

ERCO

Light and hospitality

Design
Lighting technology
Planning practice



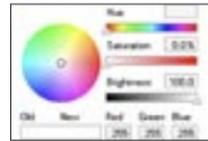
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Thinking in light qualities is one of the fundamental aspects required in the development and communication of successful lighting concepts for gastronomic properties. A qualitative lighting design concept must be structured to include three components:

ambient luminescence, focal glow, and play of brilliants. A further element which is crucial for the perception of architectural space is the illumination of vertical surfaces.



This phrase gets to the heart of a new approach: innovative lighting tools that give the lighting designer and lighting user new, amazing possibilities to affect the lighting and allow them more freedom and creative control. Lighting design has now become even easier, allowing individual and flexible solutions – which is ideal for hotels, bars and restaurants.



Well-established creative methods such as mood or story boards present themselves as an obvious solution to integrating scenographic light effectively into gastronomic concepts. The system design of the ERCO program supports the implementation of these concepts in all phases.



Tune the light also means applying an intelligent, creative design concept that optimises the lighting to harmonise with spatial situations and usage. Examples from all areas of the gastronomy, planning information and technical explanations introduce a wide spectrum of possibilities.

The Light Factory

New technologies such as digital control electronics or LED technology are developed in the ERCO laboratories into marketable products ideally suited for their intended use.



ERCO regularly organises design seminars for groups of architects, lighting designers, engineers and students.



The ERCO Technical Centre in Lüdenscheid provides functional space for the close cooperation of the development, marketing and sales departments.

ERCO specialises in producing engineering hardware and software for architectural lighting. First and foremost, we see ourselves as selling light, not luminaires. This approach, which places the immaterial "software" of light above the physical hardware of the luminaires, has been the trademark of our work for many years. That's why we call ourselves: ERCO, the Light Factory.

Light interprets spaces and helps us to perceive and experience them. In this sense, we consider light to be the "fourth dimension" of architecture.

Making good architecture even better through the right lighting is what we see as our cultural contribution and the raison d'être of our activities. Today, ERCO illuminates museums, universities, shop windows, churches, airports, hotels, chain stores, trade fair stands, administration buildings, private homes and much more. Irrespective of whether the architectural concept emphasises functionality or presentation: our goal is, and has always been, to find a solution that does justice to the specific use and architectural features of each project.

The ERCO indoor luminaires, outdoor luminaires and lighting control systems combine to form a comprehensive range of lighting tools for complete, integrated architectural lighting solutions. The luminaire is a lighting tool, a piece of lighting equipment with a special practical purpose.

The fundamental change currently experienced in lighting technology is due to new lamps, new optical systems, new digitally networked control gear and the appropriate software. This opens up undreamt-of possibilities, a concept which we have encapsulated in the phrase "Tune the light". Specifically in gastronomy, in hotels, restaurants and bars, we can see interesting areas of application opening up for this type of lighting. This brochure is intended to provide background knowledge along with examples and stimulate your imagination.

Trends in cuisine architecture

Hotels, restaurants and bars as an experimental field

Hardly anything characterises this age more than our unprecedented mobility, and there is nothing on which a mobile person relies more than on hospitality – no matter where we are. Tourism and gastronomy rank among the most important sectors of the worldwide economy, both in absolute terms and in regard to growth rates. The backdrop for hospitality is provided by the architecture, and here we have seen a significant change in the demands of those enjoying the various services over the past few decades: a standardised international appearance, i.e. the lowest common architectural denominator is giving way to increasingly individual concepts which derive their authenticity and originality from a wide variety of sources. The interior design of catering establishments has turned into an experimental ground and trend laboratory.

Whether design and boutique hotels, theme restaurants or other gastronomic experiences: the concept applied to gastronomy always requires a spatial and scenic frame to carry and communicate the theme. An increasing number of landlords, hoteliers and maitre d's have now recognised the potential of light and architecture. By providing relevant information, planning and design tips and examples, this brochure aims to motivate and help you exploit this potential by managing the interaction of light in time, space and atmosphere and integrating it into a coherent scenography – Tune the Light!



Guillaume at Bennelong Restaurant, Sydney Opera, Sydney.
Architect: Dale Jones-Evans.
Lighting design: Barry Webb Design Pty Ltd; Barry Webb, Matt Tindale



Nordic Light Hotel, Stockholm.
Architect: Rolf Löfvenberg
Lighting design: Kai Pippo



"Cuines de Santa Catarina" restaurant, Barcelona.
Interior and lighting design: Sandra Tarruella, Isabel López, Barcelona.



Intercontinental Resort Berchtesgaden (Obersalzberg), Berchtesgaden.
Architect: Kochta Architekten, Munich.
Lighting design and electrical planning: Schnell – Ingenieurbüro für Elektrotechnik GmbH, Tuttlingen



"Casino" restaurant, Zollverein colliery, Essen.
Architects: Böll & Krabel, Essen.
Lighting design: Carla M. Uphues, Berlin.



Light qualities

The language of light

Ambient luminescence, focal glow, play of brilliants. These are the principles of qualitative lighting design. In the 1950s, lighting designer Richard Kelly borrowed ideas from perception psychology and stage lighting and combined them into a uniform concept for lighting design, thereby distinguishing the qualities of light into three basic functions: ambient luminescence, focal glow and play of brilliants.

Ambient luminescence concerns the general lighting of the surroundings. In qualitative lighting design, ambient luminescence is not the final goal but simply serves to provide a background canvas for a more extensive lighting design. Ambient luminescence ensures that the basic requirement for physical orientation within a space is met.

Focal glow goes beyond the general ambient lighting: directed light accentuates eye-catching features and creates hierarchies of perception. Important areas are emphasised while unimportant ones fade into the background. Accent lighting can be used for the presentation of goods and aesthetic objects.

Play of brilliants: decorative lighting effects with colours, patterns and dynamic changes create atmosphere and magic. Possible light sources for this include lighting tools for lighting effects (e.g. projectors) or even decorative luminaires (chandeliers), or simply a candle. It is only when ambient luminescence, focal glow and the play of brilliants are combined that a lighting concept is complete.

There are less guidelines and regulations for the lighting of restaurants or hotels than for office or factory workplaces. But there are always themes and concepts that can be communicated to the guests and customers using spatial and lighting design. To ensure a successful lighting concept for gastronomic settings it is vital to think in the language of light.



Ambient luminescence

Ambient luminescence refers to uniform general lighting. In our example, downlights in the foyer provide sufficient lighting for orientation and to move around safely. Restaurants with different lighting requirements often only need a small proportion of ambient luminescence when open, but require sufficient general lighting for cleaning and maintenance purposes.



Gastronomy is one of the most obvious areas of application for scenographic lighting. It is little wonder that lighting control systems already enjoy wide acceptance in this specialisation. Easy-to-use lighting control systems such as Light System DALI provide the designer and user with additional possibilities of using light to continually reinterpret their facilities and their gastronomic concept. The Light Studio control software proves a multifunctional and practical tool for a cuisine infrastructure that needs to be versatile and flexible.



Focal glow

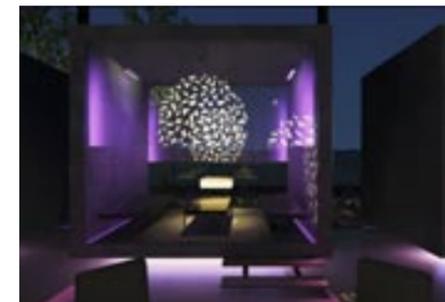


Focal glow includes accent lighting used to highlight objects, surfaces or spatial zones resulting in perceptual hierarchies. Light beams creating islands of intimacy.



Play of brilliants

A play of brilliants is produced by decorative light, by light that is attractive and is an aesthetic end in itself. In our example, the dynamic colour progressions in the separate cubicles are combined with light patterns from gobo projections to enhance the experience. However, technical lighting effects are not the only element to produce a play of brilliants in a lighting concept – even a simple candle can create the same type of effect.



Light qualities

Vertical illuminance



Vertical illuminance is a component of lighting design that is vitally important to architecture. Its primary purpose is to make spatial proportions and spatial limits visible. The opposite is the conventional horizontal illuminance, which is often the result of a purely functional, utilitarian and quantitative approach to design. In this latter case, the spatial experience is often secondary to the immediate visual task. Vertical illuminance, however, can help complement the functional lighting design and become a starting point for architecturally oriented lighting concepts.

Illuminated walls give the impression of bright and open spaces. The fascination of wallwashing arises not only from the perception of brightness but also from the clear spatial presentation, which organises the architecture, thereby making the surroundings more comprehensible.

From the point of view of perception psychology and aesthetics, wallwasher lighting is an important component in the construction of spaces with light. Combined with horizontal lighting for the tables, it is for this reason that it belongs to the essential repertoire of qualitative lighting design for restaurants.

Three different approaches to vertical illuminance give the lighting designer considerable artistic freedom for a differentiated lighting of walls. Of particular interest from the architectural point of view is the practice of uniform wallwashing. A uniform light distribution from ceiling to floor presents the wall as an entity. This approach creates a bright spatial impression and brings the wall to the fore in its function as a room surface.

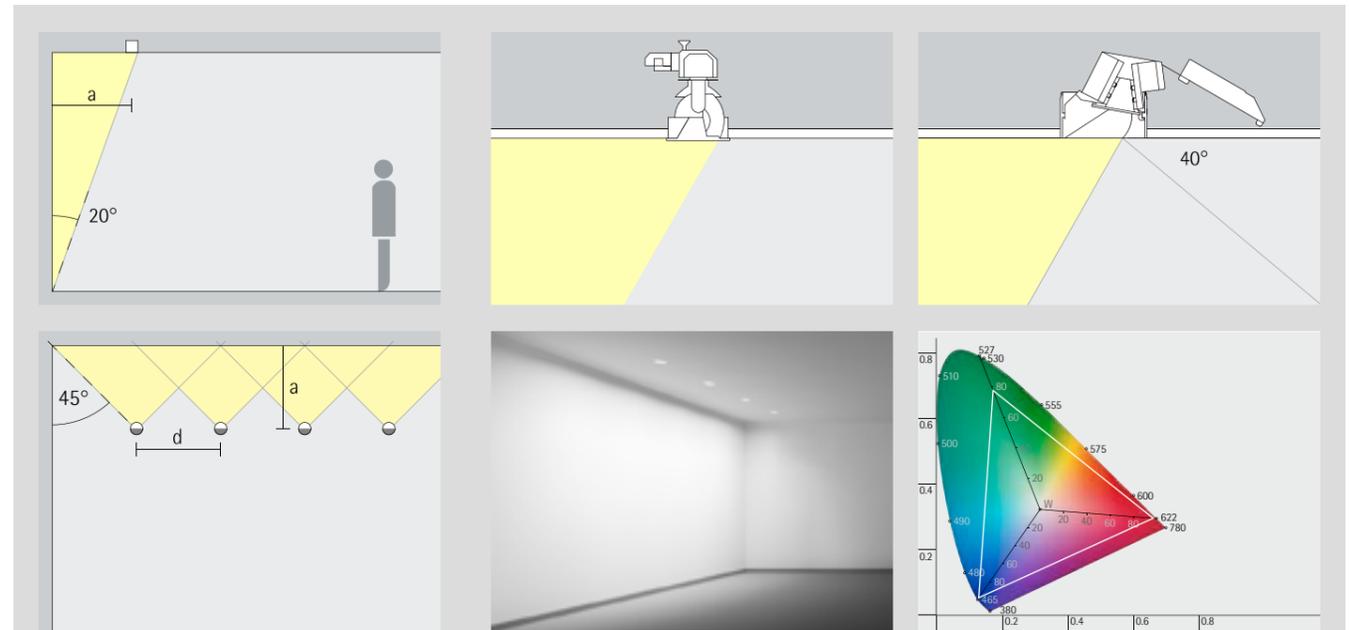
A second approach is to use grazing light up against the wall, the brightness distribution decreasing across the wall. This type of lighting in particular brings out the material nature and texture of the wall surfaces. Point-source luminaires generate brilliant lighting effects. Conversely, linear sources produce a softer light.

