

PROFESSIONAL **LIGHTING** DESIGN



Magazine for
professional lighting design

MAIN TOPIC
Atmosphere and light

LIGHTING DESIGN
Blue Lagoon Spa in Iceland

Social House Restaurant
in Las Vegas/USA

Club Minerva Bar in Kyoto/J

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Atmosphere in the Asian sense

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The beginnings of
scenic lighting design

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Kazuo Katase

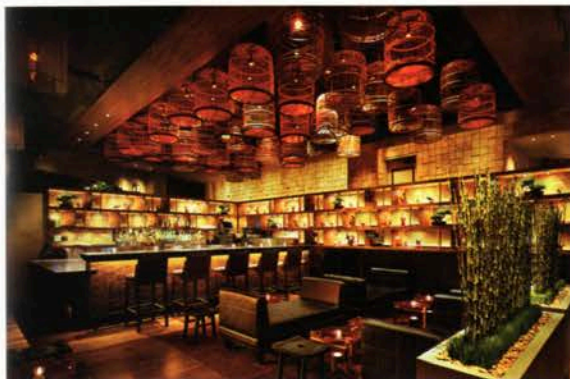
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Wireless DMX

Blue Lagoon/IS

Lighting design: Guðjón L. Sigurðsson

Iceland is just something else! The Atlantic island near the northern arctic circle is a conglomeration of extremes – fire and water in various forms being the most usual. What is especially spectacular in Iceland, however, are the lighting conditions: summertime with bright nights, fascinating northern lights, and prolonged darkness during the winter months. Icelandic lighting designer Guðjón L. Sigurðsson talked to us about the different kinds of natural light on the island and the latest lighting design trends. The beautiful images of the Blue Lagoon Spa give an impression of what Icelandic lighting design means in practice.

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Social House Restaurant in Las Vegas/USA

Lighting design: Focus Lighting

It is not the objects in a space that give away what culture we are in, but the way the objects and spaces are seen under the lighting conditions. We take a look at the Social House Restaurant in Las Vegas – lighting designed by Focus Lighting – to understand more about the correlation of light, culture and atmosphere.

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Club Minerva/J

Lighting design: Masanobu Takeishi

When dawn breaks and Club Minerva is lit by sunlight alone, it looks like yet another historical town house in Kyoto. At night, however, when the lights are switched on and the club opens its doors to welcome guests, it is a whole different story: the combination of traditional building materials and state-of-the-art lighting technology make for a unique nighttime environment. Viewing this tradi-

tional location as a clean canvas, the interior designer and lighting designer have pooled their efforts in a clearly impressionist approach.

