

BENEFITS OF INDIRECT LIGHTING

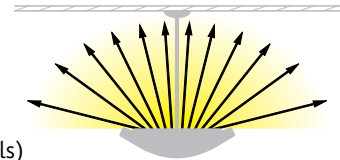


INDIRECT

Indirect linear fluorescent lighting directs light upwards towards the ceiling and, depending upon placement within the space, may also provide light to upper walls.

Favorable attributes include, but are not limited to:

- Soft and even illumination
- Computer friendly
- No visible lamp image
- Increased perception of comfort within the space
- Light is applied to ceilings (and, often, to upper walls)

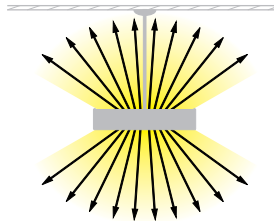


DIRECT/INDIRECT

Direct/Indirect linear fluorescent lighting directs light both upward and downward, thus combining both direct and indirect lighting in one luminaire housing.

Favorable attributes of direct/indirect include, but are not limited to the following:

- Clear facial and feature modeling
- An extra “punch” of light on the work plane
- Increased perception of brightness
- Light is applied to many angles
- Soft and even illumination
- Computer friendly
- Increased perception of comfort within the space
- Light is applied to ceilings (and, often, to upper walls)



SCHOOLS, DAYLIGHT HARVESTING, CASE STUDIES

Direct/Indirect and Indirect are favored by many school districts and are required in classrooms for compliance with the Collaborative for High Performance Schools (CHPS) because of the requirement for visual comfort, appropriate light levels, and energy management compatibility. Daylight Harvesting, for example, is recommended for use with direct/indirect because it lights ceilings, walls and surfaces in much the same way natural light does. This reduces or eliminates perceived lighting disruptions when electric light is dimmed or switched off to conserve energy when sufficient daylight is present.

Case studies, peer review articles and prestigious programs such as the Collaborative for High Performance Schools (CHPS) continue to evidence the beneficial nature of indirect and direct/indirect lighting. Studies conducted by groups as diverse as Cornell University and the Light Right Consortium confirm what many lighting professionals already intuitively know; that the occupants of office spaces prefer to work under indirect and direct/indirect lighting and that there is a direct correlation between worker productivity and good lighting.

Cornell University: 1995, Hedge, A. Sims, W.R and Becker, F.D: The effects of lensed-indirect uplighting and parabolic downlighting on the satisfaction and visual health of office workers, *Ergonomics*, 38, 260-280.

Light Right Consortium: 2003, Albany Lab Study