

Spring 2025



**SHIELDED  
HEALING**



# **Human Optimized Lighting Guide**

**Artificial Light: The Visible EMF**



**NOTICE:** Products recommended in this handout have been tested and approved by Brian Hoyer and his team of Shielded Healing Pros for flicker, spectrum and dirty electricity. We put all these products through quarterly testing to make sure they continue to meet our standards. The best way to guarantee an optimal lighting environment is to have these bulbs installed and hire a Shielded Healing Pro to test your home.

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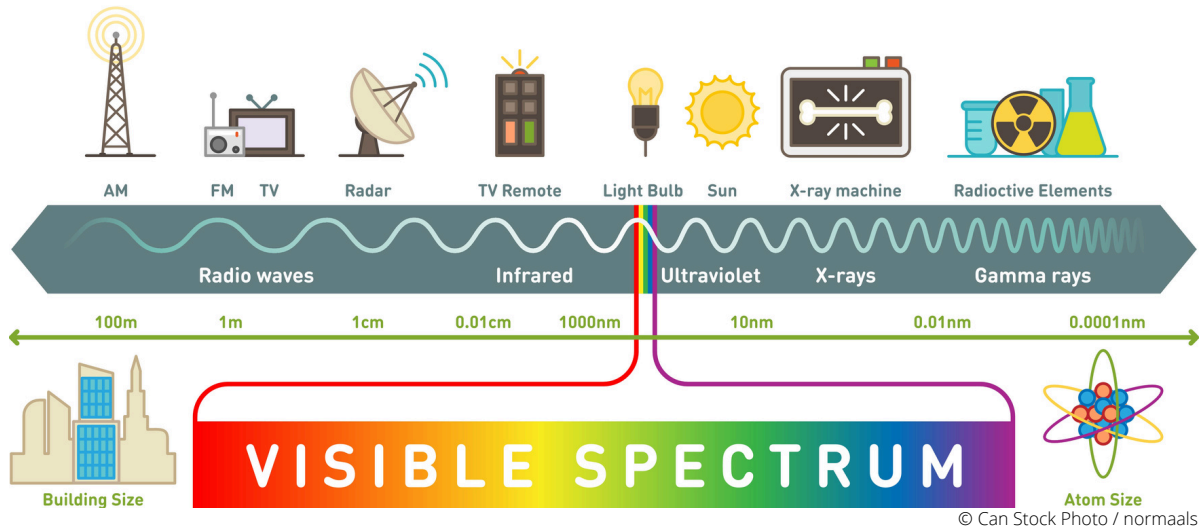
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# Health Considerations of Artificial Light

## Electromagnetic Spectrum



## Flicker

Natural sources of light do not pulse or flicker. Artificial light sources can generate imperceptible flicker. Studies show the human eye can detect flicker of up to 2,000 Hz (cycles per second). Light flicker is linked with long-term and short-term health effects such as eye strain and a decline in cognitive performance.

Artificial light sources from bulbs plugged into the electrical grid are running on 50 or 60Hz AC pulsed electrical frequencies. When a light source runs directly from these electrical frequencies, it will pulse at the same rate as that source of power. This means that the light will be flickering on and off on AC electricity at 120 times per second.

With imperceptible flicker, the eyes are constantly adjusting, but the brain doesn't process the information fast enough to produce the image of flickering even though your eyes are exposed to it. Imperceptible light flicker can cause eye strain that leads to headaches and ultimately to hormone disruption because of stress on the hypothalamus/pituitary glands. These glands depend on the eyes for signals from the light environment to regulate circadian biology, and the nervous system 'rest and digest' or 'fight or flight' stress response.

This is why we recommend flicker free bulbs. We test EVERYTHING that we recommend and just because the product marketing says it is flicker free does not mean it is something that we endorse. There are different bulbs depending on time of day that help support your natural circadian rhythms. Read on to learn about recreating an ancestral light environment!

