



## Autism Spectrum Disorder Residential Lighting Project

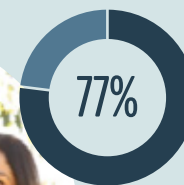
LEDs have transformed the lighting market and can illuminate spaces with an almost unlimited range of colors and color temperatures. They work with smart devices, are dimmable and are very energy-efficient. LEDs are being used to illuminate spaces differently, and more dynamically, than ever before.

Studies have shown that lighting affects our natural, internal process that regulates our sleep-wake cycle—our circadian rhythms—and may directly impact our health and behaviors. We began studying the effects of different ranges of lighting on health in 2015 with dementia patients and have continued to develop lighting solutions that could improve our customers' lives.

The Autism Spectrum Disorder (ASD) Residential Lighting Project installed circadian lighting systems in the homes of 36 families who have children with ASD. Circadian lighting changes the color of light inside to mimic daylight patterns outside. By changing colors throughout the day, not only can light stimulate our bodies and minds and help us stay alert and awake, but it can also help us unwind and relax in the evening as we get ready for bed.

This programmable (or “connected”) circadian lighting reinforced daily routines and eased transitions between activities. One of the primary goals was to help children and their parents or guardians sleep better.

All the families reported significant improvements in daily routines, behaviors and activities, including sleep. Best of all, when asked what impact the lighting system had made upon their lives, 77% of the respondents characterized the experience from “high impact” to “life-changing.” There are more than 7,600 SMUD customers in Sacramento County with ASD, and we hope to use these results to benefit all our customers with special needs.



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