RNI Reg. No. DELENG/2001/4847

July 2008 Vol. VIII No. III

LIGHT the official NEWSLETTER

of the **indian society of lighting engineers**

Printed & Published by Mr. Harcharan S. Mamak, A 274, Defence Colony, New Delhi 110 024 on behalf of Indian Society of Lighting Engineers and printed by him at Graphic Point Pvt. Ltd., WZ-429 B, Naraina Village, New Delhi.

FROM THE PRESIDENT'S DESK

When I first had the privilege of addressing you through this column in the July 2007 issue I had requested that members use the newsletter as a platform for discussion and write to us with suggestions. To facilitate the process I had given my personal email address and continued to do this in subsequent issues.

I am therefore delighted to have received a communication from Mr. Sukanta Bhattacharyya, M(L).1323 of Kolkata State Centre. He has made a suggestion (which I was already considering and have been discussing with some of the persons responsible for the newsletter) that we publish case studies of lighting design projects done in India.

To start the ball rolling I have succeeded in persuading my fellow GB member, Ar. Rohini Mani to give us information on some projects she has worked on. I am sure you will find this interesting and stimulating and I would like others to come forward with suggestions of projects that could be considered for publication in future issues.

As I mentioned in the January issue, we have extended our collaboration with Expomedia to join hands with them on the Lighting South Asia Exhibition in Mumbai next February. I am happy to report that the response to the Exhibition is positive and you will see from the floor plan on page 9 that both Indian and international companies are rapidly filling up the hall. With the rapid pace of change in technology, products and design in Lighting today, it is important to attend these periodic events and I would urge all members to mark their calendars for this event.

Another productive collaboration that we have embarked upon is for the Light India International 2009 Conference with IIID (Institute of Indian Interior

Lumilux Range of Lamps comes with Tri Band Advantage.

LPC
LUMILUX PLUS COATING

'LUMILUX TRI BAND COATING'
a new development from OSRAM.
Osram's LUMILUX PLUS lamps are now coated with a new phosphor coating that make these LUMILUX PLUS lamps ***30% more energy efficient*** and ***last 4 times more*** as compared to the conventional fluorescent lamps and also gives you brighter light comfort.

Others are fluorescent tubelights.

OSRAM
A SIEMENS Company

SEE THE WORLD IN A NEW LIGHT

OSRAM India Pvt Ltd, Signature Towers, 11th floor, Tower - B, South City - I, Gurgaon - 122001, Tel. (95124) 2383180/181, Fax No. (95124) 2383182

Designers). The Conference will coincide with the LSA Exhibition. We have an exciting programme lined up and again I would urge members to take advantage of this opportunity. With the IIID collaboration we should be able to involve a larger percentage of the architecture and design community.

The pace of lighting activities is really accelerating. Even before the Mumbai events next February, Karnataka State Centre is organising Vision 2010 in November this year in Bangalore (see page 12). Mumbai State Centre held a National Seminar on Street Lighting in Pune in June. And Chennai State Centre is proposing a major event in 2010. I am sure that this positive trend will continue increasing the reach and usefulness of our Society.

I look forward to more interaction with our members.

A.D. Kulkarni
President
dradk@hotmail.com

EDITORIAL

The reports in this issue show an increase in the level of ISLE activity. The time and energy invested in Lii2008 is spinning off into enhanced activity instead of the lull we have sometimes experienced in the wake of our big international events in the past.

The Lighting South Asia Exhibition and the Lii2009 Conference are promising to be exciting events. While it is an unfortunate fact that professional life today has become increasingly busy and demanding, we need to recognise that updating our knowledge in our professional field is as necessary as anything else we do. The conferences and exhibitions that we organise help do precisely this.

For those based in the southern region of the country and who might not be able to get to Mumbai, there is the Vision 2010 Conference and Exhibition in Bangalore.

On page 11 you will find a report on the Workshop on Street Lighting held in Pune. It brought together people from a wide range of disciplines to discuss this topic which is finding more space in public discussion. The Pune workshop helped to dispel some of the misconceptions regarding the science of road lighting while it focused on some of the recent developments of modern concepts and systems.

Teresa Goodman, CIE Vice President, Publications has outlined the need for timely technical work of the highest standard. To ensure this a new set of guidelines for TC memberships have been drawn up. We have often discussed the need for more involvement from India in the technical work of CIE, but with only limited results. I would once again like to make an appeal to our members to make the time to get involved in CIE work.

And while on the subject of international participation from India, I hope that there will be a good sized delegation from India to Lux Pacifica in Russia next April. Details are on page .....

This issue carries an article by Ar. Rohini Mani that presents two of the projects she has worked on

H.S. Mamak
Editor

ISLE ACTIVITY

Education and Training Committee

For the year 2007-08 the Committee has awarded scholarships to the following students:

Parthasarathi Satvaya (JU, ME 2nd)	Rs. 20,000
Sukanta Bhowmick (JU, ME 2nd)	Rs. 20,000
Sandipa Mukherjee (JU, ME 2nd)	Rs. 20,000
Avijit Dey (JU, ME 2nd)	Rs. 20,000
Dipayan Nath (JU, ME 2nd)	Rs. 20,000
Debadyuti Banerjee (JU, ME 2nd)	Rs. 20,000
Sayantan Chatterjee (CU, BE Final)	Rs. 7,500
Sneha Ghosh (CU, BE Final)	Rs. 7,500
Sashank Chowdhury (MIT, BE Final)	Rs. 15,000
Ritwika Singh (MIT, BE Final)	Rs. 15,000
Asit Patnaik (MIT, BE Final)	Rs. 15,000

To share the work that these scholarship holders are doing with our readers, we give below a synopsis of the projects they are working on.

Avijit Dey
Supervisor-Prof.(Dr.) Saswati Mazumdar

Microcontroller driven LED based moving message display and annunciation system powered by bicycle charged battery

Nowadays communication with people is one of the essences in rural or urban areas for safety/benefit. It may be from natural calamity or from various hazards or for

MAILING ADDRESS

Our current mailing address is

Indian Society of Lighting Engineers
A-274, 1st floor, Defence Colony
New Delhi 110 024
Tel: 46562981, 46562982
Fax: 46528477
E-mail: isledel@vsnl.com, www.isleind.org

Registered Office: C/o Philips Electronics India Ltd.
Technopolis Knowledge Park, Mahakali Caves Road, Chakala, Andheri (E)
Mumbai 400 093

highway communication or for advertising purposes etc. This project mainly concentrates on that part needed to accomplish the communication by moving message display with annunciation, even in the areas where no electricity is available.

The prototype developed in the Illumination Engineering Laboratory uses one of the latest microcontrollers which minimizes the total number of components as well as the total power consumption and makes it compact. The project can be broken down into three main parts, one being the hardware design of the LED display itself. The second part is the software uses on board which have been employed for the computer interface to the microcontroller as well as displaying control and the third part is its power supply system.

The system can store different types of messages for displaying on the display panel. Users can easily set the messages for different purposes by the selective switches. This makes it very easy to operate. This system runs with a 12V battery and is portable. Utilization of human muscle power may be explored through bicycle powered battery charger system for battery charging, which is the input power of the system. So use of the human power or non-conventional source, makes the system more effective. So for the people living in non electrified rural/remote areas, this system will make them pre-conscious from any type of unsafe condition.

Asit Patnaik

Testing and development of typical solar photovoltaic LED lighting system with tracking of sun position

In the wake of fast depleting conventional energy sources and alarming environmental pollution, a worldwide consensus is evolving for effective management of available resources. With noticeable growth in industrial sector, there has been a significant increment in electrical power requirements in recent years. Since lighting consumes about 19% of total electricity used in the world, renovating the installations and development of energy efficient response to lighting requirements is the need of the hour.

The current project involves coming up with a lighting solution keeping an eye on the luminous efficacy, color rendering, glare, lifetime and maintenance of the luminaire with optimal use of resources. It was found that light emitting diodes are more efficient than many of the existing light sources and have the advantage of low voltage technology, which makes it easier for installation and safer. Using high quality LEDs (four terminal LEDs with beam spread more than 600 were used for design of fixture), we can increase the luminous efficacy of the fixture and with proper reflector arrangement and by manipulating the shape of the fixture, optimum utilization of its beam spread can be made. A dimmer circuit was used to control the intensity of light output of the fixture depending on its application. The designed fixture was tested for various characteristic properties and compared to those of a CFL. Finally, its application was demonstrated with supply being fed from a 12 volt lead acid battery, charged with solar module. This project also dealt with testing of the given thin film amorphous silicon panels for electrical output subjected to varying test conditions and based on the above test results it was proposed to design a single axis microcontroller based solar tracking system so as to exploit maximum power. A charge controller circuit was developed with proper relay arrangements for protection of battery.

LED lighting is expected to replace many conventional lighting systems in the near future. As LEDs can be operated with low voltage battery charged by solar panels, LED lighting systems do not need fossil-fuel generated electric supply. This can lower carbon emission and reduce global warming. Any improvement in the solar cell efficiency will give a boost to the use of LEDs for general lighting. In combination with energy-efficient light emitting diodes, solar modules are achieving good results in lighting. Through this project, an attempt is made to integrate LED lighting technology with solar photovoltaics so as to achieve a self-sufficient and energy efficient solution.

Dipayan Nath
Under the guidance of Mr. Sisir Kumar Ganguly
Project completed in the month of November, 2007.

Project on hospital ward lighting

The design is substantially compliant to Section 5 : Hospital Lighting of the National Lighting Code and ECBC 2006. Lighting design and calculations are done by basic lumen method.

Prime consideration of this arbitrary, Non A.C. hospital general ward (15m X 10m X 5mht) lighting design was to meet the dual needs of patients and medical staff satisfactorily with energy efficient and cost effective illumination. Utmost care is taken to provide comfortable cool lighting for the patients to keep them in a relaxed frame of mind to facilitate recovery. So avoidance of discomfort glare from luminaires is a special consideration and the same was achieved by diffused luminaires. Again quantity and quality of required illuminance for medical staff were given equal priority by appropriate level of lighting, on and above bed-head, Nursing-station in the ward.

General lighting of the ward and adjoining corridors is made daylight linked with average illuminance of 100 lux. For close examination by doctors CFL with R_a>= 80 and intermediate colour appearance is chosen for 'Task Lighting'.

Night lighting has been done to have 1 to 3 lux (on floor space) by 2 watt Blue LED lamps in suitable luminaires at 300 mm above floor on wall in between beds. Ceiling mounted Emergency Lights are kept for average 20 lux illumination.

Main Luminaires - TCS 605/236 HF
TCS 19/236 HF (Glare free)
TCS 19/136 HF
FMS 200/111
- Philips Make
with electronic ballast

Lamp used - T8 TLD 80 - 36 Watt
CFL - PL - S/84 - 11 Watt
- Philips Make.

Debadyuti Banerjee
Under the guidance of Mr. Sisir Ganguly
Completed in November, 2007

An office lighting project

The project consisted of lighting design of a small air-conditioned mobile exchange office. The objective of this illumination design was to meet functional lighting requirements, energy efficiency and cost effectively complying with the Energy Conservation Building Code 2006. The interior is characterised by a front and back office, one control and conference room and a cubicle for the M.D. etc. where the main visual task is done by computer VDU's. So control and avoidance of glare both direct from luminaires and reflected from VDU screen is an important feature besides projecting right light at right places. The design has been done by manual lumen method and the office space is lit by ceiling mounted efficient louvered luminaires with T8 fluorescent tube lamps so as to achieve average sustained horizontal illuminance of 450 lux on the actual working zone.