# Recreating An Ancestral Environment

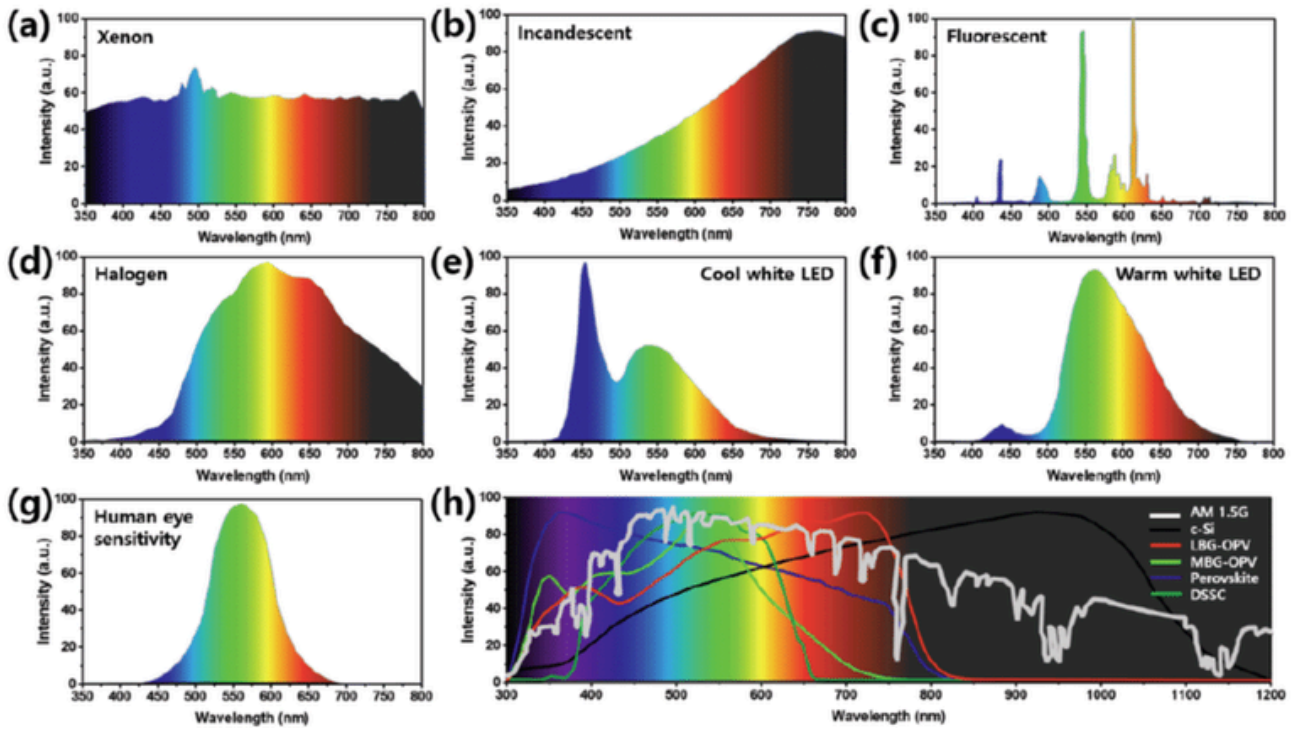


## Spectrum

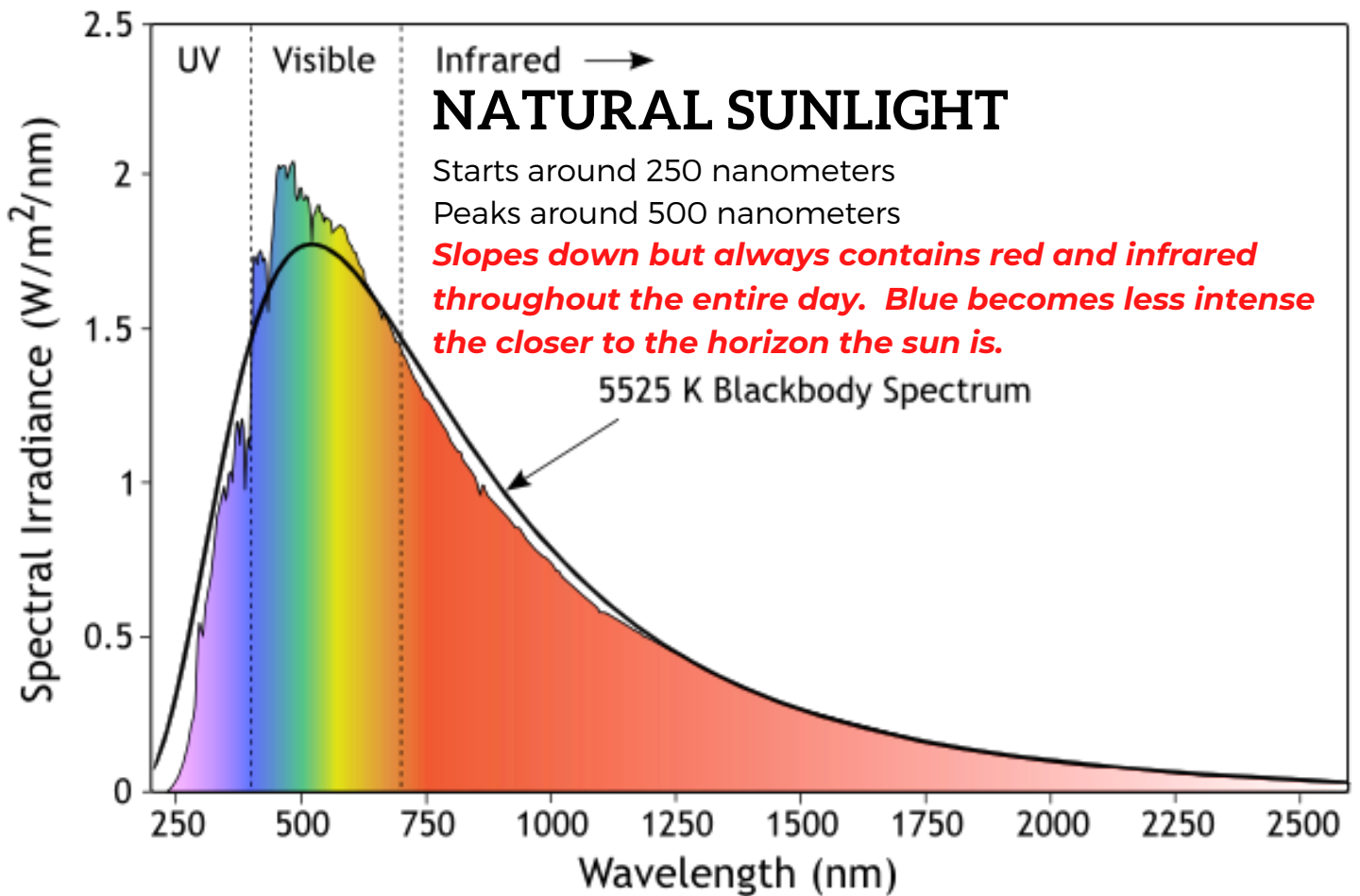
The spectrum of natural sunlight changes throughout the day and also throughout the seasons. The human body uses these wavelengths to signal circadian clocks, for hormone production including Vitamin D, to feed and give oxygen to the cells through mitochondrial ATP production, cellular respiration, and even antioxidant production.

The natural spectrum during the day contains large amounts of visible light (52-55%) and near infrared light (~43%) as well as trace amounts of UVA and UVB radiation (3-5%). Throughout the day the infrared light stays relatively the same while the visible and UV radiation varies. This is because infrared wavelengths are longer wavelengths and penetrate easier through the atmosphere AND deeper into tissue in our bodies initiating beneficial biological responses.

To recreate an ancestral lighting environment indoors, we recommend a combination of incandescent or halogen AND LED bulbs. LEDs contain more blue, green, and yellow but are missing deeper red and infrared. Incandescent and halogen bulbs have less in the blue, green, and yellow spectrums and more in the orange, red, and infrared. Our recommendations on the following pages provide options for daytime, twilight, and night time lighting to mimic the changes in spectrum found in nature.



