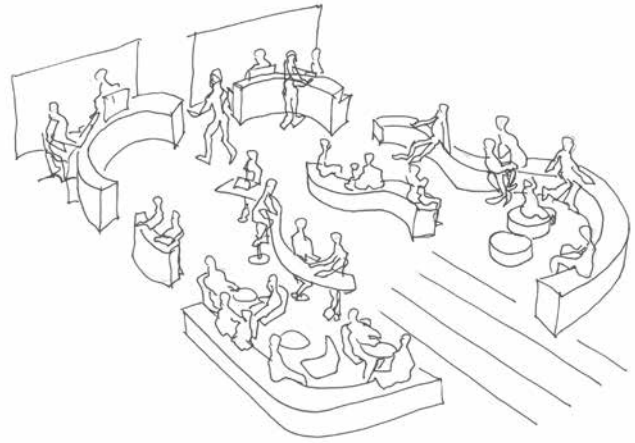


Den nye revision af DS/EN 12464-1 (2021) kalder på et nyt mindset. Der skal simpelthen tænkes anderledes i fremtiden, når der laves lysdesign/ lysberegninger. DCL har spurgt i netværket efter projekter, hvor de nye tanker i standarden – bl.a. med modificerede belysningsstyrker – er tænkt ind. Men da mange projekter stadig i dag gennemføres efter principperne i den tidligere revision af standarden, har vi ikke rigtig modtaget noget. Vi er dog via DCL's netværk faldet over et projekt i Tyskland, som vi gerne vil dele med jer – rigtig god læsning.



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## A DIFFERENT KIND OF EMPLOYMENT OFFICE

A real feel-good place thanks to individually coordinated design with an impressive lighting concept and pleasant acoustics. This lighthouse project in Berlin shows that public facilities and authorities do not automatically have to be noisy and poorly lit. Openness, customer-friendliness, and an inviting atmosphere are reflected in the new interior design of the Job Center in Berlin, Treptow-Köpenick.

BY FRANK HINZ - TRILUX, ROBERT BACHMANN, PROF. PAUL SCHMITS, ANJA GÖTZ AND CHRISTOPH FLECKENSTEIN - IONDESIGN. PHOTO: LINUS LINTNER - BERLIN.

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**Client/Developer:** Federal Employment

Agency, Berlin

**Interior Design:** IONDESIGN GmbH - Berlin

**Consultant:** Frank Hinz - TRILUX GmbH & Co. KG

**Lighting consultant:** Robert Bachmann

**Lighting supplier:** TRILUX GmbH & Co. KG

When designing the new facility of the employment office, the focus was on the well-being of the employees of the employment agency as well as on the needs of the customers of different ages and backgrounds.

Visitors should enter a pleasant and congenial environment where they feel welcome and can overcome inhibitions. The atmosphere should be appreciative, friendly, and relaxed. The design project focuses on the special lighting concept, pleasant acoustics, and ergonomic design for employees. Of course, this also benefits all visitors.

Good lighting is the basis for a healthy, fatigue-free, and barrier-free atmosphere. The eye orients itself to daylight and its spectrum. Therefore, not only brightness



← Sketch: IONDESIGN GmbH - Berlin

→ The consistent colour concept is reduced to a few colours and thrives on strong contrasts. While the deep-sea blue of the flooring conveys calm and confidence, the yellow accents of the lights, the lockers and the play corner radiate a sunny mood.

✓ Round surface-mounted luminaires in various sizes are used in the communication and waiting areas.



but also light and color rendering quality are relevant. In close cooperation with Trilux, Iondesign has realized a lighting solution that exceeds the high requirements of the at the time valid standard DIN EN 12464-1 and sets clear design accents.

### Light and colour concept

The newly designed area is divided into a T-shaped registration and waiting area, at the end of which the consultation rooms are located transversely.

When entering and passing through the rooms, one is intuitively guided by the linear light band and lets oneself be led through the centrally arranged corridor zones. The suspended ceiling below the technical supply lines in this area is not hidden but used as a striking space-creating element. Bounded by a row of round supports, it emphasizes the length of the symmetrical building architecture. The old axial grid recedes into the background, the remaining, fully glazed room areas can be freely designed.

In the entrance to the reception area, protruding walls flank integrated beverage dispensers, disinfection dispensers, waste containers and fire extinguishing panels.

Clear colors and large pictograms locate the functions.

Following this, the room opens to reveal two curved registration counters with a generous waiting area in front. Along the windows, counter areas become elongated, fixed tables. Low, s-shaped benches and individual seat poufs allow optimal use of the remaining space. On the opposite side of the room, a children's play area designed entirely in sunny yellow with a suspended acoustic ceiling surprise. Next door, in the quiet bistro area, curved benches at round tables under yellow pendant lights make waiting more attractive.

