

A Bright Future For Office Lighting

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*As awareness of circadian lighting grows,
American offices get back to nature*

It's been over a hundred years since electric lightbulbs began illuminating the workplace, yet only recently has an emerging body of research revealed the hidden health effects of working in artificial light.

In 2017, the **Nobel Prize in Physiology/Medicine** was awarded to researchers who investigated the impact circadian rhythms have on biology. Circadian rhythms are the physical, mental and behavioral changes that follow a daily cycle, governing phases of alertness and sleepiness. Over thousands of years of human history, our biological clocks have been shaped by the cycles of the earth's rotation around the sun.

Research now shows that metabolic functions at the cellular level are triggered by environmental cues like light and temperature. During the day, our body uses these cues to regulate functions such as hormone levels, sleep, body temperature and metabolism, and by extension, our behavior.

The science behind circadian lighting is simple.

Humans evolved outdoors, and the body's metabolism and alertness signals are still synched to the natural 24-hour sun cycle.

When the sun rises, the bright light and rising temperature signals our body to wake up by suppressing melatonin and producing cortisol (naturally occurring hormones in our bodies that regulate the sleep-wake cycle).

As morning turns to midday, the increasingly bright, blue sunlight causes us to continue to feel awake, alert and refreshed.

When the sun sets and the evening give way to dim warm amber light, our bodies know to do the reverse; suppress cortisol and produce melatonin, to help us rest, digest and prepare for sleep.



But by working in office settings with constant exposure to blue light, equivalent to noontime sunlight, and often with little to no natural daylight, we disrupt this natural signal pattern. This undermines our sleep and alertness patterns – leading to health issues and productivity declines.

Light bulb moment

In light of this emerging research, many companies are reevaluating the work environments they provide for their employees. With countless studies revealing the hard facts, employers can no longer neglect such a basic human need, nor do they want to. Employers have begun surveying their employees, and the data speaks for itself. Employees consider lighting to be the second leading contributor to overall wellness within the workplace, and nearly 40% of those employees desire natural sunlight in their office.

Access to natural light has been shown to lead to greater workplace productivity, decreased stress, higher employee satisfaction and improved emotional well-being. One study shows that employees in offices near windows log as much as 46 more minutes of sleep per night, having a profound effect on productivity, performance, work product and cognitive function.



As companies strive to create more productive workspaces and enhance them in ways that attract and retain talented employees, real estate decision makers need to weigh circadian lighting factors into their real estate investment.

Sorting through all your options may seem daunting, but that's where workplace strategy and occupant experience specialists can help. Armed with studies and tools to measure and quantify activity in the workplace, these experts can help you evaluate the impact of lighting and other “biophilic,” or natural, elements in your own workplace.

With the advice of workplace strategy and real estate consultants, companies can opt for workspaces that maximize natural light – or remodel their existing workplaces.

Thinking about a move?

Some enhancements are built into the space and it's just a matter of finding them. In a challenging market such as Manhattan, landlords are cognizant of the desire for natural daylight, and with a limited inventory of just 26% of office spaces considered to have high daylight exposure, they often charge a 5-6% premium for upper floors with more natural light. New certifications such as the WELL Building Standard are even rewarding buildings and or spaces that offer good daylight access to their employees. Evaluating the natural daylight is an integral component of space tours, which happen at the onset of engaging with a real estate broker.



Just 26% of office spaces in Manhattan are considered to have high daylight exposure

Sometimes, fixing a natural light deficit requires extensive reconstruction, which can be negotiated as part of a new or extended lease under landlord-provided Tenant Improvement (TI) allowances.

Considering an overhaul?

Whether windows are available or not, any office space can be improved by installing a dynamic circadian lighting system that mimics the natural shifts in color, angle and intensity of sunlight throughout the day. Studies have shown that circadian lighting designs can contribute to increased alertness, improved productivity, faster cognitive processing and enhanced mood. The costs are variable depending on your space, its infrastructure and the type of lighting system. It pays to hire project managers who can analyze, compare and help you decide on the system that's right for your circumstances.

Just a light refresher?

Sometimes a modest investment can go a long way to improving the workspace. Architects across the country have been busy redesigning office spaces to bring in more natural daylight. Modern office designs move private perimeter offices that once monopolized light and views into the building's core to expose more of the shared workspace and allow natural light to penetrate deeper into the floor plate. Change management is important for helping companies embrace this shift and address common feelings of loss of status and privacy that come with losing a private perimeter office.

Want to stay put?

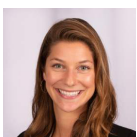
Sometimes, technology can overcome the limits of architecture. To combat the problems associated with too much screen time, computers and cellphones now offer "night shift" mode to mimic the shift in the natural light spectrum from morning to midday to evening. This, along with blue light-filtering eyewear, gives users the ability to decide just how much and what dose of light they want and when. There are also computer-controlled LED lighting systems that adjust light tones and brightness to mimic the outdoor daylight from bright white in the morning to warmer tones in the afternoon and evening.

Providing employee education on the importance of minimizing blue light exposure on screens can greatly reduce impact on sleep patterns and, in turn, benefit performance and overall well-being. Workplace strategists know how to work with your tech, HR and facilities departments to roll out a program that offers change management and helps communicate the need for change in an effective way.

Light at the end of the tunnel

We advise clients to weigh all the factors of a workplace decision, not just the cost per square foot.

The wellness quotient of a space is an often-overlooked factor, yet the return value on relatively modest investments in wellness factors can be far greater in terms of employee satisfaction, productivity, retention and recruitment. We have in-house workplace strategy and occupant experience specialists who can help clients through decisions such as updating lighting systems and maximizing natural light. Savills focuses on helping our clients amplify the power of their people by improving their workplaces, while securing maximum savings and flexibility for the bottom line.



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