LIGHTING SOLUTION

MODERN OFFICE

OMS

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LIGHTING SOLUTION

Lighting is a fundamental provision for any workplace. At OMS we have developed a lighting solution for Modern offices that utilizes the latest LED technology, provides the ultimate comfort for the eyes and aids general well-being by sufficient illumination on the horizontal and vertical surfaces in the room.

Following ergonomic standards both in the physical work environment and in the design of office lighting is essential for creating a healthy office space. Quality lighting positively influences the human psyche, the ability to concentrate, as well as regeneration.

In the Modern office solution by OMS, we integrate daylight and artificial lighting, thus providing pleasant and inspiring light, throughout the day, every day. Presence detectors represent a suitable type of control for office spaces, corridors, and staircases, leading up to 50% energy saving.

A solution that is easy to control always provides the appropriate amount of light thanks to sensors, and is set up to maximize energy saving.

Welcome to Modern Office by OMS!

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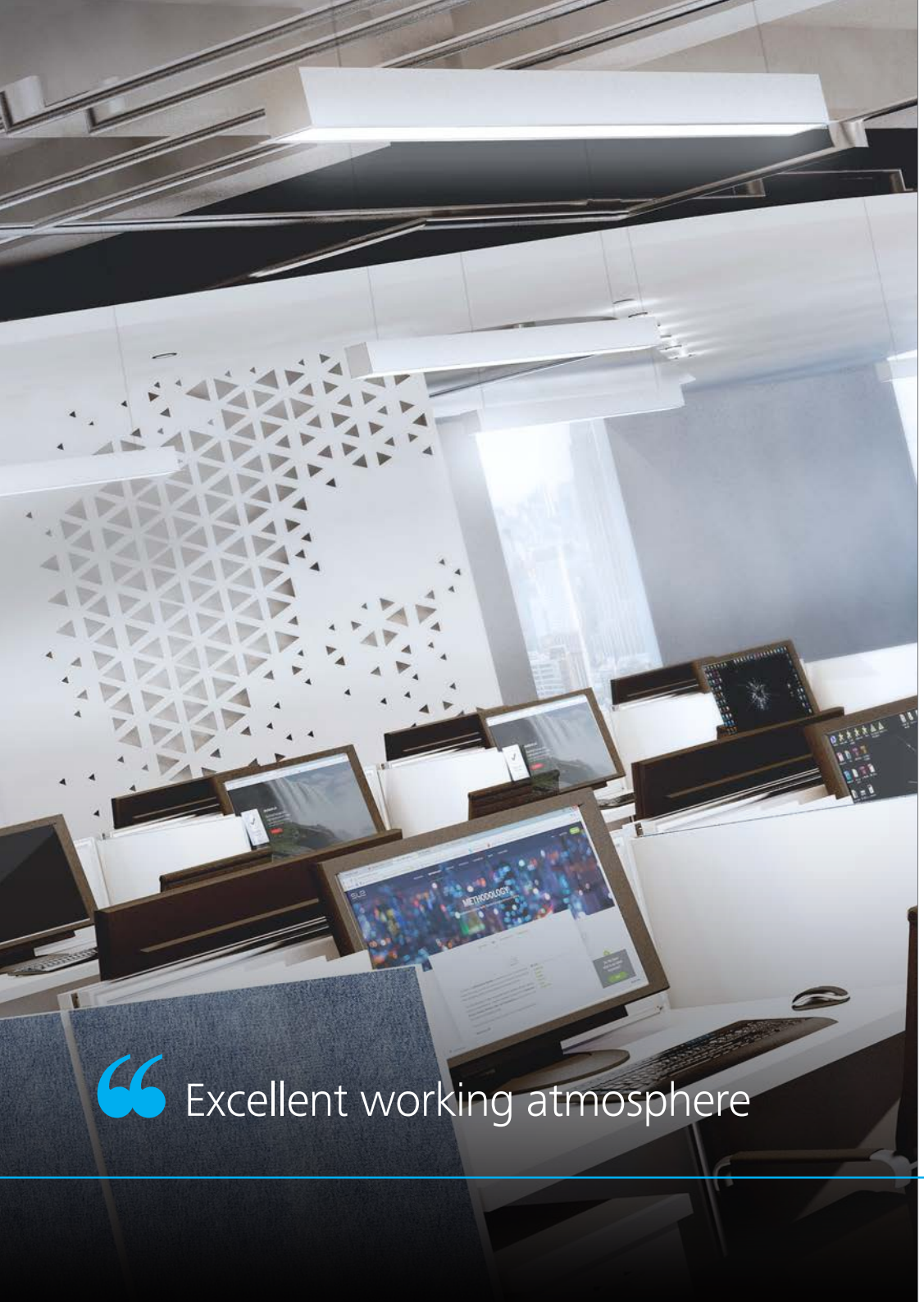


