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(54) **ILLUMINATION DEVICE FOR ADJUSTING COLOR TEMPERATURE BASED ON BRIGHTNESS AND TIME OF DAY**

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(57) **ABSTRACT**

An illumination device, system, and method are provided herein for emulating sunlight along a daytime or nighttime locus. Color temperature is determined using a first color temperature curve that includes data representative of a first color temperature as a function of a time of day. In response to a request to a change in brightness of one or more LED chains, a target color temperature output as a function of the current time of day is determined using a second color temperature curve based on the requested change in brightness. The second color temperature curve includes the target color temperature corresponding to the determined current time of day. The target color temperature output includes a lesser change in color temperature at solar noon than the change in color temperature at sunrise and sunset.