The third method of illuminating walls is using point sources. The regular sequence of beam intersections, or "scallops", forms a pattern and lends the wall surface a rhythm of brightness contrasts.



Grazing light up against the wall is an excellent way of bringing out the surface texture of materials using the interplay of light and shadow.

Special lighting tools are available for each of the different wallwashing techniques. Uniform wallwashing places the highest demands on the lighting technology. Various designs of wallwasher are available for this area of architectural lighting. The dynamic lighting requirements using colour changing light are met by varychrome wallwashers – either based on fluorescent lamps or LED with RGB colour mixing technology.



Luminaire arrangement

The offset (a) of the luminaire from the wall should generally be one third of the room height to achieve a uniform light distribution on the wall. Optimal horizontal uniformity is achieved when the luminaire spacing (d) is equal to the offset (a) from the wall. Spacing the luminaires more widely would result in darker stripes between luminaire lines and reduce the uniformity of the wallwashing.

Double-focus wallwashers

Due to the design of its reflector, the double-focus wallwasher achieves an excellent uniformity on the wall. By completely concealing the lamp using an anti-dazzle cone, it also ensures exceptional visual comfort. There is no spill light in areas of the room near to the walls. The double-focus wallwasher is a professional lighting tool used to illuminate vertical surfaces.

Varychrome LED lens wallwasher

Quadra varychrome lens wallwashers produce coloured light with high colour saturation based on LED varychrome technology. The LED technology makes it possible to produce a vast number of light colours. A special reflector-diffuser system ensures a uniform, totally mixed light which is emitted without coloured shadows. The luminaire spacing (d) of this wallwasher is three quarters of the offset from the wall.

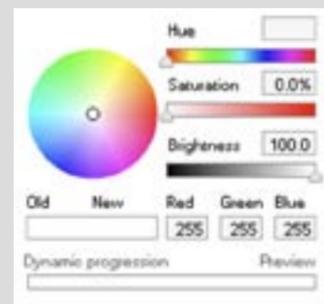
Tune the Light

Scenography in the lighting network

The breakthrough of scenographic light is due predominantly to the emergence of new technology. Scenographic concepts have been used in architectural lighting for some time – but always with considerable investments in installation and material. The technology has been defined primarily through its roots either in building management or stage engineering.

Light System DALI

The lighting control system ERCO Light System DALI, however, is specifically developed for scenographic architectural lighting. It follows an innovative approach: intelligently applied DALI (Digital Addressable Lighting Interface) technology for individually addressable luminaires. It also combines with the ERCO Light Studio software to create an integrated package. Together with the extensive range of DALI compatible ERCO luminaires for indoors and outdoors and the ERCO DALI track, scenographic light effects in architecture can be implemented more easily and economically than ever before.



Dynamic dimmer progressions and dynamic colour progressions can be assigned to dimmable luminaires and varychrome luminaires respectively with just a few mouse clicks.

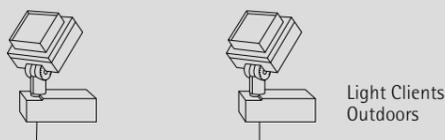


Scenographic light in gastronomy uses a coherent dramatisation to provide the customer with an experience that engages all their senses. Light, space and time combine with culinary delights to result in an all-embracing concept.

Structuring space, creating atmosphere, dynamically highlighting individual features: "Tune the Light" provides the right approach to producing successful scenographic lighting concepts for these typical requirements in bar, restaurant or hotel lighting.



In modern architecture, indoor and outdoor areas often merge seamlessly into each other. Consequently, the designer needs lighting concepts and lighting tools which allow interior and exterior to be integrated using a common system interface – such as Light System DALI.



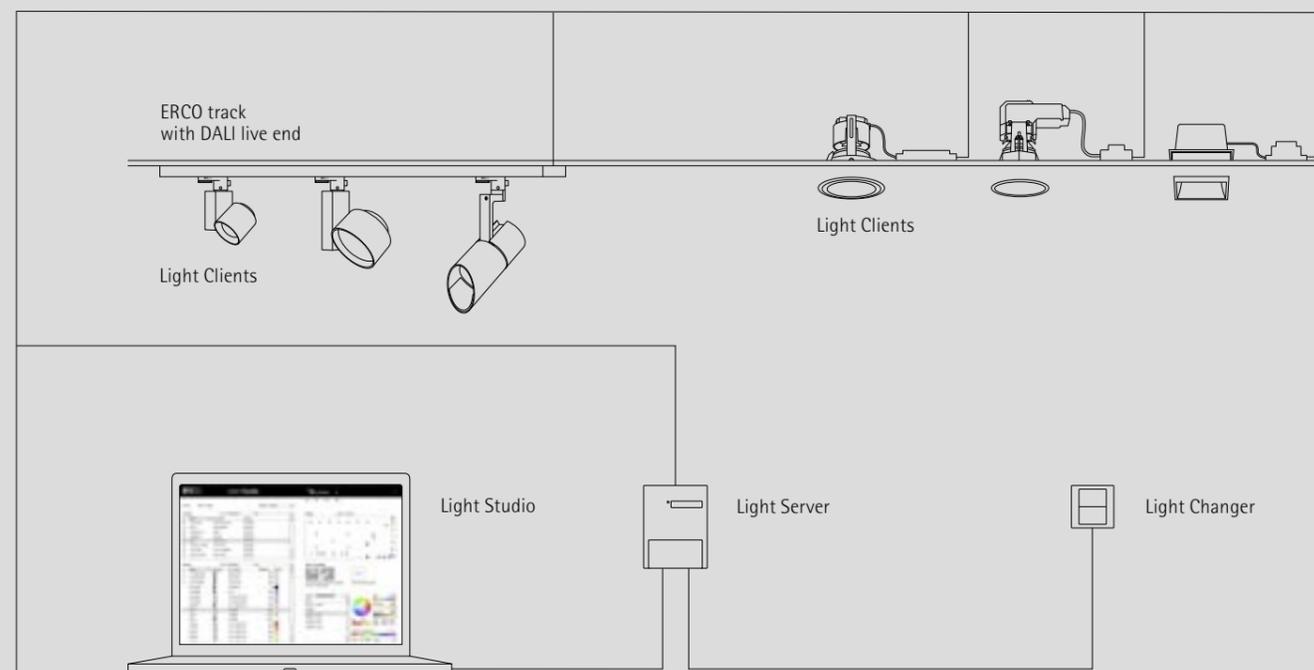
The integrated Light Studio software is used for setting up the light scenes and for other more complex operating procedures. The ERCO Light Studio software is included with every Light Server.

Light System DALI is an integrated lighting tool consisting of hardware and software and is designed for scenographic lighting, e.g. for coloured lighting effects in catering establishments. The Light Server stores the scenes and provides the control functions. The Light Changers are control panels featuring touch screen technology and are used for the everyday operation of Light System DALI.

New standards in terms of ease of operation, range of functions and creative control are set by the consistent integration of software and hardware. Thus, for example, the colour location of DALI compatible varychrome luminaires in the ERCO Light Studio can now be set interactively and displayed in a simple and straightforward format by a mere click of the mouse. Once a system is activated, both the Light Server and the software automatically recognise DALI compatible ERCO luminaires – known as Light Clients – through their pre-programmed codes in the DALI control gear, which are then clearly displayed. However, DALI compatible luminaires from other manufacturers can also be integrated into a Light System DALI and can then be controlled just as easily as the ERCO Light Clients. The Light Server 64+ can be networked with other Light Servers of the same type, which allows the system to be expanded to virtually any size.

Light System DALI consists of the hardware components Light Server and Light Changer and the Light Studio software. The Light Server is a DALI controller that stores the system and scene data and provides the control functions. The day-to-day operation is performed either by means of the wall-mounted control panel ERCO Light Changer or commercial push-

buttons. To set up light scenes and for more complex operations, designers or users can use the ERCO Light Studio software on a PC connected to the Light Server or the Light Changer via a USB connection. The Light Server uses the DALI protocol to communicate with the Light Clients, i.e. the connected DALI compatible luminaires, via a two-core control line. The bus technology and the switch and dimming functions integrated into the control gear make a permanent wiring of individual circuits and the installation of vast dimmer banks in switch cabinets unnecessary. With DALI track accessories, the well-established and reliable ERCO track is ideal for the operation of DALI compatible ERCO spotlights via Light System DALI.



Working methods and planning techniques

Mood board

Gastronomic concepts are largely based on creating moods and atmospheres. As a tool for the visualisation and communication of moods, mood boards play a key role in the creative process. They are used to capture impressions, describe emotions, form chains of association and stimulate the imagination.

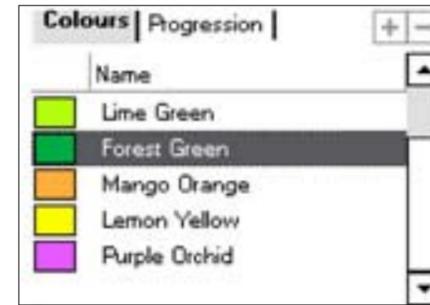
A free collage on a pin board, for example, is based on a central theme in the form of a picture or a concept and made up of pictures, sketches, materials, colours and buzzwords. To create different moods as special effects in a room, the motifs can be systematically grouped in themes to concentrate on interesting contrasts. In this way, the lighting designer can underline the conceptual statement with a mood board for each different light scene.