Kim, Soyeon & Jahandar, Muhammad & Jeong, Jaehoon & Lim, Dong. (2019). Recent Progress in Solar Cell Technology for Low-Light Indoor Applications. Current Alternative Energy. 03. 10.2174/1570180816666190112141857. t



# Daytime Light Combining

**Disclaimer:** Proper light combining in any space is best done with a Shielded Healing Pro to optimize your results. Each building or home has very different lighting requirements based on where windows are, what side of the building the windows are on, the angle of the light fixtures and lamps in the space, and even the colors of walls and furniture!

## Incandescent and halogen bulbs (heat based)

Incandescent OR halogen technology creates light by using heat. **These lights should be placed strategically, targeting places where people sit or stand for longer periods of time.** Remember the sun provides near infrared spectrum all day long. Near infrared frequencies stimulate your mitochondria to produce energy (ATP) and also stimulates subcellular melatonin production in every cell in the body where light can penetrate. Modern windows are designed to block out infrared frequencies from the sun so unless that window is open or light is coming in through a screen then you are not receiving those healing near infrared wavelengths.

Incandescent or halogen light is not needed in areas you do not spend a lot of time. These bulbs put off heat and use a lot of energy. You can save on energy use and still have an optimal lighting environment by combining targeted heat based illumination with human centric flicker free LED lighting that provides optimized visible spectrum light.

## Daytime LEDs

Half the lighting in your house should be healthy Daytime LEDs like we recommend in areas where you spend significant time during the day. Blue light from white LEDs is only detrimental at the wrong time of day without infrared. When combined with heat based lighting (as we recommend) the harshest blues are reduced. Blue light is needed in the morning and early afternoon to set your clock for later in the day. **If you are blocking blue light all the time then you will develop similar issues as people who have too much blue light.**



**Put heat based lighting over the dinner table, in a desk lamp, or fixtures hanging in the middle of the room.**

**At least 25% of your daytime lighting should be incandescent or halogen. Up to 75% of your lighting can be healthy LEDs.**

**While there was a “ban” on some incandescent bulbs in the U.S. effective Aug 1st, 2023, there were exceptions for specialty bulbs. We expect more incandescent products to become available as the laws change.**

## BioLight™ - BR30 Bulb



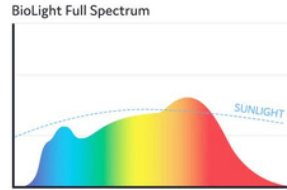
The worlds first Day to Night full spectrum light bulb! Bring the outdoors inside with the BioLight full spectrum light. Dawn to Dusk feature gives you 3 light bulbs in one. Low EMF and Flicker Free. The Shielding Shop tests each batch for dirty electricity and flicker.

**FULL SPECTRUM DAY MODE:** 4000K Replicates natural sunlight.

**MIXED MODE:** 2100K Provides a warm low blue light option which replicates the same light during sunrise and late afternoon / sunset

**NIGHT MODE:** 1800K 100% no blue light sleep friendly amber light, warm and relaxing candle light feel.

<https://bit.ly/3RWhrmq>



## BioLight™ - Recessed Light

The BioLight Recessed Light offers the same 3 modes as the BR30 bulb above. Flipping the light switch off and on will trigger a mode change, with no need for remotes or Wi-Fi controls—just a simple on/off at your light switch.

<https://bit.ly/49tOuqN>



## Full Spectrum + Infrared SAD Light Panel

The BioLight Panel stands out as a therapeutic lamp that mimics natural outdoor light by utilizing full spectrum technology and near infrared light. The panel has the potential to enhance your overall well-being, boost energy levels, increase motivation, and help regulate your circadian rhythms.

<https://bit.ly/4azxo9j>

### 💡 BioLight LED Pairing Guide

Daylight mode LED (4000K)

- Pair With: Halogen bulb
- Purpose: Adds infrared warmth for mitochondrial support while preserving bright blue-rich light for daytime serotonin production and alertness.

Twilight mode LED (2100K)

- Pair With: Twilight Incandescent bulb
- Purpose: Balances low blue/green light with red/orange spectrum for twilight tasks and smooth energy regulation.

