

Lighting Tools Interior

Introduction and Contents

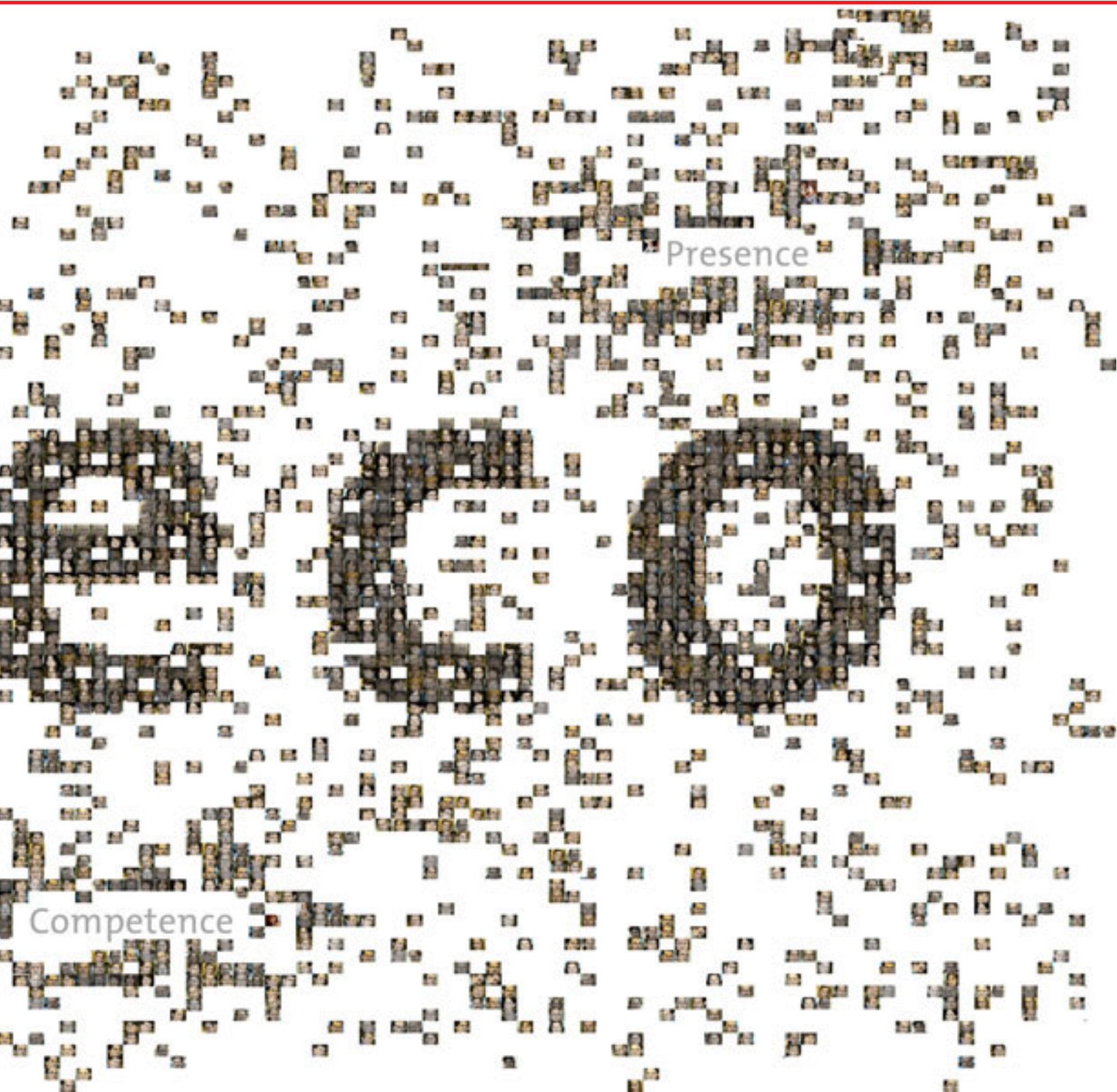


Dependability

Our Employees Light for People

Dependability, presence and expertise. Our Lighting Tools are created on the basis of these values, principles that are as unique as our employees who are active for us around the world. They share a common enthusiasm for the

medium of light and a passion for excellent service. The knowledge, curiosity and creativity of our experts enables us to develop new technologies and to implement innovative lighting instruments. This takes place within the frame-



work of a close dialogue with our customers, permanent communication with other lighting experts and with a special consideration for ecological and economical factors. The result is excellent products for lighting solutions in the

application areas of office, industry, traffic, shopping, public and sports – in fact everywhere where people need good light and luminaires as tools for creativity.



