LEDALITE

by ⓢignify

WELL
Application Guide

Introduction

Ledalite NatureConnect natural lighting system is based on biophilic design, which uses elements of nature and natural analogues in interior spaces to make people feel happy and healthy. Unlike traditional lighting solutions, NatureConnect not only offers visual benefits but also biological and emotional benefits. It is therefore a powerful solution for meeting the design strategies of many preconditions and optimizations in WELL v2.

This WELL application guide gives a detailed description of how NatureConnect can contribute to each of these features, based on WELL v2, Q3 2021.

https://v2.wellcertified.com/wellv2/en/overview

NatureConnect and WELL

The following is an overview of WELL features where Ledalite NatureConnect can contribute providing the design strategies required to earn up to 14 points spread over different features and concepts.

Light features: Max 11 points

LIGHT

L01 Light Exposure (precondition)
L02 Visual Lighting Design (precondition)
L03 Circadian Lighting Design (3 points)
L04 Electric Light Glare Control (2 points)
L05 Visual Balance (1 point)
L08 Electric Light Quality (3 points)
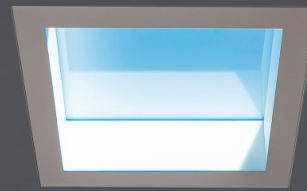L09 Occupant Lighting Control (2 points

Mind features: Max 2 points

MIND

M02 Nature and Place (precondition)
M07 Restorative Spaces (1 point)
M09 Enhanced Access to nature (1 point)

Movement features: Max 1 point

MOVEMENT

V03 Circulation Network (1 point)

Light features: max 11 points

L01 Light Exposure (precondition)

This WELL feature requires projects to provide appropriate light exposure in indoor environments through lighting strategies.

How NatureConnect contributes:
L01 can be met by achieving at least one point in Feature L03: Circadian Lighting Design.

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.

How NatureConnect contributes:
The Day rhythm of NatureConnect creates a circadian rhythm that automatically adjusts the brightness over the day. It is designed such that for a typical lighting design the minimum illuminance occurring in the rhythm can achieve at least 300 lux, which meets the requirements from the IES Lighting Handbook 10th Edition for typical office tasks.

Specifically for verification of this requirement, we offer IES files and the "IES guide" to support in simulating the minimum illuminance during the circadian rhythm of the NatureConnect system.

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.

How NatureConnect contributes:
The Day rhythm of NatureConnect creates a circadian rhythm that automatically adjusts the brightness and spectrum over the day. It is designed such that for a typical lighting design the vertical M-EDI occurring in the rhythm can achieve at least 250 lux during a 4-hour period, which meets the Tier 2 requirements from L03.

For an optimal experience and performance, it is recommended to follow the "NatureConnect Lighting design guide" recommendations, especially regarding the position of desks & chairs with respect to the NatureConnect Skylight.
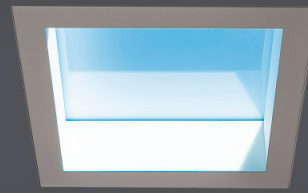
Specifically for verification of this requirement, we offer IES files and the "NatureConnect Lighting simulation tutorial" to support in simulating the vertical M-EDI during the circadian rhythm of the NatureConnect system.

L04 Visual Lighting Design (precondition)

This WELL feature requires projects to manage glare by using strategies, such as calculation of glare and choosing the appropriate light fixtures for the space.

How NatureConnect contributes:
The NatureConnect Daylight luminaire is designed to have a UGR of max. 16, which meets the L04 glare requirements.The NatureConnect Skylight and Lightscape luminaires are decorative fixtures and therefore are excluded from meeting the L04 glare requirements.

Ledalite NatureConnect
Natural lighting system

Light features: max 11 points

L07 Visual Balance (1 point)

This WELL feature requires projects to develop and implement strategies to create a visually comfortable lighting environment.

How NatureConnect contributes:
The NatureConnect lighting system and luminaires are designed such that low contrast and high uniformity ratios can be achieved.

Furthermore, automatic changes in light level and color are designed such that these changes are comfortable and not visually distracting.

L08 Electric Light Quality (3 points)

This WELL feature requires projects to take into account characteristics of electric light used in the space, such as color rendering and flicker.

How NatureConnect contributes:
The NatureConnect Daylight luminaire has a CRI of ≥90 and R9 of ≥50 over the full CCT-range, which meets the Color Rendering requirement of L08.

The NatureConnect Daylight luminaire has Pst LM ≤ 1.0 and SVM ≤ 0.6, which meets the Flicker requirement of L08.

The Color Rendering and Flicker requirements of L08 don't apply to the NatureConnect Skylight and Lightscape luminaires since they are decorative fixtures. But also these luminaires offer good light quality and low flicker for optimal comfort.
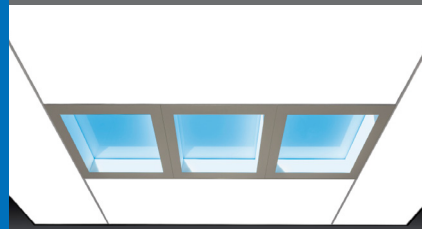
L09 Occupant Lighting Control (max 2 points)

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.

How NatureConnect contributes:
The NatureConnect system allows to create Lighting Zones that can be controlled individually.

This control is via wall-mounted control panels and allow to choose between 4 different scenes (Day rhythm, Energize, Relax, Present) that have different lighting levels and colors. It is important that these zones are already defined when making the Lighting & Controls design, to ensure that the right NatureConnect control system hardware is ordered to support these Lighting Zones.

Mind features: max 2 points

M02 Nature & Place (precondition)

This WELL feature requires the integration of nature throughout the project, as well as design that celebrates the project's unique identity and inspires human delight.

How NatureConnect contributes:
NatureConnect can contribute to M02 part 1: Provide Connection to Nature, by creating colors and color gradients of natural light, and creating clues of nature views.

M07 Restorative Spaces (1 point)

This WELL feature requires projects to provide spaces that promote a restorative environment and encourage relief from mental fatigue and stress.
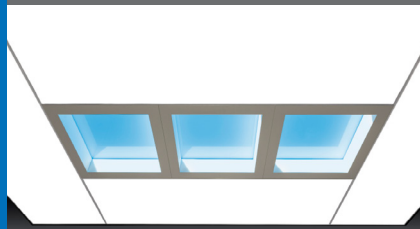
How NatureConnect contributes:
For a restorative space, NatureConnect can contribute via Dimmable lighting, Calming colors and Nature incorporation. Especially the Relax scene is specifically designed for relief from mental fatigue and stress.

M09 Enhanced Access to Nature (1 point)

This WELL feature requires the integration of nature and natural elements into the interior and exterior of the project, as well as the provision of nature views and nearby nature, such as green and blue spaces.

How NatureConnect contributes:
NatureConnect can contribute to M09 part 1: Provide Nature Access Indoors by creating a (simulated) view outside from the workstations and seating in the floor plan.

Movement features: max 1 point.

V03 Circulation Network (1 point)

This WELL feature requires projects to design staircases for everyday use and leverage aesthetics, visibility/positioning, and prompts to encourage stair use.

How NatureConnect contributes:
NatureConnect can contribute to achieve the requirements of V03 part 1: Design Aesthetic Staircases, by creating sufficient light levels and adding natural design elements with the NatureConnect Lightscape or Skylight luminaire.