While the mood board initially focuses on the straightforward collection of pictures and the free flow of thoughts to collate themes, the process of evaluation and concentration is more analytical. The pictures provide information on the required light properties and effects: the advantage of diffuse light as opposed to transitions full of contrast and shadows, the tendency toward specific light colours with pastel or saturated tones, and ideas for specific light effects. Silhouettes on photos, for example, can be produced in the lighting design through projected lighting effects.

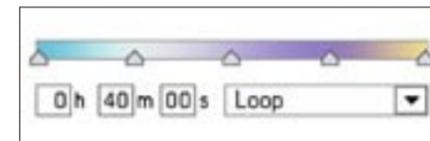
Light moods depicted and outlined as light scenes using mood boards can be integrated seamlessly into the sequence and spatial organisation of the story board.



Different light moods for a wellness area are created using mood boards. First example: a tropical atmosphere for noontime with a dominance of fresh colours, diffuse light and projections.



Colour tones can be derived directly from the impressions on the mood board and defined in the list of colours of Light Studio.



Dynamic progressions can also be inspired by elements of the mood board. Depending on the length of the fading times, the progression can either be stimulating or meditative.



Second example: a cosy winter atmosphere for the evening hours. Cool light colours with warm tone accents produce the intended associations.



Working methods and planning techniques

Story board

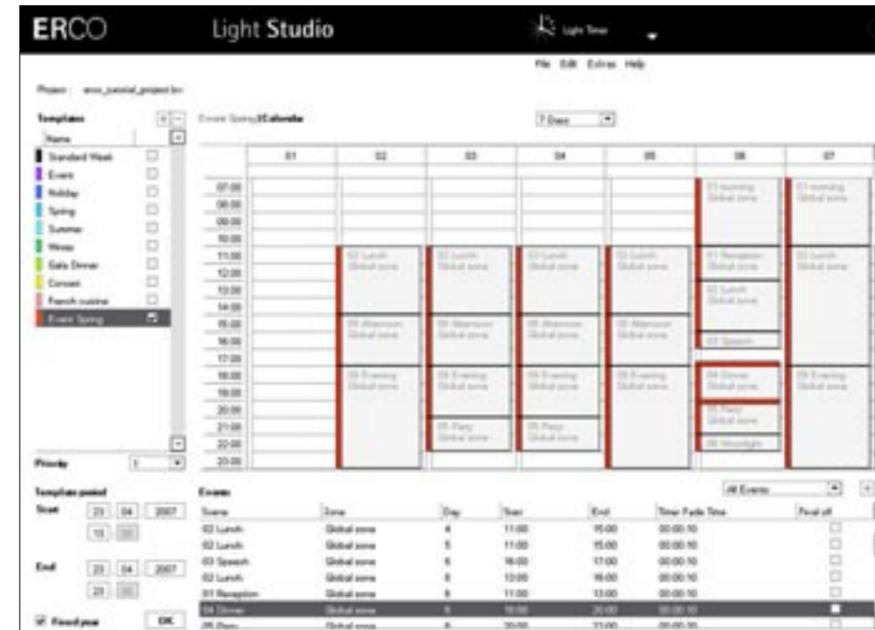
From reception through to ordering, to the courses and onto payment: even a simple restaurant visit follows a fixed sequence. Scenographic light can support and interpret such progressions and enhance them to create an atmospheric lighting experience. The story board here proves a useful tool in the visual planning of these progressions.

The basics of this method have already been introduced in the "Light and scenography" brochure. The key aspect on which to focus for a hotel or restaurant is to set up and complete an effective progression for the visit or event. The story board can be used to outline the movements of the guest in the room and along the timeline and to visualise the plot: the sophisticated lighting concept for the façade or the foyer should not suffer a loss in quality when the guest enters the next room. The light sequence is also influenced by the change in daylight conditions – even down to the light colours, the daylight white light of noon, for example, is perceived as inappropriate at night.

Thus, the story board not only reflects the lighting concept with light quantity and contrasts of light and dark. It also reproduces parameters such as light colours and coloured light. The dynamic effect of the light for evening scenes can be captured in a short series of images. The scenography of the light can be stored and is easily recalled for unique but specific events such as weddings, family parties, or theme nights. This gives the culinary experience a suitable atmospheric setting.



A story board for catering establishments can start by looking firstly at the building and then continues to describe the light moods for the spatial and temporal progressions supporting the story of the place.



Scenes	Name	Description	Fade Time
01	Reception	Welcome mat	00:00:05
02	Lunch	Daylight	00:10:00
03	Speech	Spotlight	00:00:30
04	Dinner	Festive light	00:00:05
05	Party	Colour	00:01:00
06	Moonlight	Dark Sky	00:00:30
00	General light	Spotlights	00:00:05
07	Breakfast	Sunrise	00:00:05

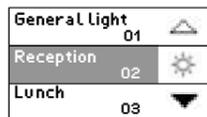
To ensure a soft transition from one light scene to the next, the fading times can be set individually in the scene list. Fading times can be seconds or even span several hours.

The Timer Module in the Light Studio software allows light scenes to be recalled at pre-determined times. The time and calendar functions provide great flexibility for the automation of scenographic lighting, e.g. to set the light scenes to opening times or licensing hours, or to reduce the lighting level during night time. This makes it possible to produce sophisticated lighting effects without staff having to intervene.

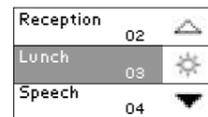
The plain text display and user-friendly touch screen of the Light Changer make it an easy-to-use operating panel of Light System DALI for convenient everyday operation.



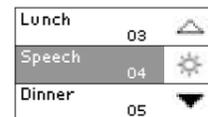
1. Champagne reception Brilliant light in the foyer welcomes the guests and makes the champagne glasses sparkle. Individual directional luminaires break up the uniformity of the general lighting.



2. Lunch Intense brightness fills the room at noon. The dominating light colour is daylight white. General lighting supplements the daylight and reduces contrasts. The uniform light distribution in the room enhances the impression of an integrated whole.



3. After-dinner speech During the after-dinner speech, a spotlight highlights and draws attention to the speaker. Subtle accents on the tables create private spaces.



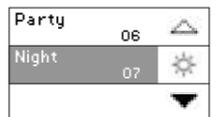
4. Dinner Dimmed directional luminaires accentuate the tables with warm white light. Pastel colours on the curtain provide the background, while gobo projections are used for additional attraction.



5. Dance and party Intense colours and sharp contrasts in a dynamic alternation create a stimulating, informal atmosphere.



6. Conclusion Moon and stars are the key features in the night impression. Dimmed light with accents both on the tables and in the garden create the ideal atmosphere and bring the party to a perfect conclusion.



Working methods and planning techniques

Zoning

In restaurant planning, consideration must be given to different situations involving a variety of visual tasks and a different atmosphere and architecture. The characteristics of these can be recorded separately and assigned to specific zones.

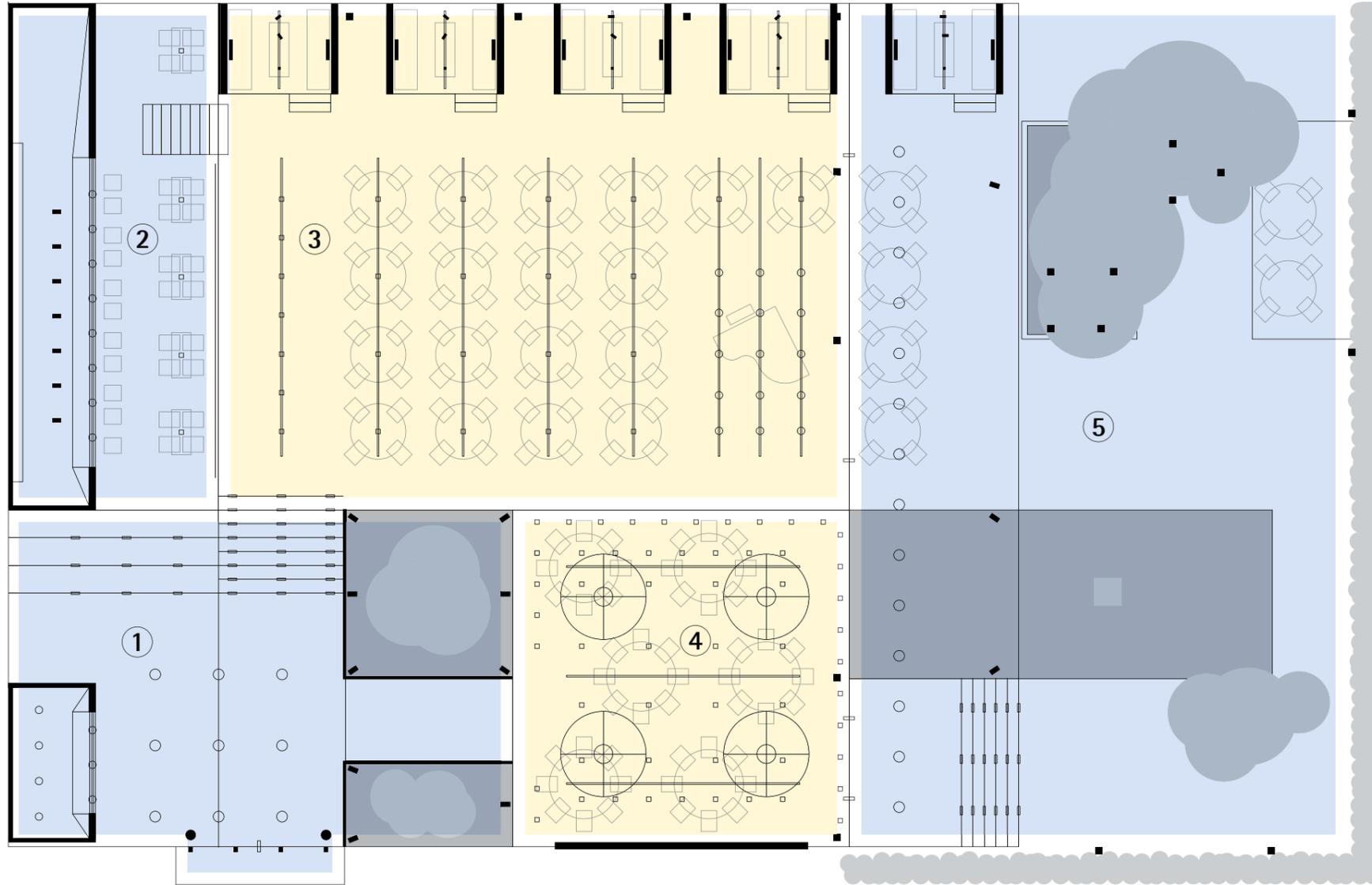
A key element in the design process is to understand the functional criteria of a visual task – such as the perception of size and contrast of details: the lighting in the kitchen or at the buffet must be of higher quality than that in traffic zones. Further important factors include the colour and surface structure to perceive subtle nuances of the food on the plate.