Being an A.C. space with substantially dust free condition, the maintenance factor is taken as 0.8: ceiling and wall reflectance taken as 70% and 60% respectively. Utilization factor for the luminaries from the tables range from 0.5 to 0.6.

The design aims to utilize daylight through windows and some day lighted space near windows have provision of automatic light control device to reduce luminaire light output to the extent of 50%. Glare from window daylight has also been taken care of suitably.

TL-D Super 80 T8 lamps of 18W and 36W have been used as those give the maximum lumen output in air conditioned space and reduce energy and environment burden. Philips make luminaires - TBS 088/418 HPF and TBS 185/136 HF are chosen to provide necessary lux level with agreeable colour appearances and colour rendering ≥80.

Aesthetic of luminaires and their disposition vis-à-vis office décor is also kept in view.

Parthasarathi Satvaya
Under the supervision of Prof. (Dr.) Saswati Mazumdar

Studies on different aspects of manufacturing advanced exterior luminaires and their applications

The Exterior lighting luminaire provides a great role in lighting the nocturnal environment. It serves and works as the identity of a city. It is used to treat an area more globally. Nowadays advanced luminaires are replacing the conventional luminaires as they are more advantageous in terms of efficiency, high initial performance retaining it throughout the lifetime of the luminaire, easy maintenance facility with low energy consumption. The luminaire should provide white light when used at city centres and pedestrian areas resulting in good visual appearance with better contrast and pleasant environment. The luminaries should have an aesthetic value minimising the light pollution and obstructive light.

There are so many products with new technologies benefitting from the most highly specialized technological research in lighting. While manufacturing these luminaires, there are lots of matters to be concerned about. The matters are regarding the construction; painting, assembling, packing and checking the quality at different product level, then work in progress level and finally on the total luminaire. Every batch of luminaires should go through quality check and pre-dispatch inspection on final product. While assembling, it is a requirement to do every work with a mannered way and with the least number of workers. Work Instruction Sheet helps the workers of an assembling industry to produce luminaires efficiently, effectively with less number of workers. The advanced luminaires have very precise photometry; they should be used and installed in a precise way with advanced lighting software that facilitates proper utilization of the precise photometry.

Ritwika Singh

Maximum power point tracking using improved perturb and observe algorithm

Lighting is taken for granted in industrial countries and in many urban areas of developing countries. It is

hard for many people to imagine living at night without being able to obtain light at the flick of the switch. However, about half of humanity, lives without much light after sunset since they do not have access to grid connected electricity. Since electric light is normally needed on demand, the only way of ensuring this is to provide electrical storage in the form of a battery. A photovoltaic system is by far the most universally applicable and, with the global demand to reduce carbon dioxide emissions, PV technology is also gaining popularity as a mainstream form of electricity generation.

This project aims in maximizing the power from the photovoltaic cell under different levels of insolation and temperature. The algorithm used is known as perturb and observe. This scheme of tracking or introducing a dc to dc voltage transformation stage will enable optimum utilization of the SPV array. In the normal case the battery charging will start only after the amount of sunlight (or solar insolation) is above the level which produces a SPV Array voltage exceeding the battery voltage. The main benefit of the scheme studied is that the battery charging can take place even when the SPV Array voltage is lower than the battery voltage. This in turn will reduce the number of SPV cells required for any particular application. Hence the cost reduction of the system as a whole.

It has been found that CFL and LED are the only efficient way of lighting using solar panels. So, if a 12 volt battery is being charged using the solar cell then it can be used to light a 7W CFL. A 7W CFL gives the same lumen output (450 lm) as a 40 W incandescent bulb hence saving the power required. The system is of particular interest to areas which face a long term cloud cover (or long rainy season) leading to inadequate battery charging during such periods. Applications of SPV Arrays for rural lighting has been a success but for the problem during the period, when sun is not seen for days in succession sometimes even for a week. In such areas the number of SPV modules will have to be increased to compensate for the low output during the monsoon season. The proposed system will avoid the need for over sizing the modules in the array, as it will now be possible to get the battery charged even if the SPV voltage is below the battery voltage threshold and hence, providing the rural population with the basic need of electricity.

—

Sandipa Mukherjee
Project Guide: Dr. Biswanath Roy

An energy efficient approach to redesign existing lighting system of a fuel handling plant along with single line diagram

This Project was assigned by Titagarh Generating Station (TGS), Calcutta Electric Supply Corporation (CESC) Ltd. to School of Illumination Science Engineering and Design (SISED) as a consultancy job.

TGS is a 240 MW generating station and it is a 25 year old generating station of CESC Ltd. The productivity of the unit was getting hampered due to bad illumination in almost all working zones, workers grievance was reported especially during the night shift. Under this situation TGS requested SISED-JU to conduct a survey of the existing illumination system, redesigning it for upgradation and finally evaluate after commissioning and installation of the proposed design.

The working areas under FHP cover the following areas:

a) Railway track, b) Wagon tippler, c) Conveyors and Transfer points, d) Crusher house, e) Bunker house, f) Coal shed, g) Open coal stack yard and h) Coal control room.
During the survey of the existing lighting system the following things are measured and observed:

1) Illuminance distribution on ground, working plane and at 1m. height above ground depending on working area.
2) Type of lamps and luminaries.
3) Wattage of lamps.
4) Layout of luminaries.
5) Users' requirement/preference of lamp and illuminance level.
6) LPD-location wise.
7) Maintenance schedule.
8) Site constraint.

The survey revealed that lux levels in almost all working areas are below the IS: 3646 recommended lux level. This is due to improper luminaire selection and layout and due also to insufficient maintenance.

The existing lighting system of FHP is redesigned with the help of DIALux 4.4 by using two different companies product. After redesigning, lux levels at considered areas in FHP meet the recommended lux levels of IS: 3646. One company product is recommended due to its cost effectiveness and better lighting performance.

An attempt has been made to develop a power distribution network for the redesigned lighting system of FHP.

After redesigning the existing lighting system it is observed that the energy/lux has been decreased.

Installation of the lighting system of the railway track has been completed and workers are satisfied with the lighting level at their working area.

Shashank Chowdhary

Evaluation of headlamp glare: Effects of photometry, size, spectral power distribution

This project suggests the research to investigate and quantify the impact of glare illuminance, glare spectral power distribution and glare source size on peripheral detection of small targets in the field of view. Peripheral visibility is an area that heretofore has not been extensively studied in the context of headlamp glare, although peripheral visibility is important for driving. The impact of glare could be segregated into two areas: reduction of visibility caused by scattered light in the eye (disability glare) and sensation of discomfort caused by the glare source in the field of view (discomfort glare).

These phenomena often but do not necessarily always occur simultaneously. In this project an attempt was made to evaluate glare caused on the oncoming driver's eye due to size, spectrum and intensity of the headlamp. Some amount of work in these lines can be found for US and Europe but hardly any work could be found for Indian roadway conditions which motivated me to do this project.

In order to evaluate glare the entire setup was simulated for a single lane unlit road. Three Tungsten halogen headlamps and real life small targets such as cycle and car backlight were made use of as part of the glare study test. The glare study test was attended by 8 subjects of various age categories. The entire simulation was done for a 3 (glare source) x 2 (glare source intensity levels) x 2(glare source size) combination. Glare study test was divided in two parts: disability glare test and discomfort glare test. Disability glare test was done on the basis of the response time the observers took to identify the targets in the peripheral field of view, whereas discomfort glare test was done by means of subjective rating of the De-Boer's scale.

The results obtained after the glare study test showed that discomfort glare was mainly affected by glare source intensity whereas the other factors namely size, spectrum had minor impact. Regarding disability glare, it seemed to be predominantly affected by spectrum (white light giving better results than yellow light) whereas the other parameters like size, intensity had minor impact. On the basis of the results obtained countermeasures in the form of suggestions and recommendations are made in order to reduce the effect of glare. These results could be used by the Indian automotive industry, highway industry, and government agencies to bring about awareness among people as well as to improve night time driving conditions for the drivers by reducing glare while keeping in mind adequate forward visibility.

Sneha Ghosh, Sayantan Chatterjee

Design of energy efficient lighting system at the new campus of University of Calcutta

Objective

To propose the indoor and outdoor lighting system for the new technical campus of the university building at Salt Lake City. Design is being done keeping in mind that it should be energy efficient as well as cost effective within the limit of site constraints.

Methodology

Good quality lighting is obtained by paying careful attention to quite a large number of closely interrelated factors. To design the lighting system the major steps to be followed are :

- Use of efficient lamp as practicable with low loss ballast.
- Use of efficient luminaire with glare reduction facilities.
- Proper layout for effective utilization of luminaries.
- Use of daylight sensor connected with daylight integrated artificial lighting system.
- Time scheduling and use of occupancy sensor.
- Regular maintenance of lighting system.

The lighting criteria for the variety of activities at the outside premises of the university are different. The outdoor lighting system consists of decorative floodlighting, lighting of garden, car parking zone, campus pathway and lanes, security lighting. For example, façade lighting requirement to decorate the front elevation of the building differs largely from that for garden lighting. So lamp luminaire selection should be done based on specific requirements keeping in mind the use of efficient lamp luminaire combination as far as practicable.

As the proposed design is energy efficient the total installed wattage in every room lies well within the limit specified by the ECBC [Energy Conservation Building Code] 2006.

Indian Standard (IS: 2006) has been taken as the reference for the general service illuminance required on the working plane.

Resources being used :

- Plan, Sectional View of entire building.
- Discussion with proposed user regarding intended use of each type of zone and room and types of activities to be carried out.
- Lamp, Ballast and luminaire catalogue.
- Indian standard IS: 3646 to get recommended illuminance level for different activities.
- ECBC 2006 data sheet for maximum limit of LPD.
- Lighting design Software DIALux 4.4, Calculux.

This project work is being done under the joint guidance of Dr. Biswanath Roy, Reader, Illumination Engineering, Electrical Engineering Department, Jadavpur University and Dr. Kallol Bhattacharyya, Reader, Department of Applied Optics and Photonics, University of Calcutta.

Sukanta Bhowmik
Under The Guidance: Dr. Biswanath Roy (Reader, Ee Dept., Jadavpur Univ.)

Redesigning of existing lighting system and its single line diagram of coal handling plant

My project was redesigning of lighting system and single line diagram in Titagarh Generating Station(TGS), a 240 MW Thermal Generating Station under the guidance of Dr. Biswanath Roy. We know that thermal generating station consists of great structural complexity and for this reason luminaires with suitable optical property should used in the appropriate place for better light level. I designed and placed luminaires in various component of TGS like Wagon Tippler(WT),Transfer Point(TP), Crusher House and Railway Track. The main objective was to meet required light level according to Indian Standard(IS:3646). For example in a room like structure like TP, on the motor surrounding area we require minimum 100 lux. But if we move away from the motor it requires 50 lux of illuminance value. So, sometimes I used asymmetric types of luminaire for this type of place.

Another aspect of my project design was to meet the required LPD (Light Power Density) in various place of TGS. But in such places like generating station, it is very difficult to maintain LPD value according to ECBC (Energy Conservation Building Code). The reason behind it is constructional hindrance, poor maintenance factor, low reflectivity of wall and ceiling due to coal dust precipitation.

