

MINUTES OF THE THIRTEENTH MEETING OF THE
CANADIAN NATIONAL COMMITTEE OF THE CIE

(Held at the National Research Council, Ottawa,
1 November, 1968)

PRESENT:

Members and
Delegates.

Mr. W. Budde (President)
Prof. M.G. Currie
Mr. G.E. Davidson
Mr. G.F. Dean
Mr. W.F. Elliott
Mr. D.W. Frick
Mr. M. Galbreath
Mr. G.E. Mulvey
Dr. A.R. Robertson (Secretary)
Dr. C.L. Sanders
Mr. A. Whitehead
Dr. G. Wyszecski.

ABSENT:

Mr. C. Boivin
Mr. E.H. Brezina
Mr. J.M. Chorlton
Mr. T.W. Christopher
Mr. A. Ketvirtis
Mr. A.T. Orr
Mr. J.C. Wilson

1. CALL TO ORDER

The President opened the meeting at 10:07 a.m. and announced that the following members had given notice that they were unable to attend the meeting:

Mr. J.M. Chorlton, Mr. A. Ketvirtis and Mr. J.C. Wilson.

2. MINUTES OF THE LAST MEETING

The Secretary read the minutes of the twelfth meeting. Mr. Ketvirtis's initial, on page 6, was changed to 'A', and the words 'IES Specifications' on page 5 were changed to 'IES Recommended Practices'. A motion that the minutes be approved was then made by Dr. Sanders and seconded by Mr. Frick. The motion was carried.

3. SECRETARY'S REPORT

(a) The National Research Council has agreed to continue its sponsorship of the CNC, and has paid the annual fee of \$1100 (U.S.) for 1968.

(b) Copies of CIE Bulletin No. 19 and the CIE Roster 1968 have now been received and will be distributed to all members and delegates.

(c) A press release was issued in November 1967. Parts of this were published in Illuminating Engineering in January, 1968, and, in French, in Transport Commercial in February, 1968.

(d) A report was sent to the Central Bureau of the CIE summarizing the reactions of Canadian delegates who attended the Washington meeting. It reads as follows:

'Of the nine delegates from Canada who attended the 16th Session of the C.I.E. at Washington, six have made comments, all of them generally favourable. The planning was described as 'very thorough' and the organisation as 'very good' and 'excellent', although one delegate thought that the session was too long for sustained interest. The greatest benefit came from the pre-session meetings which delegates found useful and constructive. One delegate felt that more time could be allotted to these at the expense of the main session, in order to avoid concurrent meetings of committees dealing with related topics; for example in Washington meetings of committees E-1.2 and E-1.3.2 often clashed with each other.

Particular praise was given to the reception by the United States Department of State, but the presentation 'Lighting in America' by the U.S. National Committee was criticised as being too commercial.

One delegate found the English interpretation slightly difficult to follow at times, although those who had attended the 15th Session in Vienna acknowledged that the interpretation was much better this time.

A suggestion was made by another delegate that it would be very useful to include in the program booklet some space for notes.

One final point concerns a rumour that it is planned to divide the next session between Barcelona and Madrid. The Canadian National Committee would be opposed to such a plan.'

(e) Members of the Executive Committee were asked to vote on whether Barcelona or Madrid should be chosen as the site of the next CIE meeting. Both Canadian members of the committee voted for Barcelona.

(f) Members of the Executive Committee were also asked to vote on a proposed list of members of the Finance Committee and the Papers Committee. Both Canadian members of the Executive Committee voted in favour of the proposal.

A motion, made by Mr. Frick and seconded by Mr. Elliot, to accept the Secretary's report, was carried.

4. BUSINESS ARISING FROM THE MINUTES AND THE SECRETARY'S REPORT

The President asked whether all members were now receiving the CSA News Bulletin. They were.

The President announced that three of the CNC's proposals regarding the status of members within Expert Committees of the CIE had not been accepted by the Action Committee. Mr. Dean, Mr. Orr and Dr. Robertson had been designated as Corresponding Members

and not Experts in their respective committees.

The 'Official Recommendation' by committee E-1.4.1 published in the Washington Proceedings was read by the President. He noted that a compromise had been adopted between the term 'luminosity' requested by the CNC and 'brightness' which is used in the U.S.A. This provoked some discussion on the relative merits of the terms brightness, luminosity and luminance.

It was noted that the CIE Bulletin is now printed only in English, for economic reasons.