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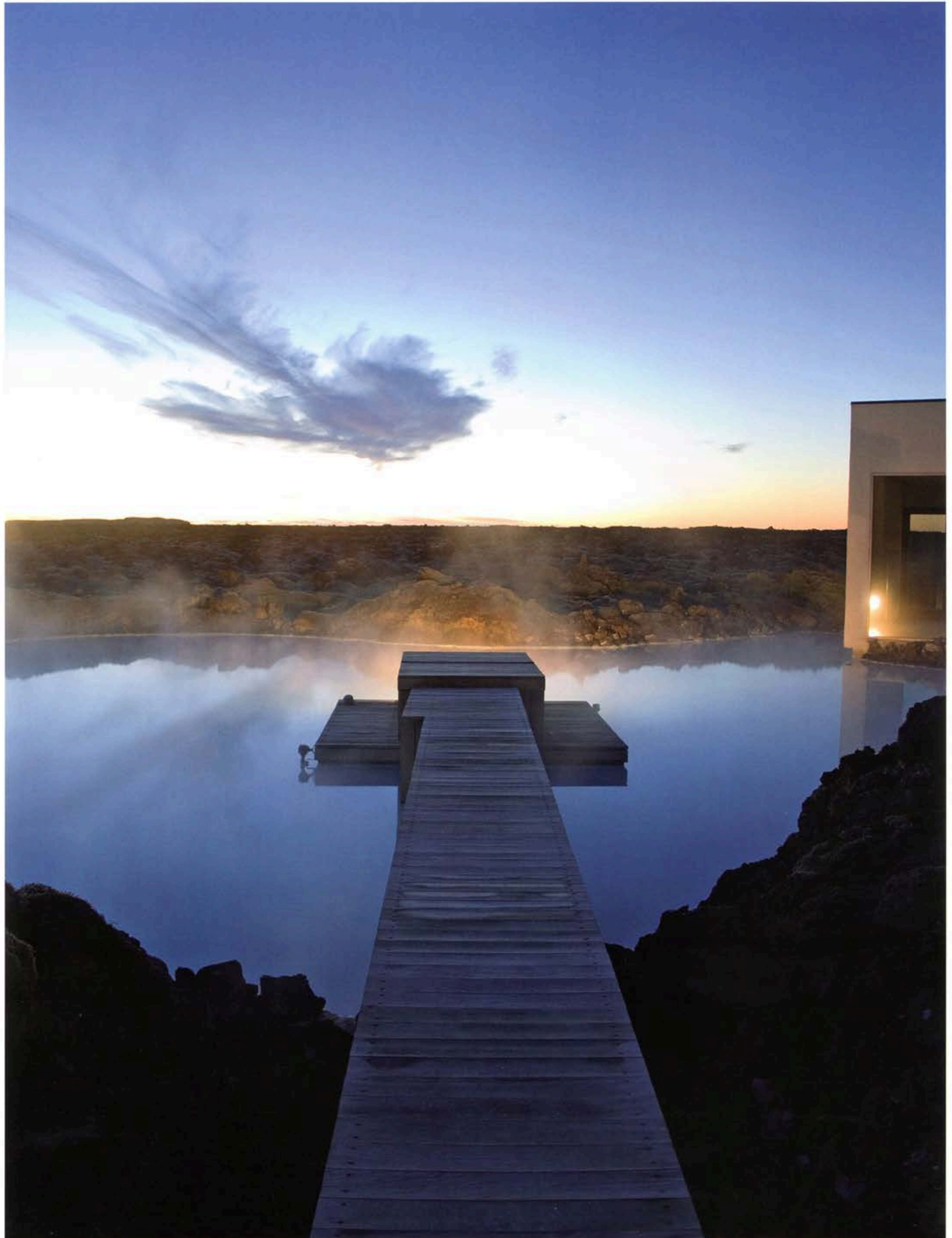
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Land of extremes

Icelandic lighting design trends and the Blue Lagoon Spa.

Text: Guðjón L. Sigurðsson, Kai Becker

Photos: Rafn Sigurbjörnsson

Iceland is just something else! The Atlantic island near the northern arctic circle is a conglomeration of extremes – fire and water in various forms being the most usual. What is especially spectacular in Iceland, however, are the lighting conditions: summertime with bright nights, fascinating northern lights, and prolonged darkness during the winter months. Icelandic lighting designer Guðjón L. Sigurðsson talked to us about the different kinds of natural light on the island and the latest lighting design trends. The beautiful images of the Blue Lagoon Spa give an impression of what Icelandic lighting design means in practice.

Erik the Red, Leif Eriksson and Björk – all names we readily associate with Iceland. But the land of fire and ice has far more to offer: the island covers 103,000 square kilometres, around eleven per cent of which is covered with glaciers. It is the second largest island state in Europe after the United Kingdom and the largest volcanic island in the world. Around 192,000 of the approximately 307,000 inhabitants live in the capital Reykjavík. Tourism has become a major source of income in the last few years, and increasingly more Icelandic people are earning a living from accommodating or entertaining foreign guests. Official statistics recorded for the year 2000 show that for the first time there were more tourists on the island than original inhabitants. What visitors enjoy

most are the raw, natural countryside, the glaciers and the pony treks, and last but not least, the Icelandic bathing culture. One of the most popular baths is the Blue Lagoon open-air spa near Grindavík, a small town not far from the capital.

An Icelandic success story: the Blue Lagoon

The success the lagoon has enjoyed since the 1990's is derived from its underground sources: the water is claimed to be therapeutically beneficial for a number of ailments. This is due to the unique composition of minerals and algae in the geothermal sea water. The spa has now been extended, thus adding a further chapter to the success story of the health centre. Just 500 metres from the



The new health centre and spa is set in a bizarre lava landscape. Large windows allow daylight into the building and afford breathtaking views of the grandiose countryside. The hotel area to the left of the picture creates its own inner courtyard. Each hotel room has its own patio which flows seamlessly into the natural hilly surroundings. The lagoon reaches right up to the building, flowing out into the rugged countryside in the other direction.

main building and embedded in the bizarre natural landscape of the volcanic island, a new bathing complex awaits spa guests. The Blue Lagoon is a 500 square metre stretch of water that winds its way through the natural furrows in the lava landscape and round a hill that separates the pool into two parts. One pool is directly linked to the clinic and the other is located slightly further away in a rugged, natural setting.