Another component to be considered in the project analysis is the psychological requirements: should the restaurant be perceived as a whole or are private areas required in a larger room. In order to give guests the feeling of privacy, the lighting designer could base his concept on small zones for each table instead of using uniform general lighting.

In terms of architecture, the creation of zones can boost the perception of spatial order. The question of room shapes, modules, rhythms, and materials is used here as a starting point from which to design light and luminaires so as to provide a structure that enhances the appearance of the architecture.

The scenographic lighting design develops different light moods for the individual zones, the dynamics of which in terms of brightness and light colours can tell independent stories or be combined to fit into an overall theme. The scenography can also change in the course of an evening, with dynamic progressions of light colours initially limited to the bar and later on extending over the entire room and out into the garden.

To set up and recall light scenes for a specific zone, a lighting control software with an easy-to-use user interface is helpful. Through software control, the light scenes and operating devices can be flexibly assigned and adapted to meet new requirements as they arise.



The Light Book of the Light Studio software is used for the spatial structuring of Light System DALI installations. Its main function is to create zones and assign Light Clients or Light Changers to zones.

Description	Article	Client ID	Zone	Server
Spotlight	8672952 000	8838EC0828	02	Server 04
Spotlight	8672952 000	88204C7879	11	Server 01
Spotlight	8672952 000	8447A05148	02	Server 01
Spotlight	8672952 000	8838EC2005	08	Server 12
Spotlight	8672952 000	8852886730	08	Server 08
Spotlight	8672952 000	86274C0845	01	Server 01
Spotlight	8672952 000	8837DC1854	11	Server 07
Levo wallwasher	8622874 000	88038C1426	01	Server 05
Levo wallwasher	8622874 000	8811EE1662	04	Server 03
Levo wallwasher	8622874 000	8886C4532	03	Server 13
Levo wallwasher	8622874 000	86238C1718	04	Server 10
Levo wallwasher	8622874 000	85128F1956	11	Server 04
Levo wallwasher	8622874 000	8598C07188	11	Server 05
Levo wallwasher	8622874 000	88208E3474	02	Server 02

Each Light Server 64+ can handle up to 64 addresses. Using the integral Ethernet interface, the Light Server 64+ can be networked and combined to implement larger installations. While the assignment of 64 addresses to one Light Server is of importance for the installation, the spatial zoning in the software can, in practice, be carried out independently. The zones can be freely determined to suit the user's habits.

The light scenes for each zone can be set up and stored individually. If the light in subzones needs to change, this too can easily be arranged.



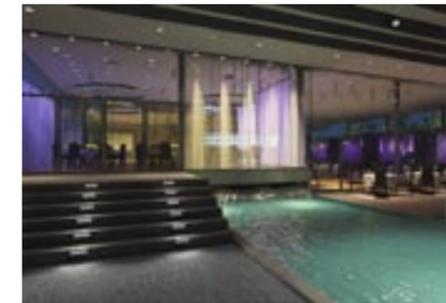
1 Entrance: Effective accentuation of a "welcome mat" made of light for outdoors and indoors. Downlights provide homogeneous general lighting in the foyer. The reception and the cloakroom are handled according to the visual tasks required.



2 Bar: The dynamic play of colours of the backlit rear wall can be activated independently from the room light. Spotlights are used for the glare-free illumination of the shelves and the bar. Pendant luminaires lower the light centre height above the high tables.



3 Restaurant: Individual light beams on each table create a private atmosphere. The cubicles provide separate zones with light scenes that can be individually controlled by the guests.



4 Private function room: The light scenes in a room for private functions need to be operated separately from the other rooms. Special light scenes for reception, talk, or dinner are adapted to meet changing requirements.

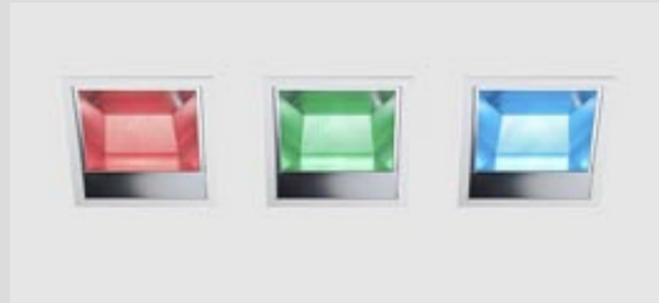
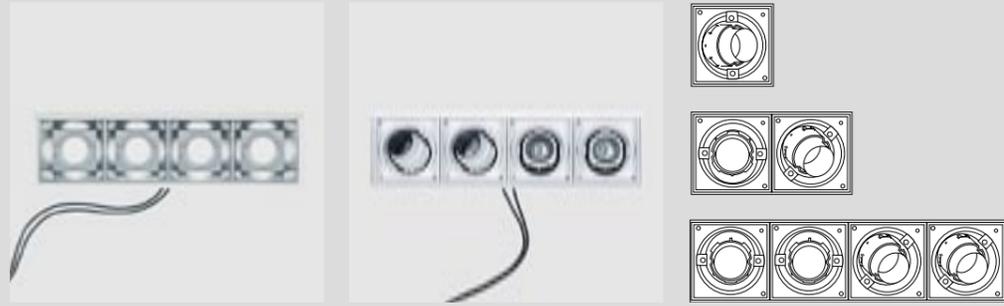


5 Garden: The outside can, for example, be divided into two zones of different distance: the terrace with subdued general lighting and the planting area – accentuated by recessed floor luminaires and spotlights.

Lighting tools

The luminaire is a lighting tool, a piece of lighting equipment with a special practical purpose. This approach is reflected in the design of our products. ERCO's product range for architectural lighting includes the three areas of lighting control systems, indoor luminaires and outdoor luminaires. Together, they ensure that holistic lighting concepts can be realised.

Taking system design to its logical conclusion is a characteristic feature of the ERCO product range. The system concept occurs at all levels: from the extensive range of accessories to an individual luminaire and from the modular system featuring a uniform design within each product range to the uniform documentation of all products. This allows them to be combined in the best way possible in the design process. The DALI technology gives our product system an additional virtual software level – on which all ERCO Light Clients can be conveniently networked.



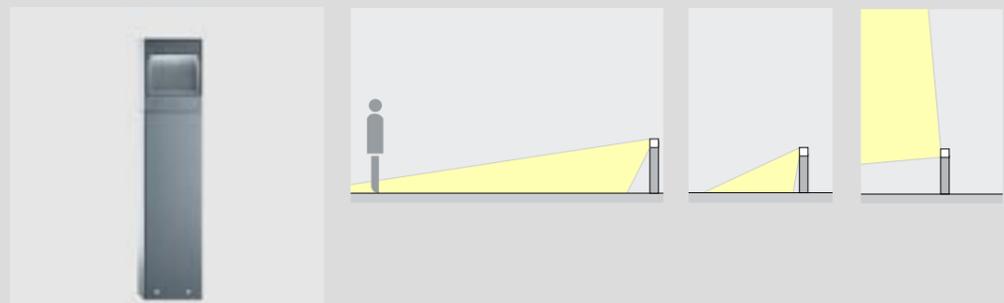
Taking system design to its logical conclusion is a characteristic feature of ERCO products. This includes the ability to develop lighting tools for different light distributions, light colours and service packages as much as interlinking digitally controllable Light Clients using the Light System DALI and the incorporation of the Light Studio software as a user interface for complex luminaire functions.



The Light System DALI and the Light Studio software add a new virtual dimension to the system concept of the ERCO product range. As an integral part of the Light System DALI lighting control installation, ERCO Light Studio software provides operational control that allows light colours and dynamic progressions to be adjusted

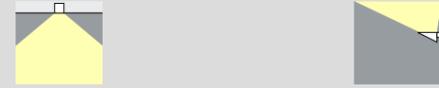
from varychrome luminaires in the most convenient and simplest possible way.

Many ERCO products provide the designer with a choice of light distributions in one range of luminaires to suit different applications. One range of outdoor luminaires can be used to illuminate open areas, pathways or facades.

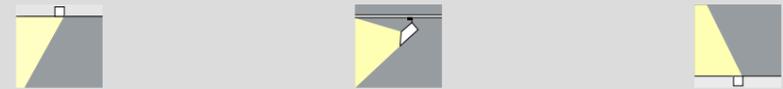


Types of lighting and lighting technology

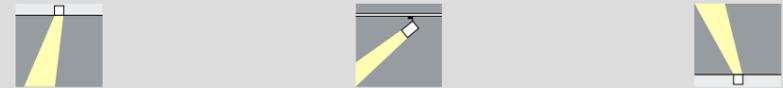
Direct/indirect general lighting
General lighting is used to provide rooms with basic lighting. Direct lighting ensures good modelling, while indirect emission casts hardly any shadows and produces soft forms.



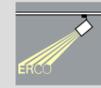
Vertical illuminance
Wallwashers with asymmetric light distribution ensure a uniform illumination of the wall to highlight vertical surfaces and emphasise the spatial structure.



Accent lighting
Recessed luminaires or spotlights for tracks with narrow light distribution accentuate objects on walls or in the room. They are used to provide a focal glow. For the buffet in the restaurant, the flower arrangement at the entrance, or for works of art on the wall.



Projection
A play of brilliants is created by using luminaires for projections. Signs, texts and images are provided for information or as a decorative eye-catcher. Easy to exchange, they can even communicate a theme.



Pathway lighting
Safe circulation on paths and in open areas is ensured by appropriate outdoor luminaires. A high level of visual comfort prevents glare in the evening hours.



The luminaire symbols provide a quick indication of the light distribution and mounting types of the luminaires. Available both in the Program and on the Internet, they help in the selection of the right luminaire.

Welcome – Enjoy your meal!

Gastronomic impressions



The world of gastronomy fascinates us with its enormous diversity. Regional traditions and international trends combine and merge in ever new ways. "Tune the light" refers here not only to the perfect harmonisation of the lighting with the thematic concept; it also indicates entirely new ways of responding flexibly to temporary or permanent changes in the requirements of customers.



