# Corn Snake Care Guide

Loving Leos Reptile Rescue Inc.
EIN 33-4462181
*Rescue and Rehabilitation*
*Science-based Education*
*Advanced Husbandry Practices*



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## Introduction

Corn snakes are a widely popular colubrid in the pet trade. They are a native species to the United States, ranging from the southeastern to mid-Atlantic states. Corn snakes are very active, inquisitive and, arguably, intelligent animals who thrive with lots of climbing, burrowing and hunting opportunities. They can grow anywhere between 4-6 feet in length. As such, they require a large enclosure where they can express natural behaviors. These colubrids can be found in a wide variety of color morphs in the pet trade. They can live for 20+ years with the right care.

## Shopping List

1.) **Supplies:**

- **FOR 0-6 MONTHS:** 36x18x18 front-opening enclosure
    - Minimum recommended size for ONE juvenile corn snake
    - **Make sure your enclosure is escape-proof! Babies are very small and can easily squeeze through cracks between glass panes or mesh.**
- **FOR 12+ MONTHS:** 120 Gallon Enclosure (48x24x24")
    - Minimum recommended size for ONE adult corn snake
    - **LLRR Inc. advocates for more-than-minimum recommendations. Larger enclosure spaces allow for an animal to have much more freedom of choice, more room for exercise, room to express natural behaviors, and provide more space for natural enrichment. Some alternative size ideas can include, but are not limited to:**
        - **150 Gallon Front-Opening Enclosure 60x24x24"**
        - **180 Gallon Front-Opening Terrarium 72x24x24x"**
        - **240 Gallon Front-Opening Terrarium 48x24x48"**
- Linear UVB (long tube, half the length of the enclosure, **do not use compact coils**)
    - Zoo Med ReptiSun T5HO 5.0 UVB Kit
    - Arcadia Shadedweller ProT5 7% UVB Kit
    - Arcadia Forest ProT5 6% UVB Kit
    - Reptile Systems T5HO Zone 2 UVB Kit
        - IMPORTANT! Please avoid knock-off Chinese brands of UVB you may find on Amazon! These are NOT safe and could harm your pet. Brands to avoid for UVB include ReptiZoo, Giangarden, OIIBO, Lucky Herp, Reptile King, etc. The brands listed above are SAFE and thoroughly tested by experts

        - Please note, each UVB listed above will have differing height requirements. The distance of the UVB lamp plays an important role in ensuring your animal is getting the correct exposure to UVB. If UVB fixtures are mounted above mesh, different mesh types can also affect how much UVB your animal will have access to, and will determine how low/high your basking area needs to be. Please refer to the group **Reptile Lighting** for in-depth information on UVB mounting
- Incandescent Basking Bulb
- **Wattage may vary based on power density of the bulbs, your house temperatures, enclosure height, and height of the basking area. Please refer to the guides in the Facebook group Reptile Lighting, and Light My Reptile for in-depth information on basking lamps**
    - Reptile Systems Eco Halogen
        - **CAUTION! REPTILE ECO SYSTEM HALOGENS HAVE VERY INTENSE BEAMS. THESE MAY NOT BE APPROPRIATE FOR EVERY SET UP**
    - ReptiZoo Intense Basking Spot Lamp
    - Exo Terra Intense Basking Spot Lamp
    - Arcadia Basking Spot Lamp
        - Wattage may vary based on your house temperatures, enclosure height, and height of the basking area. Please refer to the guides in the Facebook group **Reptile Lighting** for in-depth information on basking lamps
- Ceramic Heat Emitter
    - Use ONLY for extra ambient heat if needed. Do not use as the main heat source
- Laser thermometer gun
- LED 5000-7000k Light Bar
- Natural, safe substrate options
    - 70/30 Mix of Scott's Organic Topsoil (no fertilizers!) and Quikrete Play Sand
    - Josh's Frogs Tropical BioBedding
    - Zilla Jungle Mix
    - The Bio Dude Terra Firma Substrate
    - Sphagnum moss to mix with substrate
- Hygrometer/thermometer devices x 2
- Temperature probe
- Water dish
- Cork bark, logs and vines to create hides, climbing options
- Outlet Timer/Power Strip
- Reptivite OR Repashy Calcium Plus LoD Multivitamin
- Zoo Med Calcium with D3
- Zoo Med Calcium without D3

2.) **Products to Avoid:** (This is not a complete list, just a compilation of the most common unsafe items on the market)

- Coil Florescent UVB Bulbs

    - These bulbs are not inherently bad, but because of their compact size, they should be used in a horizontal position for a wider spread. For many medium and large-sized reptiles who openly bask during the day, they may not provide enough coverage on the animal's body for proper D3 synthesis
- Mercury Vapor Bulbs
    - These bulbs can lead to serious UVB and heat burns. They do provide UVB and heat all in one, but are dangerously inconsistent in their output and cannot be controlled with a dimming device. MVB's also produce an unnatural green light, which may affect an animal's color vision and inhibit natural behaviors
- Reptile Carpet
    - Snags teeth, holds bacteria. Cannot be dampened without molding risk
- Walnut Shell Substrate
    - Serious risk of impaction, oral, nasal and eye blockages. If ingested, this material can cause internal damage
- Calcium Sand
    - For lizards, this substrate can encourage them to eat it, which can cause serious and sometimes fatal impactions
- UVB "test" Cards
    - These items do not accurately detect UVB. They react to light emitted by heat lamps as well, and do not tell you exactly how much UVB is being emitted by a bulb
- UVB "test" Accessories and Décor
    - Just like "test" cards, these items do not accurately detect UVB, and will react to UVA as well.
- Colored Heat Bulbs
    - Encourages reptiles to eat it to supplement calcium, but can cause serious and sometimes fatal impaction
- Aspen Bedding
    - This is not a suitable substrate for corn snakes. It cannot be dampened to hold the humidity these animals need for hydration and shedding, and will mold. This can lead to respiratory infections
- Colored Heat Bulbs
    - Colored bulbs (red, blue, purple) wash out a reptile's color vision. This can interfere with their natural circadian rhythm and behavior. Heat bulbs should mimic the warm/white color of sunlight
- Heat Mats
    - Heat mats do not provide the correct Infrared heating reptiles need for proper warming, metabolism, digestion. Even with thermostat use, power failures can occur leading to severe, even fatal burns
- Heat Rocks
    - Heat rocks do not provide the correct Infrared heating reptiles need for proper warming, metabolism, digestion. These items have been known to cause serious, sometimes fatal burns
- LED UVB Products
    - As of current research (2026), LED UVB products are not recommended for safe usage in reptile keeping. They do not produce vital UVA2 wavelengths, which signal an animal's body to stop producing pre-D3. This can potentially lead to **hypervitaminosis D3**, and **photoconjunctivitis**
- Liquid Calcium and Vitamin Products

