ALG

Advanced Lighting Guidelines

algonline.org

ALG Sponsor Toolkit

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About this Toolkit

We thank you for your support of ALG Online. This premier advanced lighting resource would not be possible without the contributions of our sponsors. You are receiving these materials as part of the benefit of your sponsorship in order to help you, other employees at your company and your customers take advantage of all ALG Online has to offer. We hope that you find these materials useful.

The Sponsor Toolkit presents a brief summary of the materials and resources currently available to sponsors for promotion of ALG Online as well as integration of ALG Online into educational or training activities and programs on advanced lighting. Whether you integrate content into already existing materials, or make them available to customers and clients as they are, the resources available to ALG sponsors will enrich knowledge about advanced lighting and help further the program goals of your organization.

Promotional materials

These materials include the ALG factsheet, a short video describing the importance and value of advanced lighting and the role played by ALG Online in furthering this practice, and free subscription coupons. They can be printed and distributed as "leave behinds" or collateral at conferences, meetings, and other events and can be co-branded with sponsor logos.

Educational materials

Content from these materials can be incorporated into new and existing training programs or used as-is to support existing training efforts or as collateral for training events. Educational materials feature easy-to-print items such as presentation slide decks on aspects of advanced lighting, advanced lighting application sheets and case studies.

Accessing Sponsor Resources

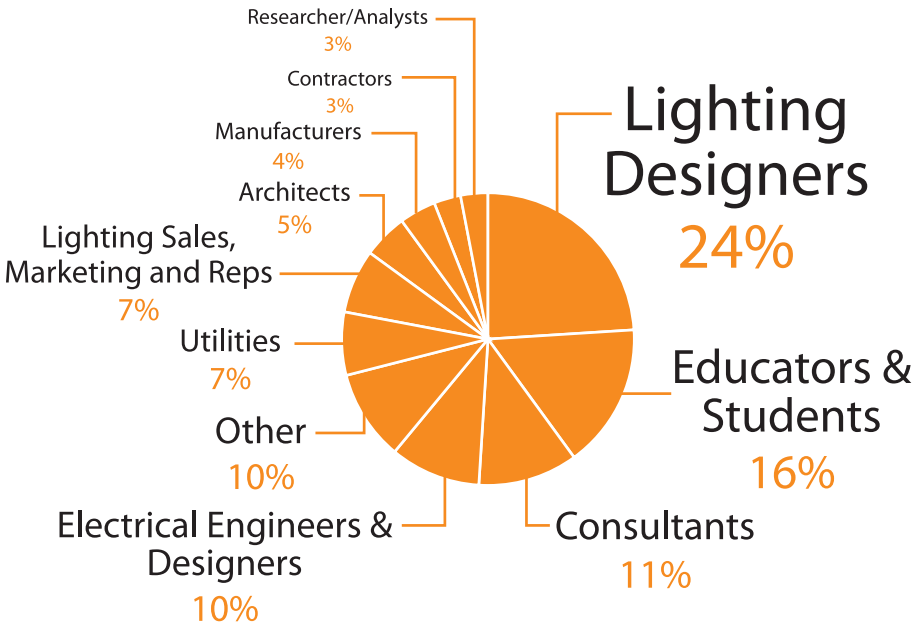
The most recent electronic versions of all sponsor materials and additional instructional documents can be downloaded at any time from the ALG Sponsor Resource page at: http://algonline.org/sponsors/

For questions and assistance, please contact us at: algonline@newbuildings.org or (360) 567-0950 ext.114