Situations

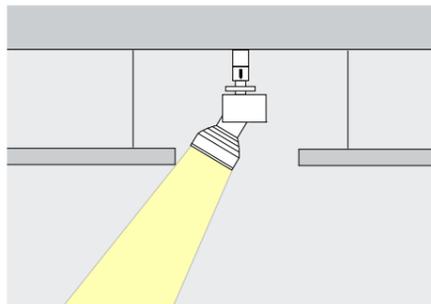
Restaurant

Good food and drink accompanied by scintillating conversation in a pleasant ambience are crucial factors in the running and design of a restaurant. Factors which also define its lighting requirements: good light on the table for the meals and drinks, visibility of the people at the table, and adequate lighting in the room.

Lighting design for a restaurant needs to be approached from a qualitative perspective because more light does not automatically mean a better quality of light. Usually, there is a connection between the complexity of the lighting concept and the gastronomic standard: while more basic restaurants get by with a lighting design based merely on a few components, top-class restaurants invest in differentiated lighting concepts that provide individual lighting solutions from the entrance to the restaurant itself and its other facilities such as the toilettes.

In the restaurant, the table is the centre of events. Appropriate table lighting satisfies several criteria: good colour rendition, a suitable light colour, a high level of brilliance, and excellent visual comfort. Brilliant light such as that of low-voltage halogen lamps ensures an optimal colour rendition. The lamp can easily be dimmed to produce the required illuminance. The light colour becomes warmer and comes very close to that of candlelight. As it shifts into the red area, this light colour, however, can change the colour appearance. Directed light provides brilliance and ensures a good modelling effect for the meals and the table decoration. Using light from fluorescent lamps or purely indirect light here would create nothing but a diffuse and matt appearance. In order not to remove the focus from the food and the dinner party, it is vital to ensure optimal visual comfort. The basis for this is Darklight reflectors and the correct choice and alignment of the luminaires. The better the glare control of the luminaires, the higher they can be installed without disturbing the customers at the tables.

Candles with their flickering light add gentle movement to the scenery and illuminate the faces of each person at the table. As a brilliant eye-catcher, candlelight can elegantly round off the light composition at the table.

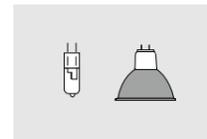


Integrating luminaires into architecture: suspended ceiling panels have room for building technology as well as luminaires. Track-mounted spotlights provide flexibility so that the restaurateur can realign the luminaires to suit changing table arrangements.

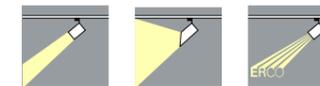
Focal glow. Accent light focused on the table creates a private environment to enjoy.



Rows of pendant luminaires emphasise geometries in the room. With their slightly luminous glass covers, these luminaires are an attractive eye-catcher at the bar or the tables and ensure high visual comfort.

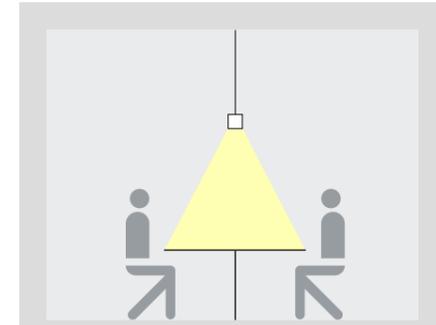


Low-voltage halogen capsule lamps or appropriate reflector lamps produce a warm light colour and brilliant light, and are easy to dim. Due to its continuous spectrum, the light emitted has an exceptional colour rendition quality.



Applying the system philosophy to luminaires allows solutions for different lighting tasks using the same luminaire range: narrow to medium-width light beams to accentuate the tables and wallwashers for a uniform illumination of the shelves. Spotlights with projection lens can be used with a framing attachment for

a hard-edged illumination of pictures, giving the impression that these pictures emit light. Luminaire symbols help communicate the lighting concepts.



Installing pendant luminaires
The spatial perception of a room can easily be influenced to range from very wide to private spaces by adjusting the light centre height – e.g. recessed luminaires or pendant luminaires. The luminaire itself must not block the view of the person on the other side of the table or cause glare. Glare-free Darklight reflectors here ensure optimal visual comfort. The accent light reflecting off the tablecloth reflects enough light back up onto the faces at the table. At the same time, the pendant luminaire with its slightly luminous cover is a decorative eye-catcher and illuminates the people sitting at the table.

Situations

Restaurant

Gallery bistro

In a modern ambience that seems to have been created effortlessly, chef Bill Boyd not only serves fresh, straightforward meals in his bistro in Copenhagen but also organises live concerts and art exhibitions. The lighting level here suits the occasion and is relatively high. Ceiling-mounted tracks are fitted with wallwashers and spotlights to produce brilliant light for both the meals and the works of art.

Boyd.nu Bistro, Copenhagen
Architecture and lighting design: Birgitte de Neergaard
www.boyd.nu

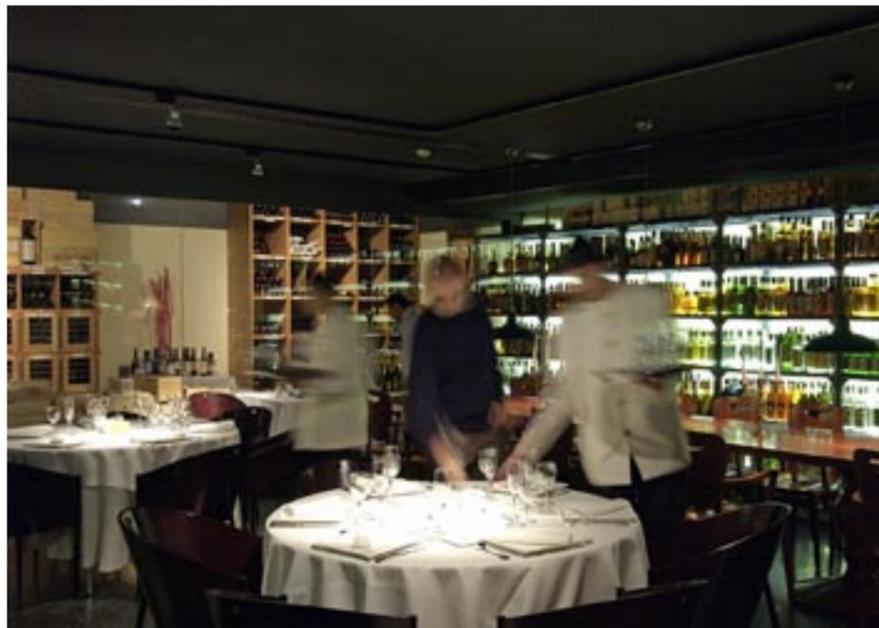


Eating and art are presented as a unit in this combined gastronomy concept. Wallwashers and spotlights provide appropriate lighting effects for both.

Exclusivity

Access to this restaurant in the back room of a bar is available only when the right password is given – which must be obtained from the bartender. Rough concrete pillars and stacked crates of wine contribute to the feeling of a storage cellar, while customers can enjoy the superb Catalan cuisine in a relaxed setting. The discreet atmospheric lighting is made up of a diffuse backlighting component for the shelves and accentuating recessed directional luminaires, and implements the "whisper bar" in a contemporary design.

Speakeasy restaurant, Barcelona
Architect: Carlos Martinez
Lighting design: Carlos Martinez
www.speakeasy-bcn.com

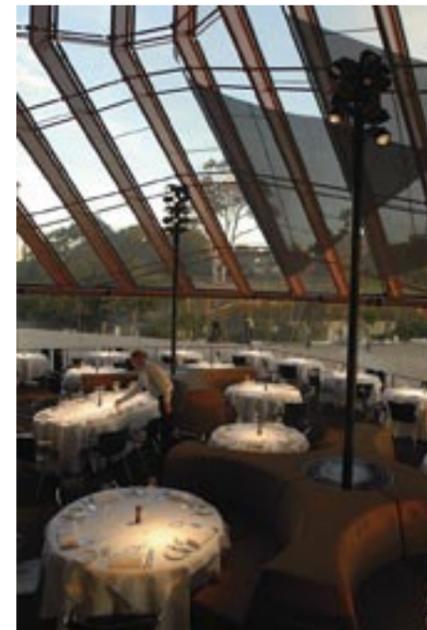


Focal glow: directed light makes the dazzling white tablecloth shine and the glasses sparkle.

Exposed location

Underneath its sail-like roof shells, the Sydney Opera House designed by Danish architect Jørn Utzon houses one of the best restaurants on this continent. Spotlights on free-standing poles are meticulously focused onto each table. In the glare-free, brilliant light of halogen lamps, the customers can enjoy their meals and a stunning view through panoramic windows of the dazzling scenery of the city at night.

Guillaume at Bennelong restaurant, Sydney
Architect: Jørn Utzon, restaurant refurbishment: Dale Jones-Evans
Lighting design: Barry Webb Design
www.guillaumeatbennelong.com.au



The spotlights for each table must be individually dimmable to ensure uniform illuminance levels. This is ensured by the easy-to-use Light System DALI. Light scenes cater to different table configurations and can be adjusted to provide an overall lighting level that suits the different daylight conditions.



Double focus downlights have very small ceiling apertures and integrate the lighting technology so as to appear inconspicuous.

Grand hotel style

The lavish chandelier in the Adlon hotel reminds of the golden age in Berlin. The style and spirit of this hotel was preserved during its renovation and combined with modern technology. Decorative and functional lighting have deliberately been kept separate: a multitude of discreet, glare-free downlights and recessed luminaires as hardly visible light sources provide functional ambient luminescence and focal glow. The decorative chandelier and wall luminaires complement this composition with a play of brilliants.

Adlon Hotel, Berlin
Architect: Patzschke, Klotz & Partner;
AIC Bau-Plan
Lighting design: Licht Kunst Licht
www.hotel-adlon.de



Situations

Bar and lounge



Bars and lounges use scenographic lighting effects to create a relaxed atmosphere for communication. The focal point here is the bar with its bar staff. Bottles and glasses are cleverly emphasised by backlighting from the surface behind them. Additional accent or wallwasher lighting from the front provides brilliance. Changing colours for the backlighting place even greater emphasis on the bar. At the bar, the bar staff needs suitable light to do their job. The cocktails that they mix are enhanced by a row of narrow-beam accent lights. Narrow light beams and excellent glare control contribute to the high level of visual comfort and prevent glare even from the reflecting surfaces of the bar. To avoid harsh shadows on faces behind the bar diffuse lighting is recommended. This can also be provided by the backlighting of the wall shelving.

The lighting concept for the entire space should first address the lounge theme. High-contrast room effects, for example, are produced by using a number of spotlights with a narrow light distribution to create individually lit spaces around the tables.