- Liquid vitamins degrade more rapidly compared to powder supplements. There is also less guarantee that the animal will consume enough of the liquids for any real benefits. Deficiency-related illnesses often occur from using these products. Liquid vitamin and calcium products such as those from Zilla, Fluker's and Exo Terra should be avoided

## Quarantining

### 1.) Why Should You Quarantine?

- Quarantining should be done when you first bring your new corn snake home. This is to monitor behaviors, and to give you time to have fecal testing done to check for parasites before moving your snake into their permanent setup
- Typically a quarantine period will last **2 to 3 months**
- Quarantine setups are simplified for the sake of maintenance and monitoring. Keeping accessories to a minimum as well as using paper towels will make clean-up and finding droppings for sampling easier.

### 2.) How to Safely Quarantine:

- New animals should be kept separately from your other pets, if other pets, especially other reptiles, are present in the home. If possible, keep them in a separate room
- Sanitize the new animal's equipment and accessories separately from other pets' items
- Use separate feeding tools for the new animal
- Use paper towel flooring for easier clean-up and sanitizing
- Schedule fecal and physical exams to check for parasites and possible underlying health issues
- For sick animals, wear gloves when handling, and thoroughly sanitize afterwards
- Once your snake has passed their quarantine period and been given a clean bill of health, you can move them into a more advanced setup (see **Enclosure Examples**)

## Nutrition

### 1.) Diet:

- Corn snakes are strict carnivores. In the wild, they will consume a variety of prey items, such as mice, small rats, birds, frogs, eggs, and lizards. In captivity, it's a good idea give them a variety of **frozen-thawed feeders**, as well as occasional supplementation. This will keep their nutrition well rounded
- Feeders should be appropriately-sized; aim for feeders no larger than 1.5x's the width of your corn snake's body
- Frozen-thawed feeders are safer than live-feeding. There is no risk of the feeder struggling and potentially seriously injuring your snake. There is also a greatly reduced risk of parasitic infection, as most parasites cannot survive long-term freezing temperatures

### 2.) Supplementation:

- While snakes can get the majority of their vitamin and mineral needs through their food, dusting feeders with occasional supplements can help to fill in any nutritional gaps.



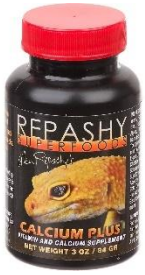


Arcadia RevitalizeD3, EarthPro-A, CalciumProMG





Zoo Med Reptivite with D3, Calcium without D3



Repashy Calcium Plus, can be paired with Zoo Med Calcium without D3

**3.) Feeding Regiment and Frequency:**

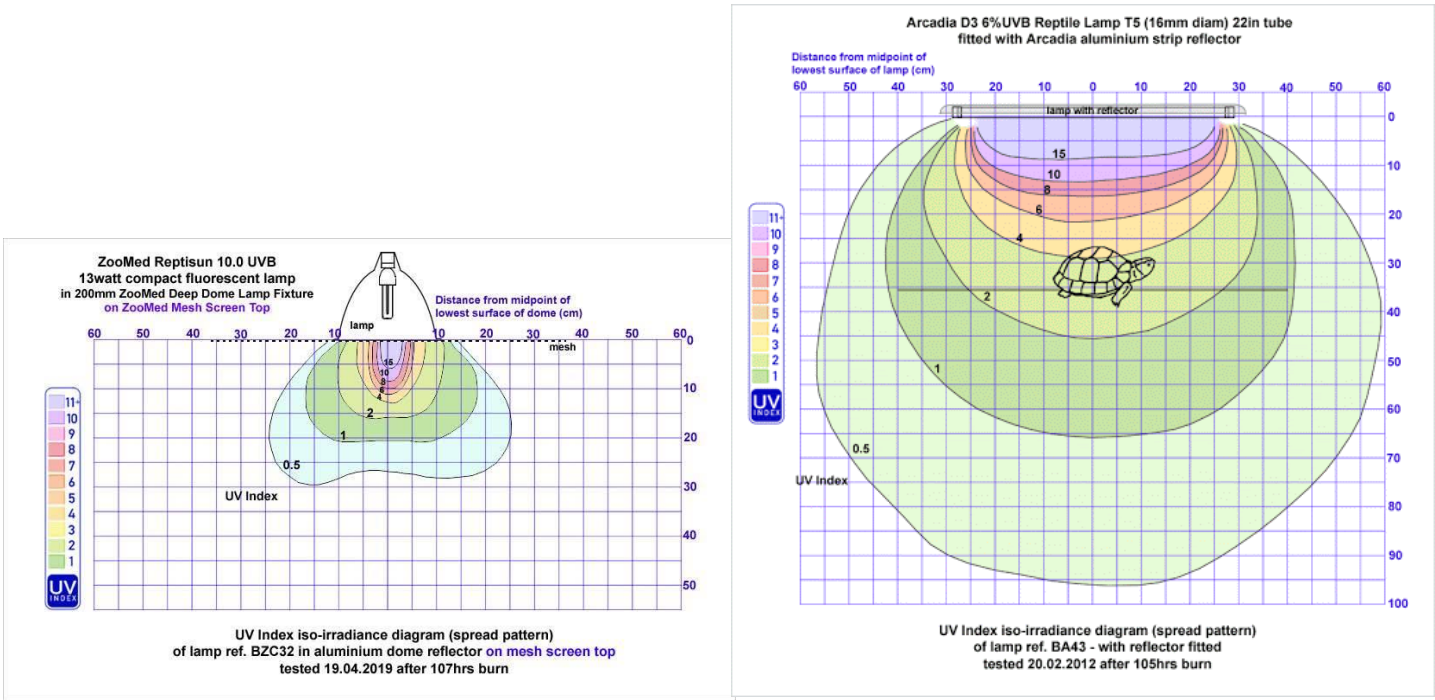
- Juveniles 0-6 Months: One feeder every 5-7 days, depending on body condition
    - Week 1, Day 1: Calcium
    - Week 2, Day 1: Calcium
    - Week 3: N/A
    - Week 4, Day 1: Multivitamin
- 12+ Months: One feeder every 2-3 weeks, depending on body condition
    - Week 1: Calcium
    - Week 2 or 3: Multivitamin
        - **DO NOT OVERFEED**. Overfeeding, or what is commonly referred to as "power-feeding" to rush growth, can lead to severe health issues later in life. Obesity and organ stress are common issues seen with over-feeding
- **If using the Arcadia supplement product line:**
    - Juveniles 0-6 months:
        - Week 1: EarthPro-A
        - Week 2, Day 1: CalciumProMg
        - Week 3: N/A
        - Week 4, Day 1: Arcadia RevitalizeD3
    - 12+ Months:
        - Week 1: EarthPro-A
        - Week 3 or 4: CalciumProMg
        - Week 6 or 7: RevitalizeD3