The architect focussed on creating a natural looking building that would harmonise perfectly with the surrounding countryside. The 2,700 square metre new building is single-storey only, comprising a clinic section and 15 hotel rooms for permanent guests. The different sections of the building vary slightly in height, reiterating the rhythm of the rugged hilly landscape. The materials used for the new building also reflect the natural environment: prefabricated concrete elements, insulated from the outside, have received a special plaster coating sprinkled with tiny lava grains from the hills in the region. The flat roof is also covered with larger pieces of lava, allowing the building to blend in perfectly with its surroundings – the tough materials providing an ideal windbreaker into the bargain.

It was important to the architect to achieve maximum quantities of daylight in the interior spaces to allow users to benefit from the unique qualities of Nordic light. The consistency of this design approach is demonstrated in the extensively glazed facades. The treatment rooms and the service area border on the lagoon, whereas the hotel rooms have wonderful views of the landscape. The spacious rooms for the permanent guests have large windows and each has its own patio which flows seamlessly into the natural surroundings. The hotel wing forms a closed inner courtyard which poses a counterpart to the wild volcanic landscape outside the complex.

A white wall runs through the entire health centre, leading visitors from the entrance to the lagoon; the colour of the wall is a reference to the silicon in the spring water. Since the clinic is frequented by hotel guests as well as day visitors, the wall separates the areas accessible to all spa users from those dedicated to the hotel guests.

Between light and shadow

Lighting designer Guðjón L. Sigurðsson was assigned to develop a lighting concept for the new spa. The concept for the electric lighting is based on local daylight conditions, a fact which is key to all lighting design. It is fascinating to listen to someone from Iceland describing their local lighting conditions. Especially impressive are the strong contrasts in daylight, which are no way comparable to the daylight experience in Central Europe, for

example. Icelander Unnur Jökulsdóttir shared her experience of mid-summer light with us: "I walk through the garden down to the white sandy beach and look northwards towards the sun. It is 1.30 am. The sun has bathed everything in golden or flaming red light that is slowly sinking into the sea, tired and swollen after a long day. Then, just before it appears to sit on the horizon, it changes its appearance: it turns pale yellow. Innocently the sun begins to dance its way upwards again, gliding towards a new day. When I wake up eight hours later, the sun is high in the sky somewhere in the south east."

As a consequence, no artificial lighting is required outdoors the whole summer, and indoors lighting designers only need to apply electric light in windowless spaces. The Icelandic people love this time of year because the daylight conditions offer the rare opportunity to see and perceive nature in all its inherent colours all day long.

But there is no light without darkness! However beautiful the summer months may be, during the winter the situation is in reverse, and it is so dark that you might think all that talk about "dark winter months" originated here. In fact, during some months of the year the island is in complete darkness. This all sounds horrific to the outsider, but the locals have come to appreciate the positive aspects of this natural phenomenon, as Guðjón L. Sigurðsson expressly assured us. According to him, many Icelanders look forward to the darkness and have discovered different aspects of its beauty: they enjoy starlight and the aurora borealis. The flickering light of a candle is apparently enough for the people to feel comfortable and at ease with. And when the countryside is covered with snow and the moon shines down on it, those who suffer from winter depression gain some relief at least to help them cope.

In the winter, electric light takes the stage to accept the challenge to substitute the total lack of daylight. According to the lighting designer we spoke to, people have started using electric light differently over the last few years. Since the people do not want to do without the kind of ambience daylight offers them, the demand for electric lighting has increased. This is a trend that applies to the domestic as well as to the professional environment. People are now also more critical about the quality of light applied and are showing an interest in colour temperature and colour rendering properties of light sources. They do not understand why electric light should differ in quality from daylight. To meet these expectations and needs, Icelandic lighting designers today are required to use high-quality light sources. Since Iceland lies so far north (66°), many non-Icelandic people might think that the local lighting designers would opt

The moss-covered field of lava on which the building stands is known as "Illahraun", Lava of the Evil One; the Atlantic Ocean can be seen in the background. The single-storey building nestles contentedly into the undulating terrain, the roof covered with lava stones from the region. To the right of the picture, the hotel rooms, whose little patios border on the naked rock.