Lighting South Asia

February 20 to 23, 2009, Mumbai

There has been a long standing request by members and other Mumbai based lighting interests for an international lighting event in Mumbai. With this in mind ISLE has joined hands with Expomedia to hold the Lighting South Asia exhibition at the Bombay Exhibition Centre in Goregaon, the largest permanent private sector exhibition venue in the country.

From the floor plan it can be seen that the 7000 square metres of space has been largely sold out already to

national and international companies. For those who for logistic or other factors are unable to participate in the Light India exhibitions in Delhi, this event will provide an opportunity to showcase their products and services on an international platform. However, it is necessary to book early to ensure that space is still available.

For those who would like to see the current range of lighting technologies and solutions available today, this will be an excellent opportunity. Mark a slot in your work schedule for an extended visit to this exhibition.

For bookings contact:
ISLE
A 274, First Floor, Defence Colony
New Delhi 110 024
Tel: 46562981/82, Fax:46528477
isledel@vsnl.com www.isleind.org

Light India International 2009 Conference

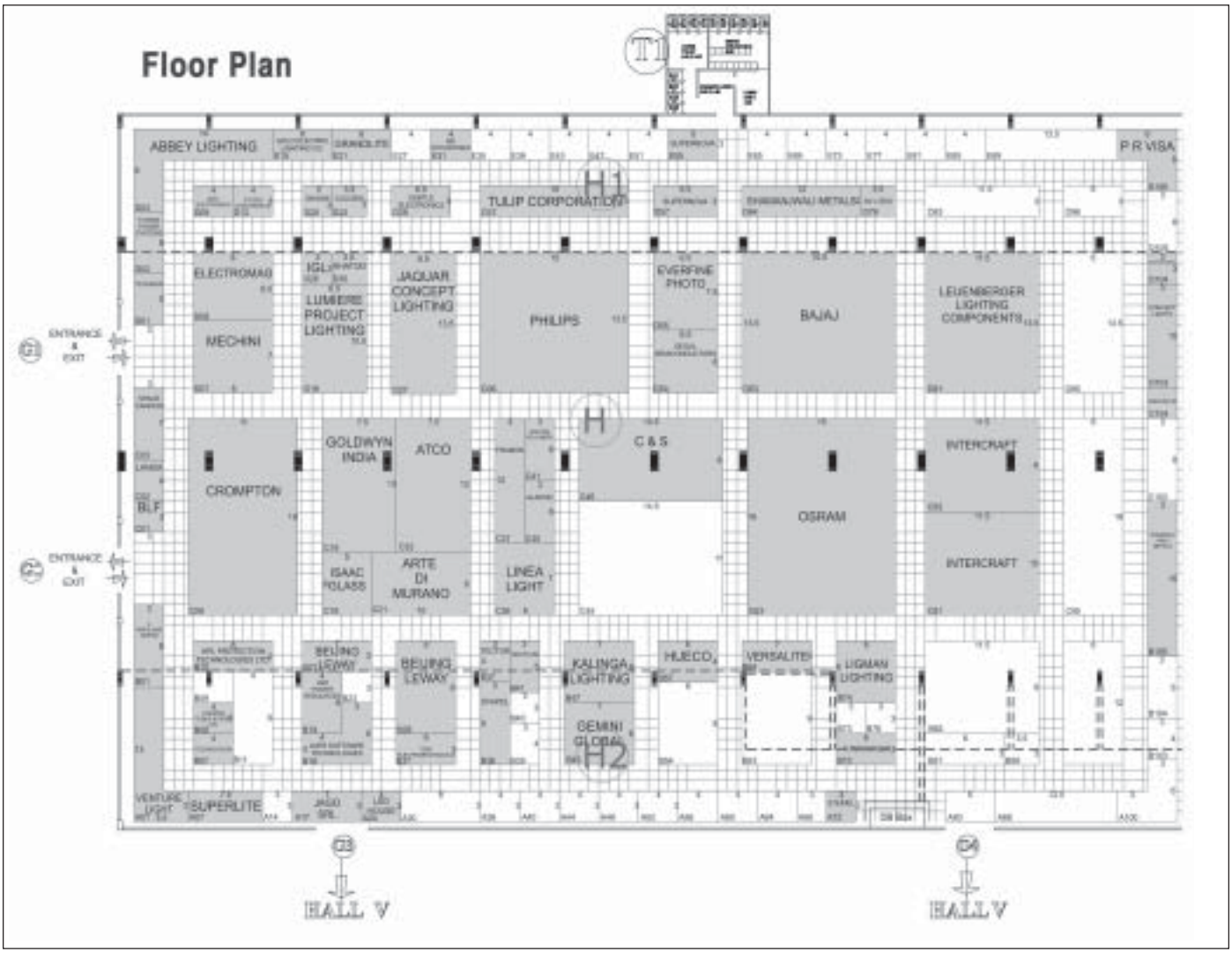
To coincide with the Exhibition in Mumbai, ISLE has joined hands with IIID (Institute of Indian Interior Designers) to hold a one day international conference.

The details of the programme are still being finalised and will be circulated shortly. The conference is planned to have four application oriented sessions. With the continuous technology improvements taking place in solid state technology, LEDs have now reached a level of efficiency that allows them to be used increasingly for professional lighting purposes, so one session is necessarily devoted to this hot topic.

There will be one session on futuristic lighting projects on the lines of the excellent presentation made by Mr. Behr Champana at Lii2005. Other sessions will include Infrastructure Lighting (case study highlighting both the conceptualization and execution), an International architect and his lighting designer to present the design issues in a specific project, application possibilities with the new development in luminaries etc.

Apart from the value of the presentations, the conference will provide an important cross disciplinary networking opportunity to anyone with an interest in lighting.

For details on the conference please contact us at the address given above.



KOLKATA STATE CENTRE

Joint Programme with SISED JU

July 05, 2008, Kolkata

A joint programme with SISED, JU was organised at the Seminar Room of Elect. Engg. Dept. of Jadavpur University, Kolkata. The meeting was chaired by Dr. (Mrs.) Saswati Mazumdar, Director of SISED, JU and Mr. Rajat Roy, GB Member, ISLE conducted as Master of Ceremonies. The speakers were introduced by Dr. Biswanath Roy, Jt. Director of SISED, JU.

The speakers, Mr. Sisir K. Gangopadhyay, Ex. Chief Engr. (Elect.) PWD and Mr. Subhankar Das, Executive Engr.(Elect.) PWD spoke on 'Energy conservation with special reference to building lighting system'. They stressed the need for energy conservation and highlighted the areas where energy can be saved in a building lighting system.

After that Dr. Sunil R. Bandyopadhyay, founder member of ISLE, who was the Chief Guest distributed the ISLE scholarships and certificates to the recipients from Jadavpur and Calcutta University for the years 2006-07 and 2007-08.

Mementos were presented to the Chief Guest and the speakers. Mr. Prakash K. Chatterjee, Secretary, ISLE Kolkata gave the vote of thanks. The meeting was followed by tea and snacks.

Joint Programme with SISED JU

July 12, 2008, Kolkata

A joint programme with SISED, JU was organised at the Seminar Room of Elect. Engg. Dept. of Jadavpur University, Kolkata. The meeting was chaired by Prof. Siddhartha Dutta, Pro Vice Chancellor, Jadavpur University. Mr. Rajat Roy, GB Member, ISLE conducted as Master of Ceremonies. Dr.(Mrs.) Saswati Mazumdar, Director of SISED, JU introduced the Chairman. Prof. Dutta in his speech stressed the need of trained technical persons in the wake of rapid industrialisation and lauded the efforts of the organisers in this regard. He also

Dignitaries on the dais.

mentioned that training should also be extended to the persons from rural areas.

Mr. Nikhilesh De, Specification Mgr. (East), Legrand (India) Ltd. spoke on 'Electrical Safety'. The speaker was introduced by Mr. Prakash K. Chatterjee, Secretary, ISLE Kolkata. In his presentation Mr. De dealt with the various aspects of electrical safety with the help of audio visual aids, which made the presentation very interesting. He also explained the functions of various electrical safety devices that are available at present and showed some samples of those. After his presentation two short films on energy conservation were shown to the gathering.

Mr. Trinath Biswas, Jt. Chief Elect. Inspector (Directorate of Electricity) was the Chief Guest. He was introduced by Mr. Pradip K. Majumdar, Gen. Secretary, ISLE. Mr. Biswas distributed certificates to the successful participants who attended short term 'Advanced Wireman Course on Wiring & Lighting'. Mr. Biswas expressed his happiness with the initiative taken by the organisers and readily agreed to have a session with the participants of the course to guide them so that they can successfully obtain Wireman's Permit from the Directorate of Electricity.

Mementos were presented to the Chief Guest and the speaker. Mr. Prakash K. Chatterjee, Secretary, ISLE Kolkata gave the vote of thanks. The meeting was followed by tea and snacks.

Committee Meeting

The Kolkata State Centre (2007-09) held its 3rd committee meeting on July 14, 2008.

Apart from the other discussions the Annual Report and the Audited Accounts for 2007-08 of the State Centre were discussed and approved by the committee. Copies of both the documents were forwarded to the GB.

Defaulting Members

The State Centre Committee has decided to recommend to the GB a list of members (24) who have dues for more than three years for deletion of their names.

MUMBAI STATE CENTRE

National Workshop on Street Lighting

July 19, 2008, Pune

ISLE Mumbai State Centre organized a National Workshop on Street Lighting on 19th July 2008 at CIRT, Pune in association with MIT Lighting Research Academy, Pune and CIRT.

This Workshop was a fall out of the innovative City Beautification program initiated by MIT-LRA wherein a study was undertaken with the vision of Saving Electricity and Environment. Post the study lighting experts from Australia Prof. (Dr) Warren Julian and Mr. Reg Wilson gave their recommendations on Street Lighting as a means of City Beautification.

Dr. Avinash Kulkarni, President, ISLE in his introductory speech spoke about the changing scenario of lighting and the journey from FTL as the most common mode of lighting to today's metal halide lamps. He emphasized the need to organise such seminars wherein there is a healthy interaction between the industry and the end users. Dr. Prakash Barjatia, Chairman of ISLE Mumbai State Centre who organised the Workshop gave a brief outline of the subjects of deliberation.

Street lighting is an important aspect of modern civic life and accounts for 38-40% of the city's electricity consumption. Effective and efficient lighting is a prerequisite for the holistic development of any city as well as for creating a feeling of well being and security. However with the increasing cost of electricity and concerns about global warming, intelligent power consumption is the need of the hour. The Workshop was held to discuss these aspects and suggest effective solutions for the benefit of the public at large.

The first half of the seminar was dedicated to the industry, wherein Mr. K. Naveen, Dy. General Manager, Crompton Greaves, Mumbai, Mr. Indranil Goswami, General Manager, Lighting Design & Application Centre Philips, Gurgaon, Mr. Arun Moorty, Country Head, Echelon Asia Pacific Ltd., Mumbai, gave their opinion on the street lighting scenario in the country.

Messrs. A.Anddy, P.N. Bhagwan, A.D. Kulkarni, P.C. Barjatia and M.N. Gandiveker

Mr. K. Naveen educated about the basics of lighting. Speaking on the occasion, Mr. Indranil Goswami explained the new concept of the "Cosmopolis", an effective option of lighting which offers improved optical quality, is compact and very efficient for reducing the electricity consumption. The Cosmopolis lighting, an eco-friendly green light, will be installed for the first time in India at the Commonwealth Games at Balewadi, Pune.

