

Feature 53: Visual Lighting Design

Part 2: Brightness Management Strategies

WELL Building Standard™ (WELL)™
WELL v1 with the Q1 2020 addenda

How to use this document:

This document is a guide for creating the professional narrative required for Part 2: Brightness Management Strategies Feature 53 Visual Lighting Design. This document is meant to demonstrate an acceptable degree of detail for a documentation submission. The level of detail is up to the discretion of the project team, as long as each of the requirements are sufficiently addressed.

- Part 2: Professional narrative outline and examples have been provided. Project teams must identify at least 2 of the 4 brightness management strategies (A-D) in their professional narrative.

The text is updated to the Q1 2020 version, which may vary from previous or future versions of WELL.

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FEATURE 53: VISUAL LIGHTING DESIGN

PART 2: BRIGHTNESS MANAGEMENT STRATEGIES

EXAMPLE PROFESSIONAL NARRATIVE

- A. Maximum brightness contrasts between main rooms and ancillary spaces, such as corridors and stairwells, are controlled through:
- a. *Example: While still maintaining lighting variety, main rooms do not exhibit 10 times greater or lesser luminance than ancillary spaces. The design team, specifically the architect and lighting consultants, worked together to ensure that this requirement was met by the design.*
 - b. *Example: Brightness contrasts between main rooms and ancillary spaces are managed through balanced ambient lighting design, efficient task lighting, and fluid transitions between spaces. While the light levels in the main rooms measure consistently between ____-____ lux across the horizontal work plane, those in stairways and corridors measure between ____-____ lux.*
 - c. *Example: Ancillary spaces, such as adjacent corridors, are separated from main rooms by glass partitions. Some stairs stand freely in an open office layout. Thus, light from the main rooms spills into the ancillary spaces to create fluid reduction in light levels, rather than stark contrast.*
- B. Maximum brightness contrasts between task surfaces and immediately adjacent surfaces, including adjacent visual display terminals screens, are controlled through:
- a. *Example: While still maintaining lighting variety, surfaces in building do not exhibit 3 times greater or lesser luminance than adjacent surfaces. The design team developed and implemented a “surface” design scheme in line with this goal.*
 - b. *Example: Brightness contrasts between task surfaces and immediately adjacent surfaces are controlled through consistent lighting and surface reflectivity. Ambient light levels measure around ____ lux across the horizontal work plane, and task lighting provides up to ____ lux where necessary. White-colored desktops limit the contrast between work materials, such as white paper and silver laptops. Computer monitors allow for adjustable brightness levels.*
 - c. *Example: The vast majority of work conducted in the space is on the computer; therefore, lighting on the work surface is designed to maintain an average illuminance of 300 lux. This metric is recommended as ideal for visual acuity at workstations using computer screens by the IES Lighting Handbook, 10th Edition, Ch 32, Reading and Writing - “Screen and Keyboard”.*
 - d. *Example: The Illuminating Engineering Society (IES) recommends a ratio of 3:1 between task surfaces and the immediate background. Thus, we designed workspaces areas with brightness levels of ____ footlamberts (fl vertical), adjacent walls with brightness levels of ____ fl vertical and computer levels with ____ fl vertical. The ratio of the computer monitor to average adjacent wall illuminance is thus ____:____, which meets IES parameters because the ratio is less than 3:1.*
- C. Brightness contrasts between task surfaces and remote, non-adjacent surfaces in the same room, are controlled through:
- a. *Example: While still maintaining lighting variety, surfaces do not exhibit 10 times greater or lesser luminance than other remote surfaces in the same room. The design team selected surface materials in line with this goal.*

- b. *Example: Brightness contrasts between task surfaces and remote, non-adjacent surfaces in the same room are controlled through high surface reflectivity and strong ambient lighting, around ____ lux across the horizontal plane at desk height. The vertical surfaces and furniture pieces in the room, which are various shades of white and beige, demonstrate light reflectance values that exhibit luminance levels similar to those at task surfaces. All luminaires, aside from select decorative fixtures, are programmed to dim continuously in response to daylight, which creates uniformity in illuminance and reflectance across the various zones in the space.*
 - c. *Example: Our new office complies with the Illuminating Engineering Society (IES) Guidelines, which recommends a ratio of 10:1 between the task and distant background. The task surfaces and distant vertical wall surfaces within the same room demonstrate compliance.*
- D. The way brightness is distributed across ceilings in a given room that maintains lighting variety but avoids both dark spots, or excessively bright, potentially glaring spots. Brightness contrasts across the ceilings are controlled through:
 - a. *Example: While still maintaining lighting variety, the space is designed so that one part of the ceiling cannot be 10 times greater or lesser luminance than another part of the ceiling in the same room. The design team selected ceiling finishes and lighting fixtures in line with this goal.*
 - b. *Example: The lighting design largely focuses on indirect lighting throughout the open office area. This indirect solution promotes visual comfort due to lack of stark contrast. The soft uplighting is broadly distributed across the exposed, white ceiling. The soft uplighting blends with ambient daylighting, enhanced by a continuous band of operable windows, to create uniformity throughout the open office.*
 - c. *Example: Our lighting design strives to create balance between natural and artificial lighting for optimal circadian conditions. The ceiling was coated with white paint for optimal surface reflectivity. Wall-mounted LED features send diffused, soft light across the ceiling at lumen outputs of at least ____ lumens/ft. In order to connect to nature, these fixtures continuously dim throughout the day to passively reflect natural lighting. While task lighting offers greater intensities at workstations, the ceiling maintains this uniform distribution.*