Left: Wood is one of the prime materials used inside the building. The dark walls reflect the mood of the surrounding countryside. Ceiling-mounted spotlights create interest in the space.

Below left: Ceiling-mounted spotlights graze light over the roughly plastered walls.

Below: The hotel rooms have large windows and their own patio. The walls are roughly plastered and painted in a natural earth colour. The light from the free-standing luminaire enhances the warm colour of the wooden floor.



for lamps with a low colour temperature in an attempt to interpret the light generated by the spectacular sunrises and sunsets on the island. In fact, Guðjón Sigurðsson finds he is using increasingly more lamps with a higher colour temperature of 4000 degrees Kelvin in working spaces, for examples. The application of these light sources is a purposeful contribution towards the production of melatonin in our bodies, and of aligning the human perception of the electric light to that of daylight.

These changes in public demand have meant higher investments in lighting and have also led to a basic change in lighting design in Iceland. This has resulted in more qualified and experienced lighting designers offering their services on the market. They are familiar with new trends and the respective technical requirements. Icelandic lighting designers are generally independent consultants working in association with electrical engineers and receiving their fee directly from the client of the particular project. In practice, they collaborate closely with the architects and develop the lighting solution for the respective project together with them. Some wholesalers offer lighting design services alongside the sale of products, covering the costs for their planning support through the sale of the recommended products.

Lighting design made in Iceland: Blue Lagoon

Guðjón L. Sigurðsson views the Blue Lagoon project as an excellent example of good cooperation between the architects and the owner during the time he was working on the lighting design for the spa. In this project the

lighting designers were also expected to take health aspects into consideration when developing their concept. It became clear at the start of the design phase that the lighting could have a significant influence on the feeling of well-being of the patients being treated at the centre. Many users have skin complaints that mean the sufferers have visible sores, so one of the central elements of the brief for the lighting designers was to reduce the visibility of the sores as far as possible. While developing the project the lighting designers contacted SPOEX, the official Icelandic organisation for psoriasis and eczema sufferers. The organisation supported the lighting design team through experiments to establish the optimum colour temperature of the light sources to be applied in the health centre. Tests were carried out using colour temperatures between 2400 and 6500 degrees Kelvin with colour rendering indices up to Ra 90. These tests showed that patients' sores were less conspicuous under light sources with colour temperatures of lower colour temperatures. On the other hand, the affected skin looked more "angry" when the red component in the spectrum was reduced and the blue content increased. The experiments led to the decision to predominantly use cold cathode lamps up to 2400 degrees Kelvin in the areas where patients are treated. In contrast, 3000 degree Kelvin lamps were applied in the consultation rooms. A further advantage of using cold cathode lighting is the long service life of the lamps, which is calculated at between 50,000 to 100,000 hours depending on the milliamps. It is simple to use dimmers and there



There are worse places to be than this! At dusk the steam from the hot spring rises between the bizarre rock formations. Pendant luminaires relate discreetly to the formal language of the architecture. The luminaires concealed beneath the benches along the side of the pool are equipped with cold cathode lamps.

are no fluctuations in the light levels: there is no flicker on ignition, and no disturbing radio interference.