Mr. Frick announced that the IES has now agreed to insert SI units in parentheses after the corresponding units in the British system, in all its publications. Several members mentioned the serious practical difficulties which would be involved in any complete change to the metric system.

5. DISCUSSION OF THE REPORTS FROM EXPERTS AND CORRESPONDING MEMBERS OF CIE TECHNICAL COMMITTEES

'No activities' were reported for committees S-1.4.1, E-1.5, E-2.1.2, E-3.1.1.2, E-3.1.1.3, E-3.3.3, E-4.1.1 and S-4.2.

In addition to the written reports concerning other committees, each member present gave a short verbal account of activities. Mr. Chorlton's report for committee E-1.4.2 was presented by Prof. Currie

and Mr. Ketvirtis's report for committee E-3.3.1 by Dr. Robertson. Mr. Dean mentioned that he had received an apology from the chairman of E-3.1.2 for the failure to invite him to one of the meetings. Two other instances were suspected of corresponding members not being kept fully informed of the activities of their committees and it was decided that if these were confirmed, the President would bring the matter to the attention of the CIE.

The President read extracts from a letter from the chairman of the Action Committee concerning the appointment of co-ordinators for various groups of technical committees. A list of these co-ordinators and groups was distributed to all members and delegates.

Mr. Dean moved that the CNC should inform all nominated sub-committee members of the ratification of their appointment. Mr. Davidson seconded the motion which was then carried.

Mr. Frick moved that the attached list of subcommittees be formally approved under Bye-Law 11. The motion was seconded by Prof. Currie and was then carried.

The meeting was adjourned for lunch at 12:40 p.m.

After the meeting had been re-called to order at 1:30 p.m. the President presented a draft proposal for a revision of Bye-Law 11. Some minor modifications to the draft were agreed upon, and the proposal will

be voted on by letter ballot according to Bye-Law 13.

A conflict between the recommendations of the CIE and those of USA Standard Z7.1-1967 over the use of the terms illuminance and illumination was pointed out. Most members seemed to favour the term illuminance, in agreement with the latest draft of the 3rd Edition of the International Lighting Vocabulary.

6. DISCUSSION OF DRAFT OF CNC/CIE BOOKLET

The officers had prepared a draft for a new edition of the CNC/CIE booklet. Mr. Dean suggested that the existence of technical sub-committees should be mentioned. A few other small modifications were agreed upon and Mr. Dean then moved that the draft, with the modifications, be approved with thanks to the officers. Prof. Currie seconded this motion which was then carried.

It was decided that 2000 copies will be printed. Mr. Frick will obtain the IES mailing list for Canada, preferably in the form of sticky labels, and Prof. Currie will supply a list of schools of architecture which would be interested.

7. APPOINTMENT OF NEW AND REAPPOINTMENT OF OLD MEMBERS

Messrs. Davidson, Dean and Galbreath were re-appointed as members of the CNC for terms expiring at the end of 1972. Prof. Currie nominated

Mr. A. Ketvirtis as a member of the CNC. Mr. Davidson seconded the nomination. Mr. Dean, seconded by Mr. Whitehead nominated Mr. G.E. Mulvey. Both nominations were then approved in a secret ballot.

The President agreed to approach Dr. Babbitt to find out whether the National Research Council still reserves the right to officially appoint members of the CNC or whether the CNC can now officially appoint its own new members.

8. OTHER BUSINESS

The Secretary announced that he would soon have a complete set of all the official CIE publications since 1957, and that these would be available to members on short-term loan.

Mr. Whitehead asked whether it was proper for him to write to the chairman of his CIE Technical Committee without first hearing from him. Dr. Wyszecski replied that if a corresponding member of a committee wished to write to his chairman he should feel quite free to do so.

Dr. Wyszecski, speaking as the chairman of an Expert Committee, expressed concern over the delay in producing the new CIE Roster which meant that for nearly a year of each four-year period he did not know the constitution of his committee. The President agreed to write to the chairman of the Action Committee to see if there was any way in which this delay could be reduced.

The President mentioned that two teachers from the Province of Quebec had visited the N.R.C. to learn about colorimetry and photometry. There followed a brief discussion in which various members of the committee expressed the need for such education in Canada.

9. MEETING ADJOURNS

The meeting was adjourned at 3:05 p.m.

