

This ad is on a Home Depot web site. It is displaying a LED light fixture that is adjustable to five different levels of color temperature shown by Kelvin (K).

City of Phoenix Street Lighting and Parks Department agreement on outdoor lighting was CCT 2700K LED (2016)\*. Since then, all the city streetlights (99,000+) have been converted to save energy with 2700K LED fixtures. PHX led the world with soft-white 2700K LED! Variations for specific sport courts or fields at 3500-4000K can be well aimed and timed lighting systems.

\*CCT is often used to list Correlated Color Temperature that defines a light source in Kelvin (K).

## 5 COLOR OPTIONS

The image shows a bathroom scene with a round mirror and a white sink, divided into five vertical panels. Each panel shows the same scene but with a different color temperature. The panels are labeled with their respective Kelvin values: 2700K, 3000K, 3500K, 4000K, and 5000K. A light fixture is mounted above the mirror, and the scene is dimly lit, highlighting the effect of the different color temperatures.

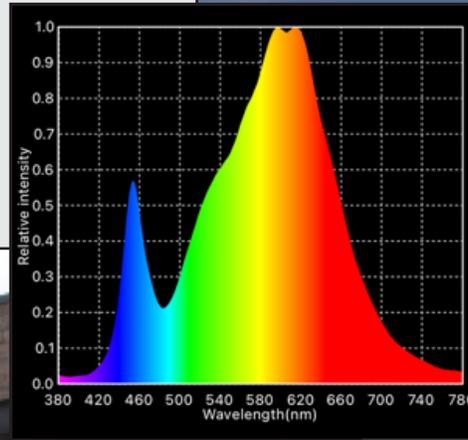
**2700K**   **3000K**   **3500K**   **4000K**   **5000K**

Decorate your space with the perfect lighting option that you can adjust to fit your space. Choose between 5 color temperatures with 1 lighting fixture.



## New Business Smart Lighting

The Light Emitting Diode (LED) fixtures are noted as 3000 Kelvin (K), often termed soft-white. Chart shows how much LESS blue is in the spectrum than 5000K LED light fixtures.



**GOOD LED LIGHTING!**

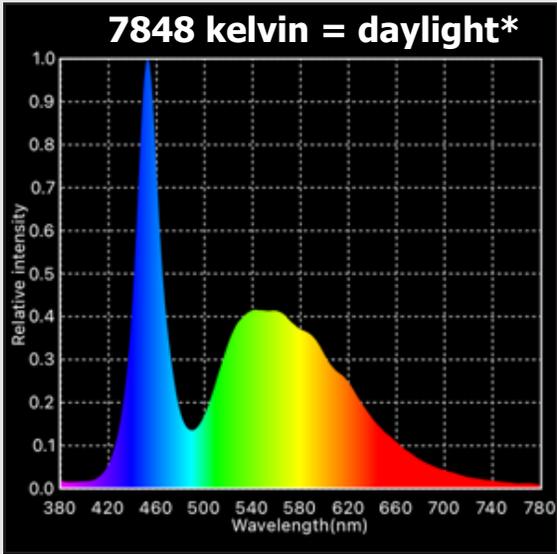


NEW building (Dunlap & 7th Ave.) with a smart approach to outdoor lighting.

Above photograph shows LED light fixture pointing down within the parking lot.