Night Mode LED (1800K)

- Pair With: Red light, Near Infrared (NIR) bulb. orange/red tinted incandescent
- Purpose: Ideal for evening use—minimizes blue light to support melatonin production and relaxation.

BioLight LED (adjustable)

- Set To: 4000K in the morning/day, 1800K to 2100K in the evening
- Purpose: Mimics natural light transitions throughout the day; supports circadian rhythm with spectral flexibility. Pair with Halogens and incandescents as recommended above.

**DAYTIME BULBS**  
**LEDS 2700K-5000K**

## Incandescent and Halogen Bulbs

Generally most brands of incandescent and halogen bulbs available are going to be similar in quality as long as the wattage is correct. We have listed some favorite brands below, but any brand will do if you have these wattages:

**Incandescent = 100 watts or higher**

**Halogen = 50 watts or higher**

For those extremely sensitive to flicker we recommend 75 watts for halogen and 125 watts incandescent.

**Before purchasing be sure that your light fixture can handle the higher wattage.**

### Chromolux Clear

For bright, daytime bulbs, we recommend the use of incandescent bulbs. One of the best brands is the Chromalux **CLEAR (not frosted)** incandescent bulbs that are 100 Watts or more IF your fixtures can handle that much. It's good to have at least a few 150 watters in each room combined with LEDs. Higher wattage means less flicker with these bulbs and more full spectrum healing wavelengths.



**3000K A21 / 100W or 150W Chromalux®**

Full Spectrum Incandescent Bulb

Use code **SHIELDEDHEALING**

<https://bit.ly/3PPb5Tq>

<https://bit.ly/46C0gLm>

### Halogen Bulbs

Halogen bulbs run hotter on the inside and can be less wattage and still low flicker. They also have a higher spectrum in blue and green than incandescent filament bulbs and for this reason are great to use as early morning to early afternoon daytime bulbs.

Use code **SHIELDEDHEALING** for 15% OFF Chromalux Full Spectrum Classic Incandescent and Halogen bulbs. To be clear, we like this brand but any brand of halogen or incandescent bulbs are acceptable as long as they are at or above 100 watts for incandescent and at or above 50 watts for halogen.

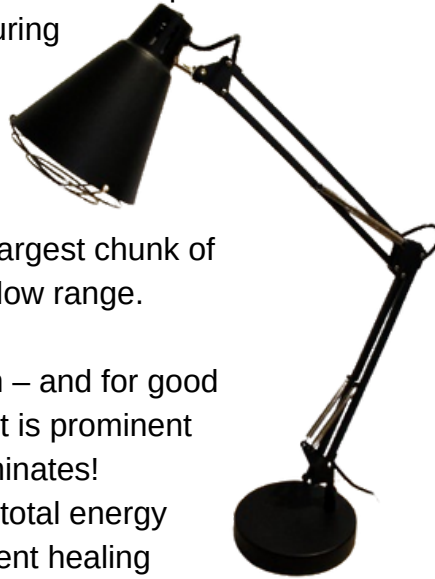
# The Jovial™ Desk Lamp

*Available at The Shielding Shop*

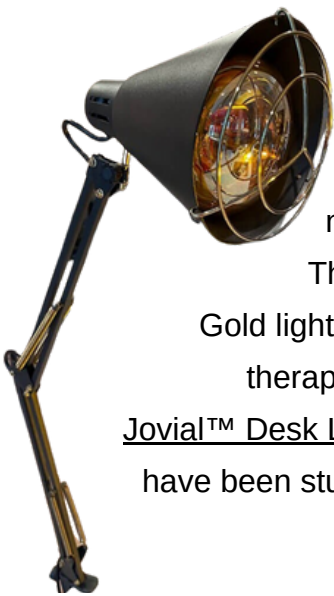
Introducing the Jovial™ Desk Lamp, a shielded desk lamp with wattage capability up to 150 watts, featuring the GoldyLux Too Hot Bulb– a quantum leap in the evolution of daytime lighting.

Let's talk science: the sun, our day's celestial guide, bathes us in its golden glow, with the largest chunk of its visible spectrum residing in the vibrant yellow range.

