



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 teesting 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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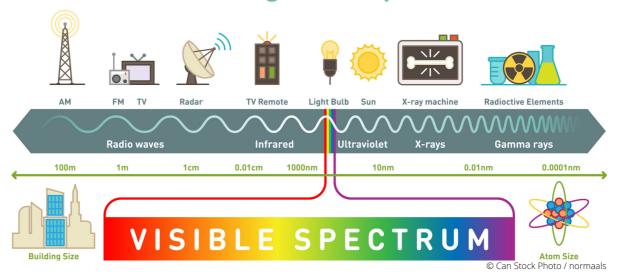
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Health Considerations of Artificial Light

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

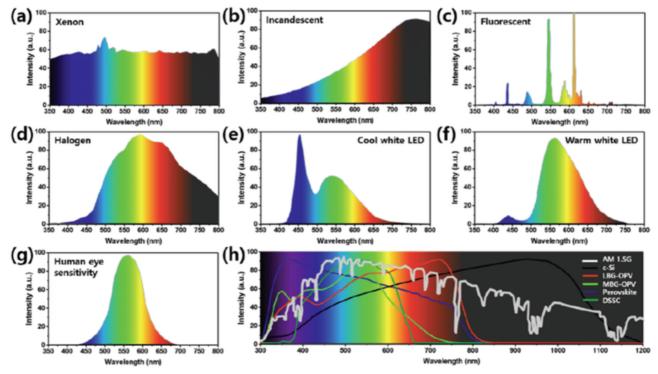


Spectrum

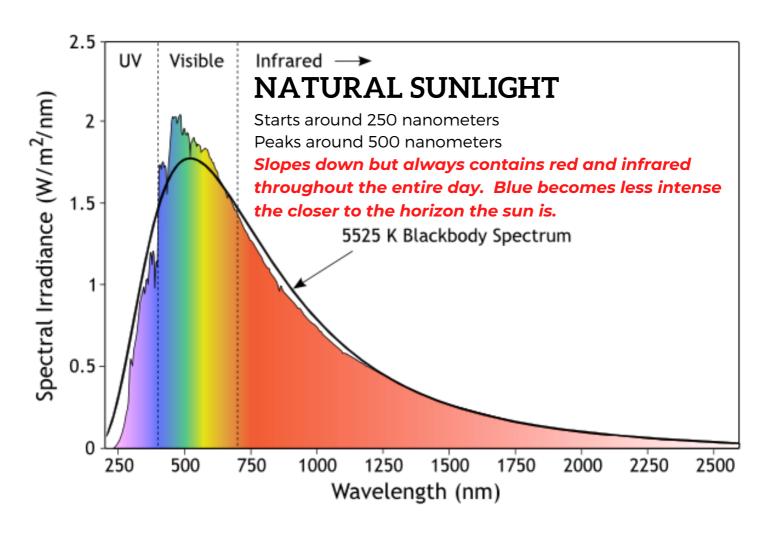
The spectrum of natural sunlight changes throughout the day and also throughout the seasons. The human body uses these wavelengths to signal circadian clocks, for hormone production including Vitamin D, to feed and give oxygen to the cells through mitochondrial ATP production, cellular respiration, and 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 is a "ban" on some incandescent bulbs in the U.S. effective Aug 1st, 2023, there are some exceptions for specialty bulbs. The bulbs listed in this guide are still being sold at the time this was written.



Philips Eye Comfort LEDs

Philips Eye comfort light bulbs in 60 watt equivalent are virtually flicker free. Other wattages with the same marketing are NOT flicker free so be sure to **choose 60 watts** whether it is vintage style LED, soft white frosted LED, or candelabra 60 watt. Sold at Home Depot, Walmart, Amazon, and other online sites.



2700K Soft White

60-Watt Equivalent A19 Dimmable with Warm Glow Dimming Effect Energy Saving LED Light Bulb Soft White

http://bit.ly/3IT7Xnh



5000K Frosted Glass

60-Watt Equivalent A19 Dimmable Energy Saving LED Light Bulb in Frosted Glass Daylight

https://bit.ly/3XXTRW3



2700K Candleabra

60W Equivalent Soft White BA11 Candelabra Dimmable LED Decorative Light Bulb

https://bit.ly/3lscLyF



2700K Clear Glass

60-Watt Equivalent A19 Dimmable with Warm Glow Dimming Effect Clear Glass LED Light Bulb Soft White

https://bit.ly/48KA82H

DAYTE DS 2700K-5000H



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.