The Technology and Design Centre Forum for Inspiration

The technology and design of luminaires are processes that are in a constant state of flux, and their development is continually progressing. The Siteco Technology and Design Centre accompanies these processes, and is a forum for our guests, customers and partners, in fact for everyone that

values good light. Within the Technology and Design Centre there is room for communication and interaction, and from this visions are developed for new lighting solutions and inspiration gathered for innovative lighting instruments.



A process of dialogue leads to optimal solutions

From expert to expert



Thoughts come about in the head, are formulated into ideas and grow to become solutions. The more heads used and the more knowledge, experience, creativity and passion brought into the processes, the better is the result. Our customers are the experts for their specific requirements.

We are the experts for lighting in the office, industry, traffic, retail, public and sports application areas and specialists for suitable Lighting Tools. Together we have a rich source of experience gained from countless successfully implemented projects. When this source of knowledge flows together into a permanent dialogue between experts, optimal solutions are created that are ideal for the specific lighting tasks of our customers.



Information and added value

Instruments for lighting design



Specific information concerning the technical characteristics and exact specifications of luminaires are the preconditions for efficient planning and creative lighting design. We make available information about our lighting instruments at www.siteco.com as an additional service and added benefit. This information comes about as a result of intensive communication with our customers and also a precise knowledge of their work processes.

The permanent development and fine-tuning of these planning tools goes hand in hand with the development of new, application-related technology and products. Such as the Street Lighting Energy Optimizer (SLEO) for example.

SLEO is a browser-based tool that enables the highly rapid specification of efficient road lighting solutions with Siteco outdoor luminaires. The tool informs about energy consumption and carbon dioxide immissions of old systems, energy consumption and carbon dioxide immissions of the new system and suitable, efficient Siteco Lighting Tools. The results list also specifies further useful instruments for daily work: the electronic catalogue with product data in all common formats, tender texts, installation instructions, application and product images and 3D models as well as plug-in libraries for PC planning software. This information is available offline via the Toolbox CD, and of course via personal dialogue with our employees from the customer service centre.



Continuity and actuality

Into the future with Lighting Tools



We are faced with a huge challenge, but also have excellent chances of success: reducing the global consumption of energy and confronting the problem of carbon dioxide immissions. Energy efficiency is the buzzword. More than 150 years lie between the first arc lamp from Siemens & Halske, the nucleus of today's Siteco, and the LED

tools for lighting that we currently manufacture. But motivation over all those years has remained the same: to conceive and manufacture luminaires that are outstanding in terms of lighting technology and highly efficient with regards to energy.

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- 2011** Siteco renounces the production of luminaires with high pressure mercury vapour lamps
 - 2011** Development and production of the Streetlight 10 LED. The modular LED road luminaire is the reference for efficient, sustainable lighting for the future
 - 2010** Siteco LED Lighting Tools for indoor and outdoor applications usher in the digital revolution in lighting technology
 - 2010** Development and introduction of electronic control systems for reduction of luminous flux, for full exploitation of the potential for LED efficiency
 - 2009** Development of the LED Module 520 as an efficient, innovative light source for classic town and park luminaires
 - 2008** Development and market launching of the Siteco DL® 10 LED – the first LED road luminaire for the energy-efficient, standard-compliant lighting of main roads and ancillary roads
 - 1998** Development of ELDAICON® microprismatic system for the glare-free lighting of VDU workstations
 - 1998** Development of the radial faceted reflector for highly precise and efficient road lighting
 - 1990** Market launching of the first daylight system
 - 1990** Development and market launching of the first electronic ballast (ECG)
 - 1981** Development and market launching of the first CAT2 luminaire for the standard-compliant lighting of VDU workstations
 - 1975** Development and market launching of the first trunking system
 - 1971** Development and market launching of the first 3.5 kW/h high performance projector for the Olympic Games in Munich

LED Technology

The future in a new light



The future of efficient lighting, predominantly for outdoor applications, will be determined by the key technology of LED. The service life of these innovative light sources, their luminous efficacy, the precision of their light distribution and their options for intelligent electronic control are outstanding. The main challenge is to be able to integrate LED technology into luminaire concepts so that they can make the most of their complete energy efficiency potential and



can simultaneously offer a quality of light that complies with and exceeds all of the standards. In this regard we are currently experiencing completely new approaches to product design and the design of light in general. One thing is sure:

the future has already begun –
and we'll be helping to shape it.



