

NatureConnect

by  signify

Lighting design guide

April 2024



Introduction

NatureConnect system has been developed to bring the benefits of natural light indoors. To create engaging and attractive indoor environments.

Natural daylight is good for us.

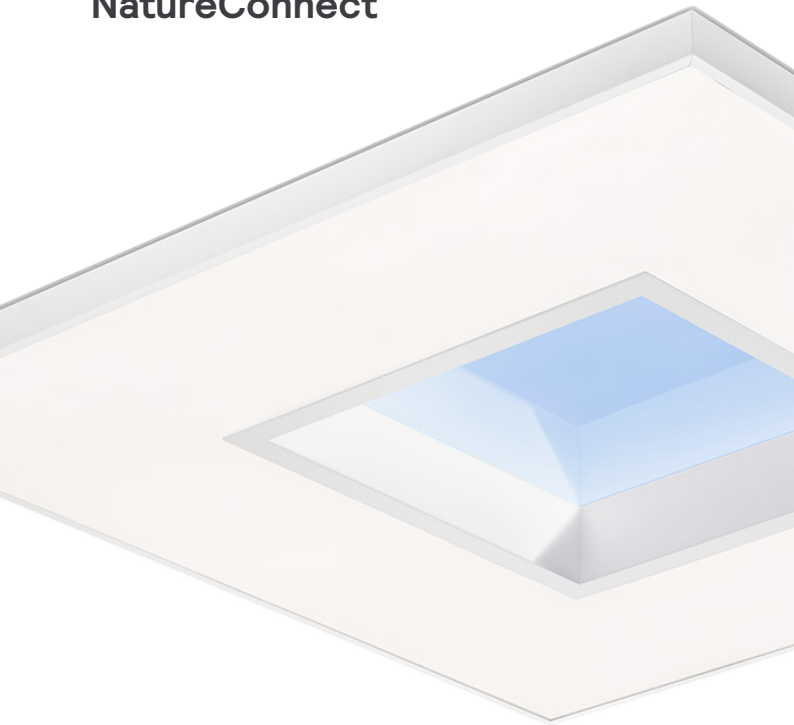
It has important effect on our comfort, health and well-being, helping us see clearly, making us feel well and energizing us every day of our lives.

Where natural daylight can't access, NatureConnect system is able to recreate the same constant cycles and variations of natural light.

This Lighting design guide provides indications how to create a lighting plan that takes in consideration three fundamental concepts:

- support natural rhythm
- provide a view to the sky
- being immersed in nature

5 benefits that can be reached with a good lighting design with NatureConnect



Having a view to the sky to create a feeling of spaciousness and connection with nature.



Bringing indoor the colors and dynamics from nature for a fully immersive experience.



Stimulating wellbeing with an energy boost with the Melanopic spectrum.