30-35% of your daytime visible light is golden – and for good reason. Beyond the visible where yellow light is prominent (followed by red light), near infrared light dominates! Encompassing a whopping 40% of the sun's total energy spectrum, NIR light is by far the most prominent healing frequency of light that all life depends on from the sun.



The Jovial™ Desk Lamp with GoldyLux bulbs allows you to biohack your indoor office or elevate your light therapy when direct sunlight isn't available. You often get plenty of blue light indoors, but are missing the yellow, red, and near infrared. With this solution you fill in those gaps. The color gold is a mixture of the color yellow and red. Gold light therapy is the fusion of yellow, red, and infrared light therapies, but it's much more than that when used with our Jovial™ Desk Lamp. Yellow wavelengths from 580-590 nanometers have been studied for brain health and are shown to boost mood, happiness, confidence, focus and productivity.



Every Jovial™ Lamp order comes with one GoldyLux bulb, a 150 watt halogen bulb with gold stained glass. There are two mounting options included with each Jovial Desk Lamp: a clamp and a hefty lamp base.

The Jovial™ Lamp provides flicker free lighting, zero electric fields, and a therapeutic daytime light experience like no other!

<https://theshieldingshop.com/product/jovial-desk-lamp/>

DAYTIME LIGHTING  
Halogen Gold Light Therapy

# Twilight Transition Lighting

**Reminder:** Proper light combining in any space is best done with a Shielded Healing Pro to optimize your results.

## What is Twilight?

Twilight is the time when the sun starts going down and it starts to get dark outside. It doesn't necessarily mean that you will be going to bed soon depending on the season and your latitude on the planet.

Remember we are trying to imitate the light environment outside so it's important to note each day when the sun will set. Make a habit of going outside and watching the sunset but before going out turn off your daylight bulbs in the house so when you return you be able to switch on your twilight lighting.

## Incandescent Vintage Edison Bulbs

Like the daytime bulbs **these lights should be placed strategically targeting places where people sit or stand for longer periods of time** BUT you don't need a lot of them unless you need brighter lighting for entertaining or to keep someone in the house happy who may not be excited about orange and red night bulbs we will recommend in the next section.

Twilight lighting should be a WARMER color and also much less bright than daytime lighting. For this reason you don't need as many of these bulbs because the sun is no longer out and you need to help signal your body that this has happened even though you are indoors. 1-3 bulb fixtures are plenty for twilight bulbs.

## Twilight LED Bulbs

These bulbs have very little blue light but still provide adequate visible light during this time of day. It will save energy to use these if you simply want the ambience in an area to look the same and don't need near infrared spectrum. Just remember not to overdo it. Twilight needs to be low intensity lighting even though the spectrum is warmer.



Twilight bulbs can be your source of near infrared installed in daytime fixtures OR used in common areas leading up to bedtime.

***With twilight at least 75% of your lighting should be incandescent. Up to 25% of your lighting can be twilight LEDs.***

## Vintage Edison Bulbs

These class of healthy bulbs have a thin filament that burns hotter and has low flicker and full spectrum while also providing a warmer kelvin with lower blue light output. Great for sunset, twilight, or even nighttime areas in transient space such as hallways that need better lighting for safety without having the extreme blue spectrum



### Hudson Edison Incandescent

**2100K** Vintage Incandescent Edison Light Bulbs:  
60 Watt, Warm White Lightbulbs - E26 Base -  
Dimmable Antique Filament

<https://amzn.to/35iHJdb>



### Jslinter Edison Incandescent

**2200K** Warm White Old Fashioned Incandescent  
Light, Jslinter 60 Watt Dimmable ST58 Antique  
Vintage Style Light, Clear Glass e26 Base

<https://amzn.to/3IGDhmH>



### BrighFivey LED Edison

Equal 25w Vintage Amber Light Bulbs **2000K**  
Soft Yellow Light LED E26 Base

<https://a.co/d/bljbYOP>

TWILIGHT BULBS  
2000K-2600K

# Night Lighting

*Reminder: Proper light combining in any space is best done with a Shielded Healing Pro to optimize your results.*

## No BLUE LIGHT!

**The sun has set!** At night for 2-3 hours before your bedtime you want to restrict all forms of blue light. Don't have a bedtime? You should set one and be consistent. The body thrives on consistent circadian rhythms including sleep and wake cycles.

