 lm/W.~~

### Exceptions to 7.3.6:

1. Lighting attached to, or integral to, appliances.
2. Luminaires with an input power rating no greater than 3 W.

**Table 7.3.6 Minimum Lamp Efficacy or Luminaire Efficacy for Dwelling Units**

<u>Light Source</u>	<u>Efficacy</u>
<u>Non-directional lamps</u>	<u>95 lm/W lamp efficacy</u>
<u>Non-directional color tunable lamps</u>	<u>85 lm/W lamp efficacy</u>
<u>Directional lamps</u>	<u>85 lm/W lamp efficacy</u>
<u>Directional color tunable lamps</u>	<u>75 lm/W lamp efficacy</u>
<u>Luminaires</u>	<u>65 lm/W luminaire efficacy</u>

**Modify Section 7.4.6.1.1(a), add Section 7.4.1.1(e), and reletter the remaining items as shown.**

**7.4.6.1.1 Additional Interior Lighting Power** For those areas where the Space-by-Space Method is used, the additional increase in the interior lighting power allowed by ANSI/ASHRAE/IES Standard 90.1, Section 9.5.2.2, for specific lighting functions shall be replaced by the requirements and allowances of this section. Additional power shall be allowed only if the specified lighting is installed and automatically controlled separately from the *general lighting* and is designed and installed to be turned off during nonbusiness hours. This additional power shall be used only for the specified luminaires and shall not be used for any other purpose. An increase in the interior *lighting power allowance* is permitted in the following cases and shall not be traded between different spaces:

- a. For *spaces* 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, provided that the additional lighting power shall not be greater than the  $\text{W/ft}^2$  ( $\text{W/m}^2$ ) value in the Additional Allowance column of Table 7.4.6.1B or Table 7.4.6.1C times the area of the space. ~~0.40  $\text{W/ft}^2$  ( $4.3 \text{ W/m}^2$ ) of such *spaces* in ballrooms, beauty and personal care service spaces, casinos, facilities for the visually impaired, leisure dining spaces, lobbies, performing art spaces, retail sales spaces, and religious worship spaces and not more than 0.30  $\text{W/ft}^2$  ( $3.2 \text{ W/m}^2$ ) in other spaces.~~

[ . . . ]

- e. For specialized *task lighting* in beauty and personal care service spaces, pharmacy areas, workshops, laboratories, nurse stations, recovery rooms, the additional lighting power shall not be greater than the  $\text{W/ft}^2$  ( $\text{W/m}^2$ ) value in the additional allowance column of Table 7.4.6.1B or Table 7.4.6.1C times the area of the space.
- ef. In *videoconferencing spaces* where the lighting is designed in accordance with ANSI/IES/AVIXA RP-38 and all lighting in the space is controlled by a *multiscene lighting control*, the allowed additional lighting power shall not be greater than 0.50  $\text{W/ft}^2$  ( $5.4 \text{ W/m}^2$ ) times the area of the videoconferencing portion of the *space*.

**Revise Tables 7.4.6.1B and 7.4.6.1C as shown.**

**Table 7.4.6.1B Lighting Power Density (LPD) Allowances, and-Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Common Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers common space types typically found in multiple building types. Table 7.4.6.1C covers building-specific space types typically found in a single building type.

Common Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance, W/ft <sup>2</sup>	Additional Allowance, W/m <sup>2</sup>
<b>Atrium</b>						
<20 ft (6.1 m) in height	0.39	4.2	NA	Decorative/display	0.30	3.2
≥20 ft (6.1m) and ≤ 40 ft (12.2 m) in height	0.48	5.2	NA	Decorative/display	0.30	3.2
>40 ft (12.2 m) in height	0.60	6.5	NA	Decorative/display	0.30	3.2
<b>Audience Seating Area</b>						
Auditorium	0.44	4.7	6	Decorative/display	0.25	2.7
Convention center	0.23	2.5	4	Decorative/display	0.25	2.7
Gymnasium	0.23	2.5	6	=	=	=
Motion picture theater	0.30	3.2	4	Decorative/display	0.25	2.7
Performing arts theater	0.75	8.1	8	Decorative/display	0.40	4.3
Religious building	0.65	7.0	4	Decorative/display	0.40	4.3
Sports arena	0.30	3.2	4	Decorative/display	0.25	2.7
All other audience seating areas	0.23	2.5	4	Decorative/display	0.25	2.7
Banking Activity Area	0.55	6.0	6	Decorative/display	0.25	2.7
Breakroom (See Lounge/Breakroom)				=	=	=
<b>Beauty and Personal Care Services<sup>e</sup></b>						
Hair care/barber	0.70	7.5	6	Specialized task	0.30	3.2
				Decorative/display	0.20	2.2
Nail care	0.70	7.5	6	Specialized task	0.30	3.2
				Decorative/display	0.20	2.2
Massage	0.70	7.5	8	Specialized task	0.30	3.2
				Decorative/display	0.20	2.2
Classroom/Lecture Hall/Training Room	0.60	6.5	4	Decorative/display	0.25	2.7
Conference/Meeting/Multipurpose Room	0.88	9.5	6	Decorative/display Videoconferencing <sup>g</sup>	0.25 0.50	2.7 5.4
Copy/Print Room	0.40	4.3	6	=	=	=
Corridor <sup>b</sup>	0.37	4.0	width <8 ft (2.4 m)	Decorative/display	0.25	2.7
Courtroom	0.90	9.7	6	Decorative/display	0.30	3.2
Computer Room	0.40	4.3	4	=	=	=