> Excellent working atmosphere

CONCEPT

100%
EXPERTISE

LIGHT UNIFORMITY

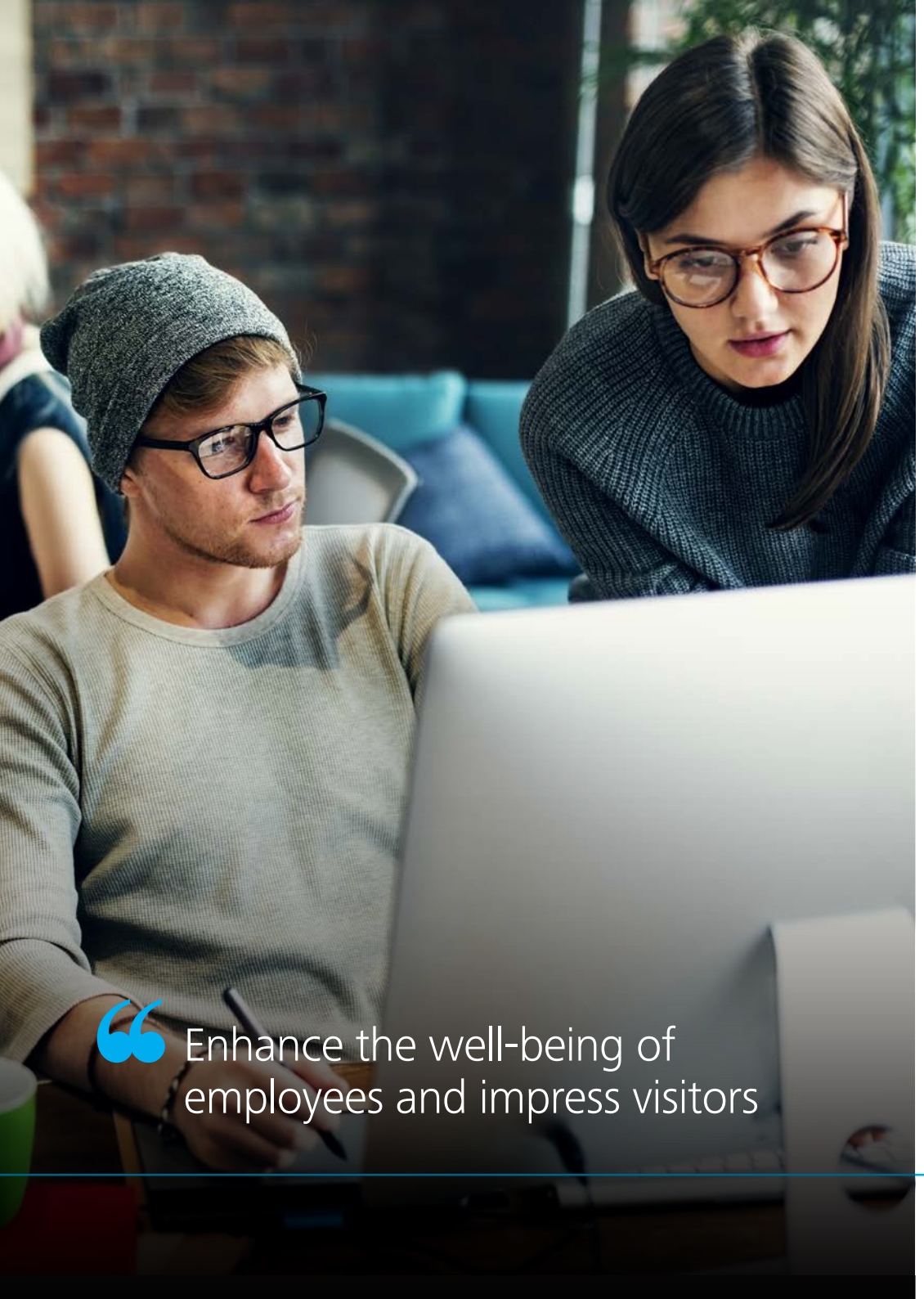
An outstanding light uniformity that fulfils the demanding requirements of the standards for offices can be achieved by placing a lighting fixture with a cosine luminous intensity curve. Lighting uniformity is expressed as a ratio of the minimal and maximal illumination of an assessed space. The closer their values are, the more uniform the space illuminance is. The optimal state can be achieved by selecting the appropriate type and number of luminaires and their correct distribution.

