COLOR-TUNING LIGHTS

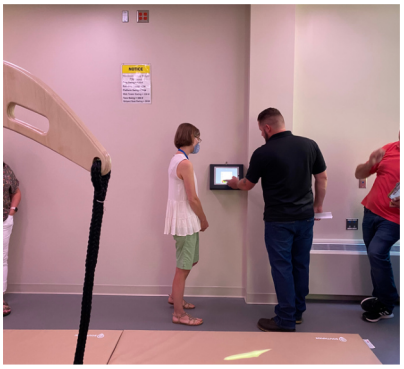
Handbook

LEARN ABOUT THE EFFECTS OF COLOR-TUNING LIGHTS

Red Yellow Blue Green White

Introduction

Color tuning lights have amazing effects on enhancing and improving the environment. From classrooms to factories, color tuning lights can have benefits for all. Different colors of light can have various effects on the human body.



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The Basics

What are color-tuning lights?

Color-tuning lights are LED lights that can change color and brightness to provide different lighting effects for different environments and purposes. They are often for commercial lighting applications to provide a range of color temperatures and intensities that can affect mood, productivity, and overall well-being. Color-tuning lights are often controlled by a mobile app or remote control, allowing users to adjust the color and intensity of the light to fit their preferences. Color-tuning lights typically use LED technology, which is more energy-efficient and longer-lasting than traditional incandescent or fluorescent bulbs.

Are they right for my industry?

Color-tuning lights can benefit a wide range of industries, including: Hospitality, retail, healthcare, offices, education, and more. Color-tuning lights can be used to create different moods and atmospheres in hospitality settings. In retail, they can be used to highlight products and create a specific ambiance. In healthcare, they can promote healing and well-being. Color-tuning lights can be used in offices to improve productivity and mood. In education, color-tuning lights can create a better learning environment for students by improving their mood and attention.

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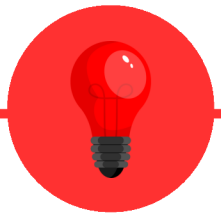

RED LIGHT

Red light is known to promote relaxation and calmness.

Red light has no effect on the circadian clock, so you can use a dim red light at night. Red light influences melatonin secretion, cortisol activity and alertness. Red light increases levels of melatonin, helping our bodies get ready for bed.

Red light has been known to have a positive effect on mood.

Red light has been shown to improve athletic performance.

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YELLOW LIGHT

Yellow light has been shown to have a positive effect on mood.

Yellow light has been shown to improve cognitive performance.

Yellow light has been shown to increase alertness.

It was found that yellow lights can help patients to be positive, stable, active, and focused. Therefore, the use of yellow lights can be helpful in settings where active therapy is required, including pediatric physical therapy and exercise therapy rooms.

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GREEN LIGHT

Green light can reduce stress and improve mood.

It is also believed to improve focus and concentration.

green lighting can improve performance and satisfaction in office workers.

However, green light can negatively affect quality of sleep.

Green light has been shown to decrease headaches. In a 2020 study, green light exposure reduced the number of headache days per month by an average of about 60%. A majority of study participants reported over a 50% reduction in headache days per month

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BLUE LIGHT

Blue light can help regulates your body's natural wake and sleep cycle (circadian rhythm), which helps to promote a healthy sleep schedule. Blue light stimulates parts of the brain that make us feel alert, elevating our body temperature and heart rate. During the day, blue light can improve performance and attention, tuning our circadian rhythms and setting us up for a better night's sleep after the sun sets.

However, exposure to blue light later in the day can make it difficult to fall asleep or stay asleep (cdc). Harvard researchers and their colleagues conducted an experiment comparing the effects of 6.5 hours of exposure to blue light to exposure to green light. The blue light suppressed melatonin for about twice as long as the green light and shifted circadian rhythms by twice as much.

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WHITE LIGHT

White light can improve productivity and cognitive performance.

White light provides better visibility in low-light conditions, which can reduce the risk of accidents and improve safety.

White light can reduce eye strain and fatigue compared to other types of light.

Exposure to white light during the day can improve circadian rhythm and promote better sleep at night. Exposure to the light of white LED bulbs suppresses melatonin 5 times more than exposure to the light of high pressure sodium bulbs that give off an orange-yellow light.

White light has been found to improve mood. Exposure to white light during the day can have positive effects, including boosting alertness and mood.

Tunable-white products allow for increasing kelvins, which increases blue-toned hues and intensity to simulate daylight. These work well in industrial, medical, office, museums and art studios settings.

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Sources Used

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2. https://blisslights.com/blogs/blisslights/colored-light-effects-how-they-impact-your-body-and-mood
3. https://files.eric.ed.gov/fulltext/EJ1418488.pdf

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