

Why is Light Distance Important?

If the grow lights are too close to your plants, it causes light stress, bleaching and burning (even if the temperature is perfect). If lights are too far, plants don't grow as fast or yield as much as they could.

Note: Some strains can handle more light than others even if you provide the exact same conditions. Cannabis plants can accept more light if you provide a great growing environment (not hot, not cold) and avoid nutrient deficiencies. A happy cannabis plant with healthy leaves and a warm breezy environment can handle insane amounts of light without stress.

LED Grow Lights

LEDs are not standardized. Every LED grow light uses different drivers, lenses, diodes, and more. This all affects how close the fixtures can be to the plants without burning.

Contact the Manufacturer If Possible – The *best* thing to do is contact the manufacturer (or read the specifications) to see what distance is recommended.

If in doubt, keep LEDs further away – Although LED grow lights run cool, the LEDs available today give off an intense amount of light. This is great for yields, but can give your plants light burn if kept too close.

If you weren't given any instructions with the light, here's a quick reference guide:

Type of LED Grow Light	Distance From Plant
Under 100W	10-14" (25-35 cm)
100-300W	14-24" (35-60 cm)
300W-600W	18-36+" (45-90+ cm)
600W and bigger	24-36+" (60-90+ cm)

Start with the highest distance and slowly move the light down each day, or simply let plants grow up to the light.

Metal Halide & HPS Grow Lights

Metal Halide and HPS (High Pressure Sodium) grow lights produce a lot of heat so you need to consider both the heat and light intensity. If you keep plants in a breezy and cool environment (under 78°F/26°C) you may be able to keep the lights at the closest distance. When it's hot (above 85°F/30°C) then you may need to keep the lights the furthest distance away.

Here's a quick reference guide to use as a starting point:

Grow Light	Closest	~ Sunlight	Furthest
150W	8" (20cm)	10" (25cm)	12" (30cm)
250W	10" (25cm)	12" (30cm)	14" (35cm)
400W	12" (30cm)	14" (35cm)	19" (48cm)
600W	14" (35cm)	16" (41cm)	25" (64cm)
1000W	16" (41cm)	22" (55cm)	31" (79cm)

* Conduct a 30 second "hand test" after you've positioned your light. This means to put your hands where your plants are. If it feels too hot to you after 30 seconds, it's too hot for your plants.

How Big a Space? (Light Footprint)

150W – covers 2' x 2' (0.6m x 0.6m) area

250W – covers 2' x 2' (0.6m x 0.6m) area up to 2.5' x 2.5' (0.8m x 0.8m)

400W – covers 3' x 3' (0.9m x 0.9m) area up to 3.5' x 3.5' (1m x 1m)

600W – covers 3.5' x 3.5' (1m x 1m) area up to 4' x 4' (1.2m x 1.2m)

1000W – covers 4' x 4' (1.2m x 1.2m) area up to 5' x 5' (1.5m x 1.5m)

CMH / LEC Grow Lights

Here's a quick reference guide to use as a starting point for CMH (ceramic metal halide) grow lights. These are typically listed as "CMH" lights but Sun System calls them "LECs" (light emitting ceramics) to make them sound fancier.

Sun System "LEC" models

LEC Grow Light Model	Distance From Plant
315W	18-24" (45-60cm) or more
630W	24-30" (60-75cm) or more

Other CMH models may need to be kept up to 3 feet away! Always read the instructions or ask the seller. Here are some examples I've found the distances for:

- [Grower's Choice 315W CMH](#) – 2.5-3 feet (75-90 cm) from plants
- [Hortilux 315W CMH](#) – 3 feet (90 cm) from plants
- [Vivosun 315 CMH](#) – 24 inches (60 cm) from plants

*Keep LEC grow lights an extra 6-12" (15-30cm) away for young plants, or if you see signs of leaf stress. If you're noticing symptoms on just the tops of the plants closest to the light, as opposed to evenly on all the leaves, the problem may be that the light is too close, even if it looks like a nutrient deficiency!

Same as with MH/HPS grow lights, always conduct the 30-second "hand test" after you've positioned your light. If the light bothers your hand after 30 seconds, it may bother your plants!

CFLs & T5s (Fluorescent Lights)

T5s and CFLs typically can't produce enough light to cause "light burn" the way you get with the other, more powerful lights.

- Only need to worry about heat, not about light stress
- Keep plants as close as possible as long as the distance passes the "hand test"
- Leave extra space for fast-growing plants so they don't grow into the lights