- Senior snakes 15-18+ years:
    - Senior snakes may sometimes struggle with metabolism as their digestive system ages. If you observe changes in your older snake's eating habits and weight, try adjusting to more frequent, smaller meals, usually at a recommendation of once every 10-14 days

## UVB, Heating and Visible Light

### 1.) The Importance of UVB

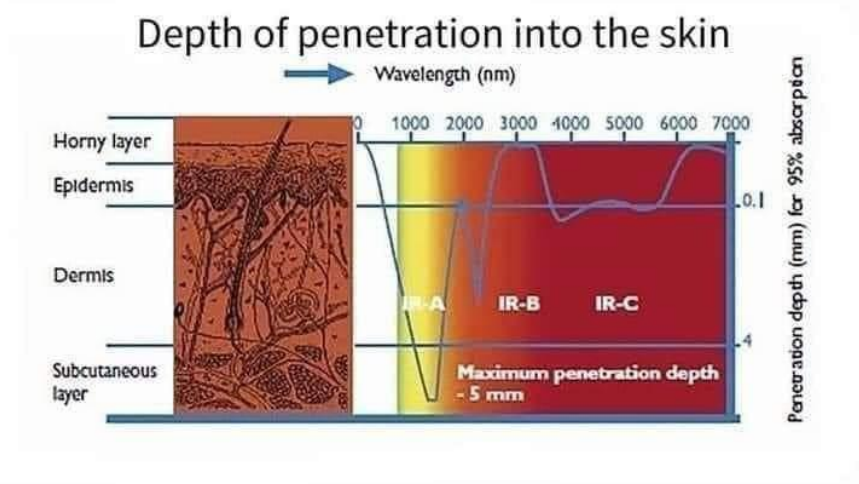
- UVB lighting is important for the following benefits:
    - Creates beta-endorphin "feel-good" hormones in the skin
    - Promotes better organ health
    - Stimulates white blood cells and promotes better immune health
    - Facilitates natural D3 synthesis for calcium absorption
    - Simulates natural UVB that would be provided by the sun in the wild and promotes more natural behaviors