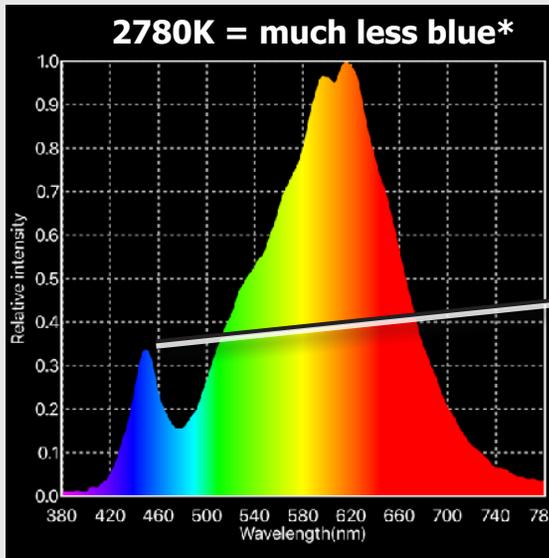
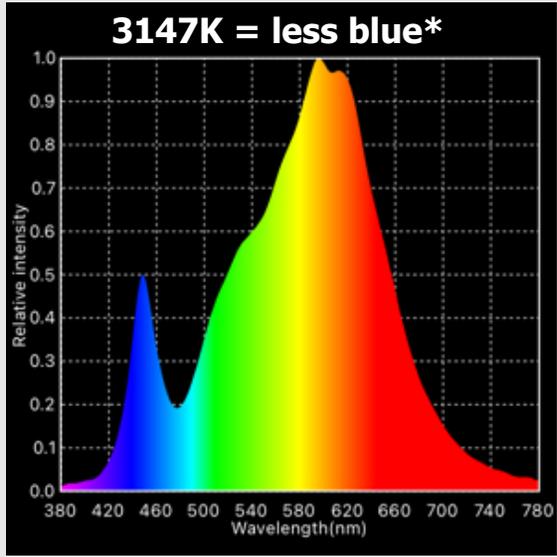
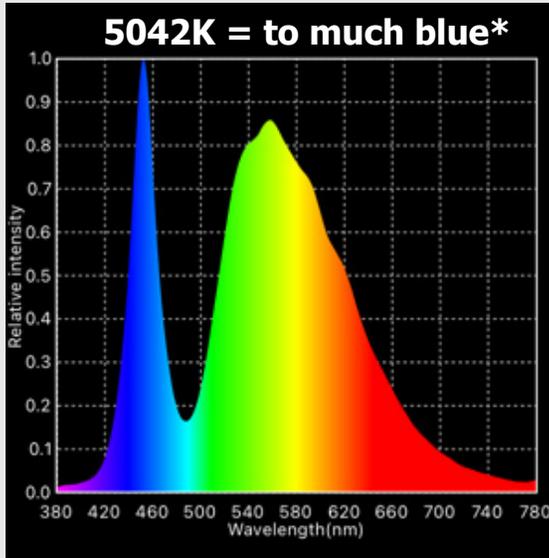
Left photo shows LED fixture on the side of the Black Rock Coffee Bar. A light meter showed 3083 Kelvin. This group of LED fixtures provide good lighting which is healthy and provides security for this business. This type of LED light fixtures follows the American Medical Association (AMA) recommendation.

# LESS blue white light at night is the smart way to go!



Visible light with increasing amounts of blue 'daylight' is a bad choice for nighttime outdoor lighting.

These charts show the results of site specific LED fixtures measured using a light meter\*.



Lower amount of blue is possible with LED light fixtures; 2700K LED were picked for City of Phoenix. Street Lights - all 99,000!

\*ASENSETTEK Passport Spectrometer used on the LED fixtures shown.

Left: Flood light rated at 5042 Kelvin is mounted on top edge of roof line shining out - not down. Bright 3042 LUX light is harsh and since it is aimed wrong the LED fixture is creating glare. Harsh blue white lights.

Right: Fixture on a post used at nearby parking lot where similar fixtures are shaded down and rated at 3147K.

Recent remodel has resulted in refreshed community building and basketball court that was resurfaced! Plus, court lights work well as they are correctly aimed and timed.

Unfortunately, other outdoor lighting is incorrect. The Park Department Director committed to 2700 Kelvin outdoor fixtures in 2016.

