

MINUTES OF THE NINTH MEETING OF THE CANADIAN  
NATIONAL COMMITTEE OF THE C.I.E.

(Held at the National Research Council,  
Ottawa, 30 October, 1964)

Present

Members and Delegates:

- Send to*
- ✓ Mr. G. K. Brown
  - ✓ Mr. W. Budde (Secretary)
  - ✓ Miss M. G. Currie
  - ✓ Mr. G.E. Davidson
  - ✓ Mr. W.F. Elliott
  - ✓ Mr. P.J. Foley
  - ✓ Mr. D. W. Frick
  - ✓ Mr. M. Galbreath
  - ✓ Dr. C. L. Sanders (President)
  - ✓ Mr. G. A. Watters
  - ✓ Dr. G. Wyszecski

Guests:

- ✓ Mr. E.L. Burnham, Chairman of the CSA Committee on Street and Highway Lighting.
- ✓ Mr. L.J. Marshall, Member of the Canadian Good Roads Association. (CGRA).

Absent

- ✓ Mr. J. Bateman
- ✓ Mr. E.H. Brzezina
- ✓ Mr. J.M. Chorlton
- ✓ Mr. G.F. Dean
- ✓ Mr. E.I. Machtinger
- ✓ ~~Mr. V.H. McPherson~~

1. Call to Order

The President opened the meeting at 10:00 A.M. and welcomed the guests who had been invited for a discussion on items Nos. 7 and 8.

The following members had given notice that they could not attend the meeting: Messrs. J.W. Bateman, E.H. Brzezina, G.F. Dean, and E.I. Machtinger.

2. Minutes of the Last Meeting

The minutes of the last meeting were read by the Secretary. On page 6, item 9, second line, the number of the Expert Committee was corrected to E-4.1.1. Mr. Watters made a motion that the minutes be approved, Mr. Brown seconded and the motion was carried.

3. Secretary's Report

(a) The annual fee for Canadian membership in the CIE in the amount of \$360.00 (U.S.) was paid by the National Research Council.

(b) The result of the letter ballot on the amendment of Bylaws Nos. 1 and 12 is as follows: all members of the CNC are in favour of the amendment to these Bylaws as proposed at the eighth meeting of the CNC.

(c) In certain instances, documents concerning the work of a particular CIE Committee are sent either to the Secretary or to the CNC member in charge of the Committee, or to both. In order to ensure that the member

concerned receives the document the Secretary will, whenever he receives such a document, send a form letter to the member asking whether he has also received a copy of the document. If he has not, the Secretary will forward his copy.

(d) Since the last annual meeting the following delegates have been appointed:

Mr. G.F. Dean: Corresponding Member for CIE Committee S-3.1.2. Application of Interior Lighting.

Mr. P.J. Foley: As Corresponding Member for CIE Committee E-1.4.1. Photopic and Scotopic Vision.

Mr. V.H. McPherson: As Corresponding Member for CIE Committees E-3.3.2.1. Aviation Ground Lighting and E-3.3.3. Airborne Lighting and Signals.

(e) Since the last annual meeting the Scope Committee of the CIE has appointed members of the CNC as Experts and Corresponding Members according to the proposed list prepared at the last meeting and attached as an Appendix to the Minutes.

(f) The press releases, mentioned in the Minutes of the last meeting, have not been sent out. The reason for this was the long delay between the meeting and the actual appointment by the National Research Council of the new officers and members of the CNC. It was felt that the meeting following the actual appointment would be a better occasion for such a press release.

4. Business arising from the Minutes and the Secretary's Report

(a) The President reported that he had written a letter to Mr. Chappat expressing the views of the CNC on items 5a and 5b of the Minutes of the Eighth Meeting.

(b) Mr. Elliott reported that Mr. V.H. McPherson, Delegate for Committees E-3.3.2.1 (Aviation Ground Lighting) and E-3.3.3. (Airborne Lighting and Signals) had left Ottawa and would no longer be able to represent the CNC on these committees. Mr. Elliott proposed that Mr. R.W. Gingles of the Department of Transport be appointed to replace Mr. McPherson.

