Light/dark patterns are the major synchronizer of circadian rhythms to local time on Earth. Phase response curves (PRC) are used to characterize the direction and magnitude of the effects of light on the circadian system. Sleep/wake schedules will change the light exposure patterns a person is exposed to, which can affect circadian phase. Chronotype is used to describe individual differences in the timing of the sleep/wake rhythm. Similar light exposures in the phase advance and phase delay portions of the PRC might be differentially effective for early types and for late types and their respective sleep/wake schedules may indirectly reflect this difference. The present study investigated whether early and late Chronotypes respond differently to advancing and delaying light exposure patterns while on a fixed, advanced sleep/wake schedule. In a mixed design, 23 participants, 11 extreme late types and 12 extreme early types, twice completed a 2-week, advanced sleep/wake protocol, once with an advancing light exposure pattern and once with a delaying light exposure pattern. It was hypothesized that the extreme early types would exhibit a greater phase advance when exposed to the advancing light intervention than the extreme late types, and the extreme late types would delay significantly more than the extreme early types when experiencing the delaying light intervention. Light/dark patterns over the course of the study were monitored with a calibrated light and activity meter. Salivary dim light melatonin onset (DLMO) was measured prior to and after the lighting interventions. Compared to the baseline week, DLMO was significantly delayed after the delaying lighting intervention and significantly advanced after the advancing lighting intervention in both groups. There was no significant difference in how the two groups responded to light at different portions of the PRC. Future studies should investigate the relationships between Chronotype, social schedules, sleep/wake schedules and personal light/dark exposure patterns with the goal of improving sleep, performance and wellbeing.