ILLUMINATION LEVEL

The correct illumination of a space substantially affects the feeling of well-being, while it also enables one to perceive visual information easily. Therefore the desk or task area plays the most important role when designing lighting for an office space. Following the European standard EN 12464-1, a value of minimally 500 lx is required for common administrative activities.

GLARE PREVENTION

Glare is a negative visual perception caused by light surfaces in the field of vision. Minimizing its occurrence is extremely important for visual comfort and safety. Excessive direct or indirect glare in office spaces can cause fatigue, and difficulties in concentration and might even lead to eyesight damage.



> Enhance the well-being of employees and impress visitors

BENEFITS

COMFORT & STIMULATION

Lighting became an integral part of the office ambiance, providing a fulfilling workplace for people to enjoy and be stimulated in, benefitting both the individual and the business. The modern lighting system interacts with the space, dimming in response to increasing levels of daylight, and turning on or off in response to occupancy.

SUSTAINABILITY

Governments worldwide are committed to decreasing their CO_2 emissions within the next few years. One undoubtedly a key benefit of LED lighting is the high savings in energy consumption thanks to their outstanding performance, therefore it is an optimal choice for reducing the CO_2 emissions of office buildings. Reducing the office's carbon footprint helps businesses to comply with the new environmental regulations, reduce costs and improve their reputation as well.

100%
EFFECTIVE

LIGHT QUALITY

Office work is visually demanding, and thus requires good quality lighting for maximum comfort and support of productivity. The most common complaints resulting from inadequate or unsuitable lighting are: difficulty seeing documents or screens, eyestrain, sore eyes, vision disturbances, dizziness, fatigue, and headaches – all leading to poor concentration. It affects not only the ocular system but can also contribute to stiff necks and aches in the shoulder area because people adopt awkward postures when trying to read something under poor lighting conditions.

GOOD LIGHTING means providing enough illumination so that people can see printed, handwritten, or displayed documents clearly but are not blinded by excessively high light levels. A good visual environment in the office will:

- **have sufficient light, coming from the right direction and not cause obscuring shadows**
- **provide good (but not excessive) contrast between the task and the background**
- **limit glare and extreme contrasts**
- **provide the right type of light**

