WELL Standard
Version 2

Light Concept

INTERNATIONAL WELL BUILDING INSTITUTE™

An Overview of the Standard

WELL standard is the first certification in the world that focuses on human's health and wellbeing.

According to the latest studies, people in North America and Europe spend a shocking 90% indoors. In some countries, this percentage can be even higher (99% in places like the United Arab Emirates in some seasons).

To put this figure into a perspective, by the time we turn 40, most of us would have spent 36 years indoors. This statistics makes an excellent case for making sure our buildings are healthy buildings. Thanks to the ever evolving evidence, we now understand the importance of the relationship between the physical space and our health.

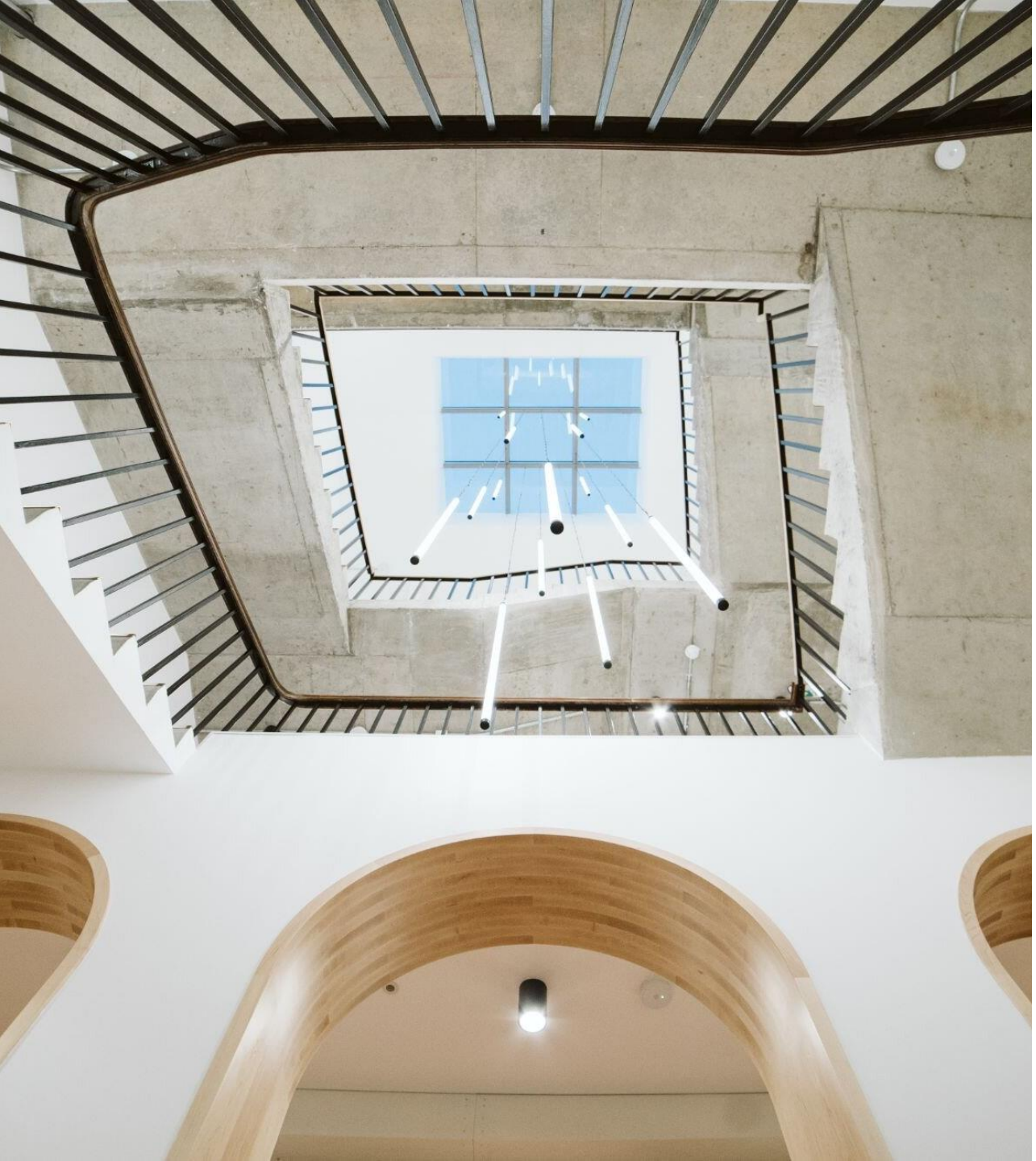
Since the first launch of the globally recognised WELL Building standard in 2014, over 2000 companies have adopted WELL as a method to promote and scale health and wellbeing across their organisations.
The standard was updated in 2018 into version 2, taking on recommendations and feedback from thousands of members of the WELL community.