(c) The President reported that a ballot of the Executive Committee of the CIE resulted in the adoption of Washington as the location for the next Plenary Session of the CIE.

Mr. Davidson moved that the Secretary's Report be approved, Miss Currie seconded, and the motion was carried.

5. Discussion of the Procedure for the Procurement of CIE Literature

The President explained why the procurement of CIE publications through NRC was no longer possible and that the U.S. National Committee had agreed to process Canadian orders for CIE publications.

Miss Currie expressed regret that there was no 'Canadian' solution for this problem. Mr. Watters suggested that the Canadian Standards Association should be contacted in this matter. Mr. Brown mentioned that IEC publications are handled by the CSA.

Mr. Watters moved that the President approach Mr. Sweet of the CSA on this matter asking whether CSA would be able to handle CIE publications. The CSA would be authorised to retain the 40% discount as a handling charge. Mr. Davidson seconded the motion which was then carried.

It was agreed that, until further notice is given, orders should still be sent to the U.S. National Committee.

6. Discussion of the Reports from Experts and Corresponding Members of the CIE Committees

Mr. Frick explained that he had too much to report to have his report ready for the meeting and that it would be supplied some time after the meeting.

There was some discussion on the reports of Committees E-1.2 (Photometry) and E-3.2 (Daylight).

7. Discussion of the 'International Recommendations for the Lighting of Public Thoroughfares' issued by Committee E-3.3.1. Street Lighting.

This draft was received from the Central Bureau for approval. Copies were made and distributed to Messrs. Watters, Dean, Brzezina, Davidson, and to the Canadian Good Roads Association and the Canadian Standards Association.

A comment was received from Mr. Dow of Toronto Hydro-Electric System (at Mr. Dean's request).

After some discussion Mr. Watters made a motion that the Recommendation be approved by the CNC and that Mr. Dow's letter be attached as an outside comment to the letter notifying the Central Bureau of the approval. Mr. Elliott seconded, and the motion was carried.

The President then reported that he had received a letter from Mr. R.E. Stopps, Technical Officer of the CSA, asking whether the CNC would be prepared to nominate a representative to a CSA Committee on Traffic Signals and Lighting of Highways. In replying to Mr. Stopps it was pointed out that the CGRA had issued a Manual which covers most of the points in question.

In the discussion Mr. Marshall mentioned that the CGRA endorses the general policy that national practices such as the CGRA manual should be referred to the CSA and considered for adoption as a national code. It was mentioned that the Province of Ontario has produced

a manual on Traffic Devices which is based on the corresponding CGRA manual. The CGRA manual also takes U.S. practices into account.

After some further discussion Mr. Watters made a motion that the CSA be informed that the CNC would be in favour of the CSA establishing a committee on Uniform Traffic Control Devices. Mr. Elliott seconded the motion which was then carried.

Miss Currie moved that Mr. Brzezina be asked to serve as delegate for the CNC on such a CSA committee and after Mr. Brown seconded this the motion was carried.

Mr. Burnham mentioned that at the present time the CSA committee on Street Lighting is complete. However, should a vacancy occur he would ask the CNC to name a delegate.

It being 12:55 PM Mr. Davidson moved to adjourn the meeting until 2:00 PM. Mr. Watters seconded. The motion was carried. The President thanked Mr. Marshall and Mr. Burnham for their very valuable contributions to the discussion on item 7 of the agenda.

8. Discussion of a Procedure for Contacting the CSA  
for further Cooperation

There was general agreement that closer cooperation with the CSA is highly desirable. Recent contacts between the officers of the CSA and those of the CNC provide a good basis. It was decided that a letter

should be written to the CSA asking whether Mr. G.F. Dean could be nominated as CSA representative to the CNC.

9. Other Business

(a) A letter from Mr. Bateman to the Secretary was read giving notice that Mr. Bateman wished to conclude his term of office as a member of the CNC and expressing his appreciation and pleasure in having worked with the CNC since it was founded. The members accepted Mr. Bateman's resignation with deep regret. The President agreed to write a letter to Mr. Bateman thanking him for his valuable work in the CNC.