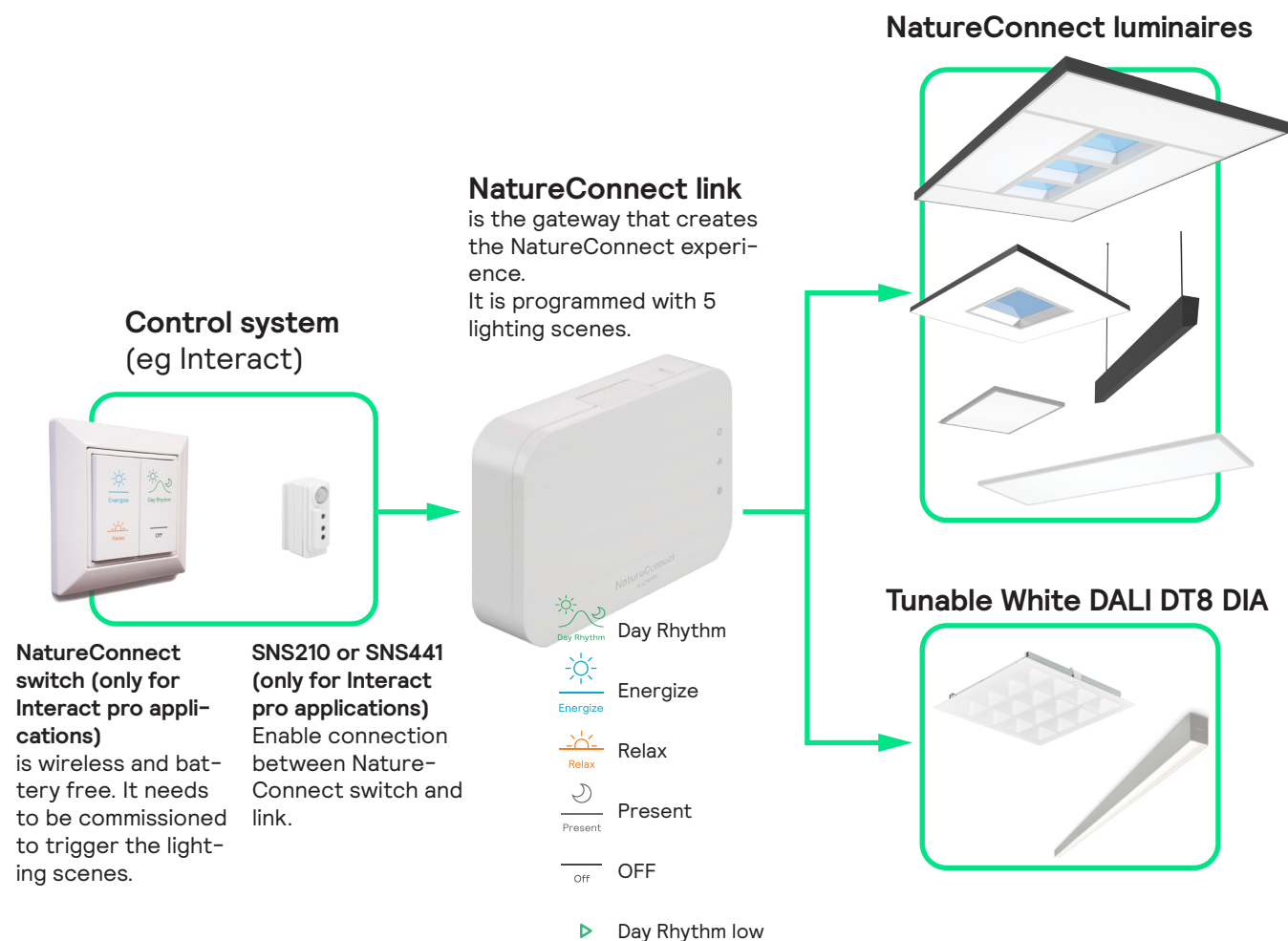


Creating inspiring environments with lack of natural daylight with low glare.



Mimicking the daily rhythm of the natural daylight via different scenes for different applications.

NatureConnect system architecture with Interact pro



- ▶ Consult [NatureConnect experience guide](#) to learn more about the behavior of the system.
- ▶ Consult [NatureConnect system integration guide](#) to learn more about the lighting control system and integration options.

NatureConnect portfolio

Standard islands

Large island



3x Skylight W60L60
4x Daylight W60L180

Small island



3x Skylight W60L60
2x Daylight W60L180

Mini island



Building blocks: NatureConnect standalone luminaires can be combined in different customized layouts.

Skylight W60L60



It's not recommended to use Skylight alone because of the amount of blue light emitted. A good balance is achieved combining 2x Daylight W60L60 with 1x Skylight W60L60. It is not intended to be suspended in an open ceiling.

Daylight W60L180



Can be used as standalone luminaires to improve lighting uniformity in the room.

Daylight W60L60



Can be used as standalone luminaires to improve lighting uniformity in the room.

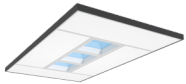






Lightscape





It can emphasize the NatureConnect experience.