Mr. Arun Moorty elaborated on monitored lighting, the opportunities and the challenges involved in the same. He emphasized that the need of the hour is the standard based monitored street lighting solutions in India.

Mr. Pravin Tupe, Exe. Engineer, Pimpri Chinchwad Municipal Corporation, Pune explained an ideal case study of how the PCMC has been successful in reducing the electricity consumption. PCMC, with the sole objective of reducing electricity consumption, replaced 6000 sodium vapour lamps by T54*24 fitting. As a result, the consumption reduced to 4, 68, 758 Watts in May 08 from 8, 07,398 Watts in Jan 08 thereby saving Rs. 12.10 lakhs for the Corporation.

The second session had lectures by Mr. S. Chakraborty, Sr. General Manager, Bajaj Electricals, Mumbai, Ms. Anu Chaudhary, Project Manager, DNV Certification Agency, Pune, Mr. M. M. Ambre, Div. Engineer and Mr. S. R. Bhagat, BEST, Mumbai, Mr. D. N. Pawar and Mr. D. G. Patel, BEST, Mumbai, Mr. Sunil Pote, Thane Municipal Corporation, Thane.

The speakers in this session discussed the Evolution of Street Lighting Systems and the Complaint Redressal in Street Lighting Systems. Ms. Anu Chaudhary elaborated on Carbon Credit as a concept and various aspects of this

topic. She elaborated the need of the carbon credit policy and the projects in Pune and India.

Eminent personalities from the lighting field like Dr. Avinash Kulkarni, President, ISLE, Mr. K Naveen, Dy. General Manager, Crompton Greaves & Sec. ISLE, Mumbai State Centre, Mr. A. Auddy, Treasurer ISLE, Mumbai State Centre, Mr. P.C Jain, Chairman, Pune Local Centre, Dr. Prakash Barjatia, Director, MIT- Lighting Research Academy & Chairman, ISLE, Mumbai State Centre and Dr. Mrs. Gandivekar, Scientist E, CIRT were present for the inauguration.

Summing up the deliberations of the Workshop, Dr. Kulkarni made the following recommendations -

(i) There is a need for a systematic study on the need of Street Lighting and different types of light sources viz. FTL, T-5, Metal Halide, Sodium Vapour etc.
(ii) Carbon Credit is a good concept, but it should not be at the cost of the basic function of Street Lighting.
(iii) There is a need for development of Quality Control facilities for lighting products, and ISLE should take a lead in that direction.
(iv) For development of relevant specifications, ISLE should have more interaction with Bureau of Indian Standards (BIS).

The Workshop was attended by 90 participants. In his Vote of Thanks, Dr.Barjatia expressed his sincere thanks to the Governing Body of ISLE for encouragement in holding this Workshop, and also to all members of Mumbai State Centre and Pune Local Centre for their cooperation in arranging the same. He thanked the Co-organisers of the Workshop, MIT Lighting Research Academy, Pune and Central Institute of Road Transport, Pune for their support. Lastly he thanked all participants, speakers, Chairpersons and all the organizations that helped directly or indirectly in making the event successful.

Dr. Prakash Barjatia
Chairman : ISLE - MSC
Co-ordinator - Workshop

KARNATAKA STATE CENTRE

VISION 2010
November 21-23, 2008, Bangalore

ISLE, Karnataka State Centre is organising Vision 2010, International Lighting Conference & Exhibition on Nov 21st, 22nd, & 23rd at The Grand Ashok, Bangalore.

ISLE Karnataka State Center has been one of the very active Chapters of ISLE since its inception in 1997 and in this direction had conducted several highly successful programmes. To name a few :

- International Conference and Exhibition in Feb'97
- 'Vision 2004' International Conference and Exhibition on Lighting in Nov'03
- 'Vision 2006' Interactive Work Shop for Vendor Development in collaboration with Government of India Ministry of SSI in Dec'05
- During 2006-2007, had organized a series of Training Programmes at different places in the Country on Street Lighting and Outdoor Lighting in collaboration with the European Commission under the Asia Invest Programme, wherein experts from Italy and Poland conducted workshops, followed by a visit by Indian participants to Warsaw (Poland) and Milan (Italy).

Further ISLE KSC has been organizing training and continuing education programmes regularly for the Educational Institutions, Industries, Government Departments and other Institutions keeping the objectives of promoting Lighting. Particular emphasis is given to Source Management and Controls for saving Energy and pollution due to Lighting and Lighting Products.

Now ISLE KSC is taking up 'Vision 2010' International Conference and Exhibition on Lighting which brings together the leaders of the Lighting Industry, Economists, Academicians and Researchers working in different fields of Lighting, Lighting Controls, New Light Sources etc. providing a platform to discuss the most recent scientific advances and applications in these fascinating fields.

Vision 2010 focuses on the problems that require urgent attention and the solutions for these problems primarily in the fields of Lighting with particular reference to Energy saving and Environment. A study shows that effective lighting can save power to the tune of 5000 MW.

The following topics will be addressed by invited Speakers who are the acknowledged Masters in the field :

Light Emitting Diodes for Lighting

LED's appear to be the most promising energy and environment saver in the next decade. Vision 2010 has a section devoted totally to LED's. The conference will throw new light on this emerging future lighting.

Lighting Controls & Building Automation

Developments in electronics have enabled sophisticated monitoring and controls even in small and medium installations, which were till recently affordable only by large Industries or Power Plants etc., Building Automation, Automatic and Programmed Lighting Controls, Remote Central Monitoring of External Lighting are the areas witnessing development. But the developments are in isolated pockets. Vision 2010 aims at building a platform for exchange of information and knowledge in all these fields.

Continued on page 19

Interior Design & Lighting Parameters

Creating Corporate Ambiance

Rohini Mani

The connection between light, mood and motivation has been well documented and assumes a different kind of importance in the context of the work place, giving lighting engineers an interesting arena to work within.

Analysis of moods across different seasons has shown the enormous importance of light, in the mood and hence the motivational levels of human beings. This acknowledgement has translated into a scientific technique that creates atmosphere and enhances energy, lighting technology and design.

Lighting design is an art and a science. The process of design falls under two categories: products designed after serious research and R & D by major lighting companies and new and innovative light fixtures or luminaries. Created by using different light sources including incandescent, florescent, high intensity discharge lamps, halogen, mercury vapor or high pressure column as per lamps and emerging technologies like LEDs and induction lamps.

The important factor in the design should be to enhance and direct the light output, make it corrosion-resistant, easy to install and at the same time give full importance to the aesthetics of the luminaries. Properly designed luminaries can increase lux levels. Hence this process, though it starts with engineering must be backed with aesthetics to create a niche in the market and acceptance from designers and specifiers. On the other hand, one can design products using some of the light sources for purely aesthetic and decorative purposes, where the light output is not the primary aim as compared to the look and feel of the product.

Design originates primarily in lighting companies, with in-house designers, who design and develop the luminaries, which have a sound research and technical backing. Independent lighting consultants, who help the designers in choosing the right products and help them to modify existing products and fabricate new products to suit the project needs as well as architects and interior designers, who can design the products with available lamp sources while experimenting with various materials, shapes and forms to create uniqueness for their designs, all push our design frontiers.

Ideally, lighting design should represent the synthesis of human factors, research, technology, photometry and calculation. The designer should provide specific solutions that are energy efficient, easy to maintain, minimally expensive and provide glare-free visibility for the task. The luminaries design should also take care of the other mechanical, thermal and electrical aspects.

The first step in achieving good lighting is to provide enough light, in such a way that it is encouraging for the occupants of the room to use the space as intended. While lighting up a space, one must study the color, shape of space, other materials used and most importantly, the human being and the nature of the usage should be looked into. Even, comfortable lighting helps to produce an atmosphere of efficiency and comfort.

The interior space, the furniture layout, the colors, the artwork and every detail should be consonant with the lighting design. When a designer visualizes the concept for a particular space, lighting design along with other disciplines of design forms an integral part of the overall scheme. It is the proper and efficient use of lighting which can make a space look dramatic and achieve any mood one wants to create.

Lakme Salon

Lighting in an interior is largely determined by the design reflected by the architect to create a visual performance, visual comfort and ambience.

Lakme needed to transform its existing salon into a 'World-class' beauty salon with the range of customers pertinent to the younger generation.

This has been deftly achieved by the implements of vibrant and well-matched brilliant hues of orange, beige, aquamarine and creamy-white! From the reception one is led into the main salon-area. The receptions acts as a welcoming lounge and a retail-outlet for displaying premium Lakme products. The 'Warm' lighting in this area makes one unwind and relax completely which is so important for a visitor to a beauty parlour. A frosted curved glass screen suspended on tension cables separates the reception from the more private areas of the salon. The screen is lit by suspended halogen lamps hidden between the overlap of the Glass screen. This provides sufficient 'Ambient' lighting as also a glamorised glass-screen partition. It may be interesting to note that the 'Reception cum Waiting area has a lighting level of 200 lux achieved through 'Down-lighters' of 2x18W CFL /84 lamps.

The curved wall with visuals and display-boxes is highlighted by the use of 'Curved-straight-backed' spot light luminaires with 12V -50W cool beam closed halogen lamps.

Now 500 lux is what is needed for the 'Hair-cutting' area as well as the 'Facial' room and 300 lux to light up the client's face. To achieve the requirements 2 nos. antiglare, facilitated reflected 'Down-lights' using PL-C26W are recommended. As along side are rectangular-opal-shaped - suspended Glass-Frame used to light up the ceiling and add color-value. Simultaneously it may be interesting to note the 'Hair-wash area is where mirrors also play an important role. Each client has an individual mirror assigned independently with sufficient storage and space for trolley to be provided near each hairstyling station.

Special chairs with not only height adjustments are sea-green in color with back-tilting Facilitation.

From public areas one moves on to the Facial-rooms. Here the rooms are sound-proof and décor soothing. Usage of pastel shades enhances the effect! Each facial room has one 'Down-lighter'with 2 CFL18W/84. Dim lights with an effective 15W candle-light are simulated in the uplighter category.

Throughout the salon 'Brand ' colors of Green and Cream, are carried forward , highlighted with Gold-brass and 'Wood-grained' laminate to compensate the 'Coldness' of green-n-cream. Walls are painted 'Ochre-n-Rust to lend sufficient 'Warmth' to the Salon without seeming over effusive! This puts people at Ease and completes the experience of 'Feeling' and looking 'Beautiful'.

Toilets and passage and Pantry areas have surface mounted Luminaires with diffusers of 1 CFL11W/84 and Minolta type luminaires with 1xTLD36W/84 provided.

Hence Lighting is varied and specifically designed for each activity and provides the right décor and ambience required for a Beauty Salon. Amazing indeed!

ABP Corporate Office

One of our most interesting projects is a corporate office that we recently completed. Here the challenge was to retain an existing lean to roof, which had a considerable ridge height and finished with teak wood boards covering the purlins. To retain the beauty of the roof, it was decided not to cover them with false ceiling, except in small partition to cover some structural members not worth exposing. The large size of the rooms too made the task more difficult and challenging for lighting design to provide efficient and dynamic lighting.

We start with the entrance foyer and reception area, where the effect was achieved by a combination of various types of fittings and fixtures placed so as to not disturb the aesthetics of the ceiling.

