1. Plants have two distinct cycles of growth: vegetative (green growth) and fruiting (flowering growth). Uriel LED Grow Lights have optimized wavelengths for these phases and can also mimic color temperature changes of natural light from sunrise to sunset.

See: http://pinklightaeroponics.net/science-pink-light-aeroponics/science-of-futuristic-aeroponic-indoor-gardening-with-pink-led-grow-lights-photosynthesis-light-spectrum-optimization/, http://www.articlesbase.com/electronics-articles/indoor-gardening-bc-qa-with-g8led-grow-lights-part-one-5440028.html and http://www.fondriest.com/environmental-measurements/parameters/weather/photosynthetically-active-radiation/ for more information.

2. Uriel Controllers also allow Growers to fine tune photosynthetic reactions to produce an Enhanced Emerson Effect to drive aggressive photosynthesis for both vegetative growth and flowering and budding resulting in higher plant yields.

See https://en.wikipedia.org/wiki/Emerson_effect for more information.

3. LEDs offer a host of benefits over traditional, HID, Sodium Vapor, & Fluorescent growing lights. For one thing, they are far more efficient, which helps to keep electricity bills down. High efficiency means less heat, which makes air conditioning cheaper. Being cooler, the lights can be placed closer to the plants, so the crops can be planted more densely. Growing cycles could be cut in half compared to traditional farming.

See http://www.livebettergarden.com/2014/05/indoor-farming-with-leds-economist.html and http://howtogrowmarijuana.com/led-grow-lights/.

4. Growers can Increase the Terpene content of their buds. Terpenes are what give cannabis, other fruits and vegetables and herbs their distinctive taste and smell, so increasing these levels are incredibly important. Growers can dramatically improve the taste and smell of their buds by increasing the levels of terpenes they contain by using certain UV light wavelengths provided by Uriel Advanced LED Grow Lights. UV light can increase THC and CBD content, boosts terpenes and flavonoids for better taste and boosts antioxidants, vitamins and pigmentation of buds.

See http://www.growweedeasy.com/terpenes-terpenoids-cannabis, http://www.growweedeasy.com/better-taste-better-smell.

5. Unlike traditional lighting, such as CFL or HIDs which emit the whole spectral range, all Uriel Advanced LED Grow Lights have been scientifically tailored to emit only the spectral wavelengths required for photosynthesis. By dialing into the proper ratios of wavelengths, plants use 95-100% of the light emitted from Uriel Grow Lights, with little to no energy wasted. Uriel LED grow lights include 440nm and 470nm blues, 640nm and 660nm reds, 740nm far-red and white with ratios of 5% white, 10% blue and 85% red. Our spectral outputs were formulated based on the relative absorbancy of each wavelength during photosynthesis, and the absorbance peaks for chlorophyll A and B. Uriel LED Grow Light wavelengths can be selected to include 440nm and 470nm blues, 640nm and 660nm reds, 740nm far-red and white; with ratios of 5% white, 10% blue and 85% red. Uriel's Controllers can also change these ratios and intensities. Because the individual diodes of a Uriel LED light are set to a specific color and in a specific proportion, we are able to emit the exact spectrum that a developing plant would need to thrive, with little to no waste. Uriel's 12 band+ complete spectrum model is designed to perfectly match the growth needs of your plants. Growers using Uriel LED Grow Lights will be able to simplify their grow rooms, save on electrical consumption, keep their rooms cooler, and perhaps most importantly, experience a marked increase in the quality of their fruits, flowers, and vegetables. Uriel's Full Grow Light Spectrum LEDs are part of Uriel's proprietary full cycle Natural Selection Grow Lights™ is full spectrum without gaps between 375nm and 735nm. This spectrum spikes to match the PAR Spectrum as closely as possible.

See https://newgrowsys.wordpress.com/, http://howtogrowmarijuana.com/led-grow-lights/.

6. Some growers believe that providing UV-B light to plants may increase the THC levels or some other aspect of potency of cannabis buds. An option to provide UV-A and UV-B wavelengths is also provided by Uriel. UVB exposure will increase yields and reduce the risk of bud rot. Concerning Cannabis, Uriel's Grow Light wavelength ranges include UV-A light which increases THC and CBD content, it boosts terpenes and flavonoids for better taste and it boosts antioxidants, vitamins and pigmentation of buds. The fuller spectrum also includes near infrared (NIR) light to boost photosynthetic activity. Use of UV light also limits mold and mildew growth and can help control insects.

See https://newgrowsys.wordpress.com/, http://www.livebettergarden.com/2014/05/indoor-farming-with-leds-economist.htm, http://howtogrowmarijuana.com/led-grow-lights/

7. Uriel Advanced Grow Lights also have other add-on features that can be added to integrate LED Grow Lighting with systems and sensors used in running Indoor and Greenhouse Growing operations to automate and make operations easier, to save labor expenses, and to provide greater yields with higher quality in shorter time periods. Options include controlling a host of actuated devices including systems and subsystems used in hydroponics, aeroponics, aquaponics, and other growing methods. Sensors are used for all types of automatic adjustments and to provide data to smartphones and computers through the cloud to allow growers to engage in botanical research. Further, Uriel's systems can also automatically monitor Plant Height and automatically raise the light fixtures as plants grow to provide the most illumination without causing fire.

See https://www.lumenscubed.com/index-4-special-purpose-led-lighting-systems.html