The best light comes from the sun Siteco daylight systems



Our daylight systems transport natural light to exactly where it is needed: to people within buildings. Daylight systems use the advantages of daylight (light colour, dynamics) and compensate for its disadvantages (heating up of rooms, glare).

The first step to a daylight system is to design a highly efficient and yet translucent solar protection. Daylight systems utilise optical laws such as reflection, transmission and

refraction to deflect hot, direct sunlight and to guide the cool, diffuse daylight into the interior. this reduces energy consumption needed for lighting and air-conditioning, and therefore also lowers the operating costs for building technology.



Daylight systems can be subdivided into:

1. **Prism systems** that use the high transparency of the materials used (acrylic glass) and the optical laws applying to prisms (total reflection, refraction, reflection on thin aluminium surfaces)
2. **Reflector systems** that use the reflection characteristics of the high quality material and the special form for each specific function (solar protection/light control)

Buildings equipped with daylight systems demonstrate that the optimisation of solar protection and maximum light ingress under consideration of photometric comfort requirements is possible. In addition to ecological savings (shorter switching times for luminaires, improved lamp service life etc.), optimal visual conditions according to natural daylight conditions are achieved that satisfy both individual and collective requirements.

Glare-free light for VDU workstations ELDACON®



The functional specifications for the illumination of VDU workstations are ambitious: on the one hand high levels of illuminance, and on the other low luminance and low glare. Patented ELDACON® light control technology enables the fulfillment of these criteria. The light is directed via a highly precise microprismatic structure without glare and with a high level of uniformity onto the working plane.

Lighting instruments featuring ELDACON® achieve especially high light output ratios that aid in the achievement of energy-efficient architecture. In addition, ELDACON® opens the way for new creative possibilities: ELDACON® luminaires because of their special characteristics can be freely arranged within the room, independently of the arrangement of VDU workstations.