19 November, 1968.

SUBCOMMITTEES OF CNC/CIE

E-1.1 (Definitions, Vocabulary)

G.E. Davidson (Ontario Hydro), Chairman
All members of CNC/CIE.

E-1.2 (Photometry)

C.L. Sanders (National Research Council) Chairman
W. Budde (" ")
G.E. Davidson (Ontario Hydro)
J.C. Morgan (Department of National Defence)

E-1.3.1 (Colorimetry)

G. Wyszecki (National Research Council) Chairman
W. Budde (" ")
A.R. Robertson (" ")
C.L. Sanders (" ")
J.H. Wright (" ")

E-1.3.2 (Colour Rendering)

A.R. Robertson (National Research Council) Chairman
D.H. McRae (Canadian Broadcasting Corporation)
C.L. Sanders (National Research Council)
J.H. Wright (" ")
G. Wyszecki (" ")

S-1.4.1 (Photopic, Mesopic and Scotopic Vision)

A.R. Robertson (National Research Council) Chairman
P.J. Foley (University of Toronto)
D. Pearce (Defence Research Establishment, Toronto)
G. Wyszecki (National Research Council)

E-3.1.2 (Interior Lighting Practice)

G.F. Dean, Chairman
R.C. Allison (T. Eaton Company)
G.K. Brown (Department of Energy, Mines & Resources)
W.M. Dillon (Crouse-Hinds Company of Canada)
A.W. Henschel (Shore and Moffat & Partners)
A.R. Parrish (The Holophane Company Ltd.)
A.C.T. Robinson (Toronto Board of Education)
J.I. Thompson (Ontario Hydro)

E-3.3.1 (Street Lighting)

A. Ketvirtis (Foundation of Canada Engineering Corporation Ltd.), Chairman.
E.L. Burnham (Belleville Utility Commission)
G. Cornish (City of Calgary Electric System)
R.C. Hobson (Department of Highways, Ontario).
A. Whitehead (Department of Public Works)

E-3.3.6 (Exterior Lighting Practice)

A. Whitehead (Department of Public Works) Chairman
D.S. Gordon (British Columbia Hydro)
A. Ketvirtis (Foundation of Canada Engineering Corporation Ltd.) :
J.I. Thompson (Ontario Hydro)

DRAFT PROPOSAL FOR REVISED BYLAW NO. 11

The Canadian delegate to a CIE-Technical Committee is encouraged to establish a technical subcommittee of the CNC. The terms of reference of the subcommittee should be those of the CIE-Technical Committee to which the Canadian delegate belongs.

The delegate shall act as chairman of the subcommittee and shall nominate the members from individuals in Canada who are active in the particular field. The nominations shall be ratified by the President of the CNC at his discretion. The delegate will be responsible to the CNC for the subcommittee's work.

The members should be appointed for terms to expire at the end of the year in which a CIE Plenary Session is held. The members of the subcommittee need not be members of the CNC.

Annual Report to CNC/CIE

Committee E-1.1 Definitions, Vocabulary

The draft of the 3rd Edition of the International Lighting Vocabulary was approved generally by the national committees of both the CIE and the IEC. It should be ready for distribution sometime in the New Year. Although no programme has been drawn up for the 4th Edition, any new items, or corrections in the 3rd Edition, should be drawn to the attention of the writer.

Committee E-2.3 Photometric Requirements for Luminaires

The photometric laboratories of Ontario Hydro participated in the first round-robin tests on a fluorescent industrial luminaire and an incandescent luminaire. The major problem overcome in making these tests was that of a 50-cycle, 240-volt power supply duplicating the normal 60-cycle, 120-volt power supply used normally in the laboratory. Tests on the fluorescent luminaire were made at photometric test distances ranging from 5 feet to 25 feet. The two luminaires are in the process of being forwarded to Mr. G.A. Horton, the U.S. representative on the Committee.



G.E. Davidson, P.Eng., FIES
Member, CNC/CIE



NATIONAL RESEARCH COUNCIL
CONSEIL NATIONAL DE RECHERCHES
CANADA

DIVISION DE PHYSIQUE APPLIQUÉE
OTTAWA 7

DIVISION OF APPLIED PHYSICS
OTTAWA 7

30 October, 1968

Report to CNC/CIE on CIE E-1.2 Light Measurement

The informal report prepared by E-1.2 and submitted in September 1967 to the Action Committee for publication is still under consideration by the Action Committee.