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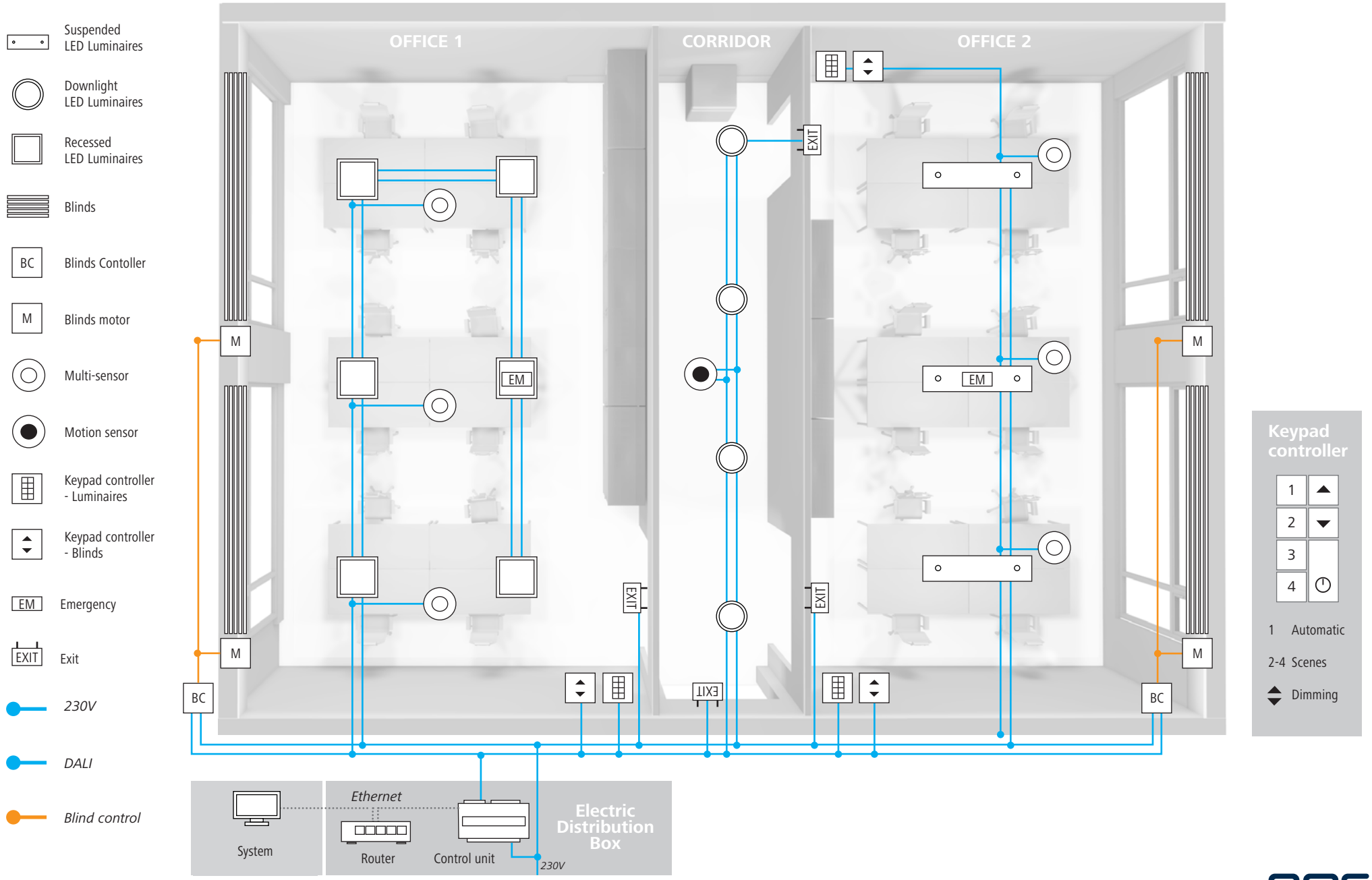
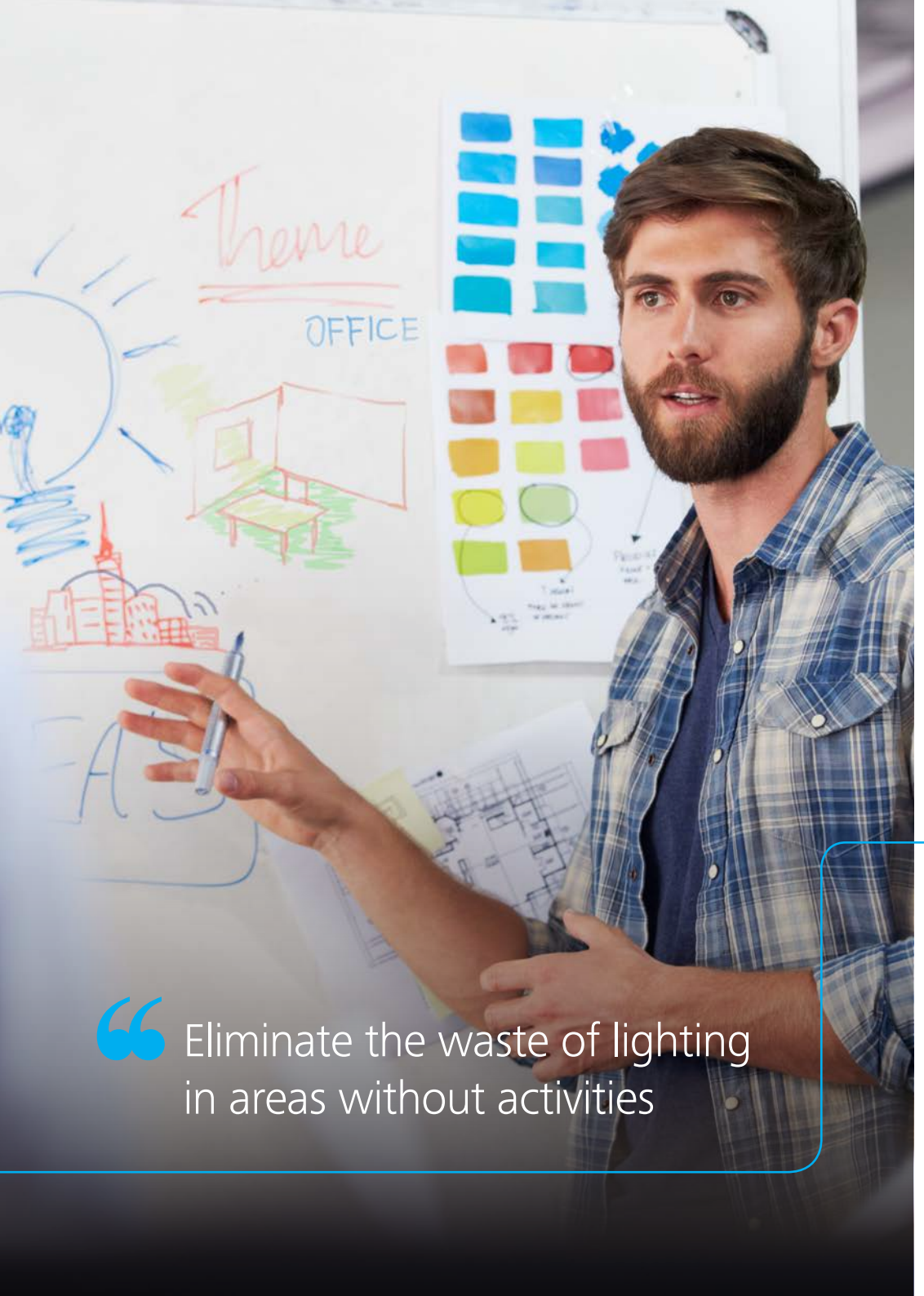
FUNCTIONALITY