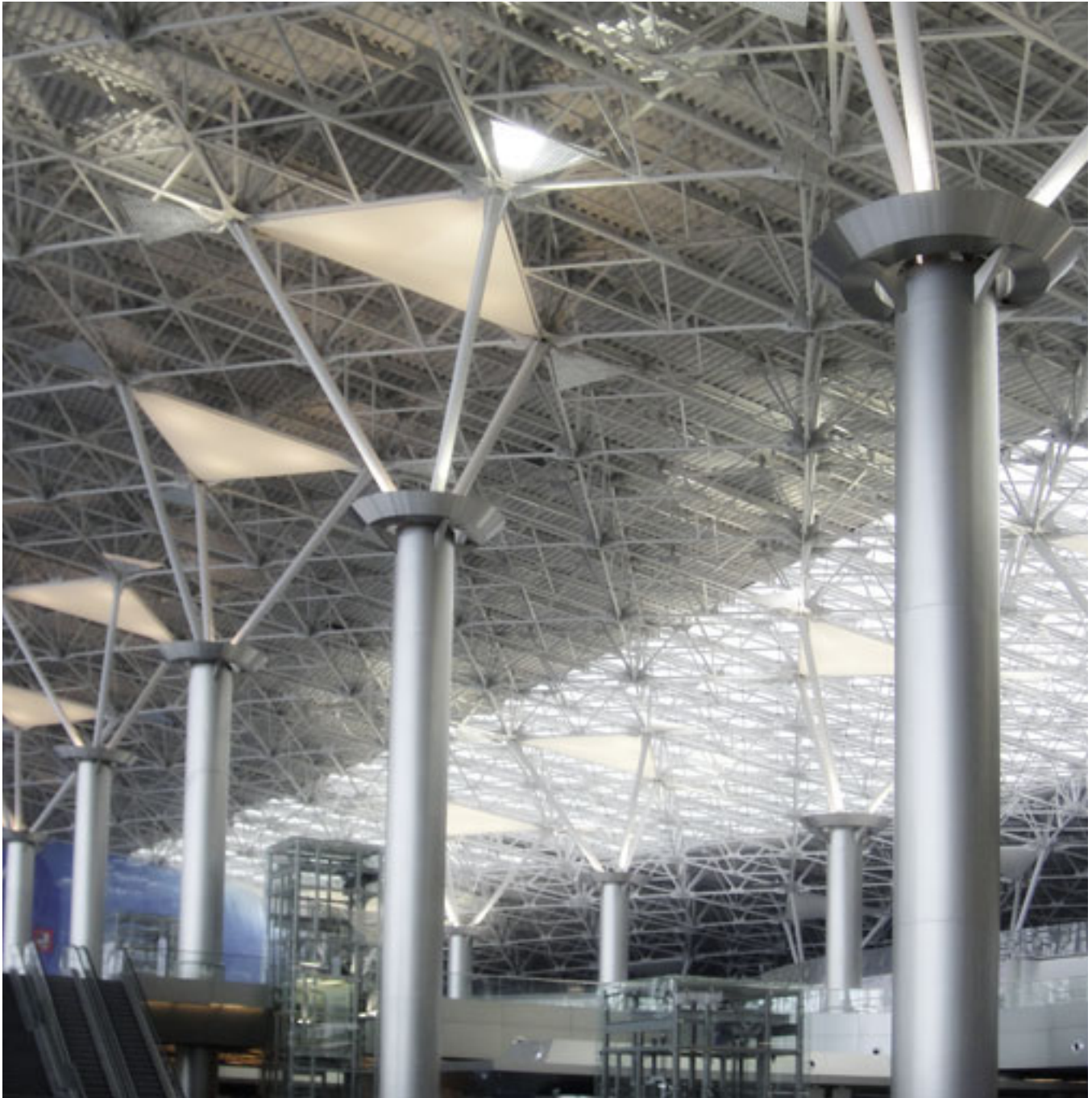


Precise Light Control via Secondary Reflector Technology Siteco Mirrortec®



Lighting instruments with Siteco Mirrortec® technology create light effects that are characterised by optimal glare reduction, a high level of energy efficiency and superior visual comfort. With secondary reflector systems the light of a projector is emitted with a narrow beam onto a faceted

reflector. The light point resolution reflector reflects the light onto the surface to be illuminated, free of glare. This technology was implemented for the first time by Siteco under the name of 'Mirrortec', and was further developed with use of Fresnel optics.



People work at desks

Light for office applications



Offices are spaces for creativity, communication, interaction and inspiration. Good lighting conditions and homogenous illumination help people to feel comfortable at work. This increases motivation and productivity levels. High, uniform lighting levels, bright vertical surfaces and absence of glare on computer screens are the criteria for good office lighting. In addition, offices today are not only places for work but

increasingly integrate the corporate philosophy into their design. They become representative spaces that are taken into account during the design of architecture. In this respect, Lighting Tools are required that are able to harmoniously fit into the holistic concept or that can set formal accents.



People work with machines and tools

Light for industry applications



The demands for lighting within industry are complex. A large application spectrum exists with precisely specified tasks. Factors such as visual requirements, safety and security aspects and special ambient conditions must be considered. In addition to requirements specified by current standards, solutions are strived for that support well-being at the workplace and therefore aid in increasing

productivity. Lighting for the industrial sector also becomes a matter for financial consideration when it is considered in terms of energy efficiency: the higher the power consumption, the higher and more interesting is the potential for saving, and therefore the more sustainable are the effects that can be achieved with individually adapted lighting instruments.