NatureConnect portfolio



NatureConnect luminaires

						
NatureConnect large island	NatureConnect small island	NatureConnect skylight white or grey	NatureConnect lightscape white or grey	Daylight panel W60L60	Daylight panel W60L180	Skylight panel W60L60







Compatible Philips DALI DT8 luminaires

		
PowerBalance Gen2 RC46xB TW9 DIA versions	PowerBalance BioUp TWBU DIA versions	TrueLine TW9 DIA

NatureConnect controls

	
NatureConnect link	NatureConnect switch

Interact

					
SNS210 or SNS441	Surface mounted bracket for sensor	Recessed mounted bracket for sensor	Power supply Xi SR bridge	Battery powered sensor	Wireless Gateway



Collect information from customers

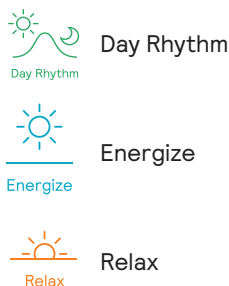
- Function of the space where NatureConnect should be installed
- Dimensions of the room
- Structure of the ceiling (presence and positioning of HVAC elements, sprinklers, projectors,...)
- Layout of the furniture, windows, apertures



Lighting design

Define light levels

NatureConnect link is programmed with different dynamic scenes, main ones are:



Day Rhythm scene is the default one that starts automatically, when turning on the system. It is a dynamic scene that mimics natural day light and changes light levels and CCT throughout the day, to be aligned with the real time of the day.



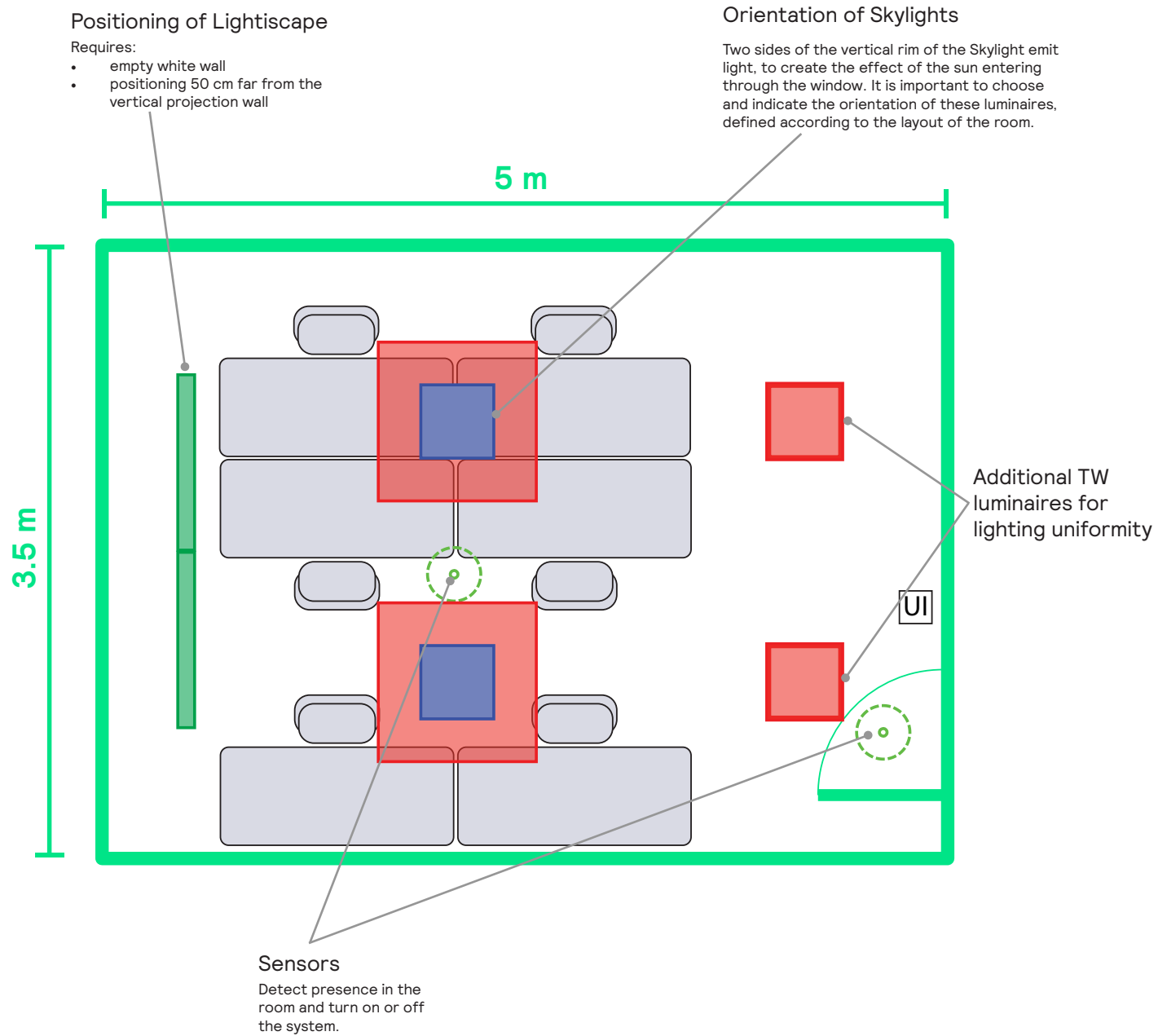
When doing a simulation it's important to take in consideration the variation of the light emitted by the system, during the day.