(b) Mr. Davidson was reappointed as a member for another term of office by unanimous vote.

(c) Subject to his acceptance, Mr. G.F. Dean was appointed a member by unanimous vote.

(d) Mr. Watters explained that the appointment of a member from the Western provinces would be highly desirable. It was agreed that the Regional Vice President of the Pacific North West Region should be asked for advice on a suitable nomination.

(e) Mr. Davidson made a motion that Mr. Galbreath be appointed a member of the CNC. After Mr. Watters seconded, the motion was carried.

(f) Dr. Wyszecski made a motion, seconded by Mr. Watters, that Mr. Foley be appointed a member of the



CNC. The motion was carried.

(g) Dr. Wyszecski gave notice of the International Colour Meeting, to be held at Lucerne in June, 1965.

(h) It was agreed that the reissue of the CIE pamphlet should be taken up after the discussion with the CSA on handling of CIE publications.

(i) At 3:00 PM, all business having been concluded, the meeting was adjourned.

COMMITTEE E-1.2 : PHOTOMETRY

A letter was received from Dr. Kartashevskaya, the Chairman of E-1.2, in July 1964, asking for suggestions regarding which projects should be given priority in the work of this Committee. She suggested eight items listed on the attached page as possible priority problems.

Since all Members of CNC should be interested in photometry and may have a special interest in one or more of these problems, I have listed them in the hope of getting other viewpoints on the order of priority. At NRC we are at present concerned with items 1 to 3 which means in effect that we give these priority and I have indicated this to Dr. Kartashevskaya. What items do you feel are urgently important and what particular aspect of these do you wish studied?

*C L Sanders.*

13 October, 1964

1. The promotion of uniformity of light units - candela and lumen - for light sources of different kinds, from incandescent lamps up to fluorescent lamps and high-pressure mercury lamps. The elaboration of the international recommendations on the methods of measurements of fluorescent lamps and of discharge sources of light.
2. The study of the properties of physical receptors when used in photometry. The working out of the methods of measurements (special attention paid to the determination of such properties as spectral sensitivity, linearity, inertia, non-uniformity of the sensitivity over the photocathode surface etc., in different conditions of the work of receptors).
3. Spectral measurements of the sources and receptors of radiation (as well as of different media) and extension of these measurements beyond the visible part of the spectrum.
4. Absolute measurements of radiant power in the visible part of the spectrum and - a separate suggestion - for the near ultraviolet and infrared parts of spectrum.
5. Photometric problems in cinema and television. Methods of luminance measurements in various cases of practice, including those of luminance of cinema screens, of television picture display tubes, of electroluminescent sources of light, etc.  
*National Film Board*
6. Measurements of coefficients of luminance and of reflection in the first case connected with the reproduction of the unit of luminance by means of diffusing specimens, and in the second case widely used in industry for evaluating the properties of many various materials. (Perhaps it would be of use to organize some international comparisons on the measurement of specimens of such kinds).
7. Photometry of flash sources of light of different kinds, that being a specific and quickly developing branch of light measurements.

8. Issues connected with the curve of luminous efficiency, it seems must not be omitted by Expert Committee 1.2. These questions lie directly in the field of Expert Committee 1.4.1. Some adjoining tasks are studied by the Committee E-1.3.1. Nevertheless the Committee E-1.2 has to be ready with a definite opinion on the question of revision of the values of luminous efficiency and on the acceptable limits of this revision, if such a question arises.

COMMITTEE E-1.3.2 : COLOR RENDERING

The minutes of the Vienna Meeting June 1963 were received in December 1963. In September 1964 the document 'Method of Measuring and Specifying Colour Rendering by Light Sources' was received for the approval of the CNC of the CIE under the three months rule. It will be available at the annual meeting.

Several editorial changes in this have been suggested and I think that the CNC should approve it as a CIE publication.

A paper on 'Color Rendering of Light Sources' by Nickerson and Jerome was given at the Miami meeting of the IES in September. This outlined the CIE method and gave examples of its application. We should try to use the recommended CIE method in Canada when color rendering problems arise.