A cut-off angle of 40° ensures good visual comfort. Within the cut-off angle there is no disturbing glare.

Recessed luminaires as directional spotlights are designed to illuminate objects that need to be highlighted and provide a tidy ceiling. Where the position of the tables or the decorative elements changes, the light beam can easily be readjusted. The light beams can be rotated 360° and inclined up to 40°. With little general lighting, the

accent light produces sharp contrasts in the room.

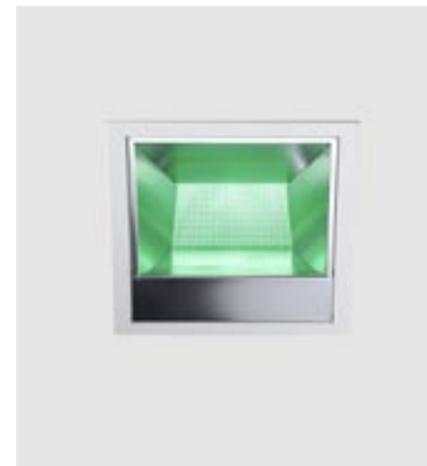


The light colours and intensities constantly change to entertain customers at the bar. The coloured backlighting subtly transforms the atmosphere in the room from a cold ice-blue mood

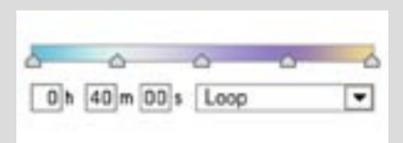
to warm-tone sunlight. Individual bottles are effectively highlighted as eye-catchers, while narrow-beam spots above the bar strikingly accentuate the cocktails.

Quadra varychrome lens wallwashers produce coloured, highly saturated light based on LED varychrome technology. The special lens reflector system ensures an even, glare-free illumination of the wall. The DALI-compatible luminaires have digitally addressable control gears, which means that each luminaire can be individually controlled

– for instance using the ERCO Light System DALI with its integral ERCO Light Studio software.



Symbols refer to the properties of luminaires – such as the type of mounting, the light distribution and light colours. They are provided for quick orientation in all the ERCO media, from the Program in paper form to the Light Scout on the Internet.



Dynamic colour progression
Dynamic colour progression is a convenient tool used for scenographic lighting design. Dynamic dimmer progressions and dynamic colour progressions can be assigned to dimmable luminaires and varychrome luminaires respectively with just a few mouse clicks. Both the cross-fading time and up to 16 colour stages can be individually specified. The colour progressions can be combined into a list and defined as required. The individually adjustable crossfading time can be set such that the light colours change almost imperceptibly throughout the evening or that stimulating impulses are created through short intervals. The dynamic progression can be programmed as a single run, an endless loop, or as a ping-pong effect. Exciting lighting effects are produced by overlapping several dynamic progressions in a room – such as colour-changing wallwashing and the fading in and out of projections.



Situations

Bar and lounge

Espresso bar

The Caras Gourmet Coffee Bar brings international coffee culture into the heart of Berlin. While facing the prominent Kurfürstendamm on the one side, the other provides a delightful view onto a large aviary garden. The atmosphere is light and stimulating to match the range of products on offer, while the relatively high illuminance level reduces the contrast to daylight.

Caras Gourmet Coffee Kranzlereck, Berlin
 Architect: Jochen Bruder / Plajer & Franz Studio
www.caras.de



While decorative ceiling and pendant luminaires create atmosphere, spotlights with brilliant halogen light specifically illuminate the bar and the work surfaces – and bring a sparkle to the glasses, cups and cutlery.



Club atmosphere

In a 5-star hotel in Buenos Aires, star designer Philippe Starck created a bar lounge for hotel impresario Faena which reflects his typical, highly imaginative and eclectic style. Dark, luxurious furniture and subdued lighting contribute to a colonial style club atmosphere as does the decoration with chandeliers and hunting trophies. Here, too, the functional lighting is provided by subtle recessed luminaires fitted with halogen lamps.

Faena Hotel + Universe, Buenos Aires
 Architect: Philippe Starck
 Lighting design: Ernesto Diz
www.faenahotelanduniverse.com



The atmosphere in the Library Lounge is characterised by comfort and relaxation. Different light scenes provide appropriate light to suit the time of day.



High-tech aesthetics

Stainless steel, glass, beamer projections and LED light spots at the hotel bar provide for a "cool" location for business travellers in Sao Paulo. The glare-free recessed luminaires fit into the modern interior concept of the luxury hotel which alludes to new directions and dynamism in the South American business metropolis.

Hilton Hotel, Sao Paulo
 Architect: Daniel Piana & Associates, Botti-Rubin
 Lighting design: Theo Kondos
www.saopaulomorumbi.hilton.com



LED orientation luminaires provide decorative accents at the bar – a play of brilliants.

Colours of the night

Teatteri is more than an elegant restaurant in Helsinki with a main dining room, a winter garden and terraces. It also provides a bar, an informal "Wine&Deli" area, and a discotheque. With dynamic lighting effects and scenically lit spaces, the young Finland, as represented in Teatteri, expresses both networking and globalisation – the world in a continuous flow. Light colours and their intensity are constantly changing, transparencies are created and disappear. Ceilings seem to hover, walls appear almost immaterial.

Ravintola Teatteri, Helsinki
 Architect: Rupert Gardner
 Lighting design: Rupert Gardner
www.royalravintolat.com/teatteri



Almost twenty defined light scenes sequentially fade into each other to produce lighting effects that continuously reinterpret the room.

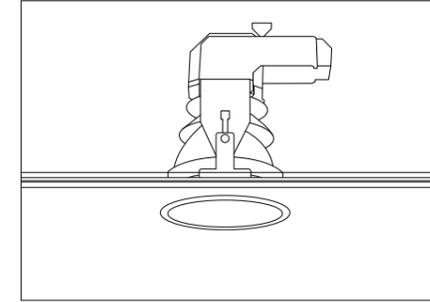
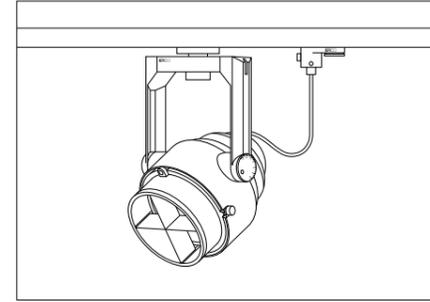


Situations

Hotel lobby and reception



Personnel at the hotel can easily recall the stored light scenes using the Light Changer: bright light during the day allows the eye to adapt more easily to the sunlight, while at night, a lower lighting level is perceived to be more pleasant.



Accent lighting and general lighting are used as lighting tools to provide hotel lobbies with scenic lighting effects. Various designs are available, from luminaires for tracks to recessed luminaires.



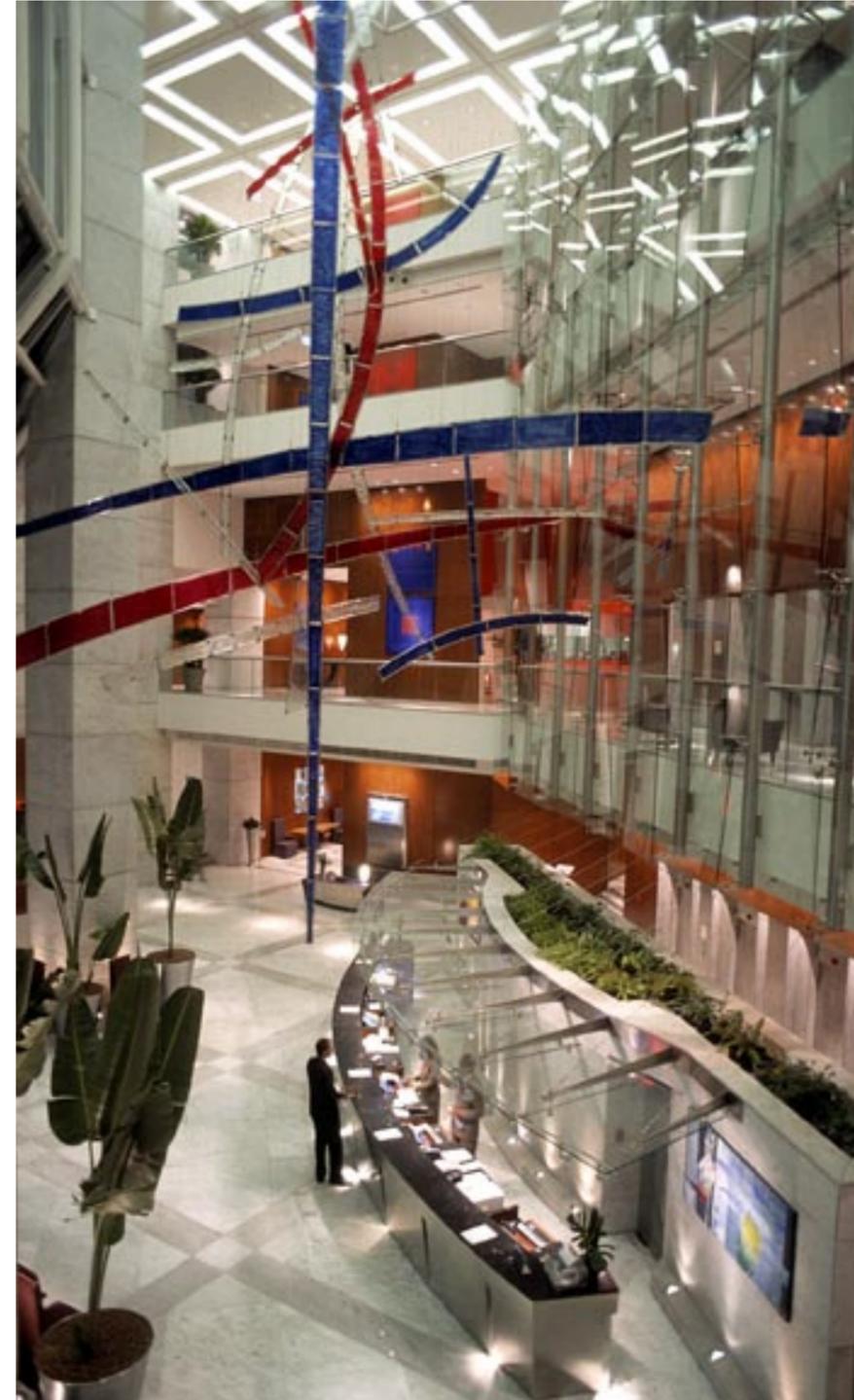
Similar to an overture, the lobby introduces the theme of the hotel and communicates to the guests the atmosphere provided for their stay. Focusing on a tasteful, conservative concept or a modern, plain ambience at the same time creates a rapport with the target group. The atmosphere can be subtly, yet effectively enhanced with appropriate lighting. The lighting can take on a range of tasks here: presentation of the hotel atmosphere through appropriate lighting design which directs newcomers to the reception. Suitably distributed light allows important areas – such as the reception – to be highlighted for orientation and quiet seating areas defined as private zones with low lighting levels.