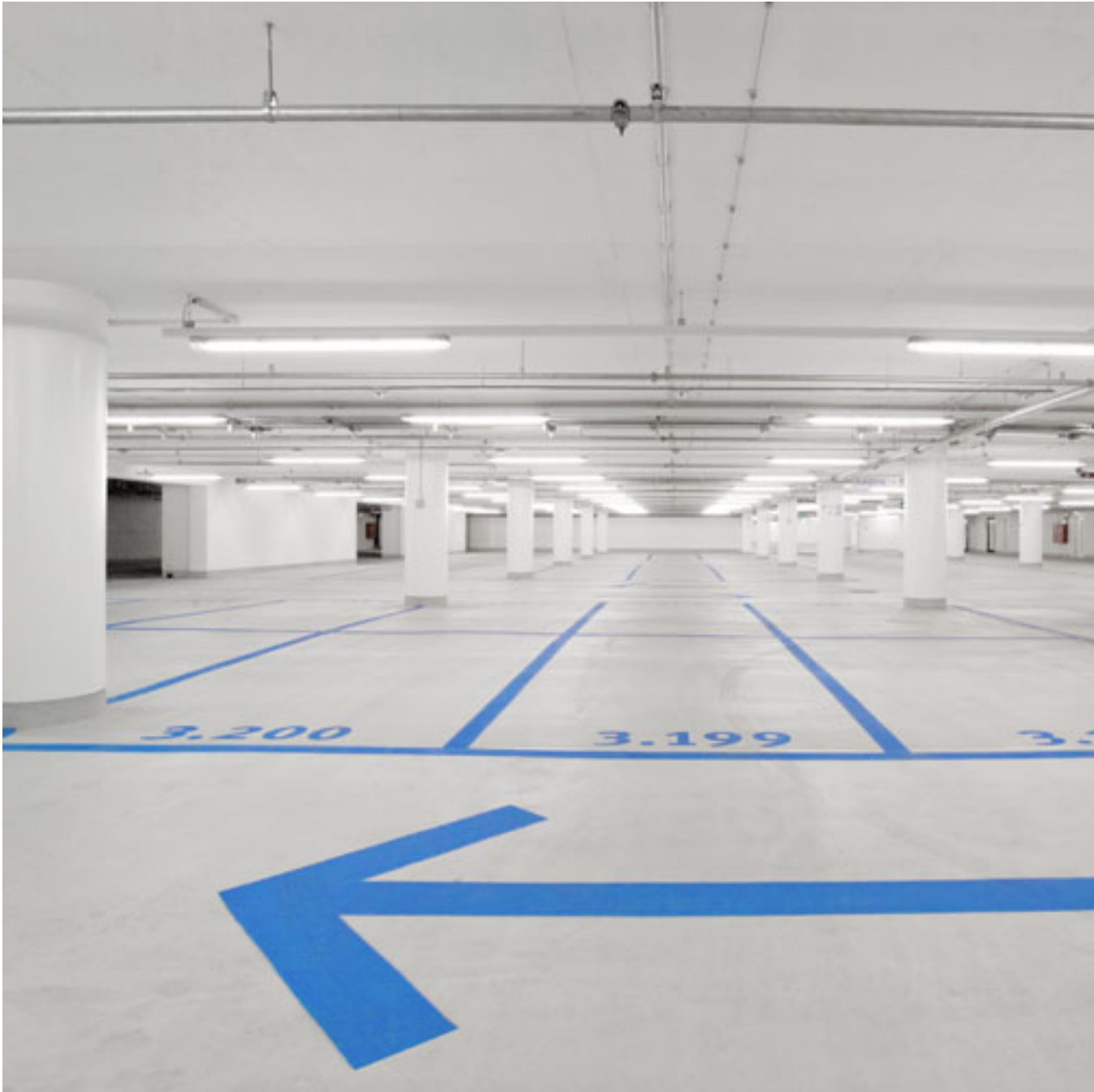
People move with vehicles

Light for traffic applications



The quicker people move, the more important lighting becomes for traffic routes. Rules and regulations exist both nationally and internationally that specify when and where requirements need to be fulfilled. As well as the specific character of lighting effects, ease of maintenance, robustness and optics are all of major importance. They lastingly determine the balance between environment,

energy and costs. In view of this, how individually a lighting system can be adapted to the specific tasks at hand is relevant: the more flexible the lighting instruments are, the better the system is in terms of environment, balance of costs and inevitably better for people as well.



People buy goods and services

Light for retail applications



To present goods in the right light, to animate customers into making purchasing decisions and to do this in pleasant surroundings that at the same time emphasise the unique character of the retail outlet are the demands placed upon

shop lighting. With the combination of the right light colours, lighting levels and distribution of light, our Lighting Tools create optimal light for discounters and supermarkets as well as for high quality department stores and boutiques.