Total Points achieved	WELL Certification		WELL Core Certification	
	Minimum points per concept	Level of certification	Minimum points per concept	Level of certification
40 pts	0	WELL Bronze	0	WELL Core Bronze
50 pts	1	WELL Silver	0	WELL Core Silver
60 pts	2	WELL Gold	0	WELL Core Gold
80 pts	3	WELL Platinum	0	WELL Core Platinum

WELL standard is a voluntary certification based on United Nation Development goals used in over 50 countries.

It's a point system, with 110 points in each project scorecard. Each project consists of 10 individual concepts. In each concept (for example "Air"), there are several preconditions, or 'must haves", that a project has to achieve. The rest of the points are earned through Optimisations.

The WELL digital platform guides project teams through development of a unique score card. This score card can be shared across all involved parties, working together to achieve the certification.



The Light Concept Overview

The Light concept is made of 8 features in total. First 2 are preconditions.

The certification offers guidelines for:

1. All spaces except dwellings
2. Dwelling Units

Light is the main driver or the circadian rhythm. All light, not just day light contributes to circadian biorhythm. As humas spend so much time indoors, it is important to implement day light and artificial lighting with the more traditional requirements like visual comfort, glare control on so on.

L01- Light Exposure (Precondition)

Providing appropriate light exposure can significantly improve health and productivity of the occupants. Smart interior design encourages using daylight to its advantage and make it available.

To meet the criteria of the first precondition, you have to choose one of 4 options:

L01

Option 1

Daylight Simulation

The project demonstrates, through computer simulations, that one of the following conditions are achieved:

A. Regularly occupied spaces achieve one of the following targets:

Calculations per IES LM-83-12		Calculations per Annex A of CEN 17037:2018
Average sDA 200,40% is achieved for >30% of regularly occupied floor area	OR	Target illuminance 19fc is achieved for >30% of individual unit area throughout 50% of daylit hours of the year

B. Common spaces that have unassigned seating for at least 15% of regular occupants at any given time achieve the following targets:

Calculations per IES LM-83-12		Calculations per Annex A of CEN 17037:2018
Average sDA 300,50% is achieved for >75% of floor area	OR	Target illuminance 28fc is achieved for >30% of individual unit area and average illuminance 9 fc is achieved for >95% of individual unit area throughout 50% of daylit hours of the year

L01

Option 2

Interior Layout

One of the following requirements is met:

A. At least 30% of the regularly occupied spaces is within 20ft horizontal distance of envelope glazing in each floor.

B. Common spaces have unassigned seating and can accommodate at least 15% of regular occupants at any given time. At least 70% of all seating in the spaces is within 1 16ft horizontal distance of envelope glazing.

Option 3

Building Design

One of the following requirements is met:

A. The envelope glazing area is no less than 7% of the regularly occupied floor area for each floor level.

B. The floor plate is no more than 65ft between opposite walls that each have transparent envelope glazing, and there are no opaque obstructions higher than 3.2ft within a 20ft horizontal distance of the transparent envelope glazing.

