TABLE 9.6.1 Lighting Power Densities Using the Space-by-Space Method

Common Space Types[a]	LPD, W/ft^2	RCR Threshold
Atrium		
First 40 ft in height	0.03 per ft (height)	NA
Height above 40 ft	0.02 per ft (height)	NA
Audience/Seating Area—Permanent		
For auditorium	0.79	6
For Performing Arts Theater	2.43	8
For Motion Picture Theater	1.14	4
Classroom/Lecture/Training	1.24	4
Conference/Meeting/Multipurpose	1.23	6
Corridor/Transition	0.66	Width<8 ft
Dining Area	0.65	4
For Bar Lounge/Leisure Dining	1.31	4
For Family Dining	0.89	4
Dressing/Fitting Room for Performing Arts Theater	0.40	6
Electrical/Mechanical	0.95	6
Food Preparation	0.99	6
Laboratory		
For Classrooms	1.28	6
For Medical/Industrial/Research	1.81	6
Lobby	0.90	4
For Elevator	0.64	6
For Performing Arts Theater	2.00	6
For Motion Picture Theater	0.52	4
Locker Room	0.75	6
Lounge/Recreation	0.73	4
Office		
Enclosed	1.11	8
Open Plan	0.98	4
Restrooms	0.98	8
Sales Area (for accent lighting, see Section 9.6.2(b))	1.68	6
Stairway	0.69	10
Storage	0.63	6
Workshop	1.59	6
Building-Specific Space Types	**LPD, W/ft^2**	**RCR Threshold**
Automotive		
Service/Repair	0.67	4
Bank/Office		
Banking Activity Area	1.38	6
Convention Center		
Audience Seating	0.82	4
Exhibit Space	1.45	4
Courthouse/Police Station/Penitentiary		
Courtroom	1.72	6
Confinement Cells	1.10	6
Judges' Chambers	1.17	8
Penitentiary Audience Seating	0.43	4
Penitentiary Classroom	1.34	4
Penitentiary Dining	1.07	6
Dormitory		
Living Quarters	0.38	8
Fire Stations		
Engine Room	0.56	4
Sleeping Quarters	0.25	6
Gymnasium/Fitness Center		
Fitness Area	0.72	4
Gymnasium Audience Seating	0.43	6
Playing Area	1.20	4
Hospital		
Corridor/Transition	0.89	Width < 8 ft
Emergency	2.26	6
Exam/Treatment	1.66	8
Laundry/Washing	0.60	4
Lounge/Recreation	1.07	6
Medical Supply	1.27	6
Nursery	0.88	6
Nurses' Station	0.87	6
Operating Room	1.89	6
Patient Room	0.62	6
Pharmacy	1.14	6
Physical Therapy	0.91	6
Radiology/Imaging	1.32	6
Recovery	1.15	6
Hotel/Highway Lodging		
Hotel Dining	0.82	4
Hotel Guest Rooms	1.11	6
Hotel Lobby	1.06	4
Highway Lodging Dining	0.88	4
Highway Lodging Guest Rooms	0.75	6
Library		
Card File and Cataloging	0.72	4
Reading Area	0.93	4
Stacks	1.71	4

TABLE 9.6.1 Lighting Power Densities Using the Space-by-Space Method *(continued)*

Building-Specific Space Types	LPD, W/ft^2	RCR Threshold
Manufacturing		
Corridor/Transition	0.41	Width < 8 ft
Detailed Manufacturing	1.29	4
Equipment Room	0.95	6
Extra High Bay (>50 ft Floor to Ceiling Height)	1.05	4
High Bay (25–50 ft Floor to Ceiling Height)	1.23	4
Low Bay (<25 ft Floor to Ceiling Height)	1.19	4
Museum		
General Exhibition	1.05	6
Restoration	1.02	6
Parking Garage		
Garage Area	0.19	4
Post Office		
Sorting Area	0.94	4
Religious Buildings		
Audience Seating	1.53	4
Fellowship Hall	0.64	4
Worship Pulpit, Choir	1.53	4

TABLE 9.6.1 Lighting Power Densities Using the Space-by-Space Method *(continued)*

Building-Specific Space Types	LPD, W/ft^2	RCR Threshold
Retail		
Dressing/Fitting Room	0.87	8
Mall Concourse	1.10	4
Sales Area (for accent lighting, see Section 9.6.3(c))	1.68	6
Sports Arena		
Audience Seating	0.43	4
Court Sports Arena—Class 4	0.72	4
Court Sports Arena—Class 3	1.20	4
Court Sports Arena—Class 2	1.92	4
Court Sports Arena—Class 1	3.01	4
Ring Sports Arena	2.68	4
Transportation		
Air/Train/Bus—Baggage Area	0.76	4
Airport—Concourse	0.36	4
Audience Seating	0.54	4
Terminal—Ticket Counter	1.08	4
Warehouse		
Fine Material Storage	0.95	6
Medium/Bulky Material Storage	0.58	4

[a] In cases where both a common *space* type and a building-specific type are listed, the building specific *space* type shall apply.