People move and meet in public buildings Light for public applications



Publicly accessible spaces, whether inside buildings or outdoors, should communicate to people a positive feeling, ensure safety and orientation and make available important information.

At the same time such spaces have a representative character or else are situated in exposed locations with particular functions: as prestigious representations,

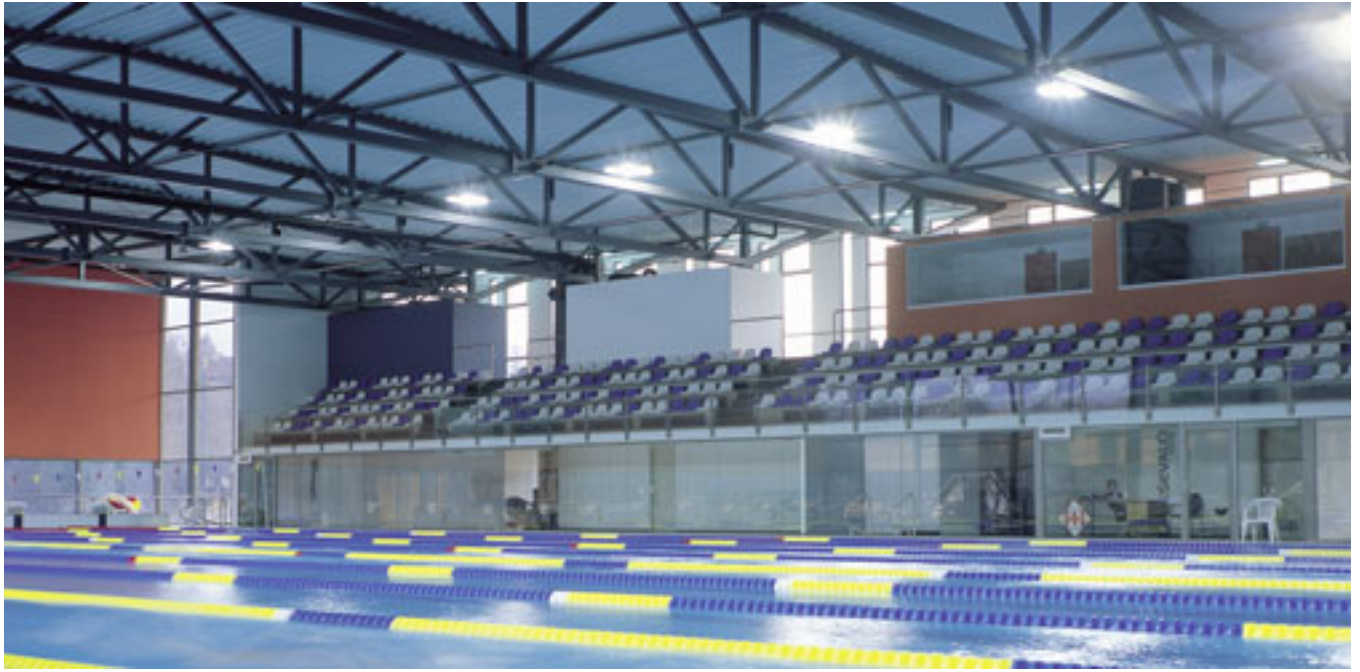


marketplaces or pedestrian zones for example. Rooms within the public sector require lighting instruments that react sensitively to the demands of people, the functional lighting tasks of the area and the specific features of the architecture.



People play sport


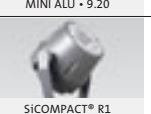
Light for sports applications



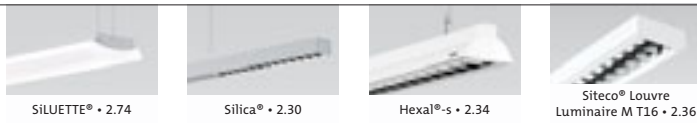
The illumination of sports arenas is a supreme discipline. As well as optimal light for a variety of applications, highest levels of efficiency are required. Because ever more sports facilities are characterised by entrepreneurial organisation and are assessed according to their energy balances. Sport in addition is not only toughening up, training and competition but increasingly an approach to

life, entertainment and the focus of major events. Sport is set in scene – both for spectators as well as for sponsors. Quality of light here plays a central role. Because modern media technology such as HDTV sets very specific demands for lighting instruments, and therefore heightens the evaluation criteria for the illumination of sports arenas.