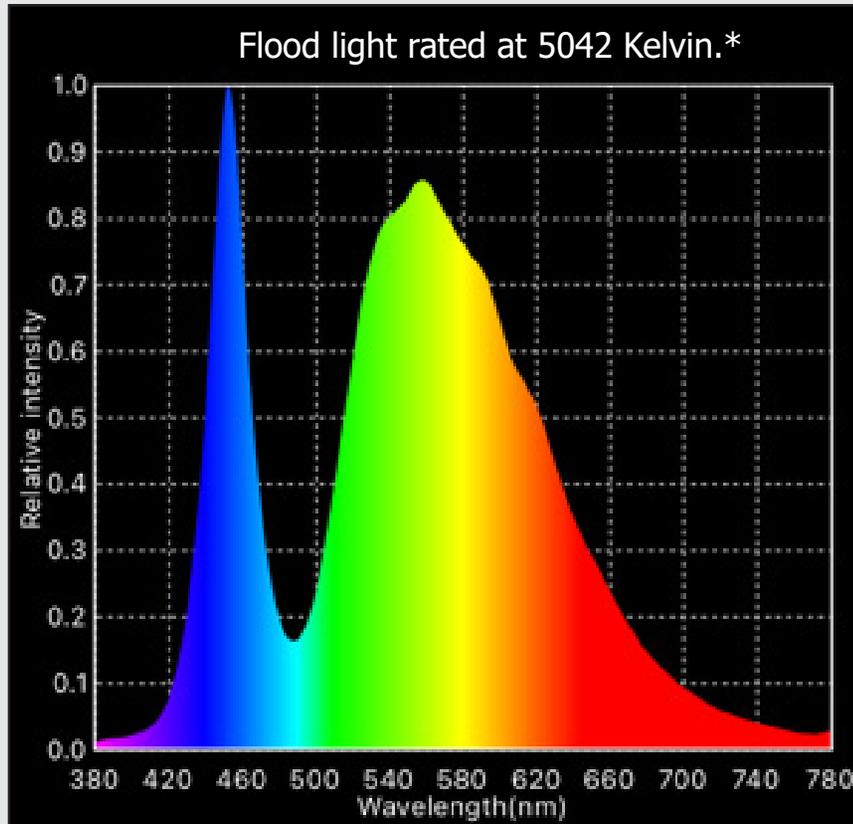
Yet, on this remodel many 5000K fixtures were installed.

Bad blue-white light.