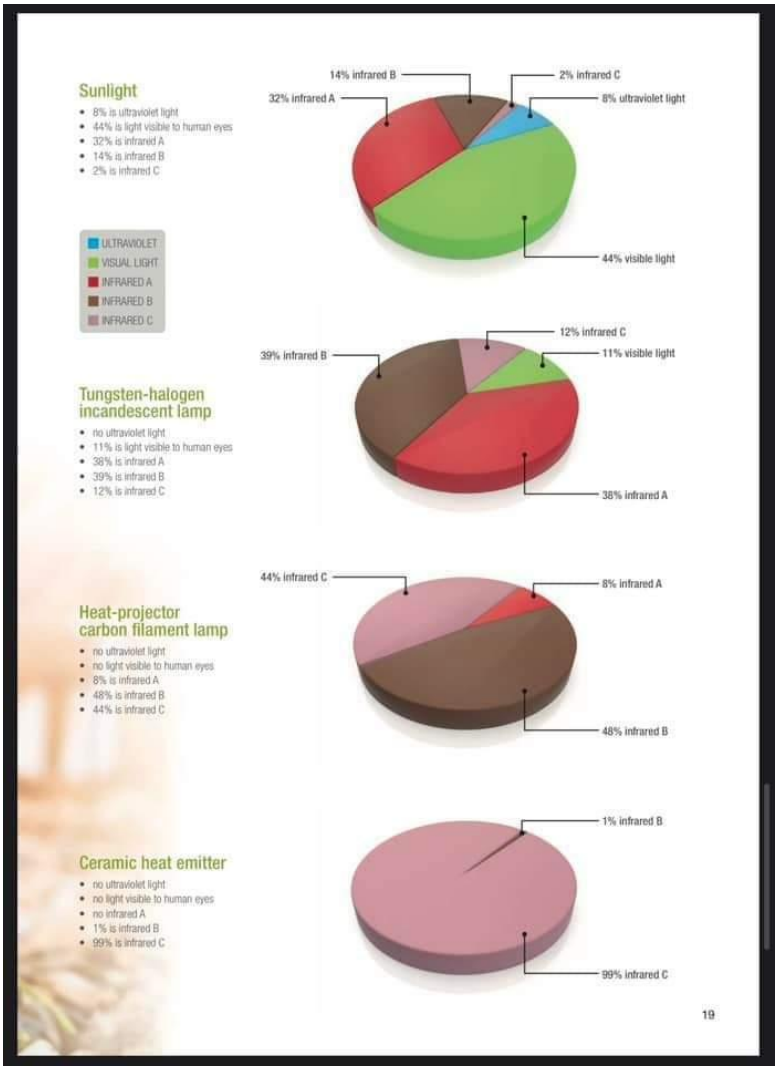

*Difference between Coil/Compact UVB coverage, versus Linear T5HO tubes*

### 2.) The Importance of Infrared Heating

- Heat sources that provide Infrared A and B are important for:
    - Deep tissue-penetrating heat
    - Faster warming of the animal's body
    - Less time needed to bask
    - Better metabolism and digestion
    - Promotion of more natural behaviors
    - Surfaces below the basking area that absorb IR-A wavelengths will radiate that heat back out as IR-C, so your animal gets the full spectrum of Infrared heating




*Example illustrating the depth of penetration between IR-A, IR-B and IR-C wavelengths. IR-A penetrates into the subcutaneous layer, where IR-C is relatively surface-level on the epidermis*

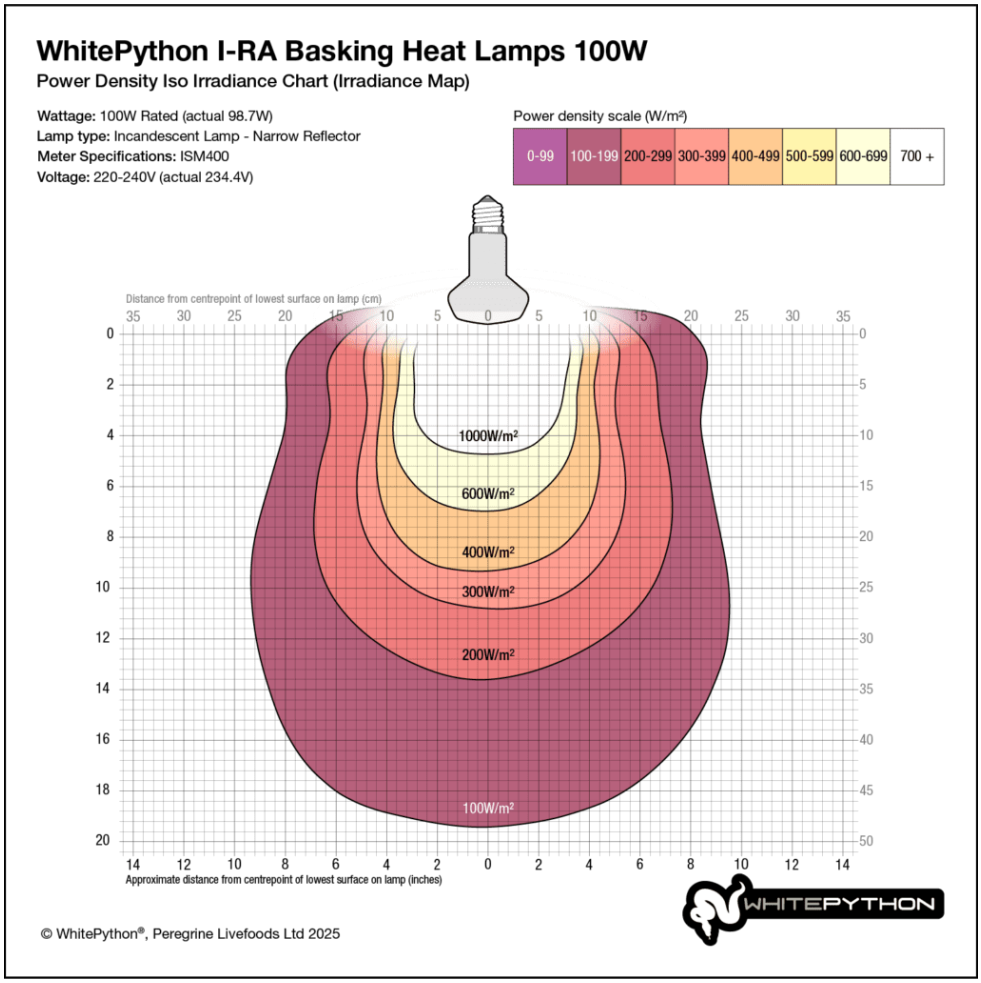



*The difference between various heating elements. Incandescent lights provide the most natural array of IR*

### 3.) Bulb Power Density

- Power density is the intensity and spread of infrared radiation from an incandescent/halogen heat lamp. This is measured by **wattage-per-meter squared ($W/m^2$)**.
- Power densities vary between bulb styles and brands, and providing infrared is not one-size-fits all.