Acoustic panels made of natural, cement-bonded wood-wool panels from Trolldtekt provide soothing calm in the entrance area. Different light islands divide the room into zones and set pleasant light accents.

The consulting area is implemented as an open space. The consulting islands distributed in the room seem to be placed randomly, but follow a precise calculation of all required distances, visual axes, and sound directions.

The gaudy yellow pendant lights with large black numbers mark the individual

consultant positions and are an indispensable and at the same time entertaining highlight.

Here too, the rooms are visually and acoustically divided by longitudinally grooved acoustic panels. Mounted in the form of a wide strip along the entire length of the room and pulled down at the ends of the wall, they give the rooms a spacious appearance and simultaneously mark the beginning and end.

The long and flat luminaires follow the direction of the room. The direct-indirect light makes them float in the room. The high quality of light provides a glare-free and soothing working light for fatigue-free vision; specifically positioned spots provide interesting accents.

The consistent color concept is reduced to a few colors and thrives on strong contrasts. While the deep-sea blue of the flooring conveys calm and confidence, the yellow accents of the lights, the lockers and the play corner radiate a sunny mood. In contrast, the white surfaces of the furniture look clean and crisp. The natural color of the ceiling and wall elements made of cement-bonded wood wool is warm and friendly.



When entering and passing through the rooms, one is intuitively guided by the linear light band and lets oneself be led through the centrally arranged corridor zones.



The consulting area is implemented as an open space. The yellow pendant lights with large black numbers mark the individual consultant positions and are an indispensable and at the same time entertaining highlight.

Related blue and yellow tones are also found in the facade of the building. The high CRI value of the luminaires reproduce the colors close to nature and thus allows interior and exterior spaces to merge. All luminaires are to the ergonomic wishes and the legal workplace guidelines.

### DIN EN 12464-1 for workplaces

The user's specifications for the project were DIN EN 12464-1:2011 for workplaces as a minimum. In addition, luminaire lines and shape requirements were specified by the planning office.

In close coordination with Iondesign and the user, the requirements were increased during the planning phase so that the current and new recommendations of DIN EN 12464-1:2021 could be met. As a result of the new revision of the standard, the illuminance in the work areas was increased to an average of up to 750 lx and the room environment was illuminated in a user-friendly manner.

Accordingly, an optimal lighting situation can be experienced for different user groups with different requirements.

For the workstations, it was desired that the luminaires have a direct/indirect light distribution. By brightening the ceiling, the high quality of the material of the ceiling becomes more perceptible and the entire room atmosphere is enhanced. The pendant luminaire Lunexo is used for the workstations and the round surface-mounted luminaire Solegra in various sizes for the communication and waiting areas as luminaires with the corresponding requirement profile. The different shapes of the luminaires visually emphasize the respective areas of use. The organic shapes and the indirect components of these two luminaires form a design reference to each other.

The design office's requirement to use a light channel for the central movement areas also as a pathway was met by the direct-beam Finea50 light channel. Thanks

to the option of using different optics and the flexible options in terms of length, the specifications could be ideally implemented.

Another requirement was that there should be no exact positions for the workstations, but that subsequent changes should allow a more flexible arrangement. For the waiting areas, the luminaire shape and arrangement selected meet this requirement. In the working area, a luminaire arrangement was chosen that ensures a more extensive illumination to avoid hot spots.

By selecting the luminaires and complying with the values of the current DIN EN 12464-1:2021, it was possible to provide the user with a modern light that corresponds to the current work situation. In addition, in the sense of DIN EN 12464-1:2021, it was considered to realize a uniform modern lighting solution without disturbing lighting differences with which various user groups can work optimally. ■

**The use of the building:** job center, employment office

**Built-up area:** 720 sqm

**Window area, daylight factor, sun protection principle:** 220 sqm window area, under 3%, interior slat blinds.

### Number and type of luminaires

8 x surface mounted downlights (Sonnos QD7), 3 x surface mounted channel (FINEA50), 55 + 4 x pedal lights (Luneco H1+H2), 14 surface mounted lights (Solegra D1+D2+D3)

### Light sources direct/ indirect, direct distribution luminaires

#### Illuminance

Reception 530 lux, open-plan office 730 - 750 lux, individual offices 630-640 lux

Glare factor 15.3

#### Illuminance

W/m<sup>2</sup> Reception 6.4 W/m<sup>2</sup>, open-plan office 10.23-10.44 W/m<sup>2</sup>, individual offices 8.77 W/m<sup>2</sup>.  
W/m<sup>2</sup>/100 lux Reception 1.21 W/m<sup>2</sup>/100 lux, open-plan office 1.41 W/m<sup>2</sup>/100 lux, individual offices 1.37 W/m<sup>2</sup>/100 lux

### Dali lighting control system

Cumulative costs, lighting system incl. installation approx. 90.000,- net plus VAT Total operating costs 3.483,15 Euro

Max. Total annual power consumption - for the lighting system 13,932,600 W