*C L Sanders*

13 October, 1964

## Report on CIE Committee Activities for 1964

G.E. Davidson Member CNC/CIE

### Committee S-2.1.1 Sources of Visible Radiation

There have been no activities of this Committee during the year. As this is very largely a reporting type of Committee, no renewed activity is anticipated in the near future.

### Committee E-2.3 Photometric Requirements for Luminaires

At the Vienna Sessions, this Committee ceased to be a Study Group under the chairmanship of Dr. H.J. Helwig, upon being transferred to Australia as an active Committee.

A document was forwarded to all committee members, outlining the terms of reference, the proposed photometric quantities to be measured and the proposed working schedule for the current session. Comments were forwarded to the Secretary of this committee.

A questionnaire formed part also of this first document but a reply has not been forwarded pending replies from several small photometric laboratories across Canada.

### Committee E-1.1 on Definitions and Vocabulary

A meeting of this Committee was held in February prior to the writer's appointment being confirmed.

*Davidson in IES Committee n Nomenclature*

It is most interesting to note that Committee E-1.1 is serving once again both the CIE and IEC (CEI). This is of particular interest to the writer as he is a member of the CSA Committee on Electrical Definitions. It is anticipated that in due course, this CSA Committee will serve also as our CNC/IEC Subcommittee on TC-1 Definitions.

A meeting of this Committee is planned for next April or May in Budapest to coincide with the Spring meeting of the Hungarian National Committee.

An invitation has been extended to Mr. Terrien to hold a meeting in Toronto at the W.P. Dobson Research Laboratories of Ontario Hydro. Although this invitation has not been accepted, it has not been rejected.

#### Committee E-2.2 on Characteristics of Lighting Materials

A meeting of this Committee was held in Berlin on June 18 and 19, 1964. It was not practicable for the writer to attend this meeting.

Although minutes of this meeting have been received, pressure of other work has delayed their translation from German into English.

Included in the data received from this Committee were copies of DIN 5036 (1963) on the Evaluation and Measurement of Photometric Properties of Materials.



CABLE ADDRESS "RESEARCH"

IN YOUR REPLY PLEASE QUOTE

FILE No. ....

NATIONAL RESEARCH COUNCIL  
CANADA

DIVISION OF APPLIED PHYSICS

OTTAWA 2, ONTARIO

13 October, 1964

Mr. W. Budde,  
Secretary, Canadian National  
Committee on Illumination,  
National Research Council,  
Ottawa : Ontario.

Dear Mr. Budde:

Re: Report on Activities of CIE  
Committee E-1.3.1 (Colorimetry)  
for Period October 1963/October 1964.

The main item was a 'good will tour' I made through several European countries to discuss with members and consultants of E-1.3.1 current problems of colorimetry and the working program of the committee. A report on this tour was sent to all Experts, Corresponding Members and Consultants of E-1.3.1 on July 28, 1964, and copies of it are attached herewith for your consideration.

Yours very truly,

Günter Wyszecki  
Member of the CNC on Illumination

c.c. To all members of CNC on Illumination.



CIE COMMITTEE E-2.1.2  
SOURCES OF UV AND IR RADIATION AND MEASUREMENT

One meeting was held in Munich on 30 June, 1964,  
with the following agenda:

1. Reports on artificial sunlight for testing.
2. Recent measurements of the UV spectrum of daylight.
3. New techniques for the measurement of radiation.
4. Miscellaneous.

I was unable to attend this meeting and have  
to date not received the minutes.

*W. Budde*

W. Budde

C.I.E. COMMITTEE E - 3.1.1.1. PREDETERMINATION  
OF ILLUMINATION AND LUMINANCE

1963 - 1964

M. G. Currie - Corresponding Member

The past correspondence and material relating to this Committee was forwarded to me in the Spring of this year by Mr. G. E. Davidson the former corresponding member. Two other communications have been received: one a brief outline of the terms of reference, the working programme, and the proposals for a vocabulary; the other a note entitled "Advices for the Choice of Methods for Lighting Calculations". The latter communication has been made under the Committee's own responsibility as a guide to specialists working in this field as well as to the Committee of Experts itself. The Committee is entering the final stages of its work - the publication of a "C.I.E. Method of Calculating the Mean Illumination on the Useful Plane, the Ceiling and the Walls of Rectangular Premises." Agreement between the Experts is almost complete and it is hoped that the method will be submitted to the National Committees of the C.I.E. for approval within the next year or two.

