

Slumber party

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Over the course of 24 hours, Future Designs teamed up with sleep expert Dr Neil Stanley to explore the effects that light and sleep have on our wellbeing with an in-house experiment: Light Work Sleep

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On 19-20 June, Future Designs – the UK-based designer and manufacturer of luminaires and bespoke lighting solutions – was the host of a 24-hour sleep experiment in its new Technology Hub, based in Clerkenwell. Led by independent freelance sleep expert and consultant Dr Neil Stanley, who has more than 36 years' experience in the industry, the test revolved around the effects that light has on the circadian rhythms, sleep patterns and wellbeing of two volunteers, which thus involved a simple tracking system and 20 basic tasks taken throughout the day.

These volunteers were situated within the showroom, they were both of similar age and body type, and each had polarising lighting solutions that remained stagnant (and dimmed at night time)

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throughout the entire process – the digitally controlled wall-to-wall ceiling panels were lit on one side with 6000 kelvins in a cool white light, while the other was at a 2700 level of warm white light.



Instinctively, it's thought that blue light would undoubtedly increase levels of alertness and productivity, with warmer light afflicting the exact opposite. Yet, according to Stanley, these affects are in fact unknown turf that is yet to be explored – although many have determined that light does have an affect on a human's physical and mental state, it hasn't been determined how and what to do with it. "It's a question of the interface between design and the individual, and I think that is the bit we haven't got," he says. "I think we need to know a lot more about light in the first place and then we need to know what we need to be doing with it."

The thing is, as he continues to explain, we "do know about light, we just don't know that individual response". It's simply not good

enough to say that blue light's better than warm light, and it's not a "one-size-fits-all" situation, so determining how an individual reacts was a key aspect of the entire experiment.

One thing to note, like with any scientific experiment, is that in order to achieve accurate results one must make sure that all variables are controlled. The two rooms were more or less similar, yet, disappointingly, the cool-lit room had an air conditioner powering chilled air throughout, whereas the other had sunshine filtering through its windows (which were also double the size) meaning it was much cosier, warmer and, in essence, sleepier. Of course this was going to have adverse affects on the results. Plus, more distractions were available in the warmer room, with school children regularly passing

by and, because of the larger windows this could have increased anxiety during the whole process.

Stanley noted these limitations, and the results suggested that there were clear differences during the tasks, but personality and motivation were also huge influences. "In summary, while tuneable white light may have the ability to modulate alertness and performance, it is only one of many factors that affect our everyday life. The relative contribution of the effect of light on everyday alertness and performance needs to be elucidated," he concludes. And scope for further lighting investigation is already taking place, with the likes of Cholo Design, exhibiting this year at 100% Design, offering environmentally friendly and natural solutions to traditional luminaire manufacturing processes. ■