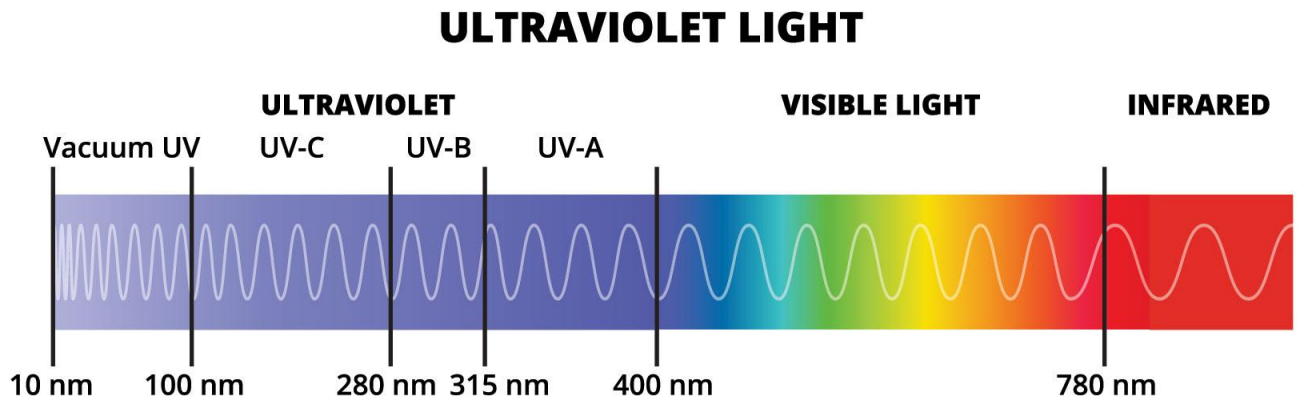
- It's important to note that basking surface temperatures don't tell us much about the power density of a bulb. This is because different basking surface materials don't absorb and radiate infrared the same (i.e., a slate basking surface and a faux resin rock may give different temperature readings, even when under the same heat lamp and at the same distance).
- Ultimately, we want to aim to provide irradiance between **200-350W/m²**. The distance for this range is different between bulb styles and brands, but there is an easy "test" to measure this distance for the bulb you have. This will help you determine how high or low your basking area should be.
    - **The Hand Test:** Human skin is just as sensitive to infrared radiation as that of reptiles. The tingly sensation of sunlight on your bare skin is the effect of infrared penetrating the epidermis and down into muscles. For this test, think of your hand as your pet reptile's back.
        - Let your basking bulb warm up for a few hours
        - Place your hand on the bottom of the enclosure and raise it until you feel tingly warmth
        - If you can comfortably keep your hand under the lamp at this distance for 60 seconds, **you are within the 200-350W/m² range**
        - **Different reptile species need different levels of irradiance exposure. Refer to part 6.) Light My Reptile for assistance determining what exposure level your corn snake needs**




*Power Density Irradiance Chart, © WhitePython. Note the range for 200-350W/m² is between 14-10cm (5.5-3.9in) for this particular bulb, but may be closer or farther away based on bulb wattage and make. Refer to the Tomaskas LTD for irradiance charts for a variety of bulbs*

## 4.) The Importance of Full Spectrum Lighting and LUX

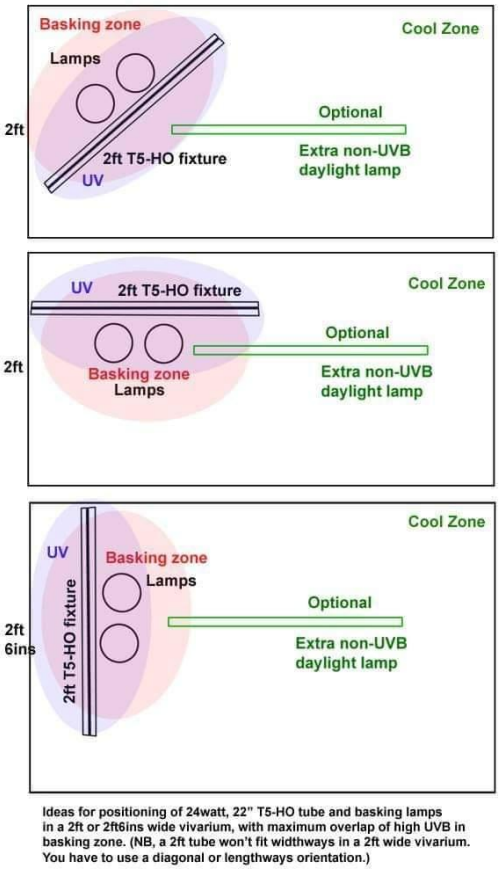
- Many reptiles have **tetrachromatic vision**, meaning they have four rods in their eyes for color detection and can see much more of the visible light spectrum than we can. Providing additional full spectrum lighting helps with:
    - More visible colors for your animal to see
    - Promotion of natural behaviors
    - Closer visible replication of what they would experience under sunlight
- Currently, there are very few products available that cover more of the visible spectrum (as of 2026). Companies working on true LED full spectrum products are:
    - Fauna-Lux
    - Reptile Systems
- **LUX** refers to the amount of light that illuminates surfaces. Consideration should be taken that the sun's brightness is far greater than the UVB, heat lamps and LED's we offer in captivity (the sun offers 32,000 – 100,000 LUX!) Providing more **LUX** over the **basking area** in the form of bright, white light can promote:
    - More natural basking behaviors
    - Mental and physical wellbeing




*Quality lighting will cover some of the visible light spectrum (here shown between 400nm to 780nm); however, the purple, or Ultraviolet spectra will be covered in part by UVB lighting. Note that UV-C wavelengths are excluded from UVB and full spectrum equipment and are dangerous*

### 5.) Proper Lighting Arrangement

- Heating and UVB lighting should be provided in a "light-to-dark", "hot-to-cool" gradient, with the highest concentration of light over the basking area
- Basking bulbs should be centered with the middle of the UVB tube, where the strongest UVB wavelengths are. This effectively creates a "patch of sun" where the animal can get UVB and heat all in one area
- LED lighting should overlap with the UVB and basking bulb