In the lobby, a bright welcoming look was achieved by recessed down lights (2XPL -C-18W). As one enters the reception the lighting is provided by suspended direct / indirect T5 / TLD with dark louvers. To light up the surrounding walls, decorative 12volt, 15 watt halogen up and down light fixtures housed in matt finished stainless steel cylindrical wall mounted fittings were used, since one could not use recessed fixtures. Halogen spots were used for picture lighting, and recessed halogen eye-ball fittings were provided in niches for flower or sculpture enhancement.

The two smaller cabin were provided with suspended direct / indirect T5 /TLD luminaries for task lighting. Further to create a feeling of depth and positive-negative spaces, halogen recessed eye ball fixtures and spot lights were used on the periphery.

The Chairman's Cabin required a different approach towards lighting design , in keeping with the room layout, which differed from normal cabin norms. Here, the work table was placed along the wall and due to the gradually reducing height of the sloping ceiling, it was not possible to

provide the suspended direct / indirect lighting used in other spaces. The table was given a task light with a 36 watt P.l. wall bracket with a single directional (downward) beam enclosed in a brushed-steel finish luminaire with dark louvers. Here we had to source an imported fitting to meet the specific need. In this room, instead of at general lighting, the lighting design has been totally task oriented, lighting up areas for specific activities.

The visitors seating area was lit with side table lamps and the wall behind the sofa seating lit up with frosted glass enclosed wall brackets, all fitted with incandescent bulbs and a halogen pictures light.

A free standing up lighter with 150watt halogen with a dimming control was placed between the work table and seating to avoid dark corners and to provide an over all soft glow in the movement space.

The opposite wall of the cabin with its dedicated book shelf was lit up with halogen wall-mounted down lights encased in brushed-steel, cylindrical fittings similar to the ones used in the reception, but with a downward beam. Having achieved the lighting of all major wall surfaces, a glass encased wall bracket with an incandescent bulb was provided on the column, to light up the wooden ceiling. This also helped in giving an overall glow for the entire room, along with the free standing uplighter.

To make one feel welcome while entering the room, a spot light was fixed on the teak wood truss at an appropriate height to focus the light on the opposite wall surface and brighten up the entry space. By this method of lighting, the ceiling was left totally untouched and uncluttered. Though incandescent and halogen are not very energy efficient, the quality of light these produce are unmatched by any other light source. Since very few light fixtures were used, the cost of energy was cut down drastically. Moreover care was taken to use very good quality transformer and dimmers to improve the efficiency of the lamps.

The same principle was followed in the Board-Room. On the board room table, combination lighting was achieved by using TL /TLD direct / indirect light with dark louvers and halogen down lights working on dimmers as part of the design theme to be used during presentations on screen or television viewing.

A partial false ceiling was provided in certain areas to cover up unwanted structural elements and here recessed down lightings of 2xPL-C-18W have been used for general lighting. Halogen eyeballs were used to light up plain wall spaces and to avoid dark corners.

The terrace which is visible from the executive room and the board room was lit up with simple wall brackets with frosted glass covering and bulk head fittings commonly available. These were placed discreetly amongst the greenery at a low level. Though very inexpensive and simple light fixtures have been used in the terrace, it still creates a dramatic effect.

The creative use of minimal light sources and fixtures, easily available in the local market, helped achieve very sophisticated, warm and welcoming spaces.

In conclusion, a word on market realities :

Today the market is flooded with fittings from the Far-East to Europe. Indian fittings are not often available for specialized needs, leading one to sources from the imported market (lower end products from the Far East and exclusive requirements from Europe.)

The world has come closer than ever before with the exchange of technologies and ideas, and there is a demand for creating world class spaces, be it office, commercial, retail, hospitality or other new economy services. The awareness among the customers is caused by globalization. The need for advanced technology infused with aesthetic and creativity has become important.

It has become a necessity for the major corporates to create their own image and identity with large budgets allocated to creating their corporate logo and image.

The lighting companies may specialize in making better and smarter products everyday. Clients and users have become more discerning and are interested in educating themselves about every aspect of design. This makes it easier for the designer to efficiently use technically advanced products.

Ultimately, the onus is on the architects, interior designers and lighting designers to choose the right kind of luminaire, the right lamp source and use it effectively to fit in the overall theme of design without compromising on the technical aspects.

Ar. Rohini Mani
(ISLE Governing Body Member)
Rohini Mani Associates
Mumbai

Continued from page 12

Retail Lighting

Retail lighting is one of the key energy guzzlers. Lighting Companies, Designers and ESCO's are all today contributing to this area of lighting with inputs on product display.

Usage of natural lighting, efficient-localised and remote control, and various types of lighting architecture will be highlighted. Vision 2010 has on its panel experts who would be presenting the best practices in retail lighting.

Airport and Sea Port Lighting

To keep pace with the rapid development in India the Government has plans to build the infrastructure. It has budgeted to improve all ports and on priority 36 Ports have been earmarked for expansion. Also several existing Airports are being modernised and expanded. Many more new locations are on the anvil.

Vision 2010 is a platform that brings together lighting experts from different countries to share and discuss the recent scientific advances and applications in the Industry. The conference focuses on Energy saving and developing solutions for major environmental issues to bring home the fact that, with the proper application of the technology and management, the same standard of Lighting can be provided for the various applications with less energy and with reduced adverse impact on Environment. While the concept of Green Building focuses on the Energy and Environment issues, the broad approach loses coverage in depth. Here the aim is to cover the selected field of Lighting in greater depth.

Exhibition

Bangalore is the hub of IT, Biotech and other research and development based industrial activity. The Government has taken up major infrastructure development activity including Airports at various Cities and Metro rail projects on high priority. It is the right time for lighting companies to participate in the Exhibition and to showcase their products and expertise in the field of lighting.

More than 400 delegates are expected to attend the Conference. They will include leading Architects, Consultants, Electrical Engineers, Government Departments, Public and Private Sector Industries, etc. It is planned to bring all such stake holders to the Exhibition site.

Please note that there are now only 20 stalls available and allocation will be done on a first come basis.

For a glow like the Sun,

choose any one...

UNIFORM

VENTURE LIGHTING

An Advanced Lighting Technologies Company-USA

Metal Halide Systems

Lamps • Ballasts • Ignitors • Luminaires
• Colour Lamps • Integrated Ballast System (IBS)

International Approvals

VENTURE LIGHTING INDIA LTD.
Plot No. A30 & D5, Phase II, Zone B, MEPZ, Tambaram,
Chennai 600 045, India. Tel. : (044) 2262 5567 / 2262 3094,
Fax : (044) 2262 5569, E-mail : baranee@vlindia.com,
Website : www.venturelighting.com

MAM/HQA 5364

Directory

Vision 2010 will be publishing a Directory of Professionals (Architects, Lighting and Energy Consultants, Landscape Designers, Interior Decorators, Electrical Contractors, Manufacturers, Dealers and Distributors).

For further information on the Conference, stall bookings and Directory advertising, please contact

Secretary
ISLE Karnataka State Centre
194 Natakarathna Gubbiveeranna Road
Seshadripuram Circle, Seshadripuram
Bangalore 560 020
Tel: 080 23460421/9341231755
secretary@islek.in and isleksc@gmail.com
www.isle-karnataka.org

The Event is sponsored by GE (Lead Sponsor), Crompton Greaves (Platinum Sponsor), PHILIPS (Gold Sponsor), and Bajaj Electricals, K'lite, Venture Lighting, Light Form Marketing, Nichia, KPTCL and BESCOM (Silver Sponsors).

Further the Event is Supported by the Government of Karnataka - Ministry of Energy, Bruhat Bangalore Mahanagar Palike, Bureau of Energy Efficiency, International Council of Consultants, ELCOMA and CPWD.

CIE ACTIVITY

Maintaining the Technical Excellence of CIE Publications

The reputation of the CIE as the world's authority on the art and science of light and lighting relies very heavily on the quality of the technical reports that are produced. This reputation will clearly be badly damaged if the high quality of these reports is not maintained, but it can also be undermined if reports are seen as being out-of-date or not relevant in terms of the latest scientific or technological developments. We therefore need to tread a careful line between producing reports in a timely fashion, to address emerging as well as more well-established needs, and ensuring that they are of the highest possible technical standard. Equally, it has to be recognised that those researchers, scientists and engineers working in the various Divisions to write these reports do so on an entirely voluntary basis, often in their own time. This band of volunteers needs to feel their contributions are properly valued, and that they have a real impact.

With all these points in mind, the CIE Board has been considering how best to ensure that the expertise that is available within the Divisions is used as effectively as possible. Discussions within the Board and the Divisions have highlighted two specific issues that often adversely affect the progress of work within the Technical Committees (TCs):

1. Difficulties in obtaining timely input from TC members during the drafting and commenting stages of report preparation

2. Large non-member attendance at TC meetings when these are held in conjunction with other meetings, particularly annual Division meetings

Point 1 is due to the fact that TC members work on volunteer basis and have many demands on their time. If TCs are to increase the speed and efficiency with which they carry out their work, it is essential that all members have a keen sense of commitment and a clear role to play within the Committee. Point 2 is in some senses to be welcomed, since it results in sharing of ideas between different areas of expertise and encourages inputs from a wide range of experts, but it can also cause problems, in particular: (a) time is often spent going over ground that has been previously discussed and agreed within the TC, so that the TC meetings then do not move forward the work of the TC and (b) many of those attending the meeting as observers (i.e. non-TC members) express a wish at the meeting to join the TC; if all these requests are accepted, the membership list can quickly become unmanageable, again slowing TC progress.

New guidelines have therefore been produced outlining requirements for membership of TCs and attendance at TC meetings which, it is hoped, will help TCs to achieve their goals and ensure that all members of the CIE family work together even more effectively. They are intended to assist TCs in their work, by making sure that the members of the TC collectively provide an appropriate and sufficiently comprehensive level of knowledge and experience for the topic under consideration, that each member has a clear task or tasks to undertake within the Committee, and that they are all fully committed to ensuring that the work progresses as quickly as possible. They are not intended to stifle debate or restrict the ability of members to participate in the work of the CIE.

These guidelines can be obtained from your Division Director or your NC. They will no doubt evolve over time, so please let me know if you have any comments or ideas about how to improve them further.

Teresa Goodman
Vice-President Publications
(teresa.goodman@npl.co.uk)

New TC

The following new TC was established:

TC 5-27: Artificial Light and its Impact on the Natural Environment

Chair: Scott Davis, US

Terms of Reference: To develop a Technical Report which will provide guidance on ways to minimize the effects of artificial lighting on the natural environment, including impacts on flora and fauna. This would be accomplished by making recommendations on light levels, spectral distributions, and other specific considerations of a broad range of organisms as well as specific habitats.

CIE PUBLICATIONS

CIE Draft Standard DS 014-5.2/E:2008 Colorimetry - Part 5: CIE 1976 L*u*v* Chromaticity Scale Diagram

The three-dimensional colour space produced by plotting CIE tristimulus values (X,Y,Z) in rectangular coordinates is not visually uniform, nor is the (x,y,Y) space nor the two-dimensional CIE (x,y) chromaticity diagram. Equal distances in these spaces and diagrams do not represent equally perceptible differences between colour stimuli. For this reason, in 1976, the CIE introduced and recommended two new spaces (known as CIELAB and CIELUV) whose coordinates are non-linear functions of X, Y and Z. The recommendation was put forward in an attempt to unify the then very diverse practice in uniform colour spaces and associated colour difference formulae. Both these more-nearly uniform colour spaces have become well accepted and widely used. Numerical values representing approximately the relative magnitude of colour differences can be described by simple Euclidean distances in the spaces or by more sophisticated formulae that improve the correlation with the relative perceived size of differences. The purpose of this CIE Standard is to define procedures for calculating the coordinates of the CIE 1976 L*u*v* (CIELUV) colour space and the Euclidean colour difference values based on these coordinates. The standard also defines a related chromaticity diagram that is a projection of the CIE x,y diagram maintaining straight lines of dominant and complementary wavelengths. The standard does not cover the alternative uniform colour space, CIELAB, nor does it cover more sophisticated colour difference formulae based on CIELAB, such as the CMC formula, the CIE94 formula, the DIN99 formula, and the CIEDE2000 formula.