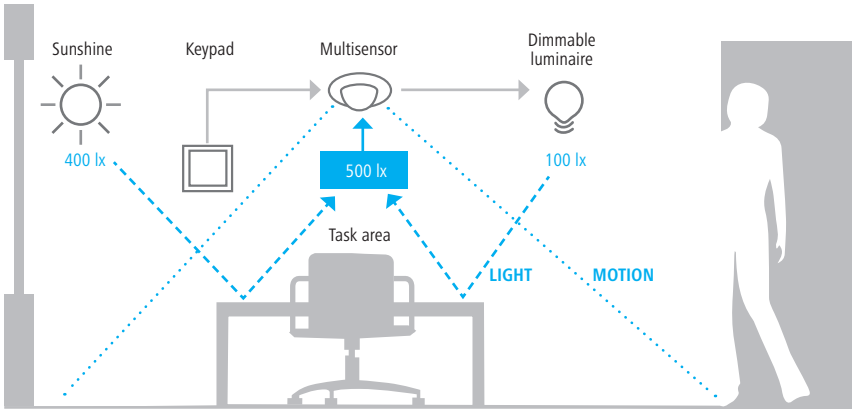




> Eliminate the waste of lighting in areas without activities

ENERGY SAVING

100%
INDEPENDENT



SYSTEM FUNCTIONALITY

Based on the design, LED luminaires are implemented in the solution, both providing excellent uniformity and great visual comfort for task areas. To maximize efficiency, multi-sensors are applied: the presence detector turns the system on automatically when someone enters the room and, to eliminate unnecessary lighting hours, it switches automatically off when there is no movement for a certain period. The light intensity sensor sets up the optimal light level, adjusting it by the available natural light. Blinds control is integrated into the same control system as the lighting. Keypad control enables manual control of the lights when needed.

types of control	combined control system								
intensity									
office	47	62	68	41	57	64	34	52	60
meeting room	59	70	75	56	67	72	53	65	70
corridor	67	76	80	54	66	72	34	52	60

occasional movement
normal movement
greater movement

low light intensity
medium light intensity
high light intensity

ENERGY SAVING
26-50%
51-80%

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> Lower CO_2 emissions while making impressive savings in your energy bill

BENEFITS OF LED OFFICE LIGHTING

Environment friendly

Compared to alternative lamp technologies, LEDs have at least 4 times less environmental impact through the course of their life cycle.

