Lighting for Offices

Many people spend the majority of their day in an office space. At certain locations and seasons, some workers may barely even see the sun. This could cause circadian disruption as well as seasonal affective disorder (SAD). The use of lighting sufficient in stimulating the circadian system can promote entrainment as well as bright light levels to mitigate effects of SAD. Especially while sitting at a desk, workers can also be impacted by post-lunch dip, a time of the day where alerting signals from the homeostatic system are not strong enough to overcome accumulating sleep pressure, causing a person to feel sleepy around 2 pm. Using alerting signals from light can increase performance during this time.

CS schedule

<u>Choose 0.3 CS target if:</u>
- Furniture layout is defined or unchanging
- Energy usage is a major concern and personal light devices can't be used
- There are horizontal illuminance limits

Office workers- 0.3 target	
Time	**CS**
7:00 AM - 4:00 PM	0.3
4:00 PM - 5:00 PM	0.3 → 0.2
5:00 PM - 7:00 PM	0.2
7:00 PM - 8:00 PM	0.2 → 0.1
8:00 PM - EOB	0.1

Office workers- 0.4 target	
Time	**CS**
7:00 AM - 12:00 PM	0.4
12:00 PM - 1:00 PM	0.4 → 0.3
1:00 PM - 4:00 PM	0.3
4:00 PM - 5:00 PM	0.3 → 0.2
5:00 PM - 7:00 PM	0.2
7:00 PM - 8:00 PM	0.2 → 0.1
8:00 PM - EOB	0.1

<u>Choose 0.4 CS target if:</u>
- Furniture layout is undefined or dynamic
- CCT preference is cooler white light (5000 K - 6500 K)
- Occupants are more out of sync with the solar day

Additional light devices

Office workers- Blue/Red add-on		
Time	**CS**	**Add-on color**
7:00 AM - 1:00 PM	0.4	Blue
1:00 PM - 2:00 PM	0.4 → 0.2	Transition
2:00 PM - 8:00 PM	0.2	Red
8:00 PM - 9:00 PM	0.2 → 0.1	
9:00 PM - EOB	0.1	

<u>Choose 0.4 CS target with add-on if:</u>
- If overall light levels have to be low for screen visibility or energy concerns, just 30 lux of blue at the eye can achieve a CS of 0.4
- Promotion of alertness is desired duirng post-lunch dip hours