Presse Press

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OSRAM

Osram supports "Healthy Offices" survey

The latest surveys verify the effectiveness of "Human Centric Lighting" solutions in offices

A research project conducted by Twente University, The Free University Amsterdam and the property consultant CBRE Holland once again confirms the interplay between work surroundings and health as well as the well-being and performance capacity of people. Osram installed a "Human Centric Lighting" solution for the survey at the headquarters of CBRE in Amsterdam – consisting of a time-controlled lighting system with a circadian-friendly lighting sequence. The results verify: 76 percent of participants felt happier, 50 percent healthier and 12 percent performed better in an objective experiment.

124 people took part in the Healthy Offices survey and more than 100,000 data records were analysed, and the multi-disciplinary research project focused on the impact of work surroundings on the potential of employees. With use of questionnaires, experiments, biological data, daily movement evaluations and interviews, the Healthy Offices project measured the effects of changes in work surroundings and health over a period of seven months.

The team of researchers specified five modifications to the work environment that could theoretically have the most impact on health and employee potential – on the one hand health aspects such as healthy nutrition, mental balance and physical movement and on the other, environmental factors such as the natural interior design and suitable lighting. In this case the influence of circadian lighting adapted to the sequence of daylight was analysed. Osram as a renowned expert for Human Centric Lighting concepts was

commissioned with installing a suitable LED lighting and light management solution for the project.

Circadian lighting

Decades of research have shown that light has a significant influence on our mood and ability to concentrate – and one of most important aspects of good lighting is timing. Our brain regulates the circadian rhythm of the body based on "light signals" from our environment. The circadian rhythm controls our energy level, mood and sense of alertness or sleepiness. When our inner clock no longer functions synchronously with the time of the day we become agitated and our reactions slow down – we are less attentive and it becomes more difficult to concentrate.

To implement an adequate Human Centric Lighting solution in the survey Osram installed a time-controlled lighting system with a circadian-friendly light sequence, meaning the luminaires adapt their light colour (Tunable White) and intensity during the course of the day. Several light sources were aligned onto the walls to create high vertical illuminance levels. Luminaires suspended from the ceiling in the open office area generate a pleasant indirect light component and avoid glare. In total, the luminous intensity was almost doubled.

Arktika-P Biolux Tunable White was specified for the primary, wide-area general lighting of the office – this is an ultra-flat and extremely efficient pendant luminaire with two different operating elements. The LED luminaire emits both direct (4000K) and indirect (6500K) white monochrome light, and cool white light is distributed across the ceiling during the course of the day via the separately controllable direct and indirect components. Employees are stimulated during the morning and early afternoon with high illuminance levels and cool white light from the indirect component, and at midday and late afternoon warmer, dimmed light supports the natural biological rhythm while improving well-being and performance capacity.



Decorative Lightify Surface Light ceiling luminaires with Tunable White ensure uniform illumination via various light colours for the morning (6500K), afternoon (4000K) and evening (2700K), and the luminaires are controlled manually via push-buttons or wirelessly via Lightify Pro. Lunis wallwashers also emit light onto the office walls to create high vertical illuminances. In the conference rooms, RGBW ceiling-recessed spotlights enable wireless selection of any white or coloured light via a Lightify Pro control for the various work and communication tasks.

Research results for "correct lighting"

The participants working in the "healthy spot", the part of the CBRE office with the new, modern lighting configuration, found their total work performance to be 18% better, 71% found they had more energy, 76 percent thought they were happier and 50 percent more healthy. Furthermore, the survey results recorded an accuracy improvement of 12 percent. On the first day of the research period the new lighting was quite unusual for the participants, but they soon enjoyed the new work ambience and stated they particularly liked to work in this office zone.

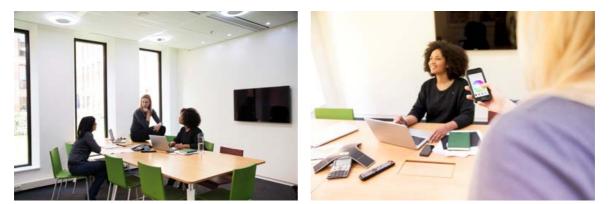
As with earlier surveys, the research project demonstrated that offices are in fact ecological systems with hundreds of different components influencing the choice of a healthy or unhealthy approach. The humane modification of work surroundings can lead to a better working future for employees and also represents an intelligent business investment; costs for illness, burnout and employee fluctuation are significant expenses that can be reduced by establishing healthier offices.







Cool white light is distributed across the ceiling during the course of the day via the separately controllable direct and indirect components of the Arktika P Biolux.



Any white or coloured light can be selected via wireless Lightify Pro control in the conference rooms.





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ABOUT OSRAM

OSRAM with headquarters in Munich, Germany is a globally leading light manufacturer with a company history spanning approximately 100 years. The product portfolio contains high-tech applications based on semiconductor technology such as infrared and laser. Products are used in a wide variety of applications ranging from virtual reality, autonomous driving and mobile phones to networked, intelligent lighting solutions in buildings and cities. The company is global technology and market leader in the automotive lighting technology sector. OSRAM employed around 24,600 people worldwide in the fiscal year 2016 (to 30 September) in its continued business divisions (without Ledvance), and achieved turnover of 3.8 billion euros in this fiscal year. The company is listed at the Frankfurt am Main and Munich stock exchanges under WKN: LED 400 (stock exchange symbol: OSR). Further information can be found on the internet at www.osram.com.



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