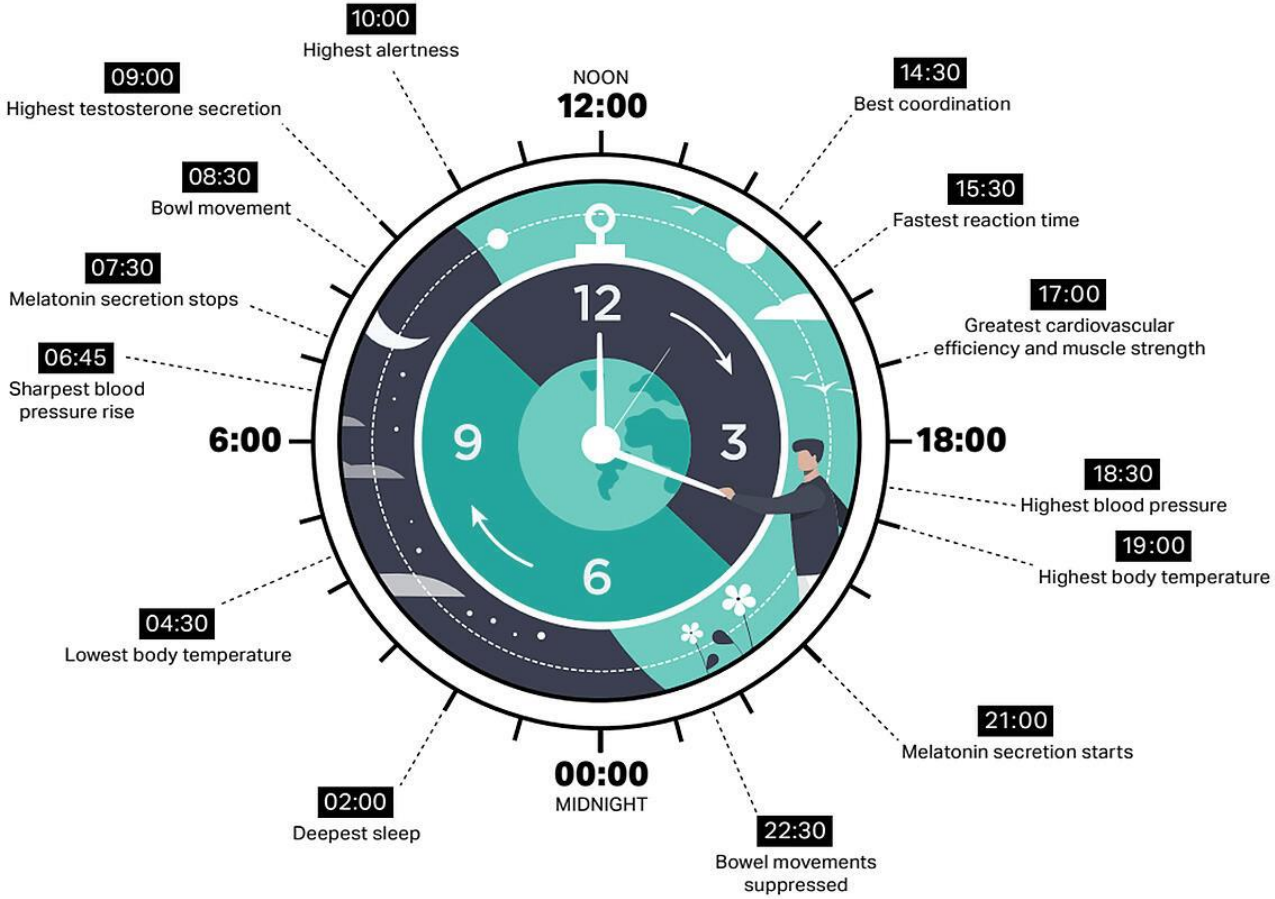
L01

Option 4

Circadian Lighting Design

The following requirement is met:

The project achieves at least one point in feature L03: Circadian Lighting Design.



WELL now offers 14 different alternatives to submit the accreditation from other system, like the LEED v.4, BREEAM of Green Star.

L02- Visual Lighting Design (Precondition)

This WELL feature requires projects to provide appropriate illuminances on work planes for regular users of all age groups, as required for the tasks performed in the space.

To provide the visual acuity, it’s critical to take into account the task conducted and the age of the occupants/users.