The ALG Online Audience

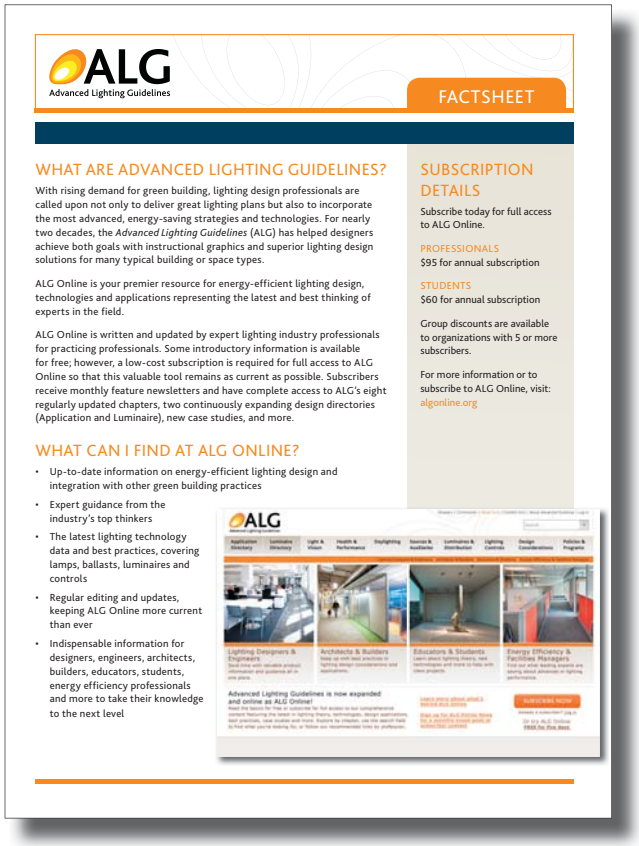
ALG Online covers the topic of lighting from in-depth theory to technical design guidance making it a valuable tool and resource for a broad audience of potential users. The team behind ALG Online has identified four primary audience groups that can benefit and learn from ALG in different ways. These audiences include 1) Lighting Designers & Engineers, 2) Architects & Builders, 3) Educators & Students and 4) Energy Efficiency & Facilities Managers.

The ALG Online homepage showcases four portals that speak directly to each of these audiences. While many sections of ALG Online are relevant to multiple audiences, certain topics may be more applicable to a given group. With this in mind, the portals were designed to feature selected content that will help each audience quickly access the information that is most useful to them.



Audience	Key Interest Areas	Highlighted Content
Lighting Designers & Engineers	Getting the lighting design right for clients' needs; saving time and money; utilizing best practices; staying on top of the latest products and technologies	• Design Considerations • Application Directory • Luminaire Directory • Sources & Auxiliaries • Lighting Controls
Architects & Builders	Easy access to product specifications; understanding impacts of daylighting on space and occupants; incorporating best practices; awareness of codes and policies	• Daylighting • Health & Performance • Lighting Controls • Application Directory • Policies & Programs
Educators & Students	Comprehensive understanding of advanced lighting theory and design; awareness of best practices; help designing a lighting curriculum; study guide for tests and exams	• Design Considerations • Light & Vision • Lighting Controls • Luminaire Directory • Daylighting
Energy Efficiency & Facilities Managers	Optimizing energy performance in new and existing buildings; understanding the impact of lighting on energy efficiency; implementing lighting best practices and retrofits	• Lighting Controls • Design Considerations • Policies & Programs • Luminaires & Distribution • Luminaire Directory

Promotional Materials



ALG Fact Sheet

This ALG Online factsheet is available as a leave-behind piece for quick reference information about ALG Online content and resources.