The draft standard has been sent to CIE National Committees for comments and sales to interested parties. It is still subject to changes and may not yet be referred to as a CIE Standard. When approved by the CIE NCs, it will be published as a CIE Standard and later on as a joint ISO/CIE standard.

Definition of the Cut-Off of Vehicle Headlights, August 2008

CIE 183:2008

A precise objective definition of low-beam visual cut-off is necessary, since a requirement for correct aiming of these beams is specified within all the existing regulations.

At present, aiming of low-beam headlamps is performed visually in Europe and USA (since 1997), using the cut-off line in the beam pattern.

A good definition of a visual cut-off is required to allow uniformity in interpretations.

This report provides a survey of studies into low beam visual cut-off that have been carried out in Europe and North America. Based on these studies, a recommendation is made for the definition and measurement of the cut-off line of a low-beam headlamp by photometric means.

The publication is written in English, with a short summary in French and German. It consists of 19 pages with 6 figures, and is readily available at the National Committees of the CIE or via the website of the Central Bureau of the CIE (www.cie.co.at).

The price of this publication is EUR 38,-- (Members of the National Committees of the CIE get 50% discount).

Joint ISO/CIE Standard ISO 30061:2007(E)/S 020/E:2007

This standard specifies the luminous requirements for emergency lighting systems installed in premises or locations where such systems are required. It is principally applicable to locations where the public or workers have access. The primary objective of emergency lighting is the provision of visual conditions that can alleviate panic and facilitate safer evacuation of buildings' occupants during the failure of normal power supply/lighting, in clear (non-smoke) and smoke filled conditions. The emergency lighting scheme design should be based on worst conditions (e.g. minimum light output, maximum glare limits) of the luminaires during operating life. The requirements given in this standard are a minimum for design purposes and are calculated for the full rated

duration period and end of design life of the equipment. A special chapter for smoke is included. Safety signs may also fulfill further functions within maintained operation.

This standard has been approved by CIE and ISO.

FORTHCOMING EVENTS

Nordic Lighting + Design Conference
October 1-3, Helsinki, Finland

The Nordic Lighting + Design Conference continues the tradition of lighting conferences organised by the illuminating engineering societies of the Nordic countries. This year they are aiming for a wider multidisciplinary audience and a fascinating additional program on top of the highly-professional conference sessions.

nL+Dc is held in close collaboration and at the same time as Helsinki Design Week and Designpartners happenings concentrating this year on light and lighting. This gives the conference participants a great possibility to join the events organised by HDW and DP. See www.helsinkidesignweek.com and www.designpartners.org.

The conference presentations are divided in three broad categories:

Lighting and Art:

Presentations dealing with Light and space, Lighting and architecture, Art of lighting, Lighting art, Lighting design philosophy and methodology, Light and luminaires

Lighting and Science:

Presentations dealing with Physiological and psychological effects of lighting, Sustainable design and lighting solutions, Technological innovations

Pecha Kucha:

Lighting design case studies in addition to personal lighting and design visions presented in Pecha Kucha - format. More information: www.pecha-kucha.org

Contact: heikki.harkonen@valosto.com
General Information
Conference, 1-3 October 2008
Kaapelitehdas - Cable Factory, Tallberginkatu 1, Helsinki, Finland
www.kaapelitehdas.fi
Helsinki Design Week, 25 September - 6 October 2008
www.helsinkidesignweek.com
Designpartners, 1-3 October 2008
Kaapelitehdas - Cable Factory, Tallberginkatu 1, Helsinki, Finland
www.designpartners.org

for further information and registration contact:
E-mail: heikki.harkonen@valosto.com
www.valosto.com
See also
www.lyskultur.no
www.ljuskultur.se
www.centerforlys.dk
www.ljosfelag.is

Illumination Modeling: Simulation and Perception of Lit and Unlit Objects (IM)
October19-23, 2008, Rochester, New York, USA

The Illumination Modeling: Simulation and Perception of Lit and Unlit Objects Topical Meeting brings together communities such as lighting, computer graphics, color technologists, optical designers, light sources and virtual reality toward the common goal of design, production and understanding of ambient lighting and a lit model's appearance.

The conference will cover the following areas:

- Simulation of ambient lighting and rendering of lit scenes and objects.
- Applications in virtual reality and animation.
- Human factors in lighting and lighting perception.
- Aesthetic design for buildings.
- Light sources for architectural and vehicular lighting.
- Optical design for lighting applications and non-imaging optics.
- Material properties of paints and other optical surfaces and volumes.
- BSDF modeling, measurement and application.
- Color in lighting applications.

Invited Papers

- The Visual Computing of Projector-Camera Systems, Oliver Bimber; Bauhaus Univ. Weimar, Germany
- Vision at Mesopic Light Levels, Alan L. Lewis; New England College of Optometry, USA
- An Overview of the Non-Visual Effects of Retinal Light Exposure, M. S. Rea and M. G. Figueiro; Rensselaer Polytechnic Inst., USA
- Utilizing BTDF Window Data, Greg Ward; Anyhere Software, USA
- An Examination of Scatter Models Used in Software Simulation for Automotive Lighting Applications, Dianna Stadtherr; North American Lighting, USA

For further information, please contact:
Customer Service cust.serv@osa.org
Phone: +1 202 416 1907 or 800 723 4632
Fax: +1 202 416 6140

MATELEC '08
International Exhibition of Electrical and Electronic Equipment

October 28 - November 1, 2008, Madrid, Spain

MATELEC will take place between 28 October and 1 November 2008 at Feria de Madrid One of the main objectives of the lighting and illumination industry, which will be represented at the International Exhibition of Electrical and Electronic Equipment, MATELEC´08, is to comply with the latest European Directives regarding products and facilities, as a condition to operating on the market.

Today, technological developments and the increasingly high demands of the market call for measures to protect industrial and intellectual property, especially in view of the threats that various companies that form part of ANFALUM are suffering.

In this respect, ANFALUM staged a trade meeting at Feria de Madrid in order to identify the factors that underlie unfair trading practices and to establish a code of good conduct among its member companies.

The International Exhibition of Electrical and Electronic Equipment has maintained its strong commitment to the industry for a number of years now, with a view to combating and denouncing industrial piracy, whilst establishing good business practices, both within the lighting and illumination sector, and in the rest of the sectors represented at the fair, such as electrical energy, electrical installation technology, inter- and telecommunications, electronics and industrial equipment.

For further information, please contact:
MATELEC
attn. D. Yolanda Cruz
matelec@ifema.es
fax: +34 91 722 57 91
matelec@ifema.es

Lux Pacifica 2009
Light without borders!

April 23-25 2009, Khabarovsk, Russia

LUX PACIFICA 2009 will be organized by the Illuminating Engineering Society of Russia. It is an open conference in which all countries are invited to participate. The national Russian lighting conference will be held in conjunction with Lux Pacifica between 22-24 April 2009.

Main subjects of the conference are

Fundamental of lighting and daylighting

- Vision and Colour
- Energy Efficiency
- Outdoor and Indoor Lighting
- Light and Health
- Light and Architecture, Lighting Design
- Lighting Fixtures
- Sources of Light and Control Systems
- LEDs and their application
- Irradiation Systems
- Light Measurements
- Standards of Lighting
- Optical devices, sensors and displays
- Radiometric or optical properties of materials

Registration is open at www.svetotech.com since 1 March 2008.

For further information, please contact:
Illuminating Engineering Society of Russia
106, Prospect Mira,
129626, Moscow, Russia
Tel.: +7 495 687 63 11, 007 495 682 27 28
Fax: + 495 687 62 90
LuxPacifica2009@yandex.ru
www.svetotech.com

Light and Lighting with special emphasis on LEDs and Solid State Lighting

May 27 to 29, 2009, Budapest, Hungary

This conference will be organised jointly by CIE Hungary, the Lighting Society of Hungary and the University of Pannonia.

The Conference will feature Invited Papers and individual contributions. Contributors will have the opportunity to introduce their main results in oral sessions and conduct detailed discussions at Posters.

The goals of the meeting are:

To bring together illuminating engineers dealing with

- all aspects of light and lighting with emphasis on
- solid state lighting
- theory and application of LEDs in lighting and signalling
- medical aspects of light with emphasis on LED lighting
- colour aspects of modern light sources

As 2009 is the International Year of Astronomy special accent should be given to lighting that seeks to preserve energy and provide a better view of the environment.

This meeting is open to all participants. To insure adequate space and support, and to allow distribution and adequate review of relevant documents, prior

registration is required. The format of the meeting will include Invited and Contributed Papers as well as Posters. Ample time will be available for round-table discussions and demonstrations.

Authors are invited to submit a one page abstract of their proposed contribution in English no later than 31 January 2009 by filling in the Submission Form at the WEB site:

CIE-HUNGARY.HU
or by mail e-mail to:
kntsj@almos.vein.hu
or by mail to
CIE - Hungary,
Árpádút. 67. H-1042 Budapest, HUNGARY

An early registration fee of EURO 360 is available for those who register before 15 March 2009. Late registration will be EURO 420. Due to limited space at the meeting early registration is recommended. Registrations will be handled on a first come - first served basis.

For further details please visit:

the WEB site of the Conference: CIE-HUNGARY.HU CIE administrative meetings (Board of Administration and its subcommittees, General Assembly) will be held prior the Conference Several CIE Divisions and Technical Committees will have their 2009 meeting after the Conference on 1 to 3 June, 2009.

WEBWATCH

LRC to Host LED Lighting Institute September 23-25

Rensselaer Polytechnic Institute's Lighting Research Center (LRC) will hold a three-day, hands-on seminar September 23-25, to teach industry professionals how to incorporate LEDs into lighting applications.

The LED Lighting Institute will include updated technical content based on the latest industry developments.

Through workshops and lab sessions, participants learn the basics of LED technology while building an understanding of LED system integration issues involving the electrical, optical, and thermal characteristics of LEDs.

Participants also learn how to measure and evaluate LEDs and LED systems, and have the opportunity to compare LED technologies from a variety of manufacturers. The program culminates with the participants designing, building, and evaluating their own LED fixtures.

LRC experts work side-by-side with LED Lighting Institute participants in a small-class setting designed to help them learn more about this quickly evolving lighting technology.

The program is designed to have participants choose and evaluate all necessary LED system components including heat sinks, LEDs, and drivers from a variety of manufacturers. Then participants will have the opportunity to compare the systems side-by-side, examining the thermal, photometric, and color properties for each system.

More than 500 people from around the globe have completed the course to date.

The program is held in the spring and fall of each year, and enrollment is limited to 30 students.