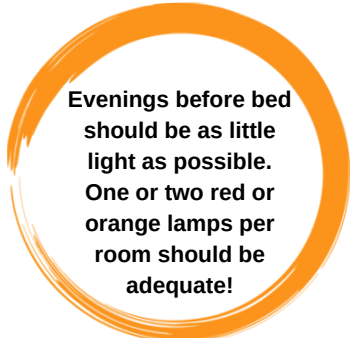
## Incandescent at night?

The only incandescent light recommended at night should be stained glass red 100 watts or above. The **Sauna Space Zero EMF Glow Light** is a great option because it is 250 watts and virtually zero flicker. It provides full red and infrared spectrum filtered light that is strikingly similar to the spectrum of fire or candles at night. It's like a modern bonfire spectrum of light for your indoor space without the smoke and all the beneficial light..

This light doesn't have to be aimed at you unless you are cold or are using it for targeted near infrared therapy on a part of the body. For night lighting you can aim this fixture up toward the ceiling and it will bathe the entire room in near infrared light. Remember that even a red light can be bright and as it gets closer to bed time it's even good to start turning off bright red lights or at least aim them away from your eyes.

## Night LED Bulbs

**LED lights are a narrow band of light about 20 nanometers wide.** Yellow LEDs are void of blue light but still have some green, which also can halt melatonin production at night. Orange is a favorite because it blocks out all the blue and most of the green. Red blocks out all blue and all green but is difficult for many people to get used to this type of light right away.



Evenings before bed should be as little light as possible. One or two red or orange lamps per room should be adequate!

***Night lighting before bed should be void of blue light and also low intensity, meaning less light.***

## Red Bulbs for Night Use

Incandescent night lighting for lamps or fixtures. No blue light. As specialty bulbs, these can be shipped to any state.



### Fluker's Nighttime Red Heat Reptile Bulb

75W incandescent bulb for night use. No blue light. Up to 2000 hours.

<https://bit.ly/3DK8aJZ>

### NoBlue Motion Night Light



The NoBlue Motion Night Light is a warm amber light source that is 100% blue light free, has zero flicker, and is low EMF. Featuring integrated rechargeable battery for up to 7 hours run time, dawn to dusk motion sensor, and magnetic wall attachment.

<https://bit.ly/3vi6mmP>



### Zilla Night Red Incandescent Reptile Terrarium Lamp

75W incandescent bulb for night use and adding infrared. No blue light.

<https://bit.ly/43vVbG6>

NIGHT BULBS  
1000K-2000K

# Near Infrared Light



## Glow Infrared Therapy Light

This Glow Infrared Therapy Light helps reduce flicker stress from computer or TV screens and fluorescent or LED home lighting. It also adds in the missing infrared light and bathes the entire room in healing infrared energy making the inside of our homes match more closely with the infrared we are bathed in outside in the sun. Now shipping with SaunaSpace's upgraded Firelight Bulb for targeted red light therapy. They have 2-3 times the irradiance of normal 250 watt bulbs and more heat too. Can also be used for targeted infrared therapy.

<https://bit.ly/3rHgZhp>



## Hearth Infrared Sauna Panels

This Hearth panel is an easy way to convert your high-EMF far-infrared (FIR) emitter sauna cabinet into our superior solution! SaunaSpace red-filtered incandescent therapy light includes their trademark Firelight Bulbs that have 3-4 times the irradiance and heat. They contain the full spectrum of healing and detox wavelengths. Therapeutic grade near infrared mitochondrial stimulation. Over 92 mW/cm<sup>2</sup> irradiance on your entire body. No UV or blue light. No flicker stress. Zero EMF stress from all SaunaSpace products, period. Intelligent design and unparalleled quality for the safest and most transformative healing you'll ever experience.