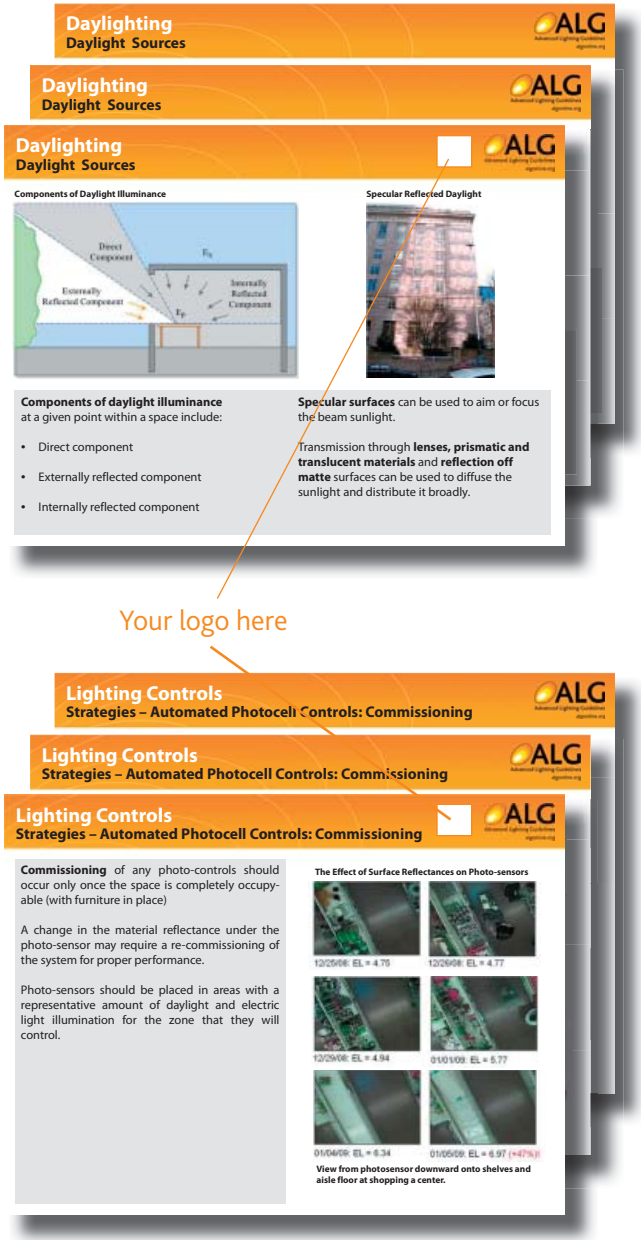
Coupon Offering

Sponsors receive unlimited subscriptions for all staff (for instructions on how to subscribe, visit the Sponsor Resources page at: http://algonline.org/sponsors/). In addition, sponsors can offer unlimited ALG subscription coupons to individuals and organizations in the sponsor service area. Please contact ALG Online at algonline@newbuildings.org or (360) 567-0950 ext. 114 for coupon codes and more details.

ALG Online video

This 5-minute ALG Online video gives a brief summary of the purpose, background, goals and content of the ALG Online website and brand. It is available for streaming in presentations or trainings.