The light for the reception must satisfy the workplace requirements of the personnel and satisfy the needs of the guests: a proper illumination of the counter, visibility of the person opposite, and a scenic atmosphere.

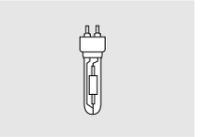


The foyer welcomes guests with a play of brilliants produced by decorative luminaires and projections, while the reception provides

the required level of ambient luminescence.



High rooms require high quantities of luminous flux to highlight the entrance area from the ceiling or to spotlight plants or works of art. Metal halide lamps provide such high quantities of luminous flux, they are suitable for continuous operation and also have a long life. These lamps combine brilliant light and extreme luminous efficacy with good colour stability and rendition.



The ratio of illuminances between general lighting and decorative luminaires can easily be adjusted via the lighting control system. The DALI actuator, DALI dimmer and DALI transformer accessories allow virtually all non-DALI-compatible luminaires to be controlled with the Light System DALI.



Well designed flower arrangements should be shown off by appropriate lighting. Brilliant accent light draws attention to the details and turns them into impressive eye-catchers.

Situations

Hotel corridors and rooms

On the way to the hotel room, the lighting quality of the foyer can be continued in similar form in the hotel corridors. The hall should be designed, in the first place, not from the aspect of safe traffic routes and clear orientation lighting. Rather, it should provide the guest with a suitable ambience.

For the designer to give the room a light feel, the wall surfaces must be appropriately illuminated. In long corridors, the impression of monotony is reduced if luminaires and lighting effect produce a rhythm. Accentuated focal points on the pictures or vases in the corridor provide structure and make the end of the hall appear more attractive.

A lighting control system is useful not merely from an economical point of view, to save energy in rooms which have to be permanently illuminated. It is also a valuable tool for qualitative lighting design. Guests in a hotel expect the lighting during the day to be different from the evenings.

The lighting of hotel rooms can generally be compared to the lighting of private living spaces. While decorative luminaires establish the first atmospheric impression, the actual lighting effect is often produced by discreet general or accent lighting.



A row of LED orientation luminaires accentuate the lines in the architecture.

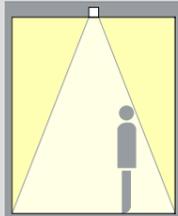
Brightly lit traffic zones create a friendly appearance even in long halls.



Stairs effectively highlight the dramaturgy of the route. They are the transition from the foyer to the other rooms and present the guest in the appropriate light: the purpose here is both seeing and be seen.

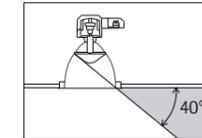
Double washlights

The lighting technology of the double washlights is derived from washlights which direct the light downward onto vertical surfaces. The double washlights are provided with a second reflector segment for even wallwashing in halls and corridors. Compared with hallway lighting using conventional downlights, double washlights also illuminate the



wall zone near the ceiling. The room appears more uniformly lit without a pattern of light that divides the wall into light and dark zones. The Darklight reflector with a cut-off

angle of 40° ensures optimal visual comfort. Within the cut-off angle there is no disturbing glare.



Recessed luminaires such as low-voltage halogen downlights are suitable for general lighting and can, where required, be complemented by decorative lighting. The downlight reflectors are designed using complex computer programs to ensure optimal visual comfort and light output ratio. The Darklight reflectors provide a

maximum of visual comfort without disturbing glare within the cut-off angle. A cut-off angle of 40° creates a balance between horizontal and vertical illuminance.



Lighting the hotel room requires a balanced composition of ambient luminescence, focal glow and play of brilliants. Depending on the use of the room and the time of day, these three components carry a different weight. When entering, the guest expects to step into an effectively illuminated room including striking accents and decorative eye-catchers. In the evenings, there must be sufficiently bright and glare-free light for reading. The reading light at the bed is critical, as its light distribution and alignment

must prevent disturbing glare for others in the room. The arrangement and logic of the switches and operating controls is crucial to ensure that the required light scenes can be recalled with maximum ease-of-use.



The bathroom must be pleasantly lit. Bright light in the morning and at night, dimmed light to help relax. A uniform light distribution and an excellent colour rendition are two of the criteria applied to mirror lighting.

The Client Editor of the Light Studio software is used to integrate DALI-compatible luminaires from other manufacturers into the Light System DALI. It allows the memories of uncoded DALI control gears to be coded individually in order, for example, to integrate luminaires from other manufacturers into the Light System DALI or to combine the individual RGB control gears of a luminaire into a single varychrome client.



Situations

Multifunctional rooms

Conferences, receptions, and dinners are an important line of business for hotels. Accordingly, the lighting installations for event rooms satisfy both functional and representative requirements. This calls for different types of luminaires: general lighting for the tables to allow for note-taking and for meals. Accent lighting for the speaker, vertical lighting for the room. On the other hand, the lighting installation must be complemented by a lighting control system which allows the setup of separate light scenes that can easily be recalled by the hotel staff. Individually definable fading times ensure a soft transition from one light scene to another.

Event rooms with removable wall systems call for light scenes that take account of the spatial complexity of different zones in the room: programmable control gears and light scene management that provide optimal lighting solutions and functionality for small and large zones. Flexible zoning and the addressability of individual luminaires provide the basis for maximum freedom in the lighting design and are supported by the user-friendly Light Book module of the Light Studio software.



Light Studio: Light Book

The Light Book is used for the organization and spatial structuring of Light System DALI installations. Its main function is to create zones and assign Light Clients or Light Changers to zones. It also defines generic Light Clients for luminaires from other manufacturers or custom-built ERCO luminaires and saves the relevant information in the DALI control gear of the Light Clients. Zones can also be assigned to more than one Light Changer. All Light Changers of a zone display identical information.

A zone can consist of a room, functional areas or several rooms. As a visual mnemonic aid, the stage can be used to place symbols for the Light Clients of a DALI installation as appropriate. Thus, the Light Book can easily meet the different requirements of hotels with flexible room divisions in multifunctional rooms.



Multifunctional rooms require different light scenes. During talks, the attention needs to be focused on the presentation and the speaker. Low general lighting allows the audience to take notes.



General lighting provided by downlights allows for a flexible seating arrangement. Spotlights provide subtle accents to compensate for the uniformity of the basic lighting.



The chandeliers provide a play of brilliants and a festive feel. The light islands for each table create an intimate atmosphere, while the coloured wallwashing produces a further accent in the room.



Dimmable lamps such as low-voltage halogen produce a warm light colour and allow fine adjustments of the illuminance.

After a presentation, the lighting in the room can easily be changed using the Light Changer to fade from talk to dinner.



Situations

Wellness area

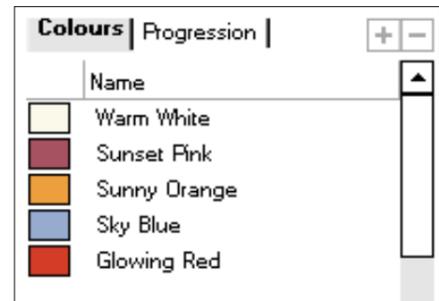


The colour wheel in the Light Studio software can be used to select the required light colour and assess the results in real time.

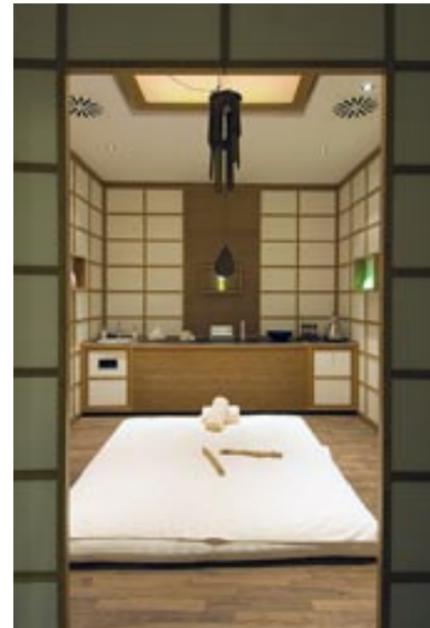


In the wellness area of a hotel, guests looking to relax first and foremost expect atmospheric lighting. They want to immerse themselves in a room that allows them to leave behind the stresses of the day and provides soothing light. Diffuse light creates a soft mood. Individual accents from direction luminaires add interesting contrasts. Coloured lighting provides further impressive effects and enables the designer to implement scenographic sensations via a lighting control system. A mood board can help visualise the required atmosphere and facilitate the translation into appropriate lighting.

Luminaires in wellness zones require a high protection mode. The luminaires are designed with a cover glass with high-quality sealing to protect them against water jets or permanent water pressure. Protection mode IP65, for example, is used to protect against water jets in the shower area. Housings or cover rings made of corrosion-resistant cast aluminium or stainless steel guarantee lasting quality even in wet zones.



The Light Studio software provides a number of predefined colours and colour progressions. Individual colours can be redefined and added using the colour wheel.



Point light sources achieve high levels of brilliance. Warm light colours harmonise with the skin colour. Skin-tone filters are colour filters which improve the appearance of natural, warm colours, especially skin colours, and are ideal for the wellness area.

Zenithally mounted spotlights create the illusion of sunlight. In this situation, guests relaxing on the loungers should not be disturbed by direct glare from the luminaires above them. Precise lighting technology and narrow light beams prevent spill light. Smooth housing surfaces minimise the accumulation of dirt. The ERCO outdoor range

includes a wide spectrum of luminaires suitable for the wellness area.



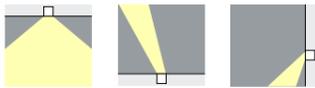
One of the striking features of Beamer spotlights is their light aperture designed as a snoot with anti-dazzle ring and cross-baffle for optimal visual comfort. The lens and filter are safely positioned inside the housing. The snoot is connected to the housing and ensures easy lamp replacement.

The pivot bracket with scale allows accurate alignment of a row of luminaires.