1 Floorstanding Luminaires	 <p>Futurel° 5MS • 1.2</p>						
2.1 Linear Luminaires → Suspended Luminaires	 <p>Quadrature° 2 • 2.4</p>	 <p>Novaluna° S • 2.12</p>	 <p>Novaluna° P • 2.12</p>	 <p>Novaluna° • 2.18</p>	 <p>Tecario° • 2.56</p>	 <p>Lightpane • 2.22</p>	 <p>Comfolight° 2 • 2.70</p>
2.2 Linear Luminaires → Surface-mounted Luminaires	 <p>Quadrature° 2 LED • 2.44</p>	 <p>Quadrature° 2 • 2.46</p>	 <p>Novaluna° 2 • 2.50</p>	 <p>Tecario° • 2.56</p>	 <p>Comfolight° 2 • 2.70</p>	 <p>SILUETTE • 2.74</p>	 <p>Siteco° Louvre Luminaire M • 2.84</p>
2.3 Linear Luminaires → Recessed Luminaires	 <p>Quadrature° 2 LED • 2.116</p>	 <p>Quadrature° 2 • 2.120</p>	 <p>Novaluna° • 2.124</p>	 <p>Novaluna° Halbembau • 2.124</p>	 <p>Tecario° • 2.136</p>	 <p>Siteco° Louvre Luminaire XS • 2.148</p>	 <p>Siteco° Louvre Luminaire M T16 • 2.158</p>
2.4 Linear Luminaires → Ceiling- and Wallwashers	 <p>Ceilingwasher Recessed • 2.184</p>	 <p>Ceilingwasher Surface mounted • 2.186</p>	 <p>SILING° • 2.188</p>	 <p>SILING° • 2.188</p>	 <p>Siteco° Louvre Luminaire M • 2.192</p>	 <p>Siteco° Louvre Lum. Plus Surface mounted • 2.194</p>	 <p>Siteco° Louvre Lum. Plus Recessed • 2.196</p>
3.1 Downlights → Suspended and surface-mounted Downlights	 <p>Lunis R° • 3.4</p>	 <p>Lunis° C • 3.16</p>	 <p>Lunis° C Semi-Recessed • 3.27</p>	 <p>NJ200 • 3.28</p>			
3.2 Downlights → Recessed Downlights	 <p>LUNIS° 2 LED • 3.44</p>	 <p>LUNIS° Q • 3.76</p>	 <p>LUNIS R° • 3.80</p>	 <p>LUNIS° SL • 3.104</p>	 <p>LUNIS° SL Directional Spotlight • 3.104</p>	 <p>LUNIS° SL Wallwasher • 3.104</p>	 <p>LUNIS° EH • 3.112</p>
4 Wall- and Ceiling Luminaires	 <p>Futurel° 5MS • 4.4</p>	 <p>Europlex° TC Mirror Luminaire • 4.6</p>	 <p>Europlex° TC Quarter Sphere • 4.6</p>	 <p>Europlex° TC circular, cambered • 4.6</p>	 <p>Europlex° TC circular, flat • 4.6</p>	 <p>Europlex° TC circular, flat • 4.12</p>	 <p>Europlex° square, flat • 4.12</p>
5 Luminaires for Sales Cabinets	 <p>Lumos° Head Luminaire • 5.2</p>	 <p>Lumos° Shelf Luminaire • 5.2</p>	 <p>Lumos° Cold Store Luminaire • 5.12</p>	 <p>Lumos° Baked Goods Luminaire • 5.16</p>			
6 Trunking Systems	 <p>Modario° IP20/40 • 6.2</p>	 <p>Modario° Spot Insert • 6.40</p>	 <p>Modario° Multi-Sensor • 6.44</p>	 <p>Modario° IP40 Powermodule • 6.50</p>	 <p>Modario° IP64 • 6.58</p>	 <p>DUS° IP20 • 6.72</p>	 <p>DUS° IP20 Spot Insert • 6.104</p>
7 Damp-Proof Luminaires	 <p>Monsun° LED Complete Luminaire • 7.6</p>	 <p>Monsun° LED Refurbishment Kit • 7.6</p>	 <p>FR500 • 7.10</p>	 <p>FR200 • 7.20</p>	 <p>FR100 • 7.30</p>	 <p>Monsun° • 7.40</p>	 <p>SiPLAST° 98 • 7.52</p>
8 Highbay Luminaires	 <p>Wide-Area Highbay Luminaire • 8.6</p>	 <p>Siteco° Louvre Luminaire M • 8.12</p>	 <p>NJ600 • 8.16</p>	 <p>Compact Reflector Luminaire NX700 • 8.26</p>	 <p>SiCOMPACT° A2 MINI MIDI LED • 8.30</p>	 <p>SiCOMPACT° A2 MINI MIDI LED • 8.30</p>	 <p>SiCOMPACT° A2 MINI MIDI • 8.36</p>
9 Secondary Reflector Systems	 <p>SMR 100 • 9.10</p>	 <p>SMR 100 rund • 9.10</p>	 <p>SMR 100A • 9.10</p>	 <p>SMR 200CA • 9.14</p>	 <p>Siteco Mirrortec° Projector 400 • 9.16</p>	 <p>SiCOMPACT° R1 MINI ALU • 9.20</p>	 <p>SiCOMPACT° R1 MINI S • 9.20</p>
10 Facade- and Path Luminaires	 <p>CL Ceiling 10 • 10.6</p>	 <p>CL Wall 10 • 10.6</p>	 <p>CL Linear • 10.14</p>	 <p>CL Spotlight 10 LED • 10.22</p>	 <p>SiCOMPACT° 52 MINI LED-RGB • 10.30</p>	 <p>SiCOMPACT° R1 MINI • 10.34</p>	 <p>Siteco Mirrortec° Projector 400 • 10.40</p>
11 Lighting Management	 <p>Professional 11.6</p>	 <p>digidim 11.26</p>	 <p>Single Room System Multi-Sensor • 11.46</p>	 <p>Single Room System Controller • 11.54</p>	 <p>Single Room System Constant Light • 11.68</p>	 <p>Luminaires with Multi-Sensor • 11.70</p>	
12 Appendix							