Educational Materials

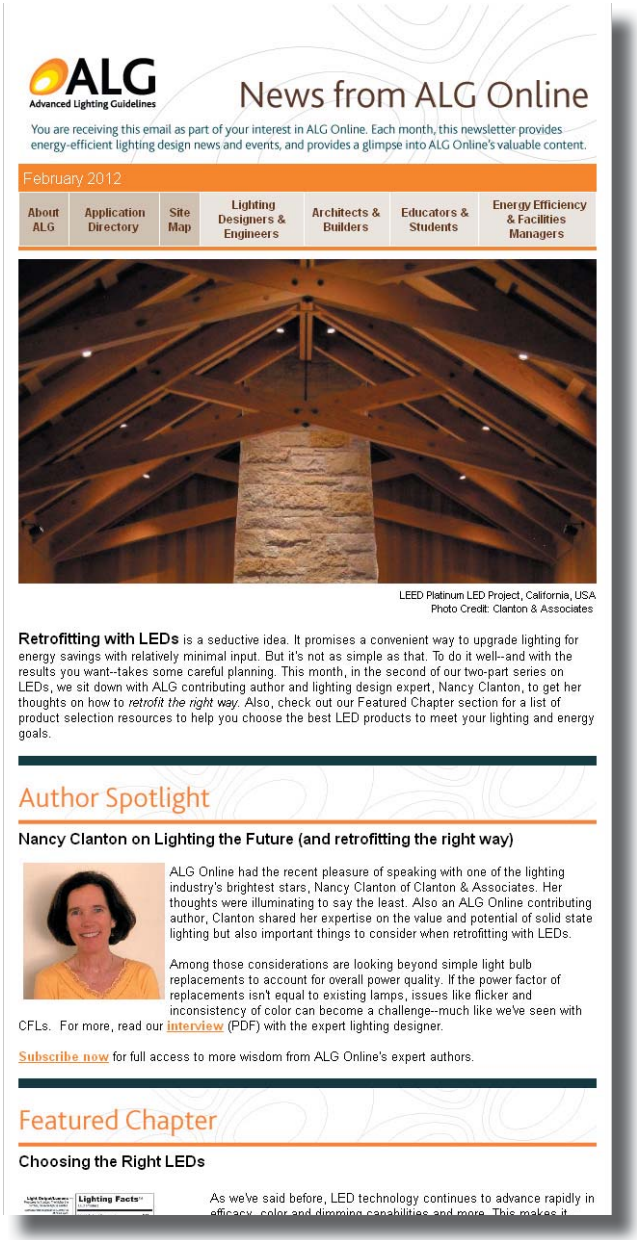


Training and Presentation Slide Decks

These presentation slides can be used to present information about advanced lighting content. This material can be integrated into existing sponsor training programs. Presentations are available on three topics:

- Daylighting
- Energy Efficient Lighting Design
- Lighting Controls

The presentation material can be co-branded as a stand-alone resource or for integration with additional sponsor training and customer outreach materials. Presentation slides are available electronically.



News from ALG Online

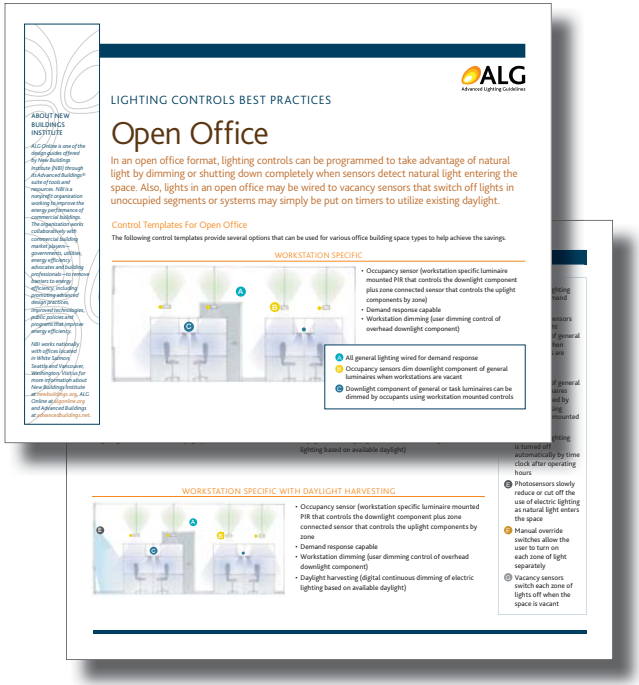
News from ALG Online is a monthly electronic newsletter featuring selected content and highlighting the most up-to-date information on lighting technologies, theory, design applications, case studies, and more.

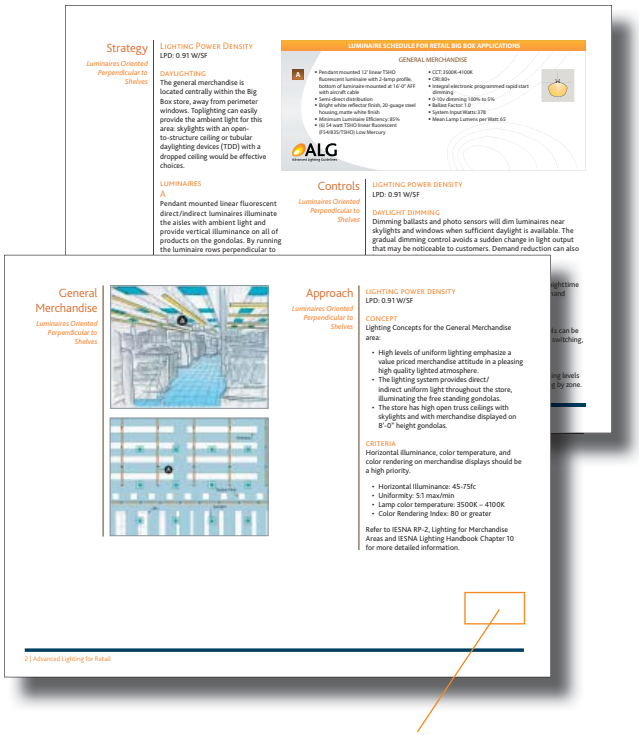
Sponsors receive ALG Online News each month, but can also access the newsletter archive any time from the Sponsor Resource page. Newsletters and their content can be forwarded to sponsor outreach lists. Sponsors may also repurpose any content from these newsletters for integration into educational or training programs.