To meet the criteria of the second precondition, you have to choose one of the 2 options:

L02

Option 1

Visual Lighting Design

One of the following requirements is met:

A. All indoor and outdoor spaces (including transition areas) comply with the illuminance thresholds specified in one of the following lighting reference guidelines:

1. IES Lighting Handbook 10th Edition
2. EN 12464-1&2: 2011 or EN 12464: 2022
3. ISO 8995-1:2002(E) (CIE S 008/E:2001)
4. GB50034-2013
5. CIBSE SLL Code for Lighting

B. The illuminance thresholds take into consideration the tasks and the age groups of the occupants.

L02

Option 2

Predetermined Light Levels

The following requirements are met:

A. More that 50% of occupants are under the age of 65.

B. At least 90% of the project area is comprised of the following space types and meets the associated illuminance thresholds:

1. Offices, conference rooms and classrooms: minimum 30fc at task surface
2. Lobby, atrium and transition (including corridor and outdoor pathways): minimum 10fc at floor level
3. Storage spaces: minimum 10fc at floor level
4. Dining, lounge and restrooms: minimum 10fc at task surface

WELL now offers 6 different alternatives to submit the accreditation from other system, with the most relevant for UK market being CIBSE SLL Code for Lighting, SLL Lighting Handbook, CIBSE SLL Lighting Guide 9 .

L03- Circadian Lighting Design

Max. 3 points

This WELL feature requires projects to provide users with appropriate exposure to light for maintaining circadian health and aligning the circadian rhythm with the day-night cycle.

Our bodies are being kept in sync by various cues, lighting being one of the most important one. As humas now spend so much time indoors, the ‘light and dark’ pattern is being disturbed by artificial lighting.

Disruption of the circadian system has been linked to serious illnesses like obesity, diabetes, metabolic disorders to name a few.

L03

Part 1

Meet Lighting for Day-Active People

For workstations used during daytime, electric lighting is used to achieve these thresholds for at least 4 hours.

A. The following light levels are achieved for at least four hours (beginning noon at the latest) at a height of 18 in above the work-plane for all workstations in regularly occupied spaces:

Tier	Threshold		Threshold for Projects with Enhanced Daylight	Points
1	At least 150 EML [136 M-EDI(D65)]	OR	The project achieves at least 120 EML [109 M-EDI(D65)] and L05 Part 1 or L06 Part 1	2
2	At least 275 EML [250 lux M-EDI(D65)]	OR	The project achieves at least 180 EML [163 M-EDI(D65)] and L05 Part 1 or L06 Part 1	4

B. The light levels are achieved on the vertical plane at eye level to simulate the light entering the eye of the occupant.

WELL currently doesn't offer any alternatives to submit the accreditation from other systems for Circadian Lighting Design.

L04 – Electric Light Control

Max. 2 points

This WELL feature requires projects to manage glare by using lighting calculation of glare and selecting the appropriate luminaires for the space.

Defined as excessive brightness, glare is managed through lighting design process. It has been associated with a host of health issues like eye strain or migraine. Reducing glare is vital for visual experience of the occupants in the space.

Part 1. Manage glare from electric lighting
To meet the criteria of this Optimisation, you have to select one of the 2 options:

L04

Option 1

Luminaire Consideration

Each luminaire meets one of the following requirements for regularly occupied spaces at light output representative of regular use conditions. Wall wash fixtures and concealed fixtures, installed as specified by manufacturer's data, as well as decorative fixtures may be excluded from meeting these requirements:

A. 100% of light is emitted above the horizontal plane
B. Classified with Unified Glare Rating (UGR) of 16 or lower
C. Luminance that does not exceed 6000cd/m2 at any angle between 45 and 90 degrees from nadir.

Option 2

Space Consideration

All regularly occupied spaces must have a Unified Glare Rating (UGR) of 16 or lower.

WELL now offers 2 alternatives to submit the accreditation from other system, Green Star Interiors v1 or Green Star Design and As Build v1.

L05 – Daylight Design Strategies

Max. 4 points

This WELL feature requires projects to design spaces to integrate daylight into indoor environments, so that daylight may be used for visual tasks along with electric lighting.

This part highlights the importance of the way the buildings are designed, as the exposure to daylight, or the lack of it, has an enormous impact on the occupants.

