

# STANDARD

**ANSI/ASHRAE/IES Addendum an to  
ANSI/ASHRAE/IES Standard 90.1-2022**

# Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on October 31, 2024, and by the Illuminating Engineering Society on October 15, 2024.

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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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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The Senior Manager of Standards of ASHRAE should be contacted for

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- participation in the next review of the Standard,
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## **FOREWORD**

*Addendum an revises Section 9.5.1 Building Area Method lighting power density (LPD) values. These values are developed via a space-weighted average using Section 9.5.2 Space-by-Space Method individual LPD values. Addendum s, which received only one editorial comment, included the revised Space-by-Space LPD values. These values are directly based on Addendum s.*

*The cost-effectiveness analysis was done during the development of Addendum s, and this is an alternate compliance pathway.*

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

**Addendum an to Standard 90.1-2022**

***Modify the lighting power density values as shown (I-P).***

**9.5.1 Building Area Method Compliance Path.** Use the following steps to determine the *interior lighting power allowance* by the Building Area Method:

[ . . . ]

**Table 9.5.1 Lighting Power Density Using the Building Area Method**

<b>Building Area Type<sup>a</sup></b>	<b>LPD, W/ft<sup>2</sup></b>
Automotive facility	<u>0.690</u> .73
Convention center	<u>0.580</u> .64
Courthouse	<u>0.690</u> .75
Dining: Bar lounge/leisure	<u>0.700</u> .74
Dining: Cafeteria/fast food	<u>0.670</u> .70
Dining: Family	<u>0.620</u> .65
Dormitory	<u>0.480</u> .52
Exercise center	<u>0.680</u> .72
Fire station	<u>0.520</u> .56
Gymnasium	<u>0.700</u> .75
Health care clinic	<u>0.740</u> .77
Hospital	<u>0.880</u> .92
Hotel/motel	<u>0.490</u> .53
Library	<u>0.810</u> .83
Manufacturing facility	<u>0.770</u> .82
Motion picture theater	<u>0.390</u> .43
Multifamily	<u>0.440</u> .46
Museum	<u>0.520</u> .56
Office	<u>0.590</u> .62
Parking garage	<u>0.140</u> .17
Penitentiary	<u>0.620</u> .65
Performing arts theater	<u>0.760</u> .82
Police station	<u>0.580</u> .62
Post office	<u>0.600</u> .64
Religious facility	<u>0.610</u> .66
Retail	<u>0.730</u> .78
School/university	<u>0.660</u> .70
Sports arena	<u>0.680</u> .73
Town hall	<u>0.630</u> .67
Transportation	<u>0.550</u> .56
Warehouse	<u>0.520</u> .45
Workshop	<u>0.82</u> 0.86

a. In cases where both a general *building* area type and a specific *building* area type are listed, the specific *building* area type shall apply.

***Modify the lighting power density values as shown (SI).***

**9.5.1 Building Area Method Compliance Path.** Use the following steps to determine the *interior lighting power allowance* by the Building Area Method:

[ . . . ]

**Table 9.5.1 Lighting Power Density Using the Building Area Method**

<b>Building Area Type<sup>a</sup></b>	<b>LPD, W/m<sup>2</sup></b>
Automotive facility	<u>7.47.9</u>
Convention center	<u>6.36.8</u>
Courthouse	<u>7.58.0</u>
Dining: Bar lounge/leisure	<u>7.58.0</u>
Dining: Cafeteria/fast food	<u>7.27.5</u>
Dining: Family	<u>6.77.0</u>
Dormitory	<u>5.25.6</u>
Exercise center	<u>7.37.8</u>
Fire station	<u>5.66.0</u>
Gymnasium	<u>7.58.1</u>
Health care clinic	<u>7.98.3</u>
Hospital	<u>9.49.9</u>
Hotel/motel	<u>5.35.7</u>
Library	<u>8.79.0</u>
Manufacturing facility	<u>8.38.8</u>
Motion picture theater	<u>4.24.6</u>
Multifamily	<u>4.74.9</u>
Museum	<u>5.66.0</u>
Office	<u>6.36.7</u>
Parking garage	<u>1.51.8</u>
Penitentiary	<u>6.77.0</u>
Performing arts theater	<u>8.28.8</u>
Police station	<u>6.36.6</u>
Post office	<u>6.56.8</u>
Religious facility	<u>6.57.1</u>
Retail	<u>7.98.4</u>
School/university	<u>7.17.5</u>
Sports arena	<u>7.37.8</u>
Town hall	<u>6.87.2</u>
Transportation	<u>5.96.0</u>
Warehouse	<u>5.64.8</u>
Workshop	<u>8.89.3</u>

a. In cases where both a general *building* area type and a specific *building* area type are listed, the specific *building* area type shall apply.

## **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.

**ASHRAE · 180 Technology Parkway · Peachtree Corners, GA 30092 · [www.ashrae.org](http://www.ashrae.org)**

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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.

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