Energy-efficient

LEDs can produce more lumens-per-watt by consuming just a fraction of energy than the corresponding alternative lamps.

Less energy wasted

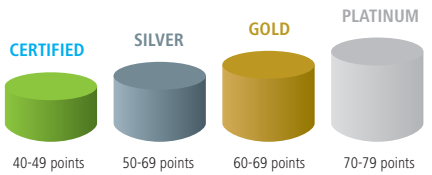
Did you know that traditional lamps have almost 95% energy loss by producing heat? On the contrary, LEDs waste only 5%.

Easy to recycle

Pollutants like mercury or lead are used in most bulbs, but LEDs don't contain any of them.

LEED PROGRAM

LEED, Leadership in Energy & Environmental Design, is a program that recognizes best-in-class building strategies and practices. To receive LEED certification, office building projects need to satisfy prerequisites and earn points to achieve different levels of certification. There are four levels:



GREEN BUILDING CERTIFICATION

BREEAM CERTIFICATION

An alternative choice is getting BREEAM (Building Research Establishment's Environmental Assessment Method) certification for an office building. BREEAM assesses scientifically based criteria covering a range of issues in categories that evaluate energy and water use, health and wellbeing, pollution, transport, materials, waste, ecology, and management processes.

HIERARCHY OF CRITERIA BASED ON THEIR IMPORTANCE FOR INDOOR LIGHTING

Compulsory criteria

- Minimum illuminance level
- Elimination of flicker and stroboscopic effect
- Daylight factor
- Maximum illuminance level
- Lamp luminous efficacy
- Luminaire maintenance factor and maintenance plan
- Daylight glare control
- Combination of general and individual lighting
- Unified Glare Ratio (UGR)
- Room lighting uniformity
- Colour Rendering Index (CRI)