L05

Part 1

Implementing Daylight Plan

Max 3 points

The project demonstrates that the following conditions are achieved on each floor:

Tier	Threshold		Façade Design	Points
1	70% of all workstations are within 25 ft of transparent envelope glazing. Visible light transmittance (VLT) is greater than 40%.	OR	Envelope glazing is no less than 15% of the regularly occupied floor area or individual unit. Visible light transmittance (VLT) of windows is greater than 40%.	2
2	70% of all workstations are within 16 ft of transparent envelope glazing. Visible light transmittance (VLT) is greater than 40%.	OR	Envelope glazing is no less than 25% of the regularly occupied floor area or individual unit. Visible light transmittance (VLT) of windows is greater than 40%.	3

L05

Part 2

Integrating Solar Shading

Max 3 points

The following requirement is met in regularly occupied spaces:

All vertical transparent envelope glazing has shading that meet one of the following:

Tier	Type of Shading	Points
1	Manual shading controllable by regular occupants at all times. Shades are regularly opened once a day for all days that the project is in use.	2
2	Shading is automated to prevent glare.	3

WELL now offers 16 different alternatives to submit the accreditation from other system, like the LEED v4, BREEAM of Green Star Interiors v1.

L06 – Daylight Simulation

Max. 2 points

This WELL feature requires projects to conduct daylight simulation calculations to make informed decisions around fenestration and shading, to provide appropriate daylight exposure for occupants.

Building design and planning has a huge impact on the amount of daylight exposure.

Conduct Daylight Simulation

The project is required to demonstrate that the following conditions have to be achieved on each floor of the building:

Regularly occupied spaces achieve one of the following targets:

Tier	Calculations per IES LM-83-12		Calculations per Annex A of CEN 17037:2018	Points
1	Average sDA 300,50% is achieved for >55% of regularly occupied floor area	OR	Target illuminance of 28fc is achieved for >50% of individual unit area throughout 50% of daylit hours of the year	1
2	Average sDA 300,50% is achieved for >75% of regularly occupied floor area	OR	Target illuminance of 28fc is achieved for >50% of individual unit area and average illuminance 9fc is achieved for >95% of individual unit area throughout 50% of daylit hours of the year	2

WELL now offers 12 different alternatives to submit the accreditation from other system, like the LEED v4, or Green Star Interiors v1 and Green Star Design and As Build v.1.

L07 – Visual Balance

Max. 2 point

This WELL feature requires projects to develop and implement strategies to create a visually comfortable lighting environment.
This feature is applicable for all types of environments (commercial and residential dwellings).

Commercial interiors use a mixture of different types of luminaires, including decorative lighting and daylight. Fluctuating light levels impact the visual comfort of occupants and could lead to eye fatigue.

Evidence suggests that thoughtful planning of lighting in a space that takes into account color temperature, daylight and electric light supports a visually comfortable lighting environment. The age of users needs to be taken into consideration to creating a productive space.

L07

Option 1

Parameters for Visual Balance

Ambient lighting in all regularly occupied spaces meets at least three of the following requirements:

A. Horizontal and vertical luminance contrast ratios for an ambient light system is no more than 10 between adjacent independently controlled zones.

B. Illuminance uniformity ratio of at least 0.4 or 1:2.5 (minimum light level : average light level) is achieved at any horizontal task plane within a space.

C. Automatic changes in lighting characteristics, such as light levels, changes in colour and distribution take place over a period of 10 minutes.

D. The Correlated Colour Temperature (CCT) in each room for similar fixtures is consistent (±200k) at any point in time.

L07

Option 2

Design for Visual Balance

Lighting is designed by a lighting professional and takes into account the following considerations:

A. Luminance ratios on vertical and horizontal adjacent zones.

B. Illuminance uniformity on horizontal task planes.

C. Changes in lighting characteristics, such as light levels, changes in colour and distribution.

D. Colour temperature of lights used.

WELL now offers 2 alternatives to submit the accreditation from other system, Green Star Interiors v1 and Green Star Design and As Build v.1.