Illuminance on the task area depends on the function of the space and the requirements or expectations of the customer.

The example below refers to an office application.

Lighting design for an office 18 m² ca, 2.8 m ceiling height, 4 to 6 work places.

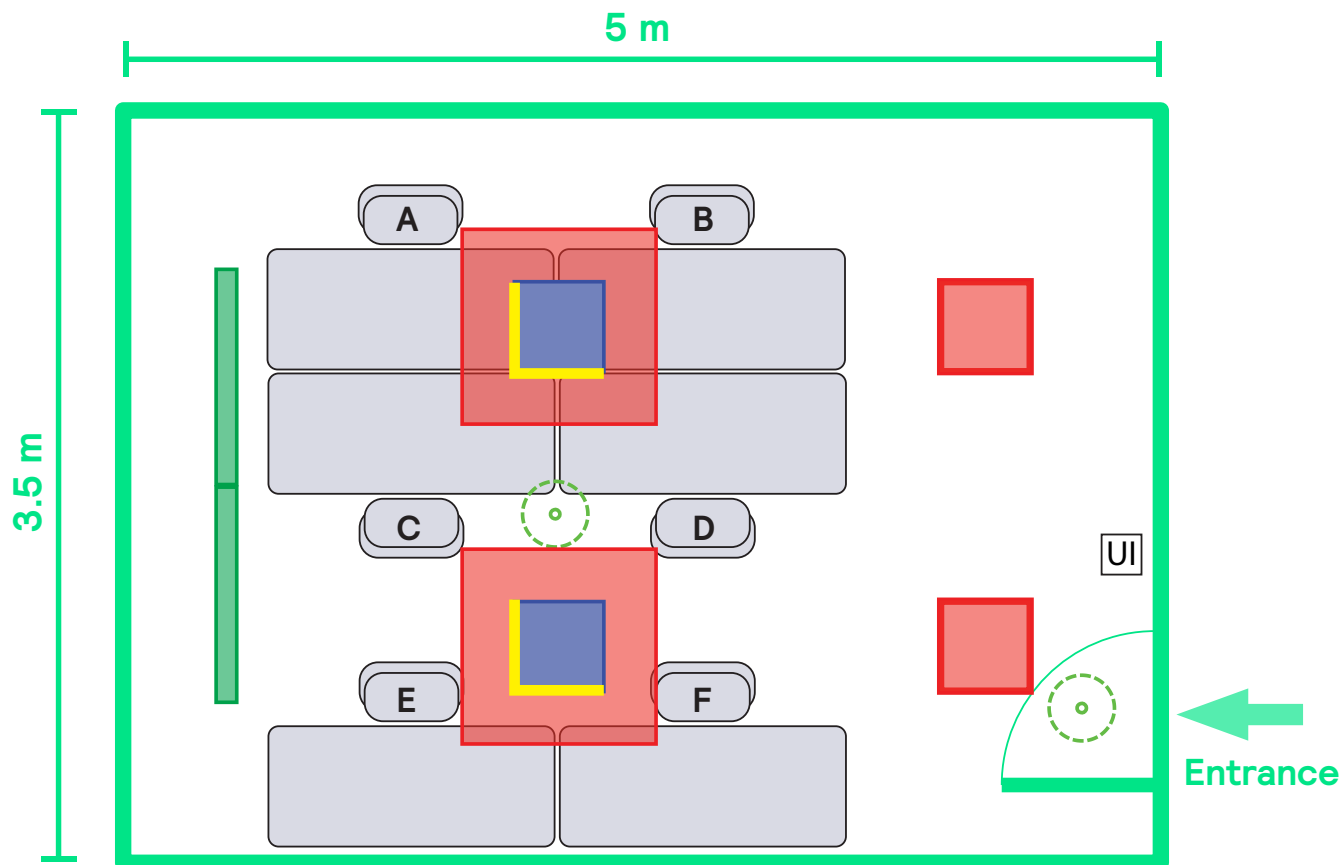
Target light level on the working desk/area during mid of the day is 1000 lx av.



