

Silhouettes of birds and squirrels can sometimes be spotted in the projected laser-cut leaf patterns, creating a game of hide-and-seek for visitors to play.

Beersnielsen turned the 7.5-metre-high vaulted ceiling into a blank canvas on which to project a program of shadow and light.

Spotlights placed in alcoves in the arched ceiling are aimed at the floor to help illuminate the interior without affecting the display.

Each chandelier has 20 adjustable and dimmable white-light LEDs with specially designed brackets, plus four downlights directed at the public spaces below.

Casting Shadows

AT A DUTCH NATURE RESERVE, IMMERSIVE INTERIOR LIGHTING FOSTERS A STRONG LINK TO THE OUTDOORS

WORDS _Kendra Jackson

PHOTOS _Stijn Bollaert

With its floor-to-ceiling glazing along one entire side, the new visitor pavilion for De Hoge Veluwe National Park (completed in the summer of 2019 by architecture firms De Zwarte Hond and Monadnock) affords those inside spectacular views of the surroundings. This isn't surprising, considering said surroundings are 5,400 hectares of mixed environments that make up one of the Netherlands' largest nature reserves. What may surprise is how that inside-outside connection has been reinforced: Reflected on the 7.5-metre-high vaulted ceilings is an interplay of light and shadow that evokes the sense of being under a forest canopy as a gentle breeze rustles the branches.

The immersive experience was formulated by Sjoerd van Beers and Juliette Nielsen and their team

of specialists at Rotterdam-based lighting design firm Beersnielsen, who were initially approached by the architects in 2013 to develop a series of conventional projections. But the lighting designers proposed a more playful and dynamic storytelling approach: a set of large-scale saddle-shaped chandeliers ultimately animated by an algorithm composed of pixelated videos of natural motions, such as light dancing on water and wind moving through trees and grasses.

Over six years, van Beers and his team refined the chandeliers' design through seven prototypes, evolving from a small domed glass shade to the 2.3-by-1.5-metre laser-cut aluminum sheets now suspended in the pavilion. Situated at the centre of each and held in place by four rigid wire arms is a light-engine matrix made up of 20 LEDs and a video input, preset with three 15-minute program loops that fluctuate the light levels to create the ever-changing shadows. Rather than multi-hued illumination, white light was chosen, says van Beers, "to 'fight' against the daylight, though we are testing sets of coloured glass filters for seasonal change."

While van Beers admits the process was a challenge, the end result — a charming, one-of-a-kind salute to nature — was worth it. beersnielsen.nl



ABOVE: TDE Lighttech of the Netherlands provide LED spotlights and drivers with a minimal heat sink for the project's nine chandeliers (one is shown here in the pavilion's restaurant). The fixtures themselves were manufactured by Rotterdam's Lens BV.