Information and Ideas for Call Center Design and Performance

SCOpE

KSBA Kingsland Scott Bauer Associates Pittsburgh, PA

Indirect Ambient Lighting Improves Call Center Performance

Studies have shown, that in keyboard intensive environments, the cost to mitigate health problems averages $1,200 per employee per year. Many health problems relate to eye strain caused by lighting that does not respond to the unique requirements of video-display terminals (VDTs).

If the design criteria unique to VDTs are not incorporated into the solution, the adverse effect on employee health can outweigh the productivity advantages of using computers in the workplace. Call center environments require two separate, but complementary lighting systems, including uniform ambient lighting for VDTs and task lighting for hard copy reading and writing. Terminals act as mirrors that reflect ceiling glare causing eye strain. Therefore, a uniform light level at the ceiling is important. In addition, because VDTs produce their own illumination, the level of illumination required for comfortable viewing is approximately half the level (25 to 30 foot candles) necessary for hard copy reading and writing (50 to 70 foot candles).

By far, the best ambient lighting system to satisfy VDT design criteria is indirect lighting, usually mounted between and 18 and 24 inches below the ceiling and shining upward. If properly designed, the result is a uniform luminance level on the ceiling, as well as a uniform 25 to 30 foot candle level of illumination at the work surface. More conventional, and far more common, lighting solutions include ceiling-mounted fluorescent fixtures with either parabolic or prismatic lenses. Although parabolic lenses are superior to prismatic lenses, both produce uneven lighting levels on the ceiling that reflect off VDTs and cause eye strain.

Successful lighting installation is not only dependent on the design of the lighting system, but also on the harmony of the lighting solution with the architecture of the space.

Indirect lighting not only eliminates glare, but also produces a comfortable calming level of lighting throughout the space. Task lighting, either fixed or movable, can be designed for specific work surfaces where hard copy reading and writing occurs. Task lighting should be designed with the objective of keeping the "contrast ratio" between the various work surfaces as low as possible. Otherwise, when the eye moves between tasks, excessive pupil dilation, another form of eye strain, will occur.

It is important to incorporate all valid criteria into the design process. Successful lighting installation is not only dependent on the design of the lighting system, but also on the harmony of the lighting solution with the architecture of the space. Call centers should not be treated as traditional office environments. If properly designed, the resultant benefits to employees produce bottom line results.

More on back side

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How Good Design With Indirect Lighting Is Benefitting AT&T

When Larry McCormick, CFM, AT&T Supervisor of Real Estate, considers how much happier the firm's 300-plus (and growing) inbound customer service representatives are these days with their new Customer Care Center in Pittsburgh, it cements his philosophy that good design solutions always pay off. He also enjoys hearing about the compliments the Pittsburgh Center receives from visiting AT&T personnel.

Understanding that his employees have stressful jobs, Bob Cain, branch manager of the Center in Pittsburgh, (along with ones in Columbus and Indianapolis), took McCormick's advice and recently worked with KSBA Architects' team on the fast-track design of the new Center, which was needed to alleviate AT&T's ever-growing space needs.

The design team, (including Gary Moshier, KSBA associate; Tom Carlins, lighting designer; Rick Yates, building systems engineer; and Mark Valenti, acoustics consultant) working in conjunction with Center management and staff, devised a holistic solution that integrated lighting, ergonomics, acoustics, furniture, computers and mechanical/electrical systems.

The team's most valuable idea though, according to Cain and echoed by current Pittsburgh Center Manager Joey White, was the application of indirect lighting fixtures (Peerless Indirect Ambient), attached to the top of each workstation partition because of low ceiling height. With these fixtures in place, AT&T's Pittsburgh Customer Care Center is imbued with soft illumination between the indirect and natural light.

Illuminating Tips

- Ideal ceiling height for indirect lighting is between 9 and 10 feet, higher than most conventional office ceiling heights.
- Capital cost of indirect lighting is higher than direct lighting; however, holistically, over time, indirect lighting is less expensive.
- Furniture-mounted indirect lighting, although more expensive than ceiling-mounted indirect lighting, can work in spaces with conventional 8 to 8½ foot ceiling heights.

As a result, operators have no computer screen glare problems to contend with and can adjust their monitors to the right height, thanks to monitor arms. "We've saved a lot of money," claims Andrew Brown, AT&T assistant manager of force and facilities, "by eliminating glare screens and reducing absenteeism caused by headaches and eye strain." Brown also credits KSBA's team for another helpful, non-aesthetic suggestion: energy efficient surge protectors that are easily hidden within the furniture.

"All of these things add up to an environment everyone can feel good about," summarizes Cain. "Morale has definitely improved since we've moved here. Since our people and facilities are so crucial to our success, what could be more important that investing in them?"

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