1 Floorstanding Luminaires



2.1 Linear Luminaires
→ Suspended Luminaires



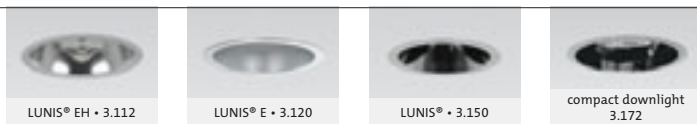
2.2 Linear Luminaires
→ Surface-mounted Luminaires



2.3 Linear Luminaires
→ Recessed Luminaires

2.4 Linear Luminaires
→ Ceiling- and Wallwashers

3.1 Downlights
→ Suspended and surface-mounted Downlights



3.2 Downlights
→ Recessed Downlights



4 Wall- and Ceiling Luminaires

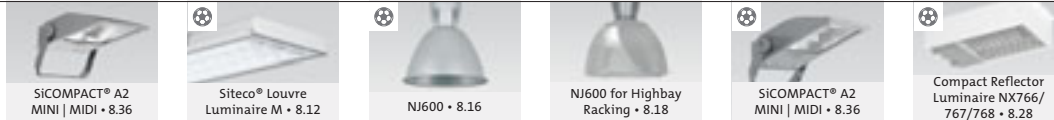
5 Luminaires for Sales Cabinets



6 Trunking Systems



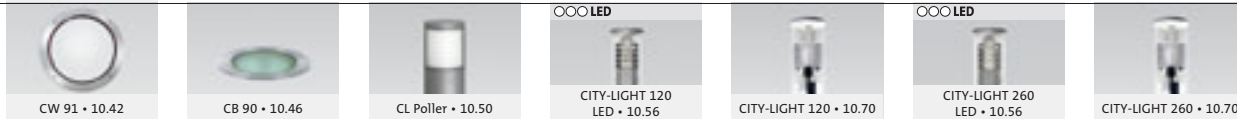
7 Damp-Proof Luminaires



8 Highbay Luminaires



9 Secondary Reflector Systems



10 Facade- and Path Luminaires

11 Lighting Management

12 Appendix