- a. In cases where a *space* type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific *space* type in Table 7.4.6.1C shall apply.
- b. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).
- c. For lighting in daylight transition zone with an additional *lighting power allowance* ≤ 0.90 W/ft<sup>2</sup> (9.7 W/m<sup>2</sup>) times the area of *parking garage daylight transition zone* for lighting separately controlled by a *daylight adaptation compensation* control and occupant sensing control, see Section 7.4.6.1.1(c)
- d. For accent lighting, see Section 7.4.6.1.1(b).
- e. *Class of play* as defined by IES RP-6.
- f. For *specialized task lighting* see Section 7.4.6.1.1(e)
- g. See Section 7.4.6.1.1 for criteria of qualified lighting systems
- g. To use additional *lighting power allowance*, *space* must be a *videoconferencing space* and have controls described in Section 7.4.6.1.1(f).

**Table 7.4.6.1B Lighting Power Density (LPD) Allowances, and-Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Common Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers common space types typically found in multiple building types. Table 7.4.6.1C covers building-specific space types typically found in a single building type.

Common Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance, W/ft <sup>2</sup>	Additional Allowance, W/m <sup>2</sup>
<b>Dining Area</b>						
Bar/lounge or leisure dining	0.45	4.8	4	Decorative/display	0.40	4.3
Cafeteria or fast food dining	0.40	4.3	4	Decorative/display	0.25	2.7
Family dining	0.40	4.3	4	Decorative/display	0.25	2.7
All other dining areas	0.39	4.2	4	Decorative/display	0.25	2.7
Electrical/Mechanical Room	0.39	4.2	6	=	=	=
Emergency Vehicle Garage	0.47	5.1	4	=	=	=
Equipment Control Room	0.73	7.9	8	=	=	=
Food Preparation Area	0.92	9.9	6	=	=	=
Guest Room	0.35	3.8	6	Decorative/display	0.25	2.7
<b>Laboratory <sup>e</sup></b>						
In or as a classroom	0.90	9.7	6	Specialized task	0.30	3.2
All other laboratories	0.90	9.7	6	Specialized task	0.30	3.2
Laundry/Washing Area	0.43	4.6	4	=	=	=
Loading Dock, Interior	0.51	5.5	6	=	=	=
<b>Lobby</b>						
Elevator	0.52	5.6	6	Decorative/display	0.30	3.2
Hotel	0.46	5.0	4	Decorative/display	0.40	4.3
Motion picture theater	0.30	3.2	4	Decorative/display	0.30	3.2
Performing arts theater	0.80	8.6	6	Decorative/display	0.40	4.3
All other lobbies	0.66	7.1	4	Decorative/display	0.25	2.7
Locker Room	0.42	4.5	6	=	=	=
Lounge/Breakroom (including mother's room and wellness room)	0.44	4.7	4	Decorative/display	0.25	2.7
<b>Office</b>						
Area ≤ 150 ft <sup>2</sup> (14 m <sup>2</sup> )	0.67	7.2	8	Decorative/display	0.20	2.2
150 ft <sup>2</sup> (14 m <sup>2</sup> ) ≤ Area ≤ 300 ft <sup>2</sup> (28 m <sup>2</sup> )	0.60	6.5	8	Decorative/display	0.20	2.2
Area > 300 ft <sup>2</sup> (28m <sup>2</sup> )	0.55	6.0	4	Decorative/display	0.20	2.2
Parking Area, Interior <sup>c</sup>	0.11	1.2	4	=	=	=