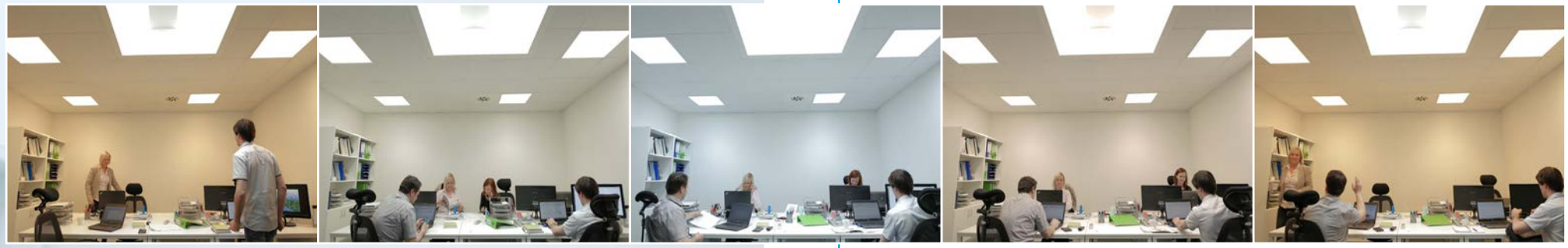
High importance criteria

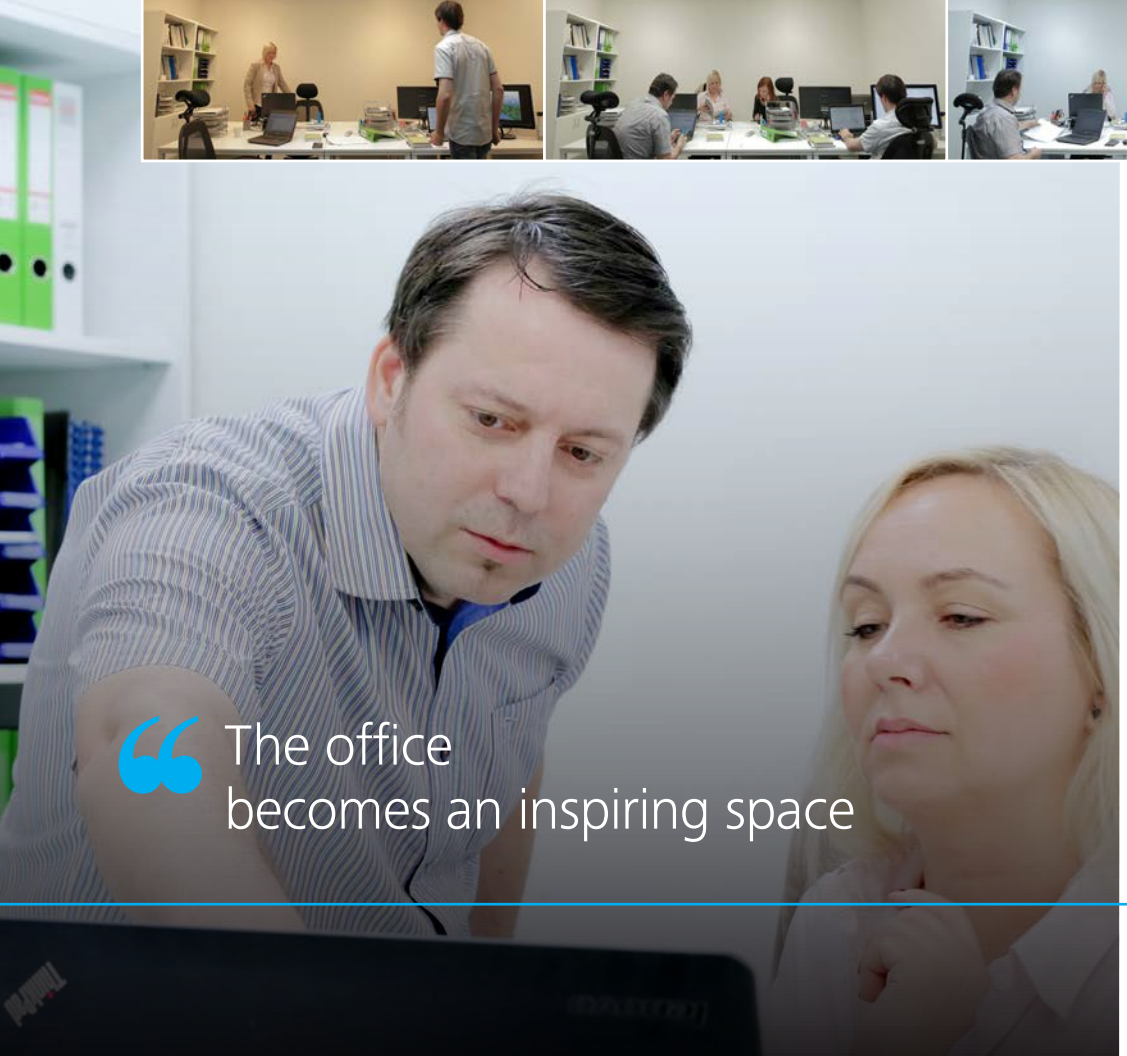
- Point daylight factor
- Occupancy sensors
- Colour of light
- Recycling of light sources

HUMAN CENTRIC LIGHTING

Lighting that is adapted to the natural rhythm of the human body can improve vitality and concentration.

100%
CONCENTRATION



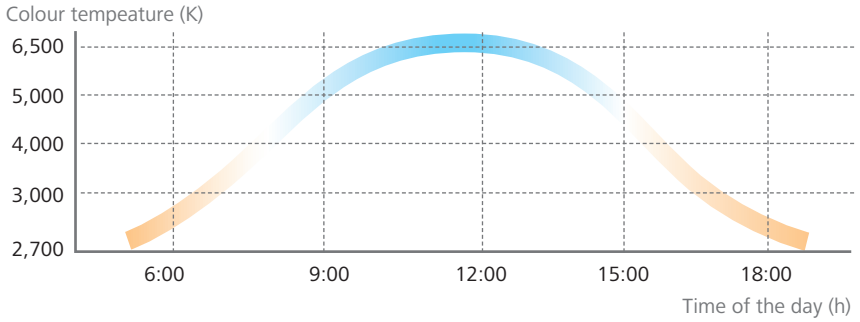


The development of human-centric lighting has led to a modern indoor solution that simulates daylight as the day progresses. It is based on the smart use of brightness, color temperature, and light direction to positively influence the human body. Office use can enhance concentration and performance during working time and aid relaxation and rejuvenation at the end of the day.

