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OCTOBER 2006

Rocky Mountain Monthly

IESNA ROCKY MOUNTAIN SECTION

WWW.IESRMS.ORG

The Denver Art Museum goes Platinum *no... wait... that's titanium!*

Continuing a legacy of bold architecture, the DAM commissioned architect Daniel Libeskind to design an expansion that would accommodate our growing collections and programs. The 146,000-square-foot Hamilton Building will open to the public October 7, 2006.

The Hamilton Building's design recalls the peaks of the Rocky Mountains and geometric rock crystals found in the foothills near Denver.

"I was inspired by the light and the geology of the Rockies, but most of all by the wide-open faces of the people of Denver," says Libeskind.

The building is covered in 9,000 titanium panels that reflect the Colorado sunshine.

Join us for this special occasion, as we partner with Designers Lighting Forum (DLF) to bring you an exclusive opening-week presentation of the new Hamilton Building at the Denver Art Museum.

Two sessions will be offered, with dinner starting at Pint's Pub, and then entrance into the museum. **Guests, family, and friends are welcome to attend this exclusive event!**

Tickets allow entrance to both of the museum buildings, and the museum will be open until 10:00pm for our event!

Click the RSVP button below to register, and to get directions and more information.

PRE-REGISTRATION IS REQUIRED, and entrance to dinner and the museum is timed, so your reservation is essential.



Register for this meeting right now!



Click here to be automatically directed to the registration website.

DAM TOUR MEETING DETAILS

Date: Wednesday, October 18, 2006

Time: 5:30pm or 6:30pm

Cost: \$20 Members
\$30 Non-Members
\$10 Students

Location: Pint's Pub (one block west of the museum)
221 West 13th Avenue, Denver, 80204

RSVP: rsvp@iesrms.org

Deadline for RSVP is Friday, October 13

**DIRECTIONS?
CLICK HERE**



Wisdom,

Wonders,

and

Wit

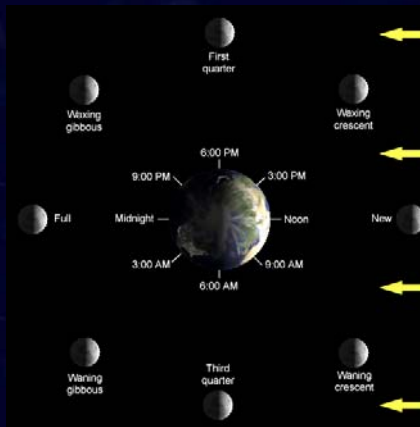
PHASES OF THE MOON



In astronomy, a lunar phase is any of the aspects or appearances presented by the Moon as seen from Earth, determined by the portion of the Moon that is visibly illuminated by the Sun. The lunar phases vary cyclically as the Moon orbits the Earth, according to the relative positions of the Earth, the Moon, and the Sun. Since the Moon appears bright only due to the Sun's reflected light, only the half of the Moon facing the Sun is illuminated.

Lunar phases are the result of our seeing the illuminated half of the Moon at different angles. The Moon exhibits different phases as the relative positions of the Sun, Earth and Moon change, appearing as the Full Moon when the Sun and Moon are on opposite sides of the Earth, and becoming invisible as the New Moon (also named

Dark Moon) when they are on the same side: these two phases are examples of syzygies. The time between two Full Moons (or between successive occurrences of any two phases - for examples, First Quarter Moon to the next First quarter Moon) is about 29.53 days (or 29 days, 12 hours, 44 minutes); it is longer than the time it takes the Moon to orbit the Earth since the Earth-Moon system is orbiting the Sun. The phases are not created by the shadow of the Earth on the Moon (that would be a lunar eclipse); instead, they are a result of our seeing only part of the illuminated half of the Moon.



EDUCATION INFORMATION



INTERMEDIATE LIGHTING (ED-150)

Its not too late to register for a drop-in class! Here's what's on the schedule this month...

- October 5
Lamps and Ballasts
- October 7
Luminaires and Optical Control
- October 12
Calculating Lumen Method
- October 19
Calculating Illuminance at a Point
- October 21
Building Electrical Systems
- October 26
Controls for Lighting

COURSE DETAILS

- Dates:**
Oct. 5, 7, 12, 19, 21, 26
Nov. 2, 4, 9, 16, 18
- Times:**
Thursdays (6:30p-9:30p)
Saturdays (8:30a-11:30a)
- Cost:**
(includes copy of text and one class)
\$ 75 Non-Members
\$ 60 Members

Click here to register now!

Register Online NOW!

For more information e-mail David Keith, Education Chair, at educate@iesrms.org.

A big thanks to our Lamp and Ballast presenters!

The Rocky Mountain section greatly appreciates the support of these presenters, who provided hands-on demonstrations as well as brief presentations on the latest in lamp and ballast technologies.



THANK YOU FOR YOUR SUPPORT!



WEB LINK

Click the link to go right to the site!

www.DENVERARTMUSEUM.org

It takes more than great art and architecture to have an incredible museum experience. At the Denver Art Museum, we believe that you—the visitor—are the most important element of any museum visit.

www.XCELENERGY.com

As a leading combination electricity and natural gas energy company, we offer a comprehensive portfolio of energy-related products and services to 3.3 million electricity customers and 1.8 million natural gas customers.

www.ALMR.org

The Association of Lighting and Mercury Recyclers provides education and information on lamp recycling for government agencies, municipal authorities, industries and other business entities.

www.CIE-USNC.org

CIE is an organization devoted to international cooperation on all matters relating to the science and art of lighting. It is a unique world-wide organization in matters of illuminating engineering, radiometry photometry and colorimetry.