It was suggested by Eastman Kodak that the work on the measurement of the absolute reflectance factor be extended to include measurements on a Kodak white paint but this was not favoured by most members.

The NRC report on the spectral sensitivity of photo-cells giving the ratio of NRC measurements to those in other countries has been delayed to see how the cells stabilized. Some were drifting with time when they were measured in the other laboratories. These checks have now been completed and the report can be sent out. One laboratory has still not returned the cells, which complicates the situation.

Sub-Committee on Spectroradiometry (E-1.2; E-1.3.1;
E-1.3.2)

Over twenty replies were received to the questionnaire sent out in September 1967. Over twenty laboratories are interested in participating in this comparison of spectral

irradiance measurements. There were only a few offers to take responsibility for coordinating the measurements and it appears that NRC will need to do most of the measurements to check the stability of the lamps and to make the initial and final measurements on all the lamps used. Our spectroradiometer has been modified and it seems possible to proceed with a somewhat less ambitious comparison than was proposed last September.

The ETL offered to compare absolute scales of spectral irradiance used in national laboratories and the offer was accepted.

C. L. Sanders
Radiation Optics

CLS:dw

COLORIMETRY COMMITTEE

E-1.3.1

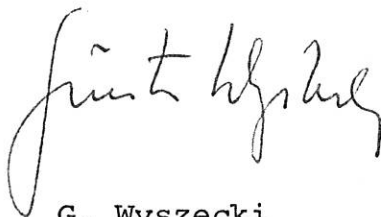
(October 1967 to October 1968)

The committee is actively engaged in the following projects :

- (1) Development of one or more indexes of metamerism (G. Wyszecki, chairman of subcommittee).
- (2) Degree of whiteness formulae (A. Berger prepared a report for further study).
- (3) Correlated color temperature (A.R. Robertson, chairman of subcommittee. Work being done in cooperation with E-1.3.2, Color Rendering).
- (4) Colorimetric terminology (G. Tonnquist, chairman of subcommittee).
- (5) Spectroradiometry (C.L. Sanders, chairman of subcommittee. Work being done in cooperation with E-1.2, Photometry, and E-1.3.2, Color Rendering).
- (6) Development of standard daylight sources for colorimetry (G. Wyszecki, reporter).

All these above projects are dealt with by correspondence.

A meeting of the committee is planned to be held on June 6 and 7, 1969, at Stockholm.



G. Wyszecki
Chairman, E- 1.3.1.

18 November, 1968

GW:dw

ADRESSE TÉLÉGRAPHIQUE "RESEARCH"

NOTRE DOSSIER



CABLE ADDRESS "RESEARCH"

OUR FILE

NATIONAL RESEARCH COUNCIL
CONSEIL NATIONAL DE RECHERCHES
CANADA

DIVISION DE PHYSIQUE APPLIQUÉE
OTTAWA 7

DIVISION OF APPLIED PHYSICS
OTTAWA 7

30 October, 1968

Report on the activities of CIE Committee E-1.3.2
(Color Rendering), prepared for the annual meeting
of the CNC/CIE on November 1, 1968.

No meetings of this committee have been held during the past year. The minutes of the Washington meetings were received in December 1967 and a circular was received in June 1968 which gave a list of the nine experts and sixteen corresponding members of the committee. There are two new experts, E. Barthès (France) and H.D. Einhorn (South Africa), and I am one of twelve new corresponding members.

A technical subcommittee of the CNC/CIE has been formed to deal with this subject. It consists of -

A.R. Robertson (NRC) Chairman
D.H. McRae (CBC)
C.L. Sanders (NRC)
J.H. Wright (NRC)
G. Wyszecski (NRC)

A. R. Robertson

Committee E.1.3.3

Fundamentals of Signals and Signs

A new committee was formed following the last plenary session of the C.I.E., taking over the functions of the former Committee E.1.3.3, Signal Colours of Great Britain, and E.3.3.7, Fundamentals of Traffic Signals of Germany. The new committee was taken over by the National Committee of the United States, and Mr. C.A. Douglas of the National Bureau of Standards has been named Chairman and LCDR Walter W. White of the United States Coast Guard, Secretary. The terms of reference of the new committee and the proposed program are attached.

I endeavoured to find what contribution could be made to this committee from work now being done in Canada. Unfortunately, none of these items are under investigation in this country. We rely very heavily on the specifications of the United States.