**Winifred Green Park**  
City of Phoenix

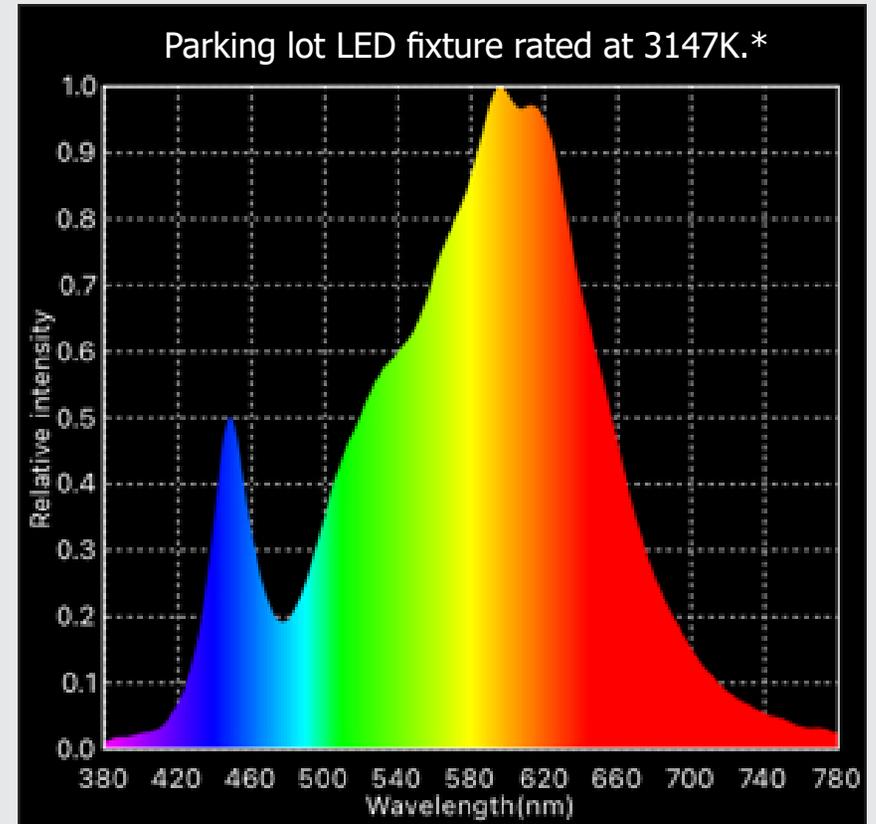


## Outdoor LED light fixtures - Winifred Green Park - City of Phoenix



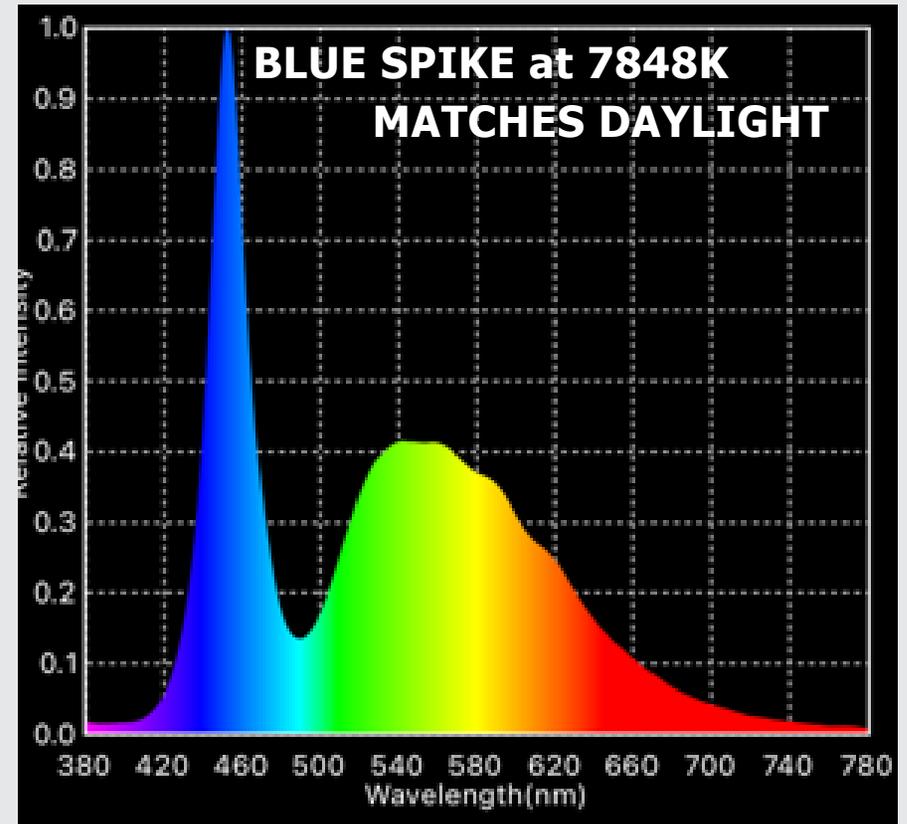
LED flood light at 5042 kelvin - blue-rich  
'daylight' is dominant.

Unfortunately, outdoor fixtures using  
blue-white LED are less safe and unhealthy  
for neighbors and wildlife.



LESS BLUE in the visual spectrum.  
Parking lot LED fixtures are a better choice  
at 3000K! One tested was 3147K.

Phoenicians selected 2700K LED for Street  
and Park lighting to save energy. With this  
decision, in 2016, Phoenix became a leader  
in the world on smart LED outdoor lighting.  
Today, after waiting a decade - the building  
code needs to be updated to address  
current LED outdoor lighting.



This solar powered light uses **Light Emitting Diodes** (LED) that was measured at **7848 Kelvin** (K) which produce a very bad blue-white light. (Note: Home & Lighting advertises this fixture at 6500K.) Each night this LED fixture is very bad for wildlife and human health. It is unfortunate, as the solar powered light seemed like a good idea. But the result is significant, blue - daylight projection. Phoenix LED street lights are rated at 2700 Kelvin and avoid this type of intense blue hue.

Many cities limit outdoor nighttime LED lighting fixtures at 2700 or 3000 Kelvin. This approach avoids the negative effects of daylight all night long. This LED fixture puts out more blue at night than the daylight sky seen in the photograph; which is commonly measured at about 5800K. While the fixture was mounted and shaded the large amount of blue within the visual spectrum is unhealthy.

>After a car hit the entry signage and light, the neighborhood is replacing this fixture shown with 3000 Kelvin LED light fixture.

*\*ASENSETEK Passport Spectrometer*

# PHOENIX LED THE WORLD WITH NEW **2700K** STREET & PARK LIGHTING!



Original part of Mountain View Park II was remodeled in 2016-17. This included street, sidewalk, and park lighting all **using 2700 Kelvin LED fixtures!** Similar sets of smart, nighttime lighting are happening! But, with a large variety of LED lighting, sometimes blue rich 'daylight' fixtures are being used outdoors. LED fixtures like these at 2700K are ideal and 3000K are a close second. Above 3000K LED are unhealthy at night.