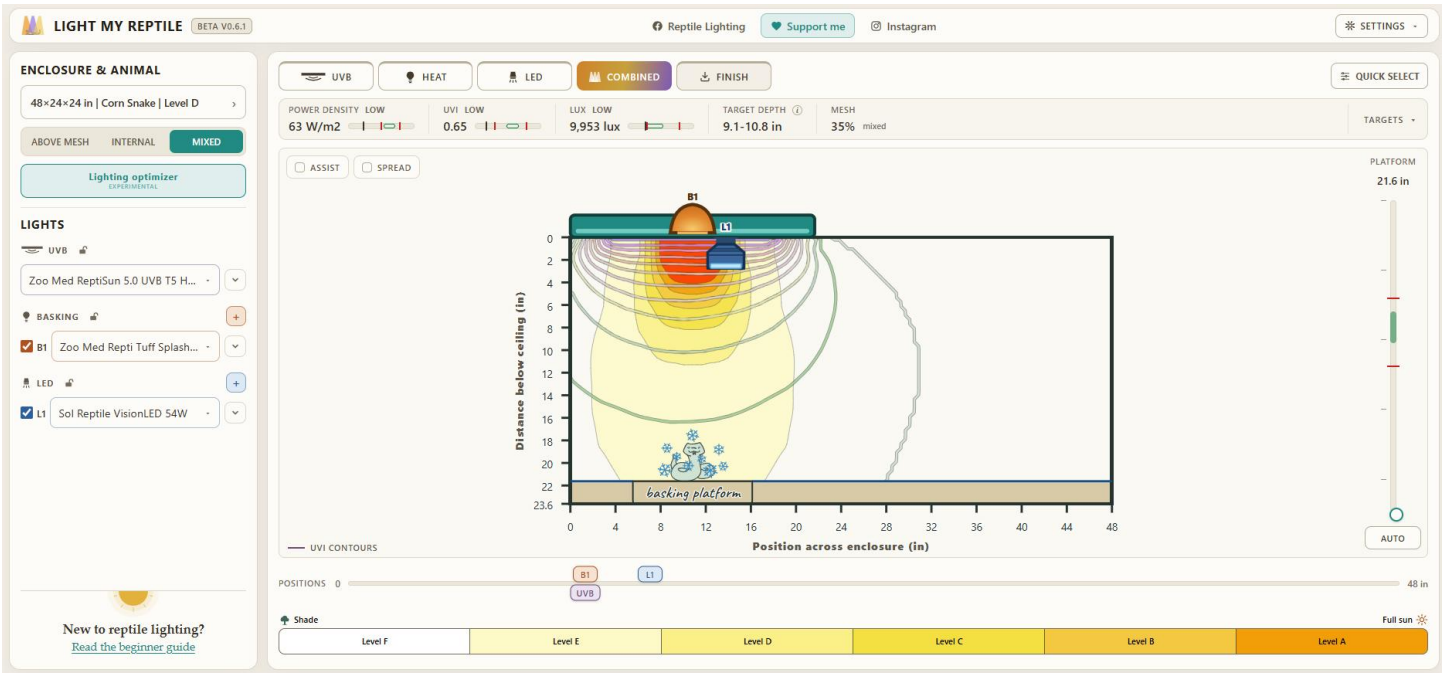



Ideas for positioning of 24watt, 22" T5-HO tube and basking lamps in a 2ft or 2ft6ins wide vivarium, with maximum overlap of high UVB in basking zone. (NB, a 2ft tube won't fit widthways in a 2ft wide vivarium. You have to use a diagonal or lengthways orientation.)

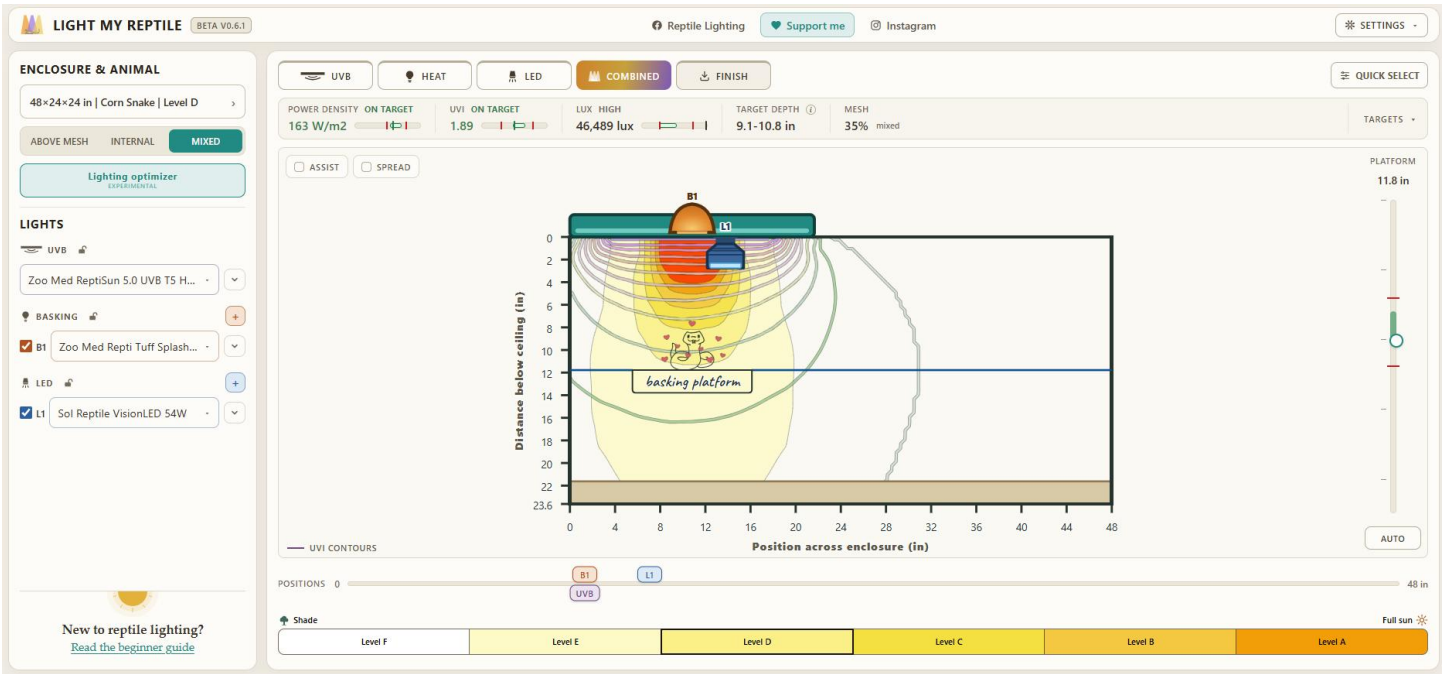
*Examples of proper lighting arrangements*