The committee proposes to have two meetings before the plenary session in Barcelona, one early in 1969 in Washington and the other in 1970 in Europe after the meeting of the International Association of Lighthouse Authorities. There will also be the usual meeting just prior to the plenary session.

W. F. Elliott,
Corresponding Member,
Committee E.1.3.3,
Fundamentals of Signals & Signs

Attachment A

E.1.3.3 Fundamentals of Signals and Signs

Terms of Reference

To study the fundamental factors which govern the detection, recognition and interpretation of lights, retroreflectors, symbols, and signs and to provide guidance for the design, evaluation, and application of signal systems.

Proposed Program

1. Visibility

To study the factors affecting conspicuity and visual range of self luminous, retro-reflective and illuminated signals, symbols and signs under service conditions.

2. Recognition and Identification

Develop and collect information with reference to the reliability of recognition and identification of signals and symbols under service conditions.

3. Colors of Signal Lights and Signs

Complete the revision of C. I. E. Publication No. 2, "Colors of Signal Lights". Study the desirability of introducing limits for the colors purple and violet into the publication. Study and correlate specifications for surface colors with a view to the adoption of C. I. E. recommended limits for such colors.

4. Vocabulary

Prepare a vocabulary of the terminology and nomenclature applicable to signal lighting. This vocabulary will supplement the forthcoming 3rd edition of the C. I. E. Vocabulary.

5. Bibliography

Prepare a bibliography of classical and recent papers pertinent to the work of the Committee.

Attachment B.

Proposed Program for C.I.M. Committee Subcommittee of Signals and Signs

1. Visual Range

1.1 Effects of atmospheric transmittance

1.1.1 On visual range of lights

1.1.2 On visual range of signs

1.1.2.1 With sky background

1.1.2.2 With terrestrial background

1.1.3 On apparent color and shape of objects and lights

1.2 Measurement of atmospheric transmittance

1.2.1 Transmittance type meters

1.2.2 Extinction - coefficient meters

1.2.3 Other meters

2. Thresholds for Applicable Service Conditions

2.1 Luminance thresholds as related to such factors as

2.1.1 Angular size of source

2.1.2 Background luminance

2.1.3 Adaptation

2.1.4 Additive effects of groups of lights

2.1.5 Color of light signal

2.1.6 Presence of extraneous lights in background

2.1.7 Flashing characteristics

2.1.8 Position of light in field of view

2.1.9 Observation time and attention of the observer

2.1.10 Observer characteristics such as age, health, visual deficiencies

2.2 Contrast thresholds as related to such factors as

2.2.1 Angular size of sign

2.2.2 Background luminance

2.2.3 Adaptation

2.2.4 Color of sign and background

2.2.5 Position of sign in field of view

2.2.6 Observer characteristics such as age, health, visual deficiencies

2.3 Acuity thresholds as related to such factors as

2.3.1 Contrast

2.3.2 Color

2.3.3 Luminance

3. Coding of Signal Lights and Signs or Recognition, Identification, and Coding

3.1 Flash coding

3.1.1 Flash coding by flash rate

3.1.2 Flash characteristics suitable for various tasks (haze, fog, obstruction lighting, navigation lighting, etc.)

3.2 Configuration and shape coding

3.2.1 Recognition of simple configurations and shapes

3.2.2 Apparent size as an indication of distance

3.2.3 Rate of change of size as an indicator of rate of closure

3.3 Color coding

3.3.1 Conspicuity of colors in given environments

3.3.2 Recognition of colors

3.3.3 Specification and reproduction of colors

3.3.3.1 Completion of revised draft of C.I.E. Publication No. 2, "Colors of Signal Lights"

3.3.3.2 Study of the desirability of introducing limits of purple and violet lights into Publication No. 2

3.3.3.3 Study and correlation of specifications for surface colors

4. Vocabulary of Signal Lighting Terms

(as Dr. F. J. J. Clarke stated at the Washington meeting of the C.I.E., the present C.I.E. vocabulary is deficient in terms applicable to signal lighting.)

5. Bibliography of Papers and Reports Pertinent to the Fundamentals of Signals and Signs Comprising:

5.1 A list of classic papers and reports published prior to 1930;

5.2 A more complete listing of papers and reports published 1930 through 1960;

5.3 An annotated listing of papers and reports published since 1960.



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30 October, 1968

Report on the activities of CIE Committee S-1.4.1
(Photopic, Mesopic and Scotopic Vision), prepared
for the annual meeting of the CNC/CIE on
November 1, 1968

There have been no activities of this committee
during the past year.