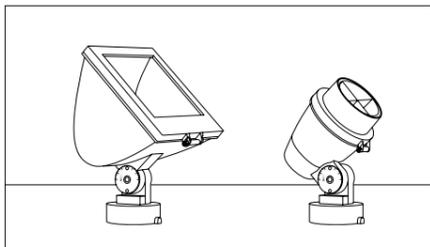
Situations

Outdoor to indoor transitions

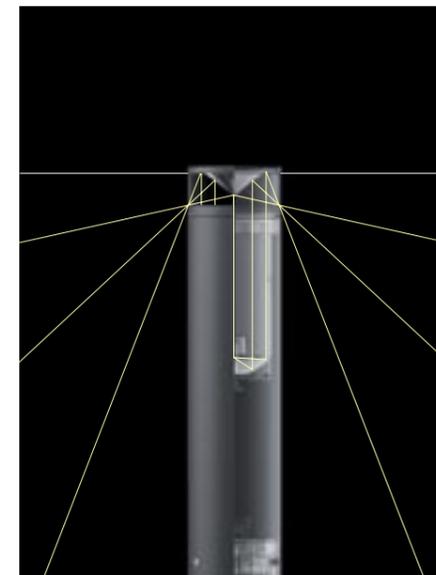
The first and crucial impression of hotels and restaurants is formed before entering, when the guest sees the hotel from afar as they approach the building. Facade lighting that harmonises with the hotel architecture and scenic light for both the driveway and the garden are a pleasant and welcoming gesture inviting the guest to enter the hotel. The entrance also provides a key signal as it is lit more brightly than other parts of the building, it identifies the entrance, helping the visitor to easily find their way. Yet even more crucial than this functional aspect is the representative impression for the corporate design of the hotel. A light carpet at the entrance acts as a "welcome mat" and shows guests getting in and out of their vehicles in the drive in a bright light. Facade luminaires show off the building in scenic grazing light and provide a frame for the entrance. Transparent architecture made of glass, on the other hand, can shine from the inside, enhance the spatial depth, and provide interesting insights. Accent lighting for shrubs and trees sets off the garden in the right light. Recessed floor luminaires appear discreet and are hidden from view – the atmosphere is determined by light and not luminaires.



A wide range of lighting tools are available for the effective lighting of a hotel. There are recessed floor luminaires for the accentuation of vegetation. Wall-mounted luminaires for the illumination of pathways. Downlights to highlight the entrance and provide a welcoming reception. The reflection from the ground lights up the canopy of the entrance.



The appearance of hotels from afar is determined by their facade lighting. Defined light distribution and a correct alignment of the luminaires avoid glare and allow a view from the building. At the entrance, a carpet of light provides the guests with a warm welcome.



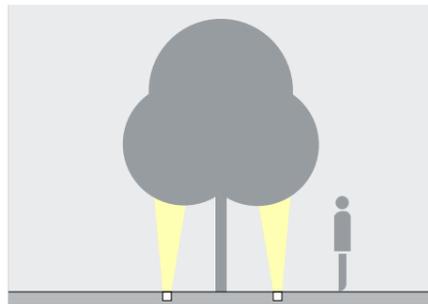
The Panorama bollard luminaire is ideal for extensive area lighting. A beam diameter of up to 12m with an outer illuminance of 0.5lx makes it a powerful tool for outdoor lighting. A precise light guidance

system ensures that no light is emitted above the horizontal plane to comply with Dark Sky legislation.

Situations

Indoor to outdoor transitions

In twilight and at night, the possibility of looking outside enhances the spatial perception inside the hotel. The dazzling view from the restaurant or the cocktail bar onto the silhouette of the landscape or the skyline contributes quite considerably to the enjoyment of staying in such places. Architecture with windows, terraces or glass facades effectively frames the view and provides a unique atmosphere. In order to enjoy the same impressive setting at night, designers work with a precise light guidance system and anti-dazzle luminaires. This ensures that the generally bright interiors are not reflected in the windows which would impair the view outside. This applies to representative rooms such as restaurants as much as to hotel rooms or corridors, where guests should enjoy an unrestricted view outside. Differentiated lighting between foreground and background enhances the perception of the garden.



The view from the hotel room onto an exciting landscape in daylight can be continued at night: illuminated trees in the foreground define the transition to the mountains. Recessed luminaires and floodlights integrate discreetly into the lighting design for the open area and accentuate the trees. A precise light guidance system with cut-off shields prevents glare during a stroll through the garden.

Facades and roofs made of glass enhance the scenic effect of the view. The vista into a starry sky or onto the skyline of a city can become a unique feature of a place. Specific light guidance with narrow emission angles prevents spill light and glare inside the building.



At night, it is light that allows us to perceive facades, squares and vegetation. It eliminates the dark effect of reflecting windows and extends the spatial perception to the outside.



Terraces are places that link the outside with the inside. In twilight, the lighting can be discreetly switched on using a slow fading time.

To allow a view from inside a building into the outside requires luminaires with excellent anti-glare protection and a well-devised luminaire arrangement to avoid reflections of the luminaires in the windows. To provide a good view of the night sky, the interior should have low levels of illuminance to ensure that there are minimal reflections in the window.



Corrosion protection

ERCO outdoor luminaires are made of corrosion-resistant cast aluminium. The no-rinse treatment improves the subsurface for the subsequent powder coating. The double powder coating guarantees a high resistance to weathering, excellent mechanical stability and good corrosion protection. The surfaces are optimised for reduced dirt accumulation.

Protection modes

Protection mode IP65
Protection against dust and strong jets of water from all directions.

Protection mode IP67
Protection against dust and against the results of temporary immersion.

Protection mode IP68 3m
Protection against dust and against the results of continuous submersion up to a depth of 3m.

Situations

Canteen

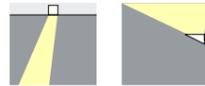
Compared to conventional restaurants, canteens and self-service restaurants include zones in which the guest can pick and choose their own meal. Consequently, it is important here to provide the right lighting for an effective presentation and appearance of the salad bars, hot food and snacks. To intensify the colour of food without changing their natural appearance, the designer can use correction filters which transmit light of a specific wavelength more powerfully than others. Thus, the filters for fruit in warm colours are different from those for green vegetables.

Spotlights for tracks or directional spots as recessed luminaires provide brilliant lighting and accentuate the canteen food selection. The eating section is economically illuminated using direct general lighting. To ensure a friendly atmosphere, indirect ceiling lighting can achieve bright room surfaces.

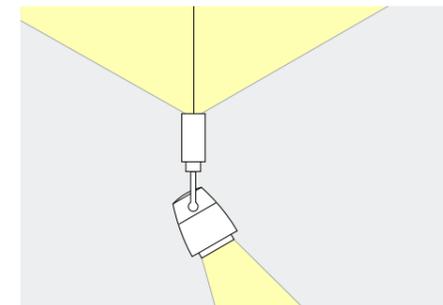
High-pressure discharge lamps are useful for this type of cuisine, as they provide brilliant accent lighting in the self-service section and for general lighting purposes to ensure that the basic lighting level is comparable to natural daylight.



The scenic lighting effect in the room is produced by ceiling washlights mounted at the sides to provide a bright room impression. Directional luminaires between the acoustic panels add brilliance on the tables.



Point light sources produce brilliant light for the presentation of the food. Warm light colours and an excellent colour rendition reveal the meals in a favourable light.



The Hi-trac light structure with the indirect component of the T16 fluorescent lamps and the brilliant light accents produced by Jilly spotlights for halogen reflector lamps create a balanced atmosphere of directed and diffuse light. The simple design of a suspended lighting system harmonises with the concrete steel construction of the historic industrial hall and simultaneously creates a bright room impression through the illuminated ceiling.



While the staff can communicate in a relaxed atmosphere at lunch-time, the car bodies float along above their heads – effectively illuminated in the corporate colours of the vehicle manufacturer. Downlights with Darklight reflector technology and different wattages match the varying room heights.

The food bars in the canteen appear like little light islands. The general lighting merely serves as the basis for a differentiated lighting design that highlights the choice of menus using focal glow.



Appropriate light scenes for the different times of the day can easily be recalled via the Light Changer.

ERCO showrooms

Experiencing light and using services – worldwide

ERCO is a cosmopolitan, globally active company. ERCO showrooms and offices can be found in all major markets. Here, our well-educated, specially trained employees work as lighting advisors. This worldwide network ensures reliable service and competent, on-site support especially on international projects: from providing advice during the planning stage, tendering, sample supply and project planning to customer service and training.

"Consultant to the consultant" – this is how ERCO lighting advisors see their role in the building process: they provide professional support to designers in all matters relating to lighting technology and in each individual project phase. With case-related specialist information and customised product documentation they help customers to make the correct decision when selecting lighting equipment.

The showrooms and offices provide ideal facilities for meetings during the project phase. Each has a mock-up section for sample and other product demonstrations.

However, our ERCO service does not end with the punctual delivery of the products: after commissioning the system, our lighting advisors support customers in word and deed, for instance by lending a helping hand when it comes to positioning and focusing luminaires correctly.



Events and seminars
These turn ERCO showrooms into meeting places for the local light and architecture scene. The showroom is designed to make it possible to explain "Tune the light": to design the qualities of light in terms of time and space.



Lighting qualities
Our wide range of luminaires addressable via lighting control equipment are ready for operation to allow the demonstration of subtle lighting qualities.



Light in space
The effect of light in space is difficult to express in words – it must be experienced. The ERCO showrooms provide ideal, flexible facilities for such demonstrations.



Project management
The offices provide ideal facilities for project meetings. Your ERCO contact is trained to support clients through all the stages of a project.



On site
Some decisions in the design process are best made on the building site. ERCO employees help to organise sample products and provide assistance on lighting technology issues.



Contact
The ERCO staff all around the world look forward to getting to know you. You will find the addresses of our offices and showrooms at the end of this brochure and at:

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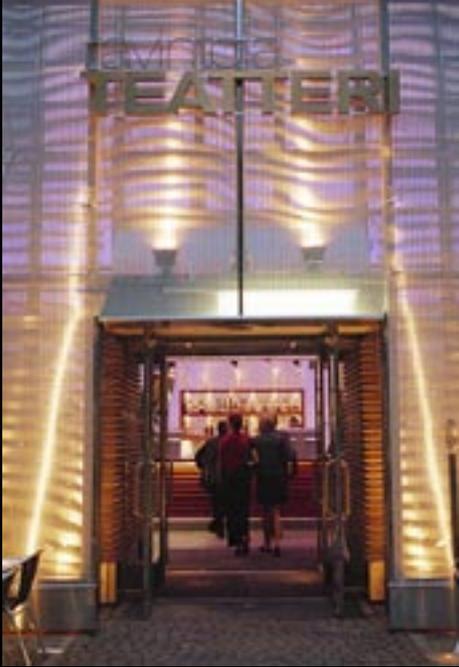
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