Your logo here

ALG Snapshots

Sometimes, examples are best. Printable snapshots of selected subscriber-only content are available for incorporation into training programs and distribution at presentations, events and more. They are available for co-branding.





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Application Modules

These Applications Modules serve as quick-reference design guides featuring lighting layout and controls integration for a variety of specific building and space types, including retail and office.

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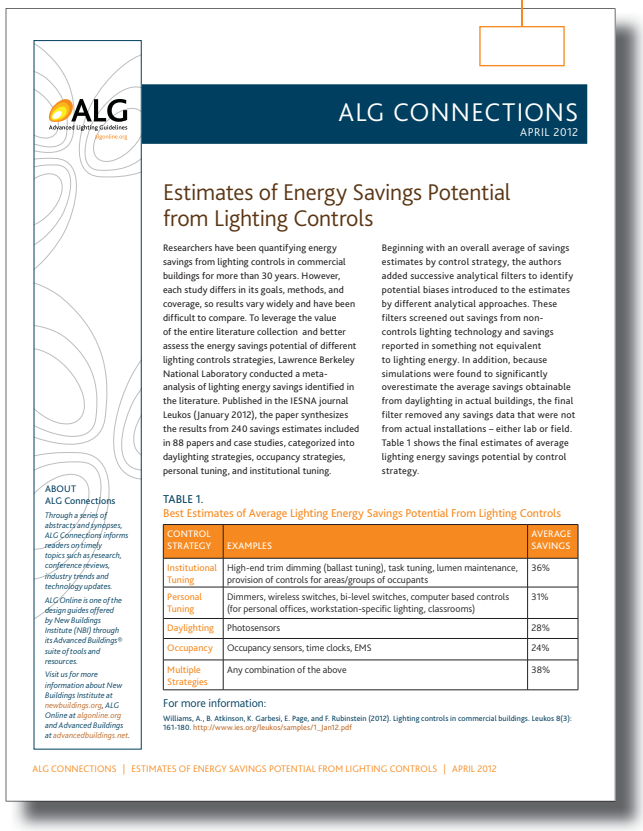


ALG CONNECTIONS
APRIL 2012

Estimates of Energy Savings Potential from Lighting Controls

Researchers have been quantifying energy savings from lighting controls in commercial buildings for more than 30 years. However, each study differs in its goals, methods, and coverage, so results vary widely and have been difficult to compare. To leverage the value of the entire literature collection and better assess the energy savings potential of different lighting controls strategies, Lawrence Berkeley National Laboratory conducted a meta-analysis of lighting energy savings identified in the literature. Published in the IESNA journal Leukos (January 2012), the paper synthesizes the results from 240 savings estimates included in 88 papers and case studies, categorized into daylighting strategies, occupancy strategies, personal tuning, and institutional tuning.

Beginning with an overall average of savings estimates by control strategy, the authors added successive analytical filters to identify potential biases introduced to the estimates by different analytical approaches. These filters screened out savings from non-controls lighting technology and savings reported in something not equivalent to lighting energy. In addition, because simulations were found to significantly overestimate the average savings obtainable from daylighting in actual buildings, the final filter removed any savings data that were not from actual installations – either lab or field. Table 1 shows the final estimates of average lighting energy savings potential by control strategy.

ABOUT
ALG Connections

Through a series of abstracts and synopses, ALG Connections informs readers on timely topics such as research, conference reviews, industry trends and technology updates.

ALG Online is one of the design guides offered by New Buildings Institute (NBI) through its Advanced Buildings® suite of tools and resources.

Visit us for more information about New Buildings Institute at newbuildings.org, ALG Online at algonline.org and Advanced Buildings at advancedbuildings.net.