### 6.) Light My Reptile Tool

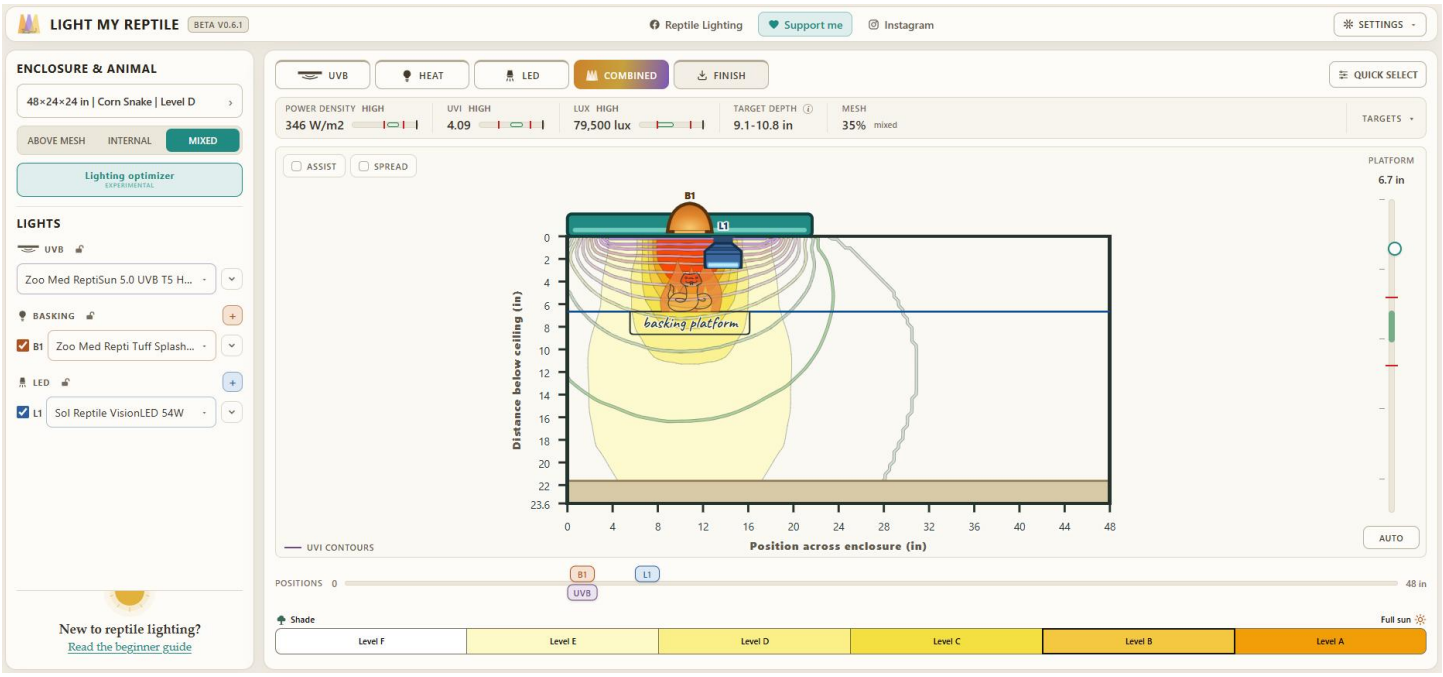
- Light My Reptile is a fantastic tool designed to help keepers take much of the guesswork out of proper lighting and heating provisions. It is an application that was created by Nathan Burton, using data collected by the experts who moderate the group Reptile Lighting.
- This tool allows you to choose lighting, heating and LED equipment that have all been thoroughly tested and are trusted in the herpetoculture hobby. It also lets you choose different mesh densities, you can choose different species, input custom enclosure sizes, and you can mix and match various equipment to see what would be the best combination for UVB, heating and lighting for your pet.




*Reference image courtesy of Light My Reptiles. Note the corn snake is "cold", being too far away from the specified UVB and heat. The equipment is mounted above a mesh type that blocks 35% of wavelengths*




*Adjusting the height of the corn snake shows the optimal distance it should be from the specified UVB and heat*




*Raising the corn snake's basking platform too high risks overexposure to heat and UVB, which will lead to severe burns*

## Temperature, Humidity and UV Index

### 1.) Temperature

- Temperatures should be provided in a "hot-to-cool" gradient across the tank, with your basking bulb placed on one side of the enclosure
- Temperatures can be monitored by placing a hygrometer/thermometer device on the hot side, and one on the cool side. A thermometer temperature probe can be placed just outside of the beam of light beneath the incandescent heat bulb.
    - Hot side temperatures: 80-83f
    - Refer to the "hand test" for guidance on the basking area, but aim for 90-94f degrees surface temperature
    - Cool side temperatures: 70-75f
    - Night time temperatures: 65-70f
- Surface temperatures can be measured with a laser thermometer gun
- Ambient temperatures can be monitored using a thermometer probe, and/or digital hygrometer/thermometer combo device near the basking area and cool side