A technical subcommittee of the CNC/CIE has been
formed to deal with this subject. It consists of -

A.R. Robertson (NRC) Chairman
P.J. Foley (University of Toronto)
D. Pearce (Defence Research Establishment)
G. Wysecki (NRC)

A handwritten signature in cursive script, appearing to read "A.R. Robertson".

A. R. Robertson

Annual Report to CNC/CIE

November 1, 1968

E 1.6 Fundamentals of Physical Environment

A communication was received from the Secretary, E. Van Gunst from Delft, dated August 27, 1968. Enclosed were minutes of an informal meeting of E 1.6 held at Cambridge, England on March 26, 1968. These minutes indicate that there is a dearth of functioning installations of properly lighted and air-conditioned space available for study in Europe. Since there are many installations here in Canada where air supply and return luminaires are functioning in conjunction with higher lighting levels and heat reclaim systems, we will likely be able to provide valuable data to the committee. Information will be forwarded to this effect to Mr. Van Gunst.

G. E. Mulvey, P. Eng.,
Member, CNC/CIE.

G. Franklin Dean, P. Eng.
144 Hanfless Avenue
Toronto 12, Canada

October 25, 1968

REPORT to C.N.C., C.I.E.
on

E.3.1.2 - INTERIOR LIGHTING PRACTICE

Two meetings of E.3.1.2 have been held this year. The first meeting was at London, England on March 29th. The second meeting was at Copenhagen, Denmark on October 3rd and 4th. The Canadian Corresponding Member was invited to the first meeting but due to a conflict with a meeting of our I.E.S. Office Lighting Committee he was not able to attend. He offered several proposals by letter for possible consideration at the meeting. An invitation to the second meeting was not received nor were any minutes received from the secretariat.

Through the kindness of Mr. R. Dorsey, Vice-President of the U.S. N.C. and their Expert on E.3.1.2., minutes of the first meeting have been made available. The minutes show that a working program was "adopted preparatory to the establishment of a C.I.E. Guide on Interior Lighting Practice". The following items are to be included on the initial work and were allotted to Experts on the Committee.


1. Levels of Illumination
2. Calculation of Illumination and Luminance.
3. Evaluation of Glare
4. Contrast Rendition
5. Colour Rendering
6. Chromaticity of Light Sources
7. Modelling
8. Luminance Distribution
9. Performance Data on Luminaires
10. Maintenance
11. Cost Analysis
12. Lighting and Interior Decoration
13. Energy Control
14. The Relationship between Daylight and Electric Light

Mr. A. B. de Graaff is to be responsible for distributing the working program to the Co-ordinating Committee.

Following the 1967 meeting of the C.N.C. a letter was sent to President W. Budde listing the names of individuals willing to serve on C.N.C. Committee E.3.1.2 in the various categories of Interior Lighting.

- R. C. Allison - Merchandising
- G. K. Brown - Mine
- W. M. Dillon - Sports and Recreation
- A. W. Henschel - Office
- A. R. Parrish - Industrial
- A. C. T. Robinson - School and College
- J. I. Thompson - Residential

The Corresponding Member will be responsible for other categories such as Hospital, Library and Museum.


Corresponding Member, E.3.1.2.

CANADIAN BROADCASTING CORPORATION
SOCIÉTÉ RADIO-CANADA

REPORT TO CANADIAN NATIONAL COMMITTEE, C.I.E.
COMMITTEE E-3.1.9.2.

No substantial progress can be reported during the past year.

A successful symposium was conducted by the Theater - Television - Film Lighting Committee of I.E.S. was held in Los Angeles in the Spring. Several Canadians were present.

Work is going on in the Canadian Television Practices Committee on standardization of lighting for sports events in color. Other work underway will cover viewing environment for judging quality of television and film pictures.

Lower lighting levels for color telecasting are being established, although there is no wide agreement on how much.

Greater availability of a wide variety of tungsten halogen lamps has led to much greater use and more sophisticated design of luminaires.

Following Expo and the Centennial a great improvement was made in standardizing equipment for outside broadcast lighting - silent diesel generators, standard cabling, switching and plugging equipment together with portable remote control dimming are a few of the features. It is expected that the industry - private and public owned television, and rental agencies will soon be following the standards which are being developed.

