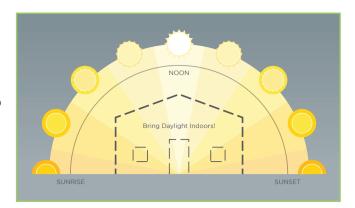
## **Daylight Tracer & Wellness Features**

Creating a seamless integration of space between inside and outside is now possible with Converging Systems and Clarté Lighting's Absolute Light with simple saved preset button recall effects.

There are over 1000+ cities globally in the Converging Systems data base to select the city that is the closest to your location to match the longitude and latitude of the sun each day throughout the year. As the position of the sun changes based on the time of year and time during the day the color of the light emitted from the Absolute Light fixtures will match the color emitted from the sun based on your global position.



Artificial Light that matches the color and quality of light from the sun creates the effect of being outside when inside. This feature creates a unique user experience to enjoy the color of the sun in any interior space throughout the day.

## Positioning of the Sun Throughout the Day

There are 4 major periods of sun during a normal day of sunlight defined as the **Astronomical**, **Nautical**, **Civil** and **Daylight**.

During each of these periods there are mid to wide variations of the chromaticity (hue and saturation), as well as brightness levels perceived by the optical receiver in the eye.

These periods are described by the following overview of Astrological Dawn/Twilight (AD/AT), Nautical Dawn/Twilight (ND/NT), Civil Dawn/Twilight (CD/CT) and Daylight (DL).

# 4 Periods of Sunrise/Sunset - Effect of Light

### <u>1st Period</u>

**Astronomical Dawn (AD)** – The period occurs when the sun generates its first sign of illumination and before the sun's center mass crosses -12° when rising in the morning.

**Astronomical Twilight (AT)** – The period before the center of the sun cross below -12° at the end of day when the sun is setting.

AD and AT are defined visually by more subtle dark and deeper blue hues of nightfall.



### 2nd Period

**Nautical Dawn (ND)** – The exact moment the center of the sun crosses -12° below the horizon line until reaching -6°.

**Nautical Twilight (NT)** – The period when the center of the sun is -6° until the center of the sun reaches -12° below the horizon.



ΔM Expanded into "Blue Hour" (dotted lines represent the subset of "Daylight" within this expanded color range)

## 3rd Period

**Civil Dawn (CD)** – The period when the center of the sun crosses -6° until reaching the horizon at 0°.

**Civil Twilight (CT)** – The period when the center of the sun crosses the horizon at 0° until reaching -6°.

These periods of time are referend to as the **Golden Hour** when the sun creates the most desired red and orange subtle color effect that transition to cooler violets and blue hues during the Astrological Dawn and Twilight.



(dotted lines represent the subset of "Daylight" within this expanded color range)

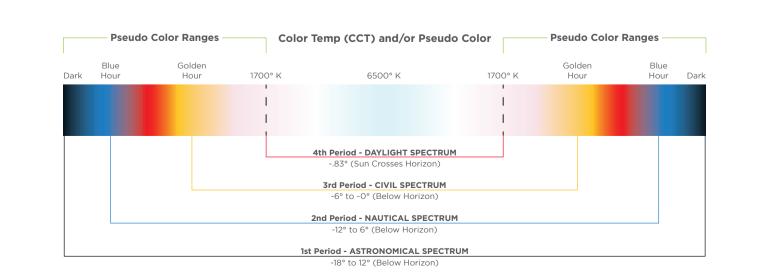
# <u>4th Period</u>

**Daylight (DL)** – Once the center of the sun crosses the 0° horizon line until 12 noon the sun goes through correlated color temperature changes from 1700K to 6500K. At the same time of color correlated temperature changes the intensity of light increases from the 0° horizon line until reaching 12 noon color and intensity of light.



#### Daylight (DL)

Absolute Light matches the same 1700K to 6500K color tunning of the sun throughout the day while at the same time increasing the intensity of light to mimic the effect of the sun during the day.



Converging Systems Integrations (click here)