TABLE 9.6.2 Control Factors Used in Calculating Additional Interior Lighting Power Allowance

Additional Control Method (in Addition to Mandatory Requirements).	Space Type				
	Open Office	Private Office	Conference Room, Meeting Room, Classroom (Lecture/ Training)	Retail Sales Area	Lobby, Atrium, Dining Area, Corridors/ Stairways, Gym/ Pool, Mall Concourse, Parking Garage
Manual, continuous dimming control or Programmable multi-level dimming control	0.05	0.05	0.10[1]	0.10	0
Programmable multi-level dimming control using programmable time scheduling	0.05	0.05	0.10[1]	0.10	0.10
Multi-level occupancy sensors	0.05	0.05	0.05	0	0
Occupancy sensors controlling the downlight component of workstation specific luminaires with continuous dimming to off capabilities.	0.25[2]	0	0	0	0
Occupancy sensors controlling the downlight component of workstation specific luminaires with continuous dimming to off operation, in combination with personal continuous dimming control of downlight illumination by workstation occupant.	0.30[2,3]	0	0	0	0
Automatic bi-level or multi-level switching in *primary sidelighted areas* when *sidelighting effective aperture* is greater than 0.15	0	0	0	0.10[4]	0
Automatic bi-level or multi-level switching in *primary sidelighted areas* when *sidelighting effective aperture* is greater than 0.15 and when *primary sidelighted area* is less than 250 ft^2	0.10[4]	0.10[4]	0.10[4]	0.10[4]	0.10[4]
Automatic continuous daylight dimming in *primary sidelighted areas* when *sidelighting effective aperture* is greater than 0.15 and when *primary sidelighted area* is less than 250 ft^2	0.20[4]	0.20[4]	0.20[4]	0.20[4]	0.20[4]
Automatic continuous daylight dimming in *primary sidelighted areas* when *sidelighting effective aperture* is greater than 0.15 and when *primary sidelighted area* is greater than 250 ft^2	0.10[4]	0.10[4]	0.10[4]	0.10[4]	0.10[4]
Automatic continuous daylight dimming in *secondary sidelighted area*s when *sidelighting effective aperture* is greater than 0.3	0.10[4]	0.10[4]	0.10[4]	0.10[4]	0.10[4]
Automatic continuous daylight dimming in *daylighted areas under skylights* when the total of those areas is less than 900 ft^2 and when *skylight effective aperture* is greater than 0.01	0.20	0.20	0.20	0.20	0.20
Automatic continuous daylight dimming in *daylighted areas under skylights* when the total of those areas is greater than 900 ft^2 and when *skylight effective aperture* is greater than 0.01	0.10	0.10	0.10	0.10	0.10

[1] These *control* factors may only be used if the requirements of section 9.4.1.2 are met using an *occupancy sensor*.

[2] *Control* factor is limited to the wattage of workstation-specific *luminaires* in partitioned single occupant workspaces contained within an open office environment (i.e. direct-indirect *luminaires* with separately controlled downlight and uplight components, with the downward component providing illumination to a single occupant in an open plan workstation). Within 30 minutes of the occupant leaving the *space*, the downward component shall continuously dim to off over a minimum of 2 minutes. Upon the occupant entering the *space*, the downward component shall turn on at the minimum level and continuously raise the illumination to a p*reset* level over a minimum of 30 seconds. The uplight component of workstation specific luminaire shall comply with section 9.4.1.1 (*automatic* shutoff).

[3] In addition to the requirements described in footnote 2, the *control* shall allow the occupant to select their preferred light level via a personal computer, handheld device, or similarly accessible device located within the workstation.