### 2.) Humidity

- Corn snakes live in a variety of zones where humidity levels can fluctuate between 40-80%+
- In captivity, we can maintain humidity by providing humid hides with damp moss, and utilizing a misting system that goes off once in the morning, and once in the evening
    - **IMPORTANT!** Make sure your enclosure has good ventilation for air flow. If air is allowed to stagnate, it can create the perfect environment for harmful bacteria to grow. **This can cause respiratory infections**
    - You can make sure fresh air is moving through the enclosure by using vivariums that have mesh tops, or by installing small computer fans that will pull cooler air in, and hot air out. If using fans, make sure they are covered with a guard so your snake won't accidentally harm themselves

- Ambient humidity can be monitored using a digital hygrometer/thermometer combo device near the basking area and cool side

3.) Safe UVB Exposure

- UVB should be provided through a linear tube that spans halfway across the enclosure. It should be aligned with your basking bulb to one side of the tank, with the basking bulb centered with the middle of the tube
- Not all UVB bulbs are created equally! Certain strengths, bulb styles and brands are not safe or effective for corn snakes (refer to the Shopping List for safe UVB products)
- Corn snakes are **crepuscular** reptiles. This means they may be active at night, but are most active at dawn and dusk. They may cryptic bask in the early morning hours, exposing a small portion of themselves to heat and UVB, or they may bask more openly
- On the Ferguson Zone (the UV requirement scale for various reptile species), corn snakes are in Zone 2. This means they need a UVB index between 2.0 – 3.0
- The height of your enclosure, whether your UVB is mounted above mesh or inside the enclosure, what brand of tank you have (different open-top tank brands have different mesh types) all affect how much UVB your corn snake will be exposed to, and how high or low your basking area needs to be to achieve the correct UVB index. To figure out how to safely provide UVB for snake, refer to the following sources:
    - Reptile Lighting on Facebook
    - Northampton Reptile Center – Ferguson Zone
    - Thomas Griffiths, Tomaskas LTD
    - Light My Reptile

## Enrichment

1.) The Importance of Enrichment

- Many reptile species, including corn snakes, enjoy living in a stimulating environment where they can climb, bask, sleep, hunt and explore
- When these animals are housed in small, bare enclosures, they often exhibit "stereotypy" behaviors, which may include glass surfing, aggression, frequent hiding, pacing, pushing at enclosure doors or corners, and listlessness. These are all indicators of boredom, stress, frustration, anxiety, and eventually sensory-atrophy
- Giving our animals more space and more things to investigate, climb, etc, allows them to exhibit natural behaviors and stimulates their senses. These provisions also decrease fear and stress, and enhance the animal's sense of security

2.) Ways to Provide Enrichment

- Enrichment can be provided by "cluttering up" your corn snake's home. Add in lots of branches, cork bark rounds, plants and substrates for digging
- Create "scent trails" when feeding. You can drag a frozen-thawed prey item across the enclosure to create a hunting trail for your corn snake to track
- Learn about target training. Target training is a great way to get your snake to associate certain objects with food items, and to train them to do certain behaviors, like moving to a specified area before feeding

## Enclosure Example



*120gal 48x24x24 bioactive enclosure, complete with a 24w Arcadia 6% Forest ProT5 UVB, 50w Arcadia Basking Spot Lamp, and LED Barrina Plant Grow Bars*

**Common Corn Snake Illnesses**

1.) **Respiratory Infections**

- Respiratory infections can occur from being exposed to unclean environments, or viruses. These infections can sometimes be passed between animals, depending on the strain of infection they are afflicted with
- Having adequate ventilation in the enclosure will help facilitate dry-out periods, so the air and soil don't become a stagnant breeding ground for harmful funguses and bacteria
- Beneficial funguses and bacteria should not be confused with contagious strains
- Infections need to be treated with the appropriate antibiotics, and may need prolonged, aggressive treatment to cure
- Symptoms can include open-mouth breathing or gasping, heavy breathing, lethargy, and excessive mucous or saliva production



*Corn snake exhibiting excess saliva and open-mouthed breathing from a respiratory infection*

2.) **Parasitic Infection**

- Parasites are an unfortunate reality of keeping reptiles, especially those who may be wild caught, or who require animal or insect proteins in their diets. Parasites can also be transmitted through cohabitation or unclean environments
- Some common parasites may include coccidia, giardia, pin worms, round worms and nematodes (these may be deadly), as well as cryptosporidium (highly contagious and often fatal)
- Fecal exams should be done routinely to check for parasite populations, and so they can be treated as needed. Some parasites may only be detectable using PCR (polymerase chain reaction) tests, so it is important keepers are aware of proper quarantining and treatment protocols



*Cryptosporidium sp. found in a corn snake PCR exam*

3.) **Shedding Issues**

- Shedding problems in corn snakes are often due to humidity levels that are too low, or nutritional deficiencies
- Stuck shed can also cause retained eye caps, which can lead to eye infections and damage to the cornea and living lens



*Corn snake with stuck shed over the eye spectacle*

4.) **Obesity**

- Obesity in corn snakes can be caused by feeding too frequently, feeding too many fatty prey items, and not enough enclosure space or external opportunities for proper exercise
- A corn snake who is overweight is at risk of developing fatty liver disease, and overall lifespan may be shortened



*Morbidly obese corn snake*

**Resources**

- **Facebook**
  - Reptile Lighting
  - Behavior Education
  - Reptiles: Advancing Husbandry Practices
  - Loving Leos Reptile Rescue Inc.
- **YouTube**
  - Animals at Home
  - Reptiles and Research
  - Herp Talk
  - Jessica's Animal Friends
  - Reptiles and Research
  - HerpHQ
- **Supplies**
  - Pangea Reptile
  - Bean Farm
  - Light Your Reptiles
  - Reptile Basics
  - Dubia Roaches
  - PetCo
  - PetSmart
- **Experts who have published papers online for science-based research**
  - Thomas Griffiths, Tomaskas LTD, Zoo Husbandry Consultant
  - Dr. Frances Baines, Veterinary Surgeon
  - Dr. Sarina Wunderlich, light physicist

- Lori Torrini, Behavior Education, Animal Behaviorist
- The British Herpetological Society