- a. In cases where a *space* type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific *space* type in Table 7.4.6.1C shall apply.
- b. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).
- c. For lighting in daylight transition zone with an additional *lighting power allowance* ≤ 0.90 W/ft<sup>2</sup> (9.7 W/m<sup>2</sup>) times the area of *parking garage daylight transition zone* for lighting separately controlled by a *daylight adaptation compensation* control and occupant sensing control, see Section 7.4.6.1.1(c)
- d. For accent lighting, see Section 7.4.6.1.1(b).
- e. *Class of play* as defined by IES RP-6.
- e. For specialized *task lighting* see Section 7.4.6.1.1(e)
- f. See Section 7.4.6.1.1 for criteria of qualified lighting systems
- g. To use additional *lighting power allowance*, *space* must be a *videoconferencing space* and have controls described in Section 7.4.6.1.1(f).

**Table 7.4.6.1B Lighting Power Density (LPD) Allowances, and Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Common Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers common space types typically found in multiple building types. Table 7.4.6.1C covers building-specific space types typically found in a single building type.

Common Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance, W/ft <sup>2</sup>	Additional Allowance, W/m <sup>2</sup>
Parking Area, Interior: Daylight transition zone <sup>c</sup>	0.11	1.2	4	Daylight transition zone	0.90	9.7
Pharmacy Area <sup>e</sup>	1.00	10.8	6	Specialized task	0.30	3.2
Restroom	0.57	6.2	8	Decorative/display	0.30	3.2
Sales Area <sup>d</sup>	0.85	9.1	6	Decorative/display Retail display lighting	0.25 See 7.4.6.1.1(b)	2.7 See 7.4.6.1.1(b)
Seating Area, General	0.23	2.5	4	Decorative/display	0.25	2.7
Stairway	The space containing the stairway shall determine the LPD requirements for the stairway			=	=	=
Stairwell	0.45	4.8	10	Decorative/display	0.25	2.7
Storage Room						
<50 ft <sup>2</sup> (4.6 m <sup>2</sup> )	0.49	5.3	6	=	=	=
≥50 ft <sup>2</sup> (4.6 m <sup>2</sup> )	0.35	3.7	6	=	=	=
Vehicular Maintenance Area	0.53	5.7	4	=	=	=
Workshop <sup>e</sup>						
Classroom workshop	1.00	10.8	6	Specialized task	0.30	3.2
All other workshop	1.00	10.8	6	Specialized task	0.30	3.2

- a. In cases where a *space* type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific *space* type in Table 7.4.6.1C shall apply.
- b. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).
- c. For lighting in daylight transition zone with an additional *lighting power allowance* ≤0.90 W/ft<sup>2</sup> (9.7 W/m<sup>2</sup>) times the area of *parking garage daylight transition zone* for lighting separately controlled by a *daylight adaptation compensation* control and occupant sensing control, see Section 7.4.6.1.1(e).
- d. For accent lighting, see Section 7.4.6.1.1(b).
- e. ~~Class of play as defined by IES RP-6.~~
- e. For specialized *task lighting* see Section 7.4.6.1.1(e).
- f. See Section 7.4.6.1.1 for criteria of qualified lighting systems
- g. To use additional *lighting power allowance*, *space* must be a *videoconferencing space* and have controls described in Section 7.4.6.1.1(f).

**Table 7.4.6.1C Lighting Power Density (LPD) Allowances, and Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Building-Specific Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers building-specific space types typically found in a single building type. Table 7.4.6.1B covers common space types typically found in multiple building types.

Building-Specific Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance (W/ft <sup>2</sup> )	Additional Allowance (W/m <sup>2</sup> )
Automotive (See “Vehicular Maintenance Area” under common space types)						
Casino—Gaming Buildings						
Betting/sportsbook/keno/bingo area	0.60	6.5	7	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
High limit game area	0.80	8.6	4	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Slot machine/digital gaming area	0.54	5.8	5	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Table games area	0.60	6.5	5	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Convention Center—Exhibit Space	0.55	6.0	4	<u>Decorative/display</u>	<u>0.30</u>	<u>3.2</u>
Correctional Facilities (See “Prison/Penitentiary Buildings”)				==	==	==
Dormitory—Living Quarters	0.035	3.8	8	==	==	==
Facility for the Visually Impaired <sup>b</sup>						
Chapel (used primarily by residents)	0.70	7.5	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Corridor <sup>c</sup>	0.71	7.6	width <8 ft (2.4 m)	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Dining (and not used primarily by staff)	0.90	9.7	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Lobby	0.85	9.1	4	<u>Decorative/display</u> <u>Daylight transition zone</u>	<u>0.25</u> <u>0.50</u>	<u>2.7</u> <u>5.4</u>
Recreation room/common living room (and not used primarily by staff)	0.95	10.2	6	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Restroom (and not used primarily by staff)	0.90	9.7	8	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Fire Station—Sleeping Quarters	0.19	2.05	6	==	==	==
Gymnasium/Fitness Center						
Exercise area	0.50	5.4	4	==	==	==
Playing area	0.70	7.5	4	==	==	==
Health Care Facility						
Corridor <sup>c</sup>	0.65	6.9	width <8 ft (2.4 m)	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Exam/treatment room	1.16	12.5	8	==	==	==
Imaging room	0.60	7.0	6	<u>Decorative/display</u>	<u>0.20</u>	<u>2.3</u>
Lounge	0.44	4.7	6	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Medical supply room	0.54	5.8	6	==	==	==