[4] *Control* factors may not be used if *controls* are used to satisfy exceptions to Section 5.5.4.2.3

Lighting Compliance Documentation

Project Name:		
Project Address:		Date:
Designer of Record:	Email:	Telephone:
Contact Person:	Email:	Telephone:
City:		Exterior Lighting Zone:

Mandatory Provisions Checklist

- ☐ Lighting Control (9.4.1)
  - ☐ Automatic lighting shutoff controls are provided based on either a scheduling device or an occupant sensor (9.4.1.1)
  - ☐ Each enclosed space has its own control including bilevel or occupancy based where required (9.4.1.2)
  - ☐ Controls for parking garages, including bilevel, transition and perimeter control as required (9.4.1.3)
  - ☐ Automatic daylighting controls for primary sidelighted areas (9.4.1.4)
  - ☐ Automatic daylighting controls for toplighting (9.4.1.5)
  - ☐ Additional controls for display/accent, case, guest room, task, nonvisual and demonstration lighting applications (9.4.1.6)
  - ☐ Exterior lighting controls including automatic shutoff and bilevel as required (9.4.1.7)
- ☐ Exit signs do not exceed 5 W per face (9.4.2)
- ☐ Exterior lighting power (9.4.3) — See worksheet
- ☐ Functional testing completed on specified controls (9.4.4)

Interior Lighting Power Allowance (Building Area Method – 9.5)

Building ID	Building Type (9.5.1)	Lighting Power Density, W/ft² (W/m²)	Building Area, ft² (m²)	Lighting Power Allowance (W)
			Total	

Interior Lighting Power Allowance (Space-by-Space Method – 9.6)

Space ID	Building Type/Space Type (9.6.1)	Lighting Power Density, W/ft² (W/m²)	Room Cavity Ratio	Space Area, ft² (m²)	Lighting Power Allowance (W)
				Subtotal	
				Controls Allowance (9.6.2c)	
				Total	

Project Name:		
Contact Person:	Email:	Telephone:

Interior Connected Lighting Power

ID	Luminaire Description (including number of lamps per fixture, watts per lamp, type of ballast, type of fixture)	Type: Incandescent	Type: Fluorescent	Type: HID	Type: Line-Voltage Track	Type: Low-Voltage Track	Type: Other	Number of Luminaires	Watts/ Luminaire	Total Watts
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
		❍	❍	❍	❍	❍	❍			
									Total	

Additional Interior Lighting Power Allowance—Control Credits

Space ID	Space Name	Control Type (Table 9.6.2)	Control Factor (Table 9.6.2)	Installed Watts (W)	Additional Allowance (W)
				Total	

Additional Interior Lighting Power Allowance – Decorative and Display

Space ID	Space Name	Type: Decorative	Type: Display Lighting	Area, ft² (m²)	Unit Allowance, W/ft² (W/m²)	Allowance (W)	Lumin-aire ID's	Installed Power (W)
		❍	❍					
		❍	❍					
		❍	❍					
		❍	❍					
		❍	❍					
		❍	❍					
		❍	❍					
		❍	❍					

Lighting Compliance Documentation

Project Name:		
Contact Person:	Email:	Telephone:

Additional Interior Connected Lighting Power

Space ID	Luminaire ID	Luminaire Description (including number of lamps per fixture, watts per lamp, type of ballast, type of fixture)	Type						Number of Luminaires	Watts/ Luminaire	Total Watts
			Incandescent	Fluorescent	HID	Line-Voltage Track	Low-Voltage Track	Other			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			
			❍	❍	❍	❍	❍	❍			

Exterior Building Lighting Power Allowance (Tradable Lighting Applications)

Application	Allowance	Area or Length, ft^2 or ft (m^2 or m)	Tradable Power Allowance
		Tradable Power Allowance	

Exterior Building Lighting Power Allowance (Non-Tradable Lighting Applications)

ID	Application	Allowance per Unit	Area or Length or Quantity	Non-Tradable Power Allowance
			Non-Tradable Power Allowance	

Exterior Connected Lighting Power (Tradable Applications)

ID	Luminaire Description (including number of lamps per fixture, watts per lamp, type of ballast, type of fixture)	Number of Luminaires	Watts/ Luminaire	Total Watts
			Total	

Exterior Connected Lighting Power (Non-Tradable Applications)

ID	Non-Tradable Application	Luminaire Description (including number of lamps per fixture, watts per lamp, type of ballast, type of fixture)	Number of Luminaires	Watts/ Luminaire	Total Watts
				Total	

Exterior Lighting Compliance Test

Tradable Power Allowance (Watts)		Base site allowance		Tradable Connected Lighting Power (Watts)
	+		≥	

Non-Tradable Application	Non-Tradable Power Allowance (Watts)			Non-Tradable Connected Lighting Power (Watts)
		+	≥	
		+	≥	
		+	≥	

Allocated base site allowance		Unallocated base site allowance
	≤	