Link:

http://www.lrc.rpi.edu/education/outreachEducation/LEDInstitute.asp

---

The Social and Economic Need to Standardize Lighting

By Georges Zissis and Stuart Mucklejohn, Université Paul Sabatier - Toulouse III, France, Laboratoire des Plasmas et de Conversion de l'Energie (LAPLACE)

Editor's note: This article is based on the winning contribution submitted to the IEC Centenary Challenge, a competition open to academia on the theme "Consideration of the economic, business and social impact of the development and use of International Standards for end-users at any level of business activity."

The lack of standardization in the area of Human Mesopic Vision affects the development of innovative light sources, particularly in urban lighting systems, which enhance security and improve the quality of life in built up areas. Developing relevant international standards in this field can play a significant role in economizing energy and contributing to sustainable development.

Standards affect every part of our life. Hundreds of them play an important role in ensuring that products, services and systems meet our needs; both in terms of functionality and protection. For example it is standards which guarantee that electrical products, such as lighting systems, are energy-efficient and safe to use. Sometimes even, standards that serve to protect public safety and health become mandatory and they are included in national or international laws and regulations. Nevertheless, there are still a number of areas where standards are cruelly lacking. This can slow down, or in

some cases even stop new product development and associated business.

You can read more about :

Mesopic Vision
Lack of standards in the area of urban lighting
The effect of the lack of standardization for mesopic conditions
The advantages to having new standards
Reducing energy consumption
New lighting can save energy
Lighting can improve road safety
Pilot street lighting system in France

at this link :

http://www.iec.ch/online_news/etech/arch_2007/etech_1207/focus.htm

The full version of the winning paper to the IEC Centenary Challenge is available from www.iecchallenge.org.

http://www.iecchallenge.org/

___

Light Looms Larger in an Energy-Conscious World

"The search for greater energy efficiency is a main driver of changes to lighting standards and patterns."

"The conversion of electricity into useful light is one of the least efficient energy conversion processes in buildings today. Advanced lighting technologies can significantly improve the energy efficiency of lighting and reduce building energy consumption and costs."

Living as our ancestors lived seems sometimes to offer distinct appeal. Early to bed, and rise with the lark. Theirs was not a world lit by electric power. Instead they had sputtering tallow candles with their associated smell and grease. On second thought, it is much easier to flick that light switch...

Today we have gone to the other extreme: it often seems as if one can never escape from light. Even in the middle of the night, there are few places on Earth where it is truly dark. It's unlikely that you live in one of them. Wherever you are, even in the middle of the country, you are still likely to see the loom of lights from a nearby town or village.

Astronomers despair : the stars get harder and harder to discern against this background of light. Light pollution can also disrupt the natural breeding and development of animals and vegetation. On the other hand, town-dwellers may feel safer. Various studies have demonstrated that lighting reduces the incidence of crime.

Although there are "no specific legislative controls on light pollution", according to a guidance note issued by the Scottish Government, various governments are adding or considering adding artificial light pollution to the list of statutory nuisances. The UK's Institution of Lighting Engineers Annual Conference in 2006 demonstrated that close cooperation between planners and local lighting engineers is helping to reduce light pollution in the United Kingdom .

To read more on :
Increasing energy efficiency
Commercial concerns...
...versus domestic ones
Street lighting
LED technology

visit the IEC web site at this link :

http://www.iec.ch/online_news/etech/arch_2008/etech_0708/technology_1.htm?mlref=etech

___

Commercial Lighting Solutions: Free Web Tool Under Development

Soon, professionals who design commercial buildings will have an interactive website at their fingertips to provide "how to" guidance about ways to improve their interior lighting efficiency and reduce energy consumption for a saving of 30% or more.

The design guidance will be available for free.

Commercial Lighting Solutions will be delivered through a web tool that provides energy savings projections to users based on their choices.

The tool gathers information from users on building type and space description, then allows users to select their preferred lighting solution.

Solutions include performance specifications for lighting equipment and controls, design layouts and supporting documentation. It includes detailed technical information in performance specification language, geared toward the architectural and engineering audience.

The tool will also link users to participating utilities, where applicable, to access rebates and incentives.

A project of the Building Technologies Program at the U.S. Department of Energy, the Commercial Lighting Solutions team is currently gathering feedback on its beta web tool and making changes. A user interface is being designed to capture actual project information.

When it is ready, users of the Commercial Lighting Solutions web site often will have a choice of several design

vignettes and lighting control strategies that suit parameters they input for their project.

A solution can be implemented as shown, or it an be used as a starting point for a design that is refined to serve particular corporate branding, architectural or business objectives.

Modeled results for each solution included on the web site must show decreased energy consumption of 30% or greater below a baseline design. Some of the solutions have achieved modeled savings of 50% or more.

To check on progress, go to the Office of Energy Efficiency and Renewable Energy's website.

LINK:

http://www1.eere.energy.gov/buildings/alliances.html

DOE Releases Results from Round 5 of SSL Product Testing

The U.S. Department of Energy (DOE) has completed Round 5 of product testing through the DOE Solid-State Lighting (SSL) CALiPER program. A Summary Report containing the results from Round 5 testing is now available for download on the DOE SSL website at:

http://www.netl.doe.gov/ssl/comm_testing.htm

The Department allows detailed test results from CALiPER testing to be distributed in the public interest for noncommercial, educational purposes only. Round 5 detailed test reports covering downlights, linear replacement lamps, A-Lamp and MR16 replacement lamps, desk/task lamps, undercabinet lighting, and outdoor lighting are now available. To streamline the request process for detailed test reports, DOE now provides the reports directly through a searchable on-line system:

LINK:

http://www.netl.doe.gov/ssl/caliper_search.html.

MEMBERSHIP APPLICATIONS APPROVED BY GOVERNING BODY

Members admitted on 9th January inadvertently omitted in the April 2008 issue of the Newsletter

M. No.	Name & Addresses	Grade	Centre
I.0127	M/s Shri Govindam UG-4, Shekawatt Complex Station Road Jaipur Rajasthan	Institutional	Delhi
IM.0127	Mr. Sachin Goyal M/s Shri Govindam UG-4, Shekawatt Complex Station Road Jaipur (Rajasthan)	Institutional Representative	Delhi
I.0128	M/s Harsham Industries 21, Jai Jawan Colony-Ist Tonk Road Jaipur Rajasthan	Institutional	Delhi
IM.0128	Mr. Peeyush Garg Harsham Industries 21, Jai Jawan Colony-Ist Tonk Road Jaipur Rajasthan	Institutional Representative	Delhi
I.0129	M/s Globus Lamps 60, Jawahar Park Saharanpur 247001	Institutional	Delhi
IM.0129	Mr. Shiv Talwar Globus Lamps 60, Jawahar Park Saharanpur 247001	Institutional Representative	Delhi
I.0130	M/s VLM India Pvt. Ltd. B 215 & 216 Somdatt Chamber 1,5, Bhikaji Cama Place New Delhi 110 017	Institutional	Delhi
IM.0130	Mr. Rohit Kapoor M/s VLM India Pvt. Ltd. B 215 & 216 Somdatt Chamber 1,5, Bhikaji Cama Place New Delhi 110 017	Institutional Representative	Delhi
I.0131	M/s Venkateshwara Controls 589/3/17 Near Hanuman Mandir Shivaji Nagar Gurgaon -122 001	Institutional	Delhi
IM.1031	Mr. Hemendra Pratap Singh M/s Venkateshwara Controls 589/3/17 Near Hanuman Mandir Shivaji Nagar Gurgaon -122 001	Institutional Representative	Delhi
F(L).0585	Mr. Akhilesh Kumar Jain 93/9, Tulsi Marg Vijay Path Mansarovar Jaipur	Fellow	Delhi
F(L).0586	Mr. Mohammad Ilyas E E PWD Elect Circle Jaipur 662 Ram Nagar Shastri Nagar Jaipur	Fellow	Delhi
F(L).0587	Mr. Praveen Kumar Jain A-2, Sri Ram Sadan Kherali Phatak Kota	Fellow	Delhi
F(L).0588	Mr. Prabhakar Sharma Assistant Engineer B-19, Sukhdham Colony Bara Road Police Line Kota	Fellow	Delhi
F(L).0589	Mr. Shyam Sharma A-604, Indra Vihar RIICO Kota, Rajasthan	Fellow	Delhi
F(L).0590	Mr. Jagat Singh Meena G-73, Bajaj Nagar Apartment Gandhi Nagar Jaipur	Fellow	Delhi
F(L).0591	Mr. Brij Mohan Gupta B-48, Natraj Nagar Imliwala Fatak Jaipur	Fellow	Delhi
F(L).0592	Mr. Amit Kakkar 152/58 Shipra Path Mansarovar Jaipur	Fellow	Delhi
F(L).0593	Om Prakash Gupta A-11, Madhuwan Colony Tonk Road Jaipur	Fellow	Delhi

F(L).0594	Mr. R. P. Meena 492 Vivek Vivar Colony Laxman Path New Sanganer Road Sodala Jaipur	Fellow	Delhi
F(L).0595	Mr. Pramod S Mathur E-111 VIT Colony Jodhpur	Fellow	Delhi
F(L).0596	Mr. Santosh Sharma III/75 Gandhi Nagar Jaipur Rajasthan	Fellow	Delhi
F(L).0597	Mr. S .V. Saxena 15/53, GAD Appartment Malviya Nagar Jaipur	Fellow	Delhi
F(L).0598	Mr. Radha Gopal Jhalani A-185, Nehru Nagar, (Pani Panch) Jaipur	Fellow	Delhi
F(L).0599	Mr. Anil Kumar Sahu 694, Devinagar New Sanganer Road Jaipur	Fellow	Delhi
F.0600	Mr. Ravi Agarwal G1/11, LIC Flats Sector#2, Vidyadhar Nagar Jaipur 302 023	Fellow	Delhi
F(L).0601	Mr. Ramesh Mathur 669-A, Vidyut Nagar -A Queens Road Jaipur	Fellow	Delhi
F.0602	Mr. Swapan Kumar Chatterjee Qr.No; E-11, Shyamali Colony P.O. Doranda Ranchi 834 002 Jharkand	Fellow	Calcutta
F(L).0603	Mr. Shashi Bhushan Prasad NE.4, Crescent Tower South Office Para Doranda Ranchi 834 002	Fellow	Calcutta
F(L).0604	Mr. Neel Kamal C-17/1, Shyamali Colony Doranda Ranchi 834 002	Fellow	Calcutta
F(L).0605	Mr. Arun Gupta 84 Apna Ghar Society Pitampura, Near M2K Delhi 110 034	Fellow	Delhi
F(L).0606	Mr. Chaman Lal Jindal Chief Engineer(Elect) New Delhi Muncipal Council Palika Kendra 17th Floor Sansad Marg New Delhi 110 001	Fellow	Delhi
F(L).0607	Mr. Udai Singh Katiyar F-1, 22C MIG Flats Hari Nagar New Delhi	Fellow	Delhi
M(L).1324	Mr. Ashok Avasthi 29, Kanak Vihar, Ajmer Road Jaipur	Member	Delhi
M(L).1325	Indra Kumar Gupta AB-377, Nirman Nagar Ajmer Road Jaipur	Member	Delhi
M(L).1326	Pramod Kumar Kashyap F-9, 424. Chitrakoot Nagar Yojana Jaipur	Member	Delhi
M(L)1327	Mr. Yash Kant Gaur III 95, Gandhi Nagar Jaipur	Member	Delhi
M(L).1328	Mr. Dinesh Kumar Gupta AB-342 Nirman Nagar Near Sadguru Apartment Ajmer Road Jaipur Rajasthan	Member	Delhi
M(L).1329	Mr. Vinay Arya A-104, Sri Nath Estate MBS Nagar Station Road Kota	Member	Delhi
M(L).1330	Mr. Pradeep Chandiramani M/s National Enterprises 300 Vinoba Vihar Malviya Nagar Jaipur	Member	Delhi
M(L).1331	Mr. Bajrang Singh 68, Vrindavan Colony Jhotwara Jaipur 302 012	Member	Delhi
M(L).1332	Mr. Deepak Kumar Kumawaj Plot no.6, L N Nagar Gandhi Path (West) Heerapura Jaipur 302 024	Member	Delhi
M(L).1333	Mr. M.L Meena F-93, Gandhi Nagar Jaipur	Member	Delhi
M(L).1334	Mr. Ajay Mathur PWD Electrical Div. Ajmer Ajmer Rajasthan	Member	Delhi
M.1335	Mr. Prakash Gupta M/s New Light Engineers S-4(A), Prem Complex Opp. Laxmi Mandir Cinema Tonk Road Jaipur 302 015	Member	Delhi
M(L).1336	Mr. Kailash Bansal C/o Havells India Ltd. 430-431,Ganpati Plaza M. I. Road Jaipur	Member	Delhi
M(L).1337	Mr. Rajesh Jain 64, Goverdhan Colony New Sanganer Road Sodala Jaipur Rajasthan	Member	Delhi
M(L).1338	Mr. Sandeep Mathur E-173, Ramesh Marg C-Scheme Jaipur	Member	Delhi
M(L).1339	Mr. Deepak Kumar Mittal 490A, Barkat Nagar Jaipur	Member	Delhi
M(L).1340	Mr. Desh Raj Verma 104/63, Pratap Nagar Sanganer Jaipur	Member	Delhi
M(L).1341	Mr. Anurag Saxena 86/127, Sector-8 Pratap Nagar Sanganer Jaipur	Member	Delhi
M(L).1342	Mr. Jitendra Kumar Dhaka A-191, Shiv Nagar (Near Lal Dibba) Murlipura Scheme Road Jaipur	Member	Delhi
M(L).1343	Mr. Kalyan Kumar Basu Midland Engineering Company 11/1B Ekdalia Place Flat No.501 Kolkata 700 019	Member	Calcutta
M(L).1344	Mr. Tushar Kanti Biswas 1/21, Dakshin Baksara Road P.O. Baksara Dt. Howrah Kolkata 711 110	Member	Kolkata