Marion G. Currie.

C.I.E. COMMITTEE E - 4.1.1 EDUCATION IN SCHOOLS, ETC.

1963 - 1964

M. G. Currie - Expert member

The Committee's questionnaire on the requirements of a lighting education programme in schools of architecture, (reported on last year), was sent to the seven schools of architecture in Canada. After a considerable delay, replies were finally received from all the schools contacted. The replies were forwarded to the Secretary, Mr. Mathis in Zurich. A communication received from Mr. Mathis in March indicated that 151 schools from 13 countries had completed the questionnaire (not including Canada).

The answers to the Canadian questionnaires all indicated considerable interest in the programme and in one particular instance a professor came to see the teaching methods and equipment used at the University of Toronto. It would seem that the study programme undertaken by the Committee in this field should be very successful and that it meets a real need in this branch of lighting education.

Marion G. Currie

Report to Canadian National Committee on Work of  
Committee E32 "Daylight"

The Chairman is now Mogens Voltelen of Denmark taking the place of Dr. Dresler who died last year. The work before the committee is as follows:

- (1) Finishing and issuing of a C.I.E. Guide to Daylight Calculation. This is now being edited and translated into French and German.
- (2) Finishing and issuing of CIE Guide to the Measurement of Climatological Data.
- (3) Standardization of Spectral Flux Distribution from Natural Sources.
- (4) Standard of Luminous Distribution for Clear Skies.
- (5) Method of Calculation of Illumination From Clear Skies.
- (6) Standardization of Methods to be used in Measuring Transmittance of Transparent and Transluscent Materials.

A sub-committee is also being formed under the Chairmanship of Dr. Hopkinson of England to study the needs for permanent supplementary artificial lighting.

M. Galbreath,  
Corresponding Member,  
Committee E32 "Daylight".

10. Report of activities of E-3.3.1. street lighting committee  
of the CIE

---

The international committee after many years of studies has edited early in 1964 a draft of an International Recommendations for the lighting of Public Thoroughfares.

This draft has been submitted to all National Committee for approval before being printed permanently, that is to be expected late this year.

It is a 32 page, letter size code, with eight main paragraphs, thirteen figures, four tables and an index.

These recommendations do not constitute a code, but may serve as a basis for the drafting of National Codes, and may lead to a form of uniformity throughout our world.

May we move a vote of appreciation on behalf the CNC of CIE.

Mr. A. Boereboom is the Chairman of E.3.3.1.

20. Standardization of traffic lights and Lighting of Highways and  
Street Lighting

---

The undersigned has started the idea of contacting various Canadian Organizations in view of forming a CSA Committee to study this question of standardization.

It has been pointed out that our traffic lights and

lighting sources at all our Canadian intersections are frequent causes of accidents due to the great variety of systems which vary from one City or town to another, one province to another.

The Canadian Standards Association has written to twenty nine different organizations (see the attached list) inviting them to nominate a representative to serve on a CSA Committee, if such is organized as planned.

May we move a vote of acceptance and nominate a representative to serve on this CSA Committee.

Respectfully submitted

GAW:mm

Geo.A. Watters

Quebec, September 29th, 1964.

MAILING LIST

Mr. W. Arch. Hayes,  
Executive Director,  
Canadian Highway Safety Council,  
30 The Driveway,  
Ottawa 4, Ontario.

Mr. S.C. Kershaw,  
Executive Director,  
British Columbia Safety Council,  
Suite 15, 1166 Nicola Street,  
Vancouver 5, B.C.

Mr. Paul R. Lawrence,  
General Manager,  
Alberta Safety Council,  
10526 Jasper Avenue,  
Edmonton, Alberta.