PERCEPTION OF COLOUR TEMPERATURE

2,700K: Low CCT lighting correlates in general with positive characteristics (calming and cozy).

6,500K: HigherCCT lighting creates a bright office space (energizing and stimulating).



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> Enhanced productivity and alertness

BENEFITS

RESEARCH RESULTS

Human-centric lighting has several proven benefits. It has a positive influence on the prevailing mood and bodily functions, next to its positive effect on depression and certain anxiety states, and on convalescence dynamics.

100%
ENERGISING

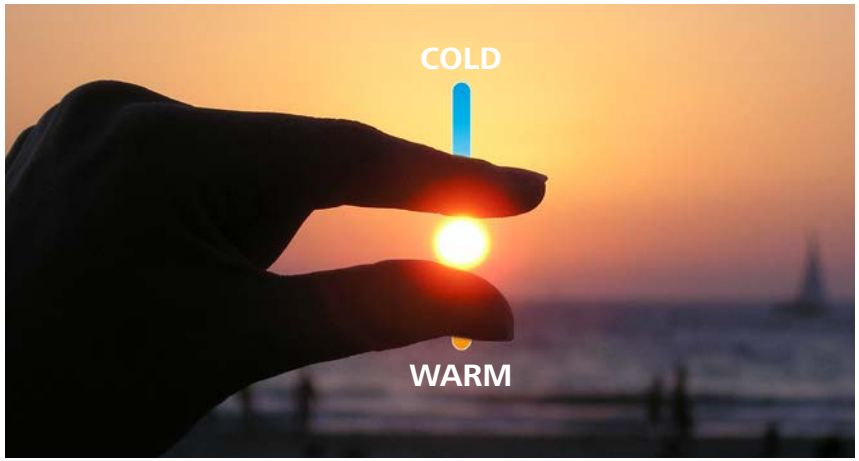
Research results showed an increase

increased work performance	**(≈ 19 %)**
reduction of fatigue	**(≈ 27 %)**
better ability to concentrate	**(≈ 37 %)**
enhanced alertness	**(≈ 23 %)**

and higher employee satisfaction

PRODUCTIVITY

People who work in a human-centric office report that they feel more energized, they are more productive, and overall more satisfied in comparison with working in an office with traditional lighting.



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availability of daylight
vertical uniformity
Soft cut-off
color rendering index
Long Life Service
dynamic lighting
5-stepMacAdam
E > 750 lux
No shadow + no yellow
lighting uniformity
Constant Light Colour
3-stepMacAdam
B2L ready
Long Life Service
task area
Very low ripple current: <= 3% at 100hz
CRI80 and CRI90 types (R9>0)
$U_o > 0,6$
color rendering index
presence and daylight sensor
harmonious distribution of brightness
E > 150 lux
E > 350 lux
Constant Light Colour
$U_o > 0,3$
Very low ripple current: <= 3% at 100hz
No shadow + no yellow
task area
vertical uniformity
No shadow + no yellow
B2L ready
vertical uniformity
3-stepMacAdam
color rendering index
B2L ready
E > 350 lux
lighting uniformity
task area
$U_o > 0,6$

WE UNDERSTAND...

LUMINAIRES

PRETTUS XS

PRETTUS II S

PRETTUS II M

PRETTUS II L

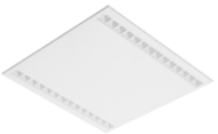
NOVIEL II S

NOVIEL II M

NOVIEL II L

FREYN II

MILINE RECESSED



GACRUX XTP

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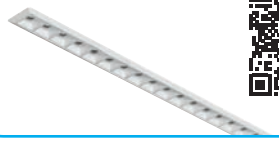
LUMINAIRES

MILINE UNO RECESSED



MILINE UNO SURFACED

MILINE UNO SUSPENDED

LAMBDA SURFACED

LAMBDA SUSPENDED

LAMBDA D-I

EMERGENCY 2930

EMERGENCY 2600

EMERGENCY 2900

EMERGENCY 2910

EMERGENCY 2990

EMERGENCY 3100

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OMS, a.s.
Dojč 419, 906 02 Dojč, Slovakia
+421 918 683 203
sales@oms.sk

www.oms.lighting