<https://bit.ly/3rHgZhp>



# Other Lighting



4000K  
6500K

## Fluorescent tube replacement

The Centric Daylight T8 Bulb from Waveform Lighting is specifically made to switch our fluorescent bulbs directly without having to rewire light fixtures. It's an easy and quick way to swap out for healthy lighting for fixtures with 4ft long fluorescent tube lights. 95 CRI. Flicker Free. We recommend 4000 or 5000K for daytime use. 6500K should only be used for a short time at solar noon if purchased.

<https://bit.ly/3HBVG2P>



3500K-4000K

## LED tube replacement

The Energy Focus 500D series tubes are an affordable flicker free LED. If replacing fluorescent bulbs you will need an electrician to remove the transformer and directly wire your fixture before these bulbs will work. If replacing an LED tube then it will swap out seamlessly.

<https://bit.ly/48sQwod>



95 CRI

3200K  
5600K  
6500K

## Under Cabinet Lighting

### FilmGrade™ WHITE LED Strip Lights

When installing under cabinet lighting in a remodel or new build, these are a great option. Flicker free and the fullest LED spectrum possible.

<https://bit.ly/3LgXocK>

# NIR, UV, BLUE



## Glow Infrared Therapy Light

(shown with a desk arm)

This light is recommended for an optimal office space set up. Full spectrum near infrared light is needed all day long for energy, managing oxidative stress, and elevating mood. **Use any VESA desk arm mount with a new Glow Light.**

<https://bit.ly/3rHgZhp>



## Ultraviolet UVA 395 nm desk clamp

This light provides a bit of UV light that windows will filter out. Zero Flicker. We recommend turning this on during the day and facing it either down or up. Clip it to the edge of your desk or to a book sitting on your desk to hold it up.

<https://a.co/d/6h5Qxrw>



## Adjustable LED 3000K-6500K

You may or may not need this additional light added to your desk light environment depending on your other lighting. It is a flicker free light with two brightness modes and 3 color temperature settings. In the morning use 4500K-6500K and in the afternoon switch over to the 3000K.

<https://a.co/d/etWM9Wv>



## Red Night Lights

If you work in your office at night these flicker free red LEDs work great. They have a motion sensor with two auto settings so they turn off during daylight hours and on only at night or only turn on when there is motion detected. There's also an always on setting. Use them anywhere in the house where you need night lights.

<https://a.co/d/a5ARfiG>

**HELPFUL TIP: USB lights can be powered by plugging into computer monitors, USB hubs, the back of some computers, or with the [SafeCharge USB Outlet](#) or [The SafeCharger™](#)**

OFFICE  
SET  
UP

# Non-Flickering Screens

Computer and TV screens can have imperceptible flicker that can cause eye strain, headaches, or ultimately hormone disruption because of stress on the hypothalamus/pituitary glands. We recommend Asus Eyecare or BenQ Monitors. Apple monitors also test well. If you can't replace your screens, use the [Zero EMF Photon Light](#) to help mitigate the flicker (see page 14)



## ASUS EyeCare Monitors

<https://bit.ly/3H3B05T>



## BenQ Monitors

<https://bit.ly/3H3CNrD>

These are few recent TV's that have tested well for flicker. This is not an exhaustive list.

- **LG UHD AI ThinQ- 50" 50UQ70 ("Vivid" setting flicker free, other settings low flicker) (confirmed WiFi off option)**
- **Vizio V-Series- 55" 50" 43"**
- **TCL 4-Series- 55" 50" 43"**
- **Onn- 55" 50" 43"**
- **Samsung CU7000- 55" 50" 43"**
- **Westinghouse 32" TV/DVD combo- Model #WD32HKB1001**

Smart TVs can emit a wireless signal continuously, even when turned off. To shut the signal off, unplug or use a [remote control outlet switch](#) to cut the power.

***HELPFUL TIP: take a slo-mo video and view the playback to see if your screens or lights have noticeable flicker.***



# SHIELDED HEALING



Services provided by Shielded Healing include in person Home EMF Assessments, Office Assessments, and Residential or Commercial New Construction/Remodel Consultations. We also test RVs, Tiny Homes, Custom Vans and any place else you call home! Our goal is to be the first and last EMF assessment you will ever need.

## Contact Us



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