TABLE 1.
Best Estimates of Average Lighting Energy Savings Potential From Lighting Controls

CONTROL STRATEGY	EXAMPLES	AVERAGE SAVINGS
Institutional Tuning	High-end trim dimming (ballast tuning), task tuning, lumen maintenance, provision of controls for areas/groups of occupants	36%
Personal Tuning	Dimmers, wireless switches, bi-level switches, computer based controls (for personal offices, workstation-specific lighting, classrooms)	31%
Daylighting	Photosensors	28%
Occupancy	Occupancy sensors, time clocks, EMS	24%
Multiple Strategies	Any combination of the above	38%

For more information:

Williams, A., B. Atkinson, K. Garbesi, E. Page, and F. Rubinstein (2012). Lighting controls in commercial buildings. Leukos 8(3): 161-180. http://www.ies.org/leukos/samples/1_Jan12.pdf

ALG Connections

ALG Connections brings timely research, conference reviews, industry trends and technology updates directly to ALG Online subscribers and readers of ALG Online news. These items are available for co-branding.

CASE STUDY

Open Office: Toplighting

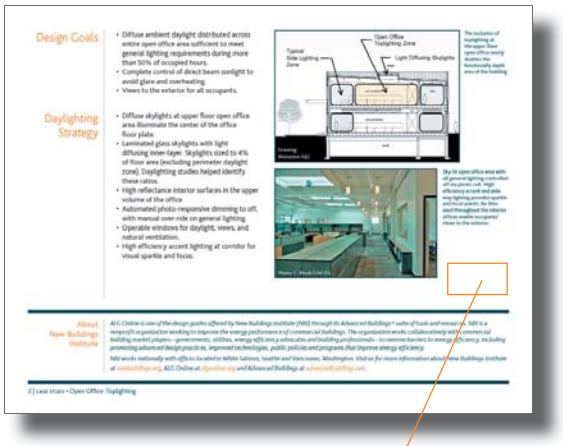
Open offices provide an ideal opportunity for bringing in daylight from above (toplighting). This allows for the uniform distribution of daylight illumination regardless of position relative to perimeter windows. It has the distinct advantage of allowing for quality light distribution even where office workstation "cubicle" panels are tall.

Project Information

The best toplighting opportunities are present where open office areas occur in single story structures or are on the top floor with direct access to rooftop skylights.

Key concepts in successfully toplighting for open office areas include:

- Design and specify apertures that provide for effective sunlight and daylight diffusion. This can be accomplished with diffusing laminated glass, prismatics, white acrylics, fiberglass panels, diffusing polycarbonates, or tubular daylighting devices.
- Ensure proper sizing and placement of apertures to ensure effective light distribution under the most common sky conditions (clear or overcast).
- Provide illumination at key vertical surfaces, including perimeter walls.
- Provide high reflectance values to avoid excessive contrast, especially at the ceiling plane.



Design Goals

Daylighting Strategy

About New Buildings Institute

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Daylighting Case Studies

Daylighting case studies are available for sponsor use in trainings, newsletters, customer offerings, etc. ALG Online's high quality daylighting case studies provide detailed summaries of how daylighting strategies have been successfully incorporated into both new buildings and renovation projects or retrofits.

Other Resources

ALG Online is one of the design guides offered by New Buildings Institute (NBI) through its Advanced Buildings suite of tools and resources. Sponsors of ALG Online have access to several Advanced Buildings tools including:

- The Daylighting Pattern Guide (http://patternguide.advancedbuildings.net/), an interactive tool that uses a combination of real-world built examples and computer simulation for the design of proven daylighting strategies in a variety of building types.
- The Daylighting Guide for Office Interiors (http://www.advancedbuildings.com/files/advancebuildings/DaylightingGuideOfficeInteriors.pdf), which helps designers understand and consider the best use of space and finishes to maximize illumination with daylight.
- The Core Performance Guide (http://www.advancedbuildings.net/core-performance) is a direct, simplified approach to achieve predictable energy savings in small- to medium-sized buildings without the need for modeling. When applied through an integrated design process, Core Performance measures result in buildings that are 30% more energy efficient than model building standards.

For more information about the Advanced Buildings suite of tools, visit advancedbuildings.net