DAYTIME ncandescent 2700K-5000K



The Jovial™ Desk Lamp

Available at The Shielding Shop

Introducing the <u>Jovial™ Desk Lamp</u>, 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/

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Twilight Transition Lighting

Reminder: Proper light combining in any space is best done with a <u>Shielded</u> <u>Healing Pro</u> 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 <u>these lights should be placed strategically targeting</u> <u>places where people sit or stand for longer periods of time</u> 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

100K-2600K



Night Lighting

Reminder: Proper light combining in any space is best done with a <u>Shielded</u>
<u>Healing Pro</u> 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 is one 250 watt incandescent bulb with a red stained glass filter on it. This is what the <u>SaunaSpace Zero EMF</u> <u>Photon Light</u> is. This provides flicker free blue filtered light that is strikingly similar to the spectrum of fire or candles at night. It's like a bonfire spectrum in your home.

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.



Colored LED Light Bulbs

Night lighting for lamps or fixtures. LED Flicker free red, orange and yellow bulbs.



Sunlite 40471

LED A19 Colored Light Bulb, 3 Watts (25w Equivalent), E26 Medium Base, Non-Dimmable, UL Listed

https://amzn.to/3MeYjLs



Sunlite 40470

LED A19 Colored Light Bulb, 3 Watts (25w Equivalent), E26 Medium Base, Non-Dimmable, UL Listed

https://amzn.to/3MeYjLs



Sunlite 40472

LED A19 Colored Light Bulb, 3 Watts (25w Equivalent), E26 Medium Base, Non-Dimmable, UL Listed https://amzn.to/3MeYjLs



Twilight Red Light Bulb

1300K red bulb by Blockbluelight
Use code SHIELDED for 10% off
https://www.blockbluelight.com/products/blue-blocking-red-sleep-bulb

NIGHT



Near Infrared Light





The Zero EMF Photon Light

This Zero EMF Photon 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 Thermalight Bulbs 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





Zero EMF Tungsten Panel

This Tungsten 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 Thermalight 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/cm2 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



BLOCKBLUELIGHT

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.

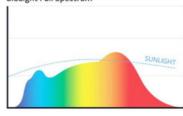


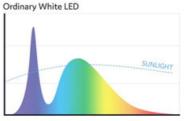
FULL SPECTRUM DAY MODE: 4000K Replicates natural sunlight.

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







Multi-Mode Blue Blocking Sleep Lamp

Experience the versatility of this three-in-one lighting marvel! With convenient rechargeability, prolonged battery endurance, an adaptable neck, and variable brightness options, you can effortlessly set the perfect mood for maximum relaxation and a tranquil sleep experience. Offers 3 different no-blue color modes.

https://bit.ly/3uL0X7s



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



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



Other Lighting



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



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



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



Photon Light with 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 Photon.

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 <u>SafeCharge USB Outlet</u>





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



shieldedhealing.com



info@shieldedhealing.com

EMF EDUCATIONAL OPPORTUNITIES

A Collaboration between

and



Brian Hoyer, FNTP Founder of Shielded Healing EMF Mitigation Specialist



Nick Pineault- "The EMF Guy"
Advocate for Safe Technologies

igation specialist

Electro-Pollution Fix

EMF Protection Course



Click here to learn more

Nick Pineault and Brian Hoyer teamed up to create the ultimate Electro-Pollution Fix -- a simple, step-by-step EMF Protection course which will teach you simply the best way to get started if you want to clean up your home from all this toxic EMF pollution and help your entire family thrive.

One Time Payment \$297

- Monthly masterclass or Q&A session
- Full recordings and past archives
- Private community
- Exclusive discounts on EMF products
- Honest, hype-free information you can trust

<u>\$15 monthly</u> <u>or \$119 yearly</u>



Here's what a past member of Electro-Pollution Fix said about the course:

"I loved this course and learning more about how I can better protect my family from this invisible 'pollution' that is surrounding us. The quick fixes offered in the course allowed me to feel like I was already making an impact on my families health without investing a ton of money. I'm grateful for this knowledge."

- Mandi V., Littleton, USA