



SOLAR CYCLE
Sit and Spin's Laundromat Cafe

Katie Guillen - Virginia Tech
Robert Bruce Thompson Student Light Fixture Design Competition

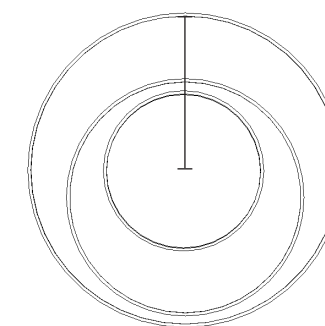


The day/night concept is inspired by a 24-hour diner, how a space can continuously bring enthusiasm throughout an entire day. Each day is a new, different moment with the same purpose - to bring positivity and put customers first. Lighting in a laundromat and cafe is an effective feature that can bring value to customers, specifically towards the atmosphere that they are in and what task they are performing.

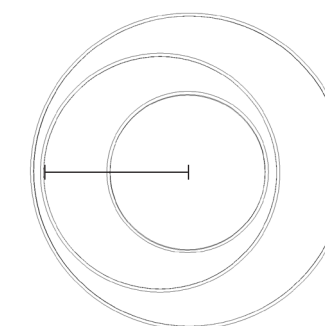
It is important to understand why and how the Solar Cycle is applied in a particular space. The day/night concept is also inspired by the different times of day - how a customer's mood can change based on the transformation from day to night.

Different phases of natural daylight will affect how the solar LED lights interact within the interior of the laundromat. The Solar Cycle is a color-tunable human-centric luminaire with a color spectrum that changes depending on the time of day. It completes and mimics the natural cycle of an entire day. The Solar Cycle contains less blue wavelength at night time to not disrupt the circadian rhythms.