L08 – Electric Light Quality

Max. 3 points

This WELL feature requires projects to consider characteristics of electric light used in the space, such as colour rendering and flicker.

Specifying lighting that uses high quality of light and don’t display signs of flickering contributes to a comfortable and healthy space.

L08

Part 1

Enhance Colour Rendering Quality

Max. 1 Point

For all spaces except circulation areas:

All luminaires in occupiable spaces (except decorative fixtures, emergency lights and other lighting for signage) meet at least one of the following colour rendering requirements. If tunable white lighting is used, the requirements are met at 1000k intervals from the lower end (with a minimum of 2700k) to the higher end (with a maximum of 5000k):

A. CRI ≥90
B. CRI ≥ 80 with R9 ≥ 50
C. IES Rf ≥ 78, IES Rg ≥ 100, -1% ≤ IES Rcs,h1 ≤ 15%

For circulation areas:

All luminaires spaces (except decorative fixtures, emergency lights and other lighting for signage) meet at least one of the following colour rendering requirements:

A. CRI ≥ 80
B. IES Rf ≥ 75, IES Rg ≥ 95, -7% ≤ IES Rcs,h1 ≤ 15%

L08

Part 2

Manage Flicker

Max. 2 Points

All luminaires in occupiable spaces, in combination with the appropriate controls (except decorative lights, emergency lights and other lighting for signage), used in regularly occupied spaces meet at least one of the following flicker requirements:

A. Classified as “reduced flicker operation” per California Title 24, when tested according to the requirements in Joint Appendix JA-10.
B. Recommended practices 1, 2 or 3 as defined by IEEE standard 1789-2015 LED.
C. Pst LM 1.0 and SVM 0.6 for indoor applications per NEMA 77-2017.

WELL now offers 2 alternatives to submit the accreditation from other system, like the LEED v4.

L09 – Occupant Lighting Control

Max. 3 points

This WELL feature requires projects to implement innovative lighting strategies that take into account personal preferences of users, as well as their interaction with the physical space.

Lighting environments that are customisable by individuals are shown to improve satisfaction levels.

The ages of occupants have an impact on the light levels required for visual acuity. Lighting guidelines recommend twice the light levels for individuals over the age of 65 years, compared to individuals between the ages of 25 years and 65 years.

L09

Part 1

Enhance Occupant Controllability

Max. 2 Points

The requirements for all spaces:

1. Lighting zones - Ambient lighting systems meet the following requirements:

All regularly occupied spaces contain lighting zones as shown in the table below (note: individual rooms smaller than the areas below and/or that have occupancies less than those listed in the table are considered separate zones):

Tier	Number of Zones		Number of Zones	Points
1	One per 650ft²	OR	One per 10 occupants	1
2	One per 320ft²	OR	One per 5 occupants	2

2. Lighting control system - Each lighting zone meets the following requirement:

A. Lighting systems have at least three levels or scenes that allow for changes in light levels and have the ability to change at least one of the following:
   1) Colour.
   2) Colour temperature.
   3) Distribution of light by controlling different groups of lights or through preset scenes.

B. All regular occupants have control over their immediate lighting environment through at least one of the following:
   1) Manual controls (e.g. switches or panels) located in the same place as each lighting zone.
   2) Digital interface available on a computer or phone.

C. Lighting presentation or projection on walls are separately controlled.

L09

Part 2

Provide Supplemental Lighting

Max. 1 Point

The requirements for all spaces:

1. Supplemental lighting For all spaces except dwelling spaces:

   A. Occupants are provided supplemental lighting, the light fixtures provided increase the light level on the task surface to at least twice the recommended light levels based on the reference used to meet Feature L02: Visual Lighting Design, Part 1.
   B. The supplemental light fixture is positioned to create minimal visual discomfort for the occupant or per manufacturer recommendations for installation.
   C. The supplemental light fixture is installed at least 9in from the edge of a workstation or other work surface (horizontal distance) or per manufacturer's instructions.

2. Supplemental lighting availability:

   A. Supplemental light fixtures are provided to occupants upon request at no cost. Requests are fulfilled within eight weeks.
   B. At least one supplemental light fixture is available to occupants for trial purposes.