M.1345	Mr. Sairam Rajaram No.51/26, First Main Road West Shenoy Nagar Chennai 600 030	Member	Chennai
M(L).1346	Mr.Hamir Bhagwan Sampat Samson Lighting Pvt. Ltd. No. 140 Sydenhams Road Periamet Chennai 600 003	Member	Chennai
M(L).1347	Mr. Y R Dhingra A-8, Double Storey Kalkaji New Delhi 110 019	Member	Delhi
M(L).1348	Mr.Anand Mohan Shah 4/26, Shri Ram Nagar G.T Road, Shahdara Delhi 110 032	Member	Delhi
A(L).0932	Mr. Manish Kumar Jain 216, Arjun Nagar Durgapura, Tonk Road Jaipur, Rajasthan	Associate	Delhi
A(L).0933	Mr. Sushant Nigam M/s Bajaj Electricals Limited Raghu Kamal Niwas Opp. Ganpati Plaza M.. I. Road Jaipur	Associate	Delhi
A(L).0934	Mr. Vipul Sharma M/s Bajaj Electricals Limited Raghu Kamal Niwas Opp. Ganpati Plaza M. I. Road Jaipur	Associate	Delhi
A(L).0935	Mr. Anubhav Jain M./s Jainsons Electronics 1934 Opp. Fountain Chandni Chowk Delhi 110 006	Associate	Delhi

Members admitted on 9th May 2008

I(L).0132	Sabic Innovative Plastics India Pvt. Ltd. 781, Solitaire Corporate Park Andheri Ghatkopar Link Road Chakala Andheri East Mumbai 400 093	Institutional	Mumbai
IM(L).0132	Mr. Anand Verma Sabic Innovative Plastics India Pvt. Ltd. 781, Solitaire Corporate Park Andheri Ghatkopar Link Road Chakala Andheri East Mumbai 400 093	Institutional	Mumbai
F(L).0616	Mr. Shekhar Bajaj Bajaj Electricals Ltd. 2nd Floor, Mulla House 51 E, M. G. Road Fort Mumbai 400 001	Fellow	Mumbai
F(L).0617	Mr.Ramamurthi Ramkrishnan Bajaj Electricals Ltd. 45/47 Veer Naiman Road Mumbai 400 001	Fellow	Mumbai
F(L).0618	Mr. Bhavesh Mehta Reliance Retail Limited Block 3B Ist Floor, Reliance Corporate Park Thane Belapur Road Chansoli Navi Mumbai 400 701	Fellow	Mumbai
M(L).1360	Mr. SS Ravi Kumar Pingali CPWD O/o The Assistant Engineer (E) CPWD G/F, C-11, Income Tax Building Bandra Kurla Complex Mumbai 400 051	Member	Mumbai
M(L).1361	Mr. Abdul Moid ERTL(W), STQC DTE Plot F7, F8 Opp. SEEPZ MIDC Marol Area Andheri (E) Mumbai 400 093	Member	Mumbai
M(L).1362	Mr. Bansraj Laxman Nayak ERTL(W), STQC DTE Plot F7, F8 Opp. SEEPZ MIDC Marol Area Andheri (E) Mumbai 400 093	Member	Mumbai
M(L).1363	Mr. Datta Sampatrao Chavan Bharati Vidyapeeth University College of Engineering Dhanakawadi Pune 411043	Member	Mumbai
M(L).1364	Mr.Ramchandra Balaji Pode C/o Dr. R B Pode Deepali 401 Tirumala Co.op Hsg. Society 11 Farmland Layout Ramdaspeth Nagpur 440 012	Member	Mumbai
M(L).1365	Mr. Mukund Mahadeo Ambre 101/ A-Wing, Gangatori, Shivdham Complex Vrindavan Road, Nr. Shailendra Police Chowky & Highway Dahiser (E) Mumbai 400 068	Member	Mumbai
M(L).1366	Mr. Mukesh Hargovindas Panchal C-6, Ground Floor Bonanza Ind. Estate Ashok Nagar Near Bank of Baroda Kandivali (East) Mumbai 400 101	Member	Mumbai
M(L).1367	Mr. Rajesh Kuvelkar H.No.105/I/2, Behind R.T. O Barebhat, Arlem, Raia Salcete Goa	Member	Mumbai
M(L).1368	Mr. Kapil Motwani Cona Lighting Solutions A-28, Nandkishore Ind.Est. Near Paper Box Mahakali Cave Road Andheri - E, Mumbai 400 093	Member	Mumbai
M(L).1369	Mr. Anant Bajaj Bajaj Electricals Ltd. 2nd Floor, Mulla House 51 E, M. G. Road Fort Mumbai 400 001	Member	Mumbai
M.1370	Mr. Neelesh Varma Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai
M.1371	Mr. Umesh Arjun Deokar Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai
M.1372	Mr. Sujay Sudhakar Uchil Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai

M.1373	Mr. A Krishna Prasad Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai
M.1374	Mr. Sanjeev Malik Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai
M.1375	Mr. Alok Kumar Dube Bajaj Electricals Ltd. 15/17 Sant Savta Marg Reay Road Mumbai 400 010	Member	Mumbai
M(L).1376	Mr. P R Kurunadan IL&FS Property Management & Services Ltd. B-1, S R Enclave Ajitha Flats No.5 3 RT Street, Renga Nagar Keelkattalai Chennai 600 117	Member	Chennai
M(L).1377	Mr. Deepak Gupta CP -206, Pitampura New Delhi 110 088	Member	Delhi
M(L).1378	Mr. Pramod Narayan Bhagwan Patodia Glass Ind. Ltd. Gate No.375, Koregaon - Bhima Tal. Shirur, Nagar Road Pune 412 216	Member	Mumbai
M(L).1379	Mr. Kishore S Jain No.340 -A, 14th Main, Ist Block, IIIrd Stage Basaveshwar Nagar Bangalore 560 079	Member	Karnataka
A(L).0943	Mr. Chandrashekar Kesarnath Chaudhari Sidheshwar & Co. 29, Electronic Estate Pune 411 009	Associate	Mumbai
S.0331	Mr. Anay Jiten Choksey M/s Smart Hitec 29-A, French Road Opp. Merchants Club Chowpatty Mumbai 400 007	Student	Mumbai
S.0332	Mr.Tushar Vinodrao Vaidya 36/B, Bhange Vihar Trimurtinagar Nagpur	Student	Mumbai

Transfer of grade

F(L)0615	Mr. B. Chakrabarti Crompton Greaves Ltd. Lighting Division Kanjur Marg (E) Mumbai 400 042	Fellow from M0849	Mumbai

Publications for Sale

Directory of the Lighting Industry in India

The only comprehensive survey of the Lighting Industry in India-now in its 6th edition.

Covering all interests - users, suppliers of lighting products, components, raw materials and services.

Articles, Standards, Statistics.

Rs. 550 in India

US$ 25 Overseas Orders

Exhibitor Catalogue

Information on Exhibitors available at the time of going to press

Rs. 250 in India

US$ 12 Overseas Orders

Lii 2008 Proceedings

Proceedings of the Light India International Conference 2008

Session: Energy Saving (Sustainability),
Outdoor (City Beautification Street Lighting, Monument Lighting),
Infrastructure Lighting (Highways, Airports, Railways),
Retail and Hospitality, LEDs, Electronics and Controls

February 22-25, 2008
New Delhi

Rs. 750 in India

US$ 30 Overseas Orders

lighting SOUTH ASIA

Fri 20th - Mon 23rd Feb, 2009
Bombay Exhibition Centre
Mumbai, India

SWITCHING ON TO

A BRIGHTENING MARKET

2008 Event AT A GLANCE

Lii 2008

120	17	8000
EXHIBITORS	COUNTRIES	HIGH QUALITY TRADE VISITORS

www.lightingsouthasia.com

organiser

Expomedia Events India (P) Ltd.
2nd Floor, K-2 Somdatt Towers
Sector-18
Noida 201 301
India
Tel: +91 120 251 6110 / 251 6144
Fax: +91 120 251 6020
E-Mail: rasheed.anwaar@eme-india.com
Website: www.eme-india.com

For Local Enquiries
Indian society of lighting engineers
A-274, 1st floor, Defence Colony
New Delhi 110 024
Tel: 46562981, 46562982
Fax: 46528477
E-Mail: isledel@vsnl.com,
Website: www.isleind.org

For International Enquiries
Meridien House
69-71, Clarendon Road
Watford, Herts, WD 17 1DS
United Kingdom
Tel: +44 19 2349 1047
Fax: +44 20 8387 3201
E-Mail: frank.matus@expomediagroup.com
Website: www.eme-uk.com

See how Philips Lighting makes your collection more appealing – and profits more beautiful!

Philips MASTER Colour CDM is the simple way to make your boutique more attractive. With the crisp sparkling light of CDM technology your collection blossoms into vibrant color, becoming brighter and more luxurious than ever. This means even more customers coming to your store more often, staying longer and buying more.

PHILIPS

sense and simplicity

www.lighting.philips.co.in