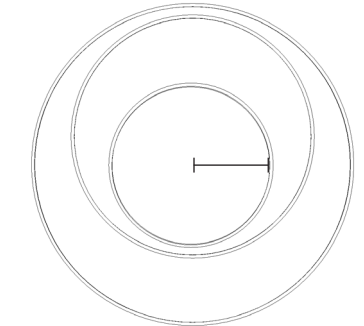
Top View



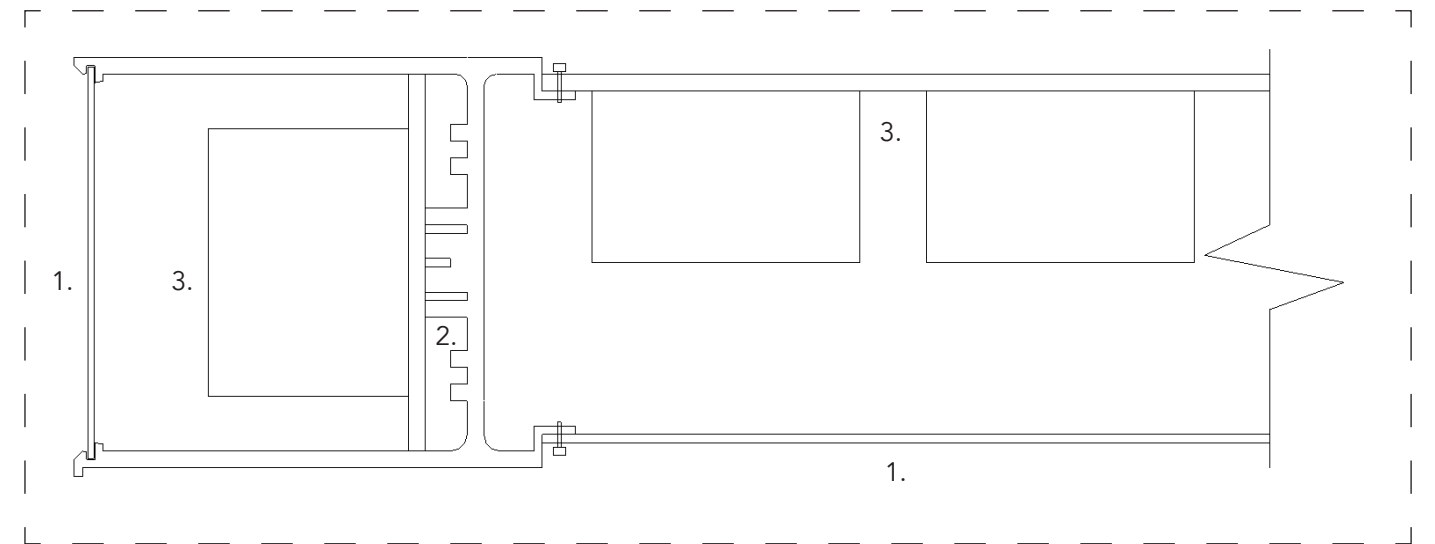
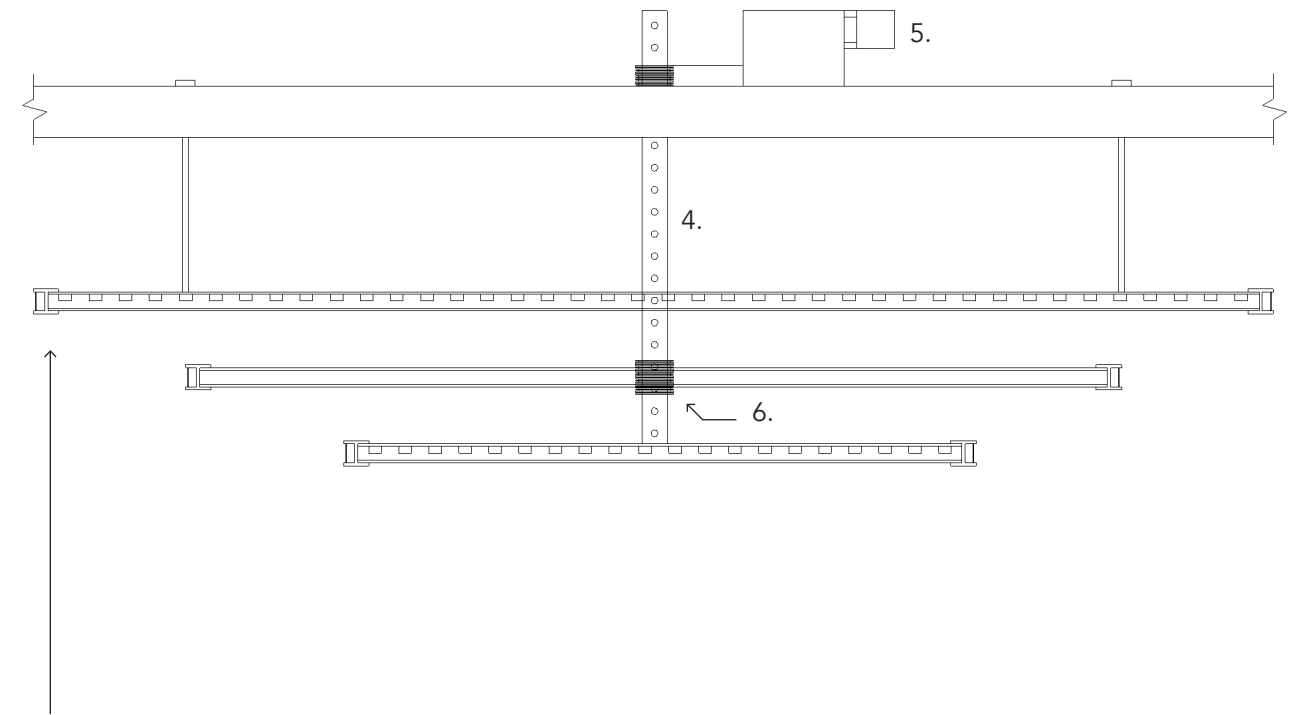
2' Radius



1' Radius



6" Radius



1. Polycarbonate Cover
2. Screw Channel
3. Linear LED Strips (Color-Tunable)
4. Aluminum Rod
5. Rotator Engine
6. Rotator

The Solar Cycle is connected to a rotator engine that is operated through a programmable smart system that controls the efficiency and color of lighting. The middle screw channel is attached to a rotator to allow it to move throughout the day. The pace of the rotator depends on the intensity of daylight, which powers the Solar Cycle.