IESNA Announces 2007 Conference

Speaking on the behalf of our president, Kevin Flynn, and as current chair of this committee, we extend an invitation to step with us into a new direction and focus for the IESNA Annual Conference.

The IESNA has dedicated the entire year in 2007 to the theme, "Light Matters: Integrating Light Into Our Environments." This kicks off with our January Conference in Phoenix. The intent is to use the theme to clearly define a focus for our seminars, papers, and presentations that is current, topical, and interesting to all of our membership.

Upon review of the Conference program, you will notice changes that have taken place. The IESNA Conference has been

revamped to place it once again as the premier event for acquiring lighting knowledge, creating opportunities for networking, and for providing mentoring opportunities for the merging professional and students. The conference is unique in its focus of offering programs that stand alone in depth and degree of content.

Combine all of this with Phoenix's near perfect January temperatures, and you have a conference that should not be missed. We hope to see you in Phoenix to help us kick off our second century.

Peter A. Hugh, LC, IESNA
Conference Steering
Committee Chair

WELCOME

NEW SECTION

MEMBERS

Ryan Arni, Caveo
Consulting Engineers,
Greenwood Village

Jon Brooks, AE Design
Denver

DAM Tour
Explore the Hamilton Expansion
of the Denver Art Museum
October 18



2006-2007 Upcoming Section Events

IIDA "How To" Workshop
Original Brooklyn's
December 12



Regional IIDA Chair Leo Mendoza gives you tips and tricks to you're your IIDA submission a winner!

Xcel Energy Rebates
Original Brooklyn's
November 14

Join us as an Xcel Energy host speaks about energy rebates available now and in the future!

ED-150 Intermediate Class
Corelite
September thru November

Thursdays (6:30p-9:30p)
Saturdays (8:30a-11:30a)

Sept. 21, 23, 28
Oct. 5, 7, 12, 19, 21, 26
Nov. 2, 4, 9, 16, 18

Light and Health in the 21st Century
Original Brooklyn's
January 12

An abbreviated presentation of David Keith's acclaimed workshop from the 2006 Southwest Regional Conference.



Rembrandt offers paintings, like his *Self Portrait*, with a unique, luminescent quality

Art and Light

Considerations for the designer when working with fine art, photography, and light

I know what you are thinking: this art stuff isn't so hard. The answer is simple, natural light, right? Most artists are trained in art schools flooded with natural light, so the answer is natural light. Many people believe that sunlight is the best type of light for art and it would follow that art looks best in natural light. True?

Sorry, but no. There is no simple answer here, this is art, remember. Art's not easy. Anyway, natural light is hard to control in general terms. It causes a big problem for art, particularly paintings and works on paper. The infrared and ultraviolet rays of natural sunlight can damage works of art.

UV rays are so harmful that it can, over time, fade works on paper especially pastels, prints, photographs, and watercolors. Also, textiles will fade in sunlight in a matter of only a few short months. That means your notion to redecorate in the "cozy, country style" and hang your great Grandma's colorful crazy quilt on the wall that faces that big picture window in your sunroom is definitely a bad idea.

In short, as a museum curator and art historian, I do not keep works on display for long periods of time since all light (natural and artificial) is damaging to works of art and antiques and as a result will devalue your pieces over time. Thus, I do not recommend direct lighting systems and I never recommend that any direct light

be placed at any angle on artwork or antiques. A compromise is necessary when lighting art. This doesn't mean go out and purchase all different types of art lighting, just light your pieces wisely. Try to avoid the UV and infrared rays from directly hanging works of art in sunlight. Don't shine a bright light of any kind directly onto artwork, especially works on paper. Remember, photographs and works on paper are most fragile.



article © 2004 Dr. Lori

For many artists, art and light are synonymous. For instance, Rembrandt's paintings are famous for their luminosity. Just consider any of the portraits by the Dutch master on view at the Metropolitan Museum of Art in New York City or any of a number of important museum collections worldwide. While Rembrandts look pretty good in any light, there are certain methods to properly lighting your masterpiece. While the MET's Rembrandts seemingly glow of their own accord, they do employ the aid of various light sources. In short, lighting is critical when coupled with fine art and even a slight difference in direction or type (fluorescent, incandescent, halogen, natural, etc.) can make all the difference. Like anything else, art lighting is a compromise and requires some expert advice.

IESNA Guidelines to Improve Your IIDA Text

1. Clearly state the complexity of the problem.

What area, object or people were to be illuminated and why? What were the visual tasks? Were there special effects to be achieved? Is the space used for varied functions? Were there energy or budget limitations? Were there architectural, structural, HVAC or maintenance restrictions?

2. Define the lighting concept.

Does the lighting contribute to the function of the space? Is the system consistent with the aesthetics of the space? Is there daylight in the space and if so how was it controlled and utilized?

3. If lighting was integrated into the architecture, explain how.

Is the lighting equipment integrated into the environment? Is the solution consistent with the purpose of the space? Does the lighting enhance the space? What was incorporated into the design that is of special value to the needs of the end-user?

4. Address the originality of your design.

What considerations did you deem necessary in the selection of lamp sources and equipment to solve the problem? Were commercially available products used? If custom equipment was used, what particular problems were solved? What aspects of the design are innovative or special?

5. Utilize IESNA recommendations to reinforce the performance criteria.

What performance criteria were used to solve the problem? Were owner and/or architect's requirements met? Although not required, did the solution meet or exceed the IESNA recommendations for quantity and quality of light? If so, address the recommended practice that guided you. List the actual foot-candle levels and why those levels were targeted.

6. Reinforce the visual comfort of your design.

Did you have to address the viewing comfort, glare, reflections, or contrast ratios of the end-user? How did you solve the problem?

[Click here for more ideas from IESNA to improve your IIDA text, and to obtain an entry form](#)



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