Orientation of Skylights

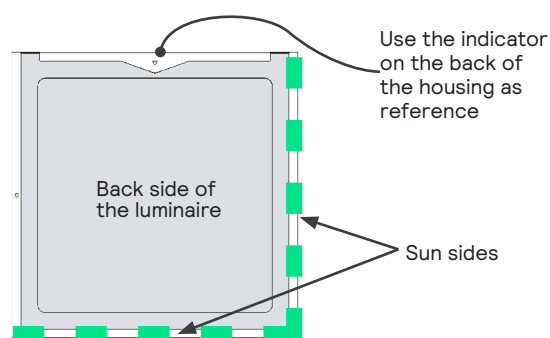
The most appropriate orientation of the Skylight is determined by:

- the position of the main entrance of the room: everyone entering the room will immediately see the effect of the sun
- the majority of the people spending time in the room will notice the effect. In the example below only from position C the sun effect is not visible.



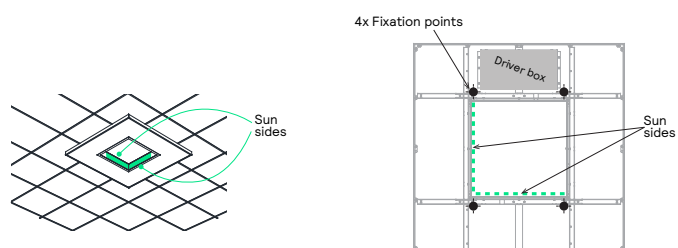
With Skylight W60L60

Define the orientation of the Skylight thanks to the arrow marked on top of the housing of the luminaire.



With Mini island

Define the orientation of the Skylight using the position of the driver as reference.



Positioning of Lightscape

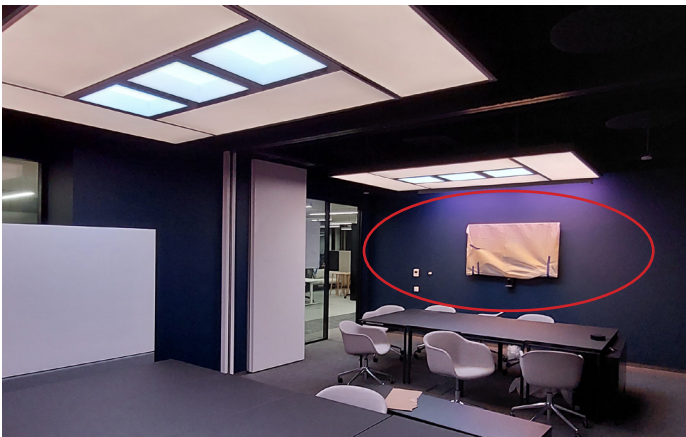
Benefits of adding Lightscape in NatureConnect lighting designs:

- Delivers a landscape effect
- Indoor spaces are perceived as more spacious.
- It will give a better perception of dynamic Day Rhythm scene.