Mr. Leonard S. Bowman,  
General Manager,  
Saskatchewan Safety Council,  
1721 Searth Street,  
Regina, Saskatchewan.

Hon. Maitland B. Stainkopf, Q.C.,  
Minister,  
Department of Public Utilities,  
Legislative Building,  
Winnipeg, Manitoba.

Mr. Fred H. Ellis,  
General Manager,  
Ontario Safety League,  
208 King Street West,  
Toronto 1, Ontario.

Mr. W.B.G. Reynolds,  
Commissioner of Highway Safety,  
Department of Transport,  
Parliament Buildings, East Block,  
Toronto, Ontario.

Dr. M. Armand Blais,  
President,  
Presidentie,  
1175 ave des Rabels,  
Quebec, P.Q.

Hon. Bernard Plamond,  
Minister,  
Quebec Department of Roads,  
Parliament Buildings,  
Quebec City, P.Q.

General Manager,  
Province of Quebec Safety League,  
1455 Peel Street, Suite 1-15,  
Montreal 2, Quebec.

Hon. A.F. Richard,  
Minister,  
New Brunswick Department of Public Works,  
Legislative Buildings,  
Fredericton, New Brunswick.

Hon. S. T. Pyke,  
Minister of Highways,  
Province House,  
Halifax, Nova Scotia.

Mrs. Mary Resciter,  
Director of Women's Activities,  
Newfoundland Safety Council,  
P.O. Box 5123,  
St. John's, Newfoundland.

Hon. J. Philip Matheson,  
Minister,  
Prince Edward Island Department of  
Highways,  
Province Building,  
Charlottetown, P.E.I.



Dr. G.L. Saunders,  
President,  
Canadian National Committee of C.I.E.,  
National Research Council,  
Ottawa 2, Ontario.

Mr. B.C. Fairchild,  
General Manager,  
Canadian Electrical Association,  
35 York Street, Westmont,  
Montreal 6, Quebec.

Mr. H.J. Papik,  
Manager of Technical Services,  
Canadian Electrical Manufacturers Association,  
10 Price Street,  
Toronto 5, Ontario.

Mr. C.W. Gilchrist, O.B.E.,  
Managing Director,  
Canadian Good Roads Association,  
270 MacLaren Street,  
Ottawa 4, Ontario.

Hon. Gordon E. Taylor,  
Minister,  
Alberta Department of Highways,  
Legislative Buildings,  
Edmonton, Alberta.

Hon. P. A. Gagliardi,  
Minister,  
British Columbia Department of Highways,  
Parliament Buildings,  
Victoria, B.C.

Hon. F. W. Rowe,  
Minister,  
Newfoundland Department of Highways,  
Confederation Building,  
St. John's, Newfoundland.

Hon. G. G. Willis,  
Minister,  
Saskatchewan Department of Highways  
and Transportation,  
Legislative Building,  
Regina, Saskatchewan.

Mr. J. A. Gallant,  
Registrar of Motor Vehicles,  
Department of Provincial Secretary,  
Craffon Street E.,  
Charlottetown, P.E.I.

Mr. B.F. Anderson,  
Secretary-Treasurer,  
Traffic Engineering Section,  
The Ontario Traffic Conference,  
2301 Eglinton Avenue E.,  
Scarborough, Ontario.

Mrs. Michaud,  
Manager,  
Ontario Motor League,  
150 Glencair Street,  
Ottawa, Ontario.

Mr. M.T. Malone, P.Eng.,  
Director,  
Traffic Engineering Services,  
Corp. of The City of Ottawa,  
Ottawa, Ontario.

Mr. J.T. Newton,  
Operation Engineer,  
The Municipality of Metro. Toronto,  
Traffic Engineering Department,  
171 Eglinton Avenue W.,  
Toronto 12, Ontario.

Mr. B. Huffman,  
Chairman, Technical Committee,  
Western Canada Traffic & Parking  
Association,  
City Hall,  
Edmonton, Alberta.

Director,  
Traffic Engineering Services,  
City of Montreal,  
700 Craig Street East,  
Montreal, Quebec.