a. In cases where a space type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific space type in Table 7.4.6.1C shall apply.

b. For lighting within 30 ft (9 m) of an exit in facilities for the visually impaired that is separately controlled by a daylight adaptation compensation control, with an additional lighting power allowance  $\leq 0.50$  W/ft<sup>2</sup> (5.4 W/m<sup>2</sup>) times the area within 30 ft (9 m) of an exit, see Section 7.4.6.1.1(d).

c. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).

d. Class of play as defined by IES RP-6.

e. For specialized task lighting see Section 7.4.6.1.1(e).

f. See Section 7.4.6.1.1 for criteria of qualified lighting systems.

g. To use additional lighting power allowance, space must be a videoconferencing space and have controls described in Section 7.4.6.1.1(f).



**Table 7.4.6.1C Lighting Power Density (LPD) Allowances, and Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Building-Specific Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers building-specific space types typically found in a single building type. Table 7.4.6.1B covers common space types typically found in multiple building types.

Building-Specific Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance (W/ft <sup>2</sup> )	Additional Allowance (W/m <sup>2</sup> )
Nursery	0.80	8.6	6	=	=	=
Nurse's station <sup>e</sup>	0.75	8.1	6	Specialized task	0.30	3.2
Operating room	1.87	20.1	6	=	=	=
Patient room	0.70	7.5	6	Decorative/display	0.25	2.7
Physical therapy room	0.75	8.1	6	Decorative/display	0.25	2.7
Recovery room <sup>e</sup>	0.89	9.6	6	Specialized task	0.30	3.2
Telemedicine <sup>g</sup>	0.83	8.9	8	Videoconferencing <sup>g</sup>	0.50	5.4
<b>Library</b>						
Reading area	0.77	8.3	4	Decorative/display	0.25	2.7
Stacks	1.08	11.6	4	=	=	=
<b>Manufacturing Facility</b>						
Corridor <sup>c</sup>	0.28	3.0	width <8 ft (2.4 m)	=	=	=
Detailed manufacturing area	0.80	8.6	4	=	=	=
Equipment room	0.40	4.3	6	=	=	=
Extra high bay area (>50 ft [15.2 m] floor-to-ceiling height)	0.73	7.9	4	=	=	=
High bay area (25 ft [7.6 m] to 50 ft [15.2 m] floor-to-ceiling height)	0.65	7.0	4	=	=	=
Low bay area (<25 ft [7.6 m] floor-to-ceiling height)	0.61	6.6	4	=	=	=
<b>Museum</b>						
General exhibition area	0.31	3.3	6	Decorative/display	0.25	2.7
Restoration room	0.70	7.5	6	=	=	=
Performing Arts Theater—Dressing Room	0.35	3.8	6	=	=	=
Post Office Sorting Area	0.50	5.4	4	=	=	=
<b>Prison/Penitentiary Buildings</b>						
Audience seating	0.50	5.4	4	=	=	=
Classroom/lecture hall/training room <sup>c</sup>	0.65	7.0	4	Decorative/display	0.25	2.7

a. In cases where a *space* type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific *space* type in Table 7.4.6.1C shall apply.  
b. For lighting within 30 ft (9 m) of an exit in *facilities for the visually impaired* that is separately controlled by a *daylight adaptation compensation control*, with an additional *lighting power allowance*  $\leq 0.50$  W/ft<sup>2</sup> (5.4 W/m<sup>2</sup>) times the area within 30 ft (9 m) of an exit, see Section 7.4.6.1.1(d).  
c. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).  
d. Class of play as defined by IES RP-6.  
e. For specialized *task lighting* see Section 7.4.6.1.1(e).  
f. See Section 7.4.6.1.1 for criteria of qualified lighting systems.  
g. To use additional *lighting power allowance*, *space* must be a *videoconferencing space* and have controls described in Section 7.4.6.1.1(f).