Requirements to position correctly the luminaire:

- Projection wall should be white or painted with light color and matt.
- Luminaire needs to be installed 50 cm far from the projection wall.

Lightsapes misuses:



Photometric files for simulations

Eulumdat and IES

NatureConnect system is dynamic during the day and includes different scenes. There are available multiple versions of the photometric files for each luminaire:



Day Rhythm scene:
from 08.00 to 17.00
from 20.00 to 06.00



Energize
Day
Night

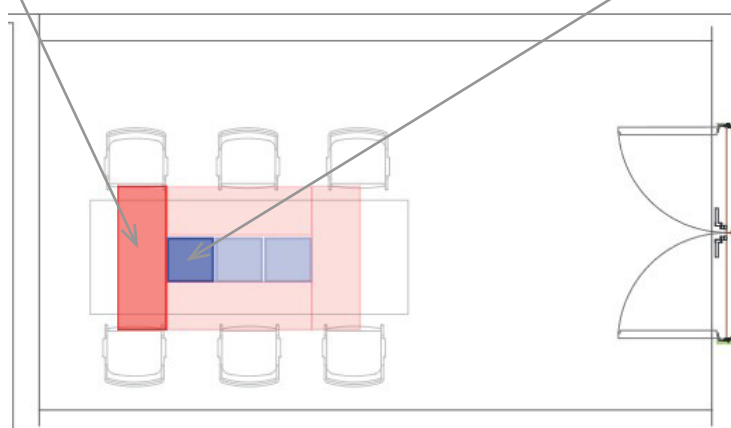
These files allows to simulate the real behavior of the system.

Example - lighting simulation of a large island for Day Rhythm at 12.00:



NatureConnect Daylight W60L180_08.00 to 17.00.Idt

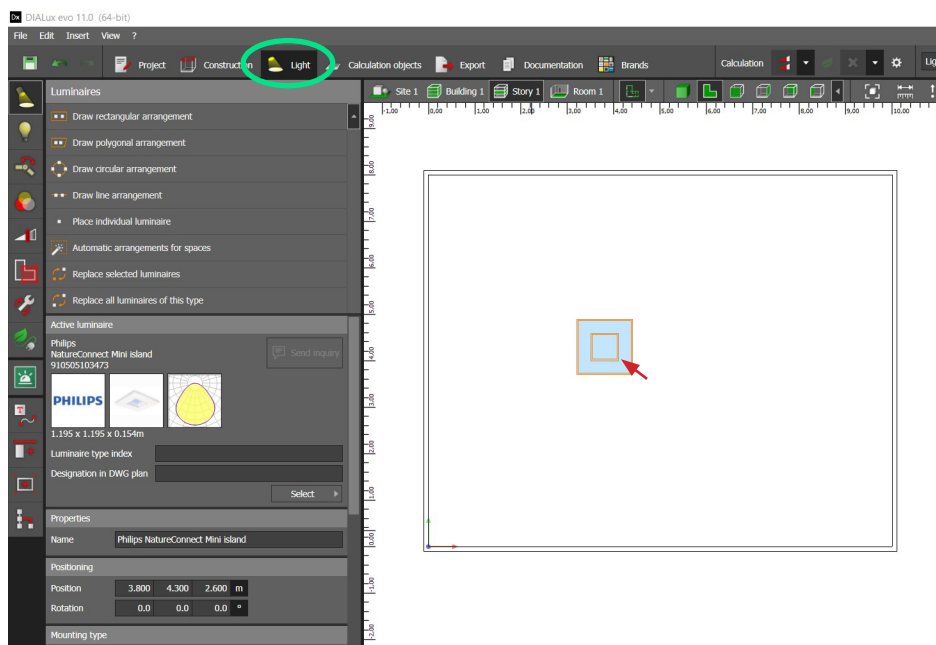
NatureConnect Skylight W60L60_08.00 to 17.00.Idt



