

*Table 5-3 – (Standards Table 146-F) Area Category Method – Lighting Power Density Values (Watts/ft<sup>2</sup>)*

Primary Function	Allowed Lighting Power (W/ft <sup>2</sup> )	Primary Function	Allowed Lighting Power (W/ft <sup>2</sup> )
Auditorium	1.5 <sup>1</sup>	Laboratory, Scientific	1.4 <sup>4</sup>
Auto Repair	0.9 <sup>2</sup>	Laundry	0.9
Beauty Salon	1.7	Library	Reading areas 1.2
Civic Meeting Place	1.3 <sup>1</sup>		Stacks 1.5
Classrooms, lecture, training, vocational room	1.2	Lobbies	Hotel lobby 1.1 <sup>1</sup>
Commercial and industrial storage (conditioned & unconditioned)	0.6		Main entry lobby 1.5 <sup>1</sup>
Commercial and industrial storage (refrigerated)	0.7	Locker/dressing room	0.8
Convention, conference, multipurpose and meeting centers	1.4 <sup>1</sup>	Lounge/recreation	1.1
Corridors, restrooms, stairs, and support areas	0.6	Malls and atria	1.2 <sup>1</sup>
Dining	1.1 <sup>1</sup>	Medical and clinical care	1.2
Electrical, mechanical, telephone rooms	0.7 <sup>2</sup>	Offices	> 250 ft <sup>2</sup> 0.9
Exercise center, gymnasium	1.0		≤ 250 ft <sup>2</sup> 1.1
Exhibit, museum	2.0	Parking garage	Parking Area 0.2
Financial transactions	1.2 <sup>1</sup>		Ramps and Entries 0.6
General commercial and industrial work	Low bay 0.9 <sup>2</sup>	Religious worship	1.5 <sup>1</sup>
	High bay 1.0 <sup>2</sup>	Retail merchandise sales, wholesale showrooms	1.6
	Precision 1.2 <sup>3</sup>	Tenant lease space	1.0
Grocery sales	1.6	Theaters	Motion picture 0.9 <sup>1</sup>
Hotel function area	1.5 <sup>1</sup>		Performance 1.4 <sup>1</sup>
Housing, Public and Commons Areas	Multi-family, Dormitory 1.0	Transportation Function	1.2
	Senior Housing 1.5	Waiting area	1.1 <sup>1</sup>
Kitchen, food preparation	1.6	All other	0.6

**FOOTNOTES**

1. The smallest of the following values may be added to the allowed lighting power for ornamental chandeliers and sconces that are in addition to and switched or dimmed on circuits different from the circuits for general lighting:
  - a. One watt per square foot times the area of the task space that the chandelier or sconce is in; or
  - b. The actual design wattage of the chandelier or sconce.
2. The smallest of the following values may be added to the allowed lighting power for specialized task work
  - a. 0.5 watt per square foot times the area of the task space required for an art, craft assembly or manufacturing operation, or
  - b. The actual design wattage of the luminaire(s) providing illuminance to the specialized task area.

For spaces employing this allowance, the plans shall clearly identify all task spaces using these tasks and the lighting equipment designed to illuminate these tasks. Tasks that are performed less than two hours per day or poor quality tasks that can be improved are not eligible for this specialized task work allowance.
3. The smallest of the following values may be added to the allowed power for precision commercial and industrial work:
  - a. One watt per square foot times the area of the task space required for the precision work; or
  - b. The actual design wattage of the luminaire(s) providing the illuminance to the precision task area.

For spaces employing this allowance, the plans shall clearly identify all task spaces using these tasks and the lighting equipment designed to illuminate these tasks. Tasks that are performed less than two hours per day or poor quality tasks that can be improved are not eligible for this precision task work allowance.
4. The smallest of the following values may be added to the allowed lighting power for specialized task work:
  - a. 0.2 watt per square foot times the area of the task space required for a lab in a school, or
  - b. The actual design wattage of the luminaire(s) providing illuminance to the specialized task area.

### 5.3.3 Tailored Method

§146(c)3

Standards Table 146-G

The Tailored Method is a compliance approach, which establishes allowed lighting power on a room-by-room basis. The Standards allow the Tailored Method for most buildings and spaces. Use of Tailored Method is acceptable when the building or space has function types, which are allowable display and/or ornamental lighting. It may also be helpful when a building and/or areas have spaces with higher room cavity ratios (RCR's) such as those with an RCR of 3.5 or higher. Tailored Method has several components (wall display, floor display, ornamental and very valuable display lighting) that are “use it or lose it” allowances. As a result, if a lighting design does not include these components, the allowed wattage under the Tailored Method may be less than if the Area Category Method or Whole Building Method of compliance is used.

Allowed lighting power may be traded from Primary Function areas using the Area Category Method to Primary Function areas using the Tailored Method. However, trade-offs may not be traded from the Tailored Method to the Area Category Method.

Some of the Primary Function areas in Table 5-5 (Table 146-G in the Standards) have been renamed, and some of the Primary Function area definitions have been edited and clarified. Refer to the definitions in §101 to appropriately classify a primary function area according to the current definitions.

*Note:* As a reminder, in many buildings the Tailored Method may actually result in less allowed lighting power than other methods. Larger allowances generally result from special lighting needs in a substantial portion of the building or from control credits.

#### **Room Cavity Ratio (RCR)**

The room cavity ratio must be determined for a space using the Tailored Lighting Method.

The lighting level in a room is affected by the amount of light its fixtures provide and by the configuration of the room, expressed as the room cavity ratio (RCR). Small cramped rooms are more difficult to light and have a high RCR. Large open rooms are easier to light and have a low RCR. Since lighting fixtures are not as effective in a room with a high RCR, the Standards allow a greater LPD to compensate for this effect.

The RCR is based on the entire space bounded by floor-to-ceiling partitions. If a task area within a larger space is not bounded by floor to ceiling partitions, the RCR of the entire space must be used for the task area. The exception to this rule allows for imaginary or virtual walls when the boundaries are established by “high stack” elements (library stacks and storage shelves) or high partial walls defined as “perimeter full height partitions” described in §146(c)3Bi wall display.

*Note:* For use in calculating the RCR of the space, the walls are not required to be display walls as is required under §146(c)3Bi.