**Table 7.4.6.1C Lighting Power Density (LPD) Allowances, and Room Cavity Ratio (RCR) Thresholds, and Additional Lighting Power Allowances for Building-Specific Space Types Using the Space-by-Space Method**

*Informative Note:* This table covers building-specific space types typically found in a single building type. Table 7.4.6.1B covers common space types typically found in multiple building types.

Building-Specific Space Types <sup>a</sup>	LPD, W/ft <sup>2</sup>	LPD, W/m <sup>2</sup>	RCR Threshold	Additional Lighting Power		
				Qualified Lighting System <sup>f</sup>	Additional Allowance (W/ft <sup>2</sup> )	Additional Allowance (W/m <sup>2</sup> )
Confinement cells	0.52	5.6	6	==	==	==
Dining area	0.42	4.5	6	==	==	==
Religious Buildings						
Audience seating area	0.65	7.0	4	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Fellowship hall	0.48	5.2	4	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Worship/pulpit/choir area	0.77	8.3	4	<u>Decorative/display</u>	<u>0.40</u>	<u>4.3</u>
Retail Facilities						
Dressing/fitting room	0.49	5.3	8	==	==	==
Mall concourse	0.35	3.8	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Sports Arena—Playing Area <sup>d</sup>						
Class I facility	2.26	24.3	4	==	==	==
Class II facility	1.45	15.6	4	==	==	==
Class III facility	1.08	11.6	4	==	==	==
Class IV facility	0.72	7.8	4	==	==	==
Swimming Pools <sup>d</sup>						
Class I facility	2.35	25.2	4	==	==	==
Class II facility	1.47	15.8	4	==	==	==
Class III facility	0.88	9.5	4	==	==	==
Class IV facility	0.40	4.3	4	==	==	==
Transportation Facility						
Airport hangar	1.00	10.8	4	==	==	==
Baggage/carousel area	0.35	3.8	4	==	==	==
Airport concourse	0.32	3.4	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Passenger loading area	0.32	3.4	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Terminal ticket counter	0.40	4.3	4	<u>Decorative/display</u>	<u>0.25</u>	<u>2.7</u>
Warehouse—Storage Buildings						
Warehouse and storage areas	0.27	2.9	4	==	==	==
Shipping and handling	0.60	6.5	6	==	==	==

a. In cases where a *space* type appears in both Table 7.4.6.1B and Table 7.4.6.1C, the building-specific *space* type in Table 7.4.6.1C shall apply.

b. For lighting within 30 ft (9 m) of an exit in *facilities for the visually impaired* that is separately controlled by a *daylight adaptation compensation control*, with an additional *lighting power allowance*  $\leq 0.50$  W/ft<sup>2</sup> (5.4 W/m<sup>2</sup>) times the area within 30 ft (9 m) of an exit, see Section 7.4.6.1.1(d).

c. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft (2.4 m) and is not based on the RCR, see Section 7.4.6.1(c).

d. Class of play as defined by IES RP-6.

e. For specialized *task lighting* see Section 7.4.6.1.1(e).

f. See Section 7.4.6.1.1 for criteria of qualified lighting systems.

g. To use additional *lighting power allowance*, *space* must be a *videoconferencing space* and have controls described in Section 7.4.6.1.1(f).

**POLICY STATEMENT DEFINING ASHRAE'S CONCERN  
FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES**

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

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.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

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.

### **Standard 189.1 and the International Green Construction Code**

Standard 189.1 serves as the complete technical content of the International Green Construction Code<sup>®</sup> (IgCC). The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and complementing voluntary rating systems. For more information, visit [www.iccsafe.org](http://www.iccsafe.org).

### **About ASHRAE**

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

To stay current with this and other ASHRAE Standards and Guidelines, visit [www.ashrae.org/standards](http://www.ashrae.org/standards), and connect on LinkedIn, Facebook, Twitter, and YouTube.

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ASHRAE offers its Standards and Guidelines in print, as immediately downloadable PDFs, and via ASHRAE Digital Collections, which provides online access with automatic updates as well as historical versions of publications. Selected Standards and Guidelines are also offered in redline versions that indicate the changes made between the active Standard or Guideline and its previous edition. For more information, visit the Standards and Guidelines section of the ASHRAE Bookstore at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).

### **IMPORTANT NOTICES ABOUT THIS STANDARD**

**To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit [www.ashrae.org/standards](http://www.ashrae.org/standards) to download them free of charge.**

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