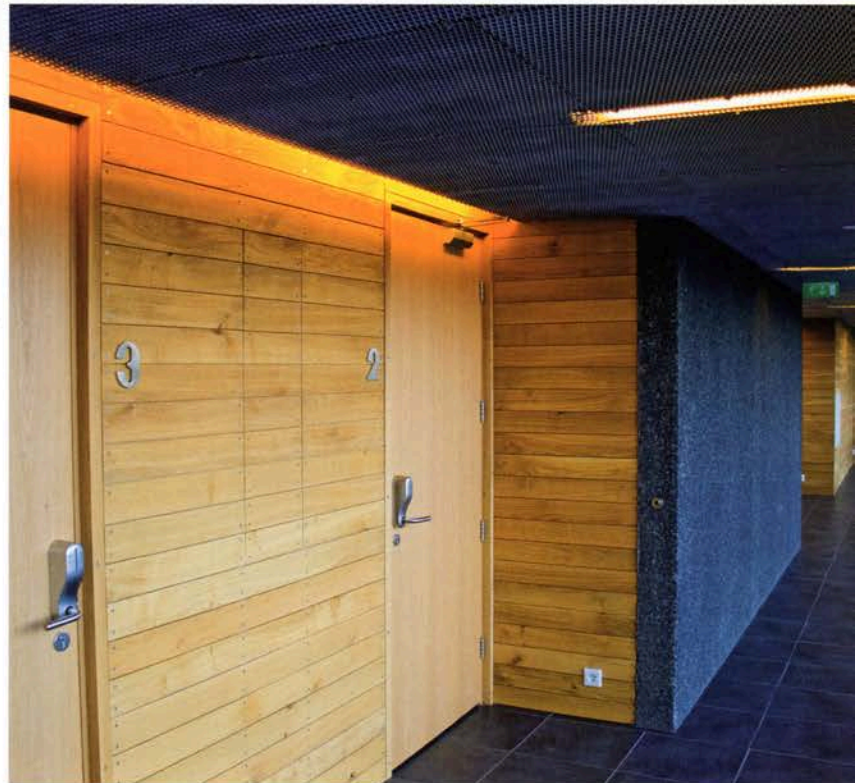
There is a special rest room in the treatment area at Blue Lagoon for people suffering from depression, which often occurs in connection with the long, dark winter months. A large number of foreign visitors who are not familiar with the dark Icelandic winter and at least temporarily need to be immersed in an environment in which daylight is imitated also benefit from this facility. This room has large windows and skylights in the ceiling. A kind of interim luminous ceiling comprising spanned fabric was installed in this space. Fluorescent lamps of different colour temperatures (3000 to 8000 degrees Kelvin) spaced at 20 centimetres are installed behind the fabric. The spanned fabric allows the daylight that enters through the skylights plus the electric light that can be switched in four steps to permeate the space. The carefully designed lighting makes this a very popular space. Patients also have a great view of the landscape through a window that imitates a hole that has been cut in a wall of lava.

The Blue Lagoon is not only highly popular with visitors. It also convinced the jury who were deciding on the winner of the Nordic Lighting Award. According to the judges, the lighting design underlines among other things the sensitive architectural and spatial transition from inside to outside – outside being the rugged, undulterated Icelandic landscape. The project received the 2006 Nordic Lighting Award.



Above: Guests dining in the restaurant can also enjoy magnificent outdoor views. Skylights allow more daylight to enter the space. Recessed ceiling luminaires equipped with cold cathode lamps mark the transition to the lower section of the room.

Below: The doors to the hotel rooms are indirectly lit by concealed luminaires equipped with cold cathode lamps.





Guðjón L.
Sigurðsson

Project team:

Client: Eldvörp fasteignafélag

Architect: VA-architects / Sigridur Sigþorsdóttir, architect FAI

Design team:

Ingunn Lilliendahl, architect FAÍ / Olga

Gudrun Sigfusdóttir, architect FAÍ

Lighting designer:

Guðjón L. Sigurðsson / Raftækning hf

Products applied:

Exterior:

iGuzzini - Comfort 26 watt TC-D; Radius 70 watt HIT-DE; Linea-Luce 1 x 28 watt T5; Light-Up Walk 1 x 50 watt white SON

Interior:

Antrox - cold cathode lamps 2400 K.

iGuzzini - Laser Pixel 50 watt/12V QR CBC 51

Fagerhult - Pleiad SLD 215 1 x 26 watt

FSM-I

Schmitz - Box 3 x 24 watt PL-H

Ansorg - Tecno TRS 1 x 100 watt QPAR 30

Lival Cyli-Con - 1 x 100 white SON

Menvier - Ben 3/IS 2 x 10 watt

Flos - Stylos 120 watt PAR 38 und 150 watt

IAA



Lack of light can lead to winter depression. This room is designed to help sufferers: an interim luminous ceiling comprising spanned fabric has been installed in this space. Fluorescent lamps of different colour temperatures (3000 to 8000 degrees Kelvin) and spaced at 20 centimetres backlight the fabric. Walls and flooring are light in colour to reflect the light better. Guests have a view of the natural scenery outside through the large windows.

Above: The path lighting brings out the milky colour of the water.
Right-hand page: The outdoor pool at the Blue Lagoon spa at dusk. Uplights recessed into the wooden pontoon graze the dark facade. The plaster coating on the outdoor wall is sprinkled with tiny lava grains from the hills in the region. The luminaires in the foreground illuminate the milky water, which is rich in minerals.

