

## GROUND-BREAKING CZECH BIO-OPTIMISED PRO-COGNITIVE LED LIGHTING TECHNOLOGY FOR OFFICES, MANUFACTURING AND COMMERCIAL PREMISES



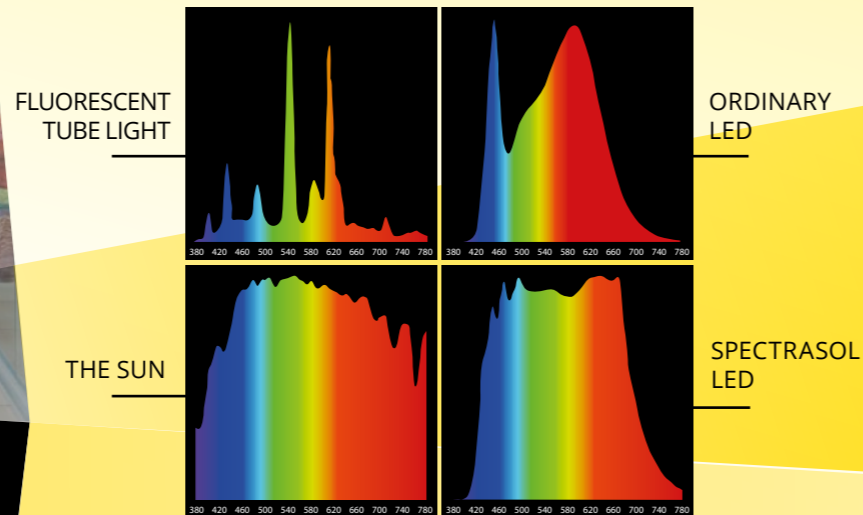
SPECTRASOL LIGHTING IMPROVES WORK OUTPUT, VISUAL COMFORT, SUBJECTIVE SENSE OF SATISFACTION AND THE HEALTH OF EMPLOYEES

- Improves work performance and reduces human errors
- Supports alertness, speed of thought and concentration
- Improves health, vitality and emotional mood
- Improves the subjective sense of satisfaction and sociability in teams
- Regenerates the retina in real time
- Makes working and environmental conditions more attractive
- Improves the efficiency and quality of lighting
- Enhances safety within workplaces



Numerous scientific studies have proven the clear effect of lighting on the work performance, health and comfort of people. Sufficient quality light during the day supports overall cognition, alertness, the ability to concentrate, and improves social and work climate as well as overall health and vitality. This presents an opportunity for commercial, office and manufacturing premises, which should offer a **comfortable and stimulating environment that supports proper brain function, physical and psychological health and the subjective sense of happiness** of employees and clients.

**Spectrasol is a unique patented lighting system** whose designers and advocates are leading Czech experts and renowned scientific authorities in the field of lighting and chronobiology. Our **ground-breaking bio-optimised pro-cognitive lighting technology**, designed with respect to **human biorhythms**, uses special light sources that emulate **the properties of natural light from sun** and thus create a healthier and more stimulating environment.



*Spectral power distribution graphs: Top left fluorescent tube lighting, top right ordinary LED lighting, bottom left sunlight, bottom right pro-cognitive SPECTRASOL LED lighting.*

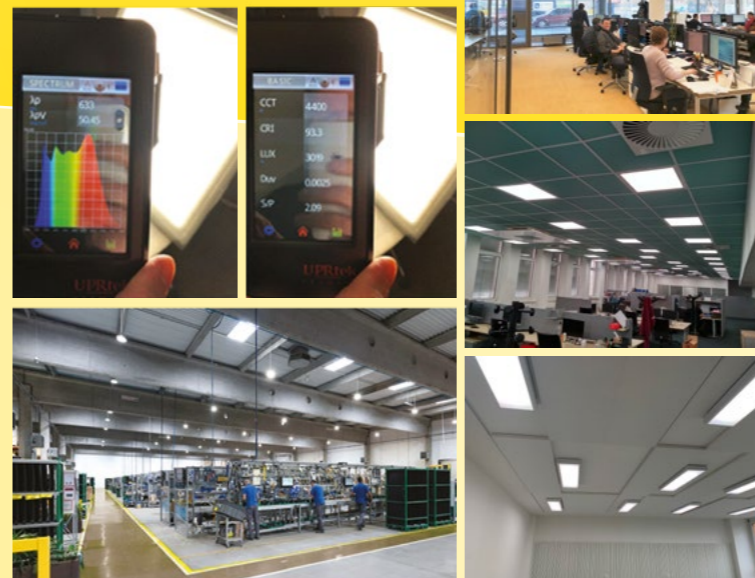
The effectiveness of the technology is verified by experimental research in collaboration with The Czech National Institute of Mental Health (NÚDZ) and the University Centre for Energy Efficient Buildings of the Czech Technical University (UCEEB ČVUT) and other public scientific institutions.



### The current state of workplace and office lighting:



### The lighting conditions after the installation of Spectrasol daylight-like bio-optimised pro-cognitive lighting systems:



### PROPERTIES OF TRADITIONAL LIGHTING IN COMMERCIAL, OFFICE AND MANUFACTURING PREMISES:

- Passive and outdated fluorescent tube lighting or ordinary low-quality LEDs with an unbalanced spectrum
- Low level of visual comfort
- Negative effect on performance, output, safety and the subjective sense of satisfaction
- No positive effect on health and vitality
- Flicker effect that causes eye strain, dry-eye syndrome, headaches and migraines
- Properties normally do not meet official lighting regulations and relevant standards
- Higher energy consumption in the case of fluorescent tube lighting

### PROPERTIES OF THE SPECTRASOL LIGHTING SYSTEMS:

- LED light sources with an optimised spectrum that simulates natural daylight with a balanced blue and red component ratio
- More uniform spatial distribution of light and an increased level of lighting = improved visual comfort and spatial orientation
- Improves cognitive endurance and overall cognition = improved performance, output, reduced error rate (more work and fewer mistakes)
- Improves safety and reduces the risk of injuries
- Improves the subjective sense satisfaction and mood during work and social interactions
- Long-term positive effect on physical and psychological health and vitality = reduced sickness rate
- Doesn't contain a concentrated part of the spectrum in the area of the so-called Blue light hazard effect
- Regenerates the retina in real time and repairs damage caused by light sources emitting in the Blue light hazard area
- Improves the attractiveness of work conditions for new and existing employees
- Most effective and economical lighting technology available today (30-60% more in energy savings when compared with traditional light sources)
- Highest quality components on the market incl. boosters without subliminal flicker



See us and pro-cognitive lighting in a short video



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