Prepared by:

D. W. Frick
D. W. Frick

October 31, 1968.

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REPORT ON COMMITTEE E.3.2. DAYLIGHT

1 NOVEMBER 1968

There has been little activity in this Committee during the past year. The Guide to Daylight Calculation for Buildings has not yet been published. Papers have been prepared on the following subjects.

- (1) Transmission characteristics of transparent and translucent glazing materials.
- (2) A simple method of measuring and evaluating the atmospheric diffusion of sunlight in order to obtain typical luminance patterns for a clear sky.
- (3) Predetermination of daylight at a point on a facade due to direct sunlight and reflected light from obstruction.

M. Galbreath,
Corresponding Member

MG/db

1/xi/68

CIE COMMITTEE MEETING E-3.3.1
HARROGATE, ENGLAND
SEPTEMBER 23-25, 1968

A semi-annual meeting of the CIE Committee on Public Lighting was held in Harrogate, England, on September 23-25, 1968. 15 members out of a total of 16 attended. This meeting coincided with the Association of Public Lighting Engineers' Annual Convention. Members of the CIE Public Lighting Committee were invited to attend the technical sessions, as well as the social events of APLE. Also, a large scale exhibition of electrical equipment coincided with the APLE and CIE meetings.

The writer attended all the above technical and social events.

The following major subjects were discussed at the CIE E-3.3.1 Committee Meetings.

1. Motorway Lighting

Mr. Gaymard (France) presented a draft of proposed recommendations for motorway lighting. Discussion of this document extended through most of the first day of the committee meeting. The proposed recommendations, when completed, will serve as a guide for design engineers and public lighting authorities in choosing the best methods and types of illumination for specific projects. The recommendations should be ready for the Committee's approval by the next meeting in April, 1969, to be held in Berlin.

Mr. Gaymard also presented a brief review of the latest developments in the public lighting field in various countries around the world.

2. Road Surface Reflection Properties

A survey of various methods of road surface classifications and measurements was presented for discussion, with specific suggestions on how to classify various types of pavement presently used in Europe and North America. Methods for improvement in light reflectance were also discussed.

3. Visibility in Public Lighting Installations

Dr. Ostrovsky (Russia) presented a brief report on comparisons between different methods of evaluating visibility related to lighting system characteristics.

4. Measurement of Photometric Characteristics in Public Lighting

Dr. Stolzenberg (Germany) discussed the methods used in Germany for measuring photometric characteristics on streets and highways, and the instruments available for this work.

5. Public Lighting Installation Appraisal

Dr. Schreuder (Holland) presented a new system jointly developed by himself and Dr. Adrian for practical assessment of lighting system effectiveness before the installation is actually completed. This method was discussed at length, and received many favourable comments. As soon as this system is firmed up reprints of the paper will be made available for distribution.

The writer raised the question of possible CIE participation at the International Road Federation meeting in April, 1970. Professor J.B. de Boer, Chairman of the Committee, suggested that a formal letter be initiated from the Technical Advisory Council of IRF, inviting the Public Lighting Committee to take part in this convention.

The next meeting will be held in Berlin in April, 1969.

Aud. Ketvirtis
A. Ketvirtis
Expert-Delegate

CIE Committee E-3.3.1

Canadian National Committee of the C.I.E.
1968 Report of the C.I.E. Committee E3.3.6
Exterior Lighting Practice

A copy of the progress report of the Exterior Lighting Practice Committee given at Washington in June 1967 has been received. Many very interesting installations were described, these had been made in the period from 1963 to 1967. As many of the developments mentioned in the report are now in active use and have been for the last year or two, I will not go into any detail except to note increasing interest in Xenon and Xenon Mercury lamps for high candlepower projectors. No report on Expo 1967 lighting was included.

It would seem appropriate to submit a report from Canada on the special effect lighting at Expo and other lighting projects for Centennial year. I would, therefore, like to ask any of the members who have interesting information on Expo or Centennial lighting, suitable for such a report, to send it to me for inclusion with other data I am collecting for the report.

At the 12th Meeting last October members were asked to form sub-committees, and as a result I wish to report Mr. J. Thompson of the Hydro Electric Power Commission of Ontario, Mr. D.S. Gordon of British Columbia Hydro & Power Authority and Mr. A. Ketvirtis of Fenco, have offered to join the sub-committee. No confirmation has been received from any of the manufacturers contacted.

A. Whitehead
Corresponding Member
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