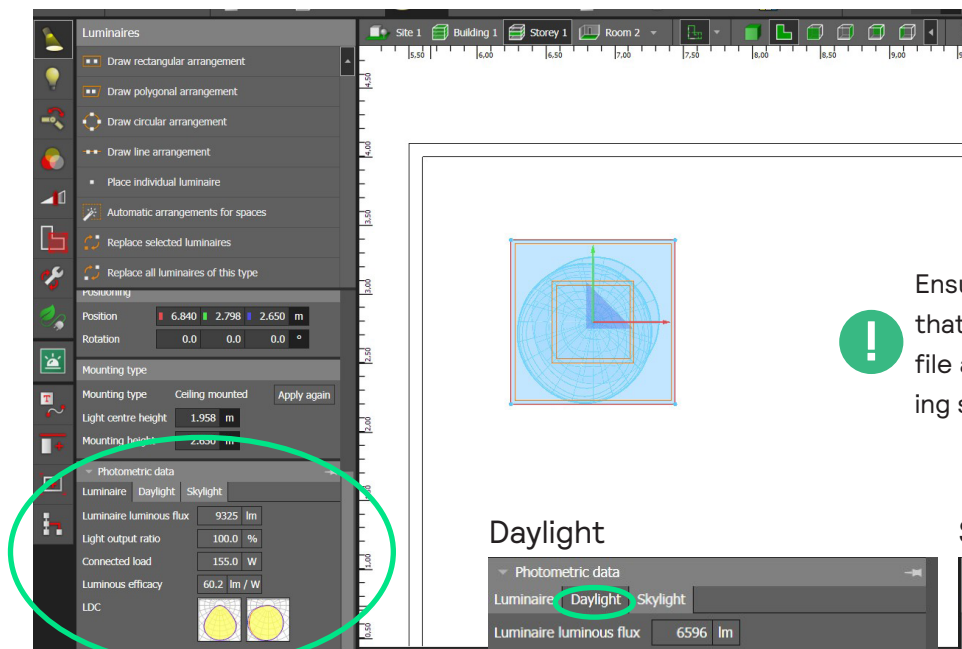
Simulation with Dialux - .ULD files

The .ULD files of NatureConnect large island, small island and mini island can be used when doing simulation with Dialux. Each file includes different setting for the different time of the day.

How to use ULD file



Once positioned the .ULD file in the room select the luminaire and in the "Light" tab go to Photometric files



Ensure that all the luminaires that are included in the ULD file are set to the same lighting scene.

Daylight

Photometric data	
Luminaire	Daylight
Luminaire luminous flux	6596 lm
Light output ratio	100.0 %
Connected load	95.0 W
Luminous efficacy	69.4 lm / W
Fitting	Daylight_Mini island_8.00 to17.00
Change	6595 lm 4000 K 60.0 W
LDC	Emergency lighting factor 100.00 %

Skylight

Photometric data	
Luminaire	Skylight
Luminaire luminous flux	2729 lm
Light output ratio	100.0 %
Connected load	60.0 W
Luminous efficacy	45.5 lm / W
Fitting	Skylight_Mini island_8.00 to17.00
Change	2730 lm 6800 K 40.0 W
LDC	Emergency lighting factor 100.00 %

NatureConnect applications

NatureConnect is a perfect fit for any professional indoor environment such as: Office, hospitality, hospitals, care homes and retail.

OFFICES

Create a comfortable, engaging and attractive workplace.

- Offices
- Meeting rooms
- Open office



HOSPITALITY

Create a unique experience and create revenues.

- Meeting rooms
- Conference rooms
- Office areas
- Receptions



HOSPITALS

Improving circadian rhythm for patients and create a better workplace for the staff.

- Patient rooms
- Examination spaces
- Nurse stations
- Waiting areas



CARE HOMES

Improving circadian rhythm for a better sleep.

- Elderly care living rooms
- Lunch areas



RETAIL

Bring marketplace indoor

- Fresh food
- Special areas
- Elderly care living rooms
- Lunch areas



► Consult **NatureConnect applications leaflet** for different examples of NatureConnect lighting designs.

Scan the QR code for more information about NatureConnect system:



<https://www.signify.com/global/innovation/natureconnect/download-assets>

Or send a request to:

natureconnect@signify.com

