



International Commission on Illumination  
Commission Internationale de l'Éclairage  
Internationale Beleuchtungskommission



**Canadian National Committee    Comité national canadien**

## **MINUTES OF THE 69<sup>th</sup> ANNUAL CNC/CIE MEETING**

29 November 2024

The 69<sup>th</sup> annual meeting of the Canadian National Committee of the Commission Internationale de l'Éclairage (CNC/CIE) was held on Friday, November, 29, 2024, 11:30 AM EST, on the Webex videoconferencing platform arranged and hosted by C. Suvagau.

**Note:** the following acronyms may be used in this report:

CIE	Commission Internationale de l'Éclairage
CIE-CB	CIE Central Bureau
CIE-DD	CIE Division Director
CNC/CIE	Canadian National Committee of the CIE
CNC-BA	Canadian National Committee Board of Administration
CoP	CNC/CIE Code of Procedure
CIE-USNC	US National Committee of the CIE
IES	Illuminating Engineering Society
ISO	International Organization for Standardization
MC	Membership Committee
NRC	National Research Council of Canada
NRC-IAO	National Research Council International Affiliations Office
NRC-METRO	NRC Metrology Research Centre
NRC-CONST	NRC Construction Research Centre
NRCan	Natural Resources Canada
SCC	Standards Council of Canada
TC	CIE Technical Committee
WG	Working Group

## 1. Call-to-Order and Approval of Agenda

The 69<sup>th</sup> annual meeting of the CNC/CIE was called to order at 11:30 EST on Friday, November 29, 2024 by C. Suvagau, President. C. Suvagau motioned to accept the agenda, J. Veitch seconded the motion and the motion was carried unanimously.

## 2. Minutes of the 68<sup>th</sup> Annual CNC/CIE Meeting

C. Suvagau called for a ballot on the last year meeting minutes, but this was called off by L. Ivanescu because the minutes were already voted by email last March.

### 2.1 Action Items

Action Item	Responsible	Action	Status	Comments
2020-AI-2	J.A. Veitch	Develop a system for disseminating a call for experts and press releases to relevant groups that are interested in the activity of the CNC-CIE.	OPEN	Ongoing JAV: We already announce to Affiliates, but if Members know of other groups to whom we should send announcements, please inform me.
2020-AI-3	All	Recruit Canadian organizations and individuals involved in the light and lighting community for the purposes of expanding the affiliates list and the outreach of CNC-CIE activity.	OPEN	ongoing
2020-AI-4	V. Venktaramanan and C. Suvagau	V. Venktaramanan and C. Suvagau will get in touch with contacts in Western Canada about joining the CIE with the intention of improving geographic representation.	OPEN	We could get a joint meeting with IES Vancouver
2022-AI-1	S. Coyle	S. Coyle will follow up with the CIE-CB about the missing wire transfer of funds from the CIE-CB account to the CNC/CIE account.	OPEN	Resolved
2022-AI-3	S. Coyle	S. Coyle will contact TD Bank about the different products available (i.e., high-interest savings account, GICs, etc.) to offset the cost of inflation.	OPEN	Challenging to have double signature at the bank because it's hard to have two people in the same city. S. Coyle will check to get more

				signing authorities and eventually have two people in Ottawa able to sign in person at the bank, eventually J. Veitch and L. Ivanescu (the secretary)
2023-AI-1	J.A. Veitch	By March 2024, select the Canadian Head of Delegation for the 2024 plenary meeting in Milan, Italy in late June.	OPEN	Done. Toby Lau represented Canada there.
2023-AI-2	J.A. Veitch	Meet the website developer by Dec, 8th, 2023, to discuss platform options	OPEN	Done. See Website subcommittee report.
2023-AI-3	J.A. Veitch	J. Hovis proposed to reflect on having the joint CORM-CNC/CIE-US/CIE meeting on even years, to avoid having it during the central CIE meetings. J.A. Veitch has an action item to discuss this idea with CORM and US/CIE partners.	OPEN	See item 12.2 in this agenda.

### 3. President's Report

C. Suvagau presented his first report as president, with discussion, which is attached as [Appendix D](#). J. Veitch asked for a motion on president report. M. Brown gave the motion and L. Ivanescu seconded. It was accepted unanimously.

### 4. Vice-President's Report

J. Veitch presented her report with discussion and is attached as [Appendix E](#).

### 5. Secretary's Report

L. Ivanescu presented his report with discussion and is attached as [Appendix F](#).

### 6. Treasurer's Report

S. Coyle presented her report with discussion and is attached as [Appendix G](#). She noted opening balance of 25292.39\$ and ending balance 27702.76\$. The way to send the committed 5000\$ to the ISO/TC 274 meeting in Montreal, in June 2025, at McGill University, will be sorted out later. C. Suvagau asked for a motion on the report, J. Veitch seconded, and it was accepted unanimously.

### 7. Reports from Division Members

Division members presented their reports with discussions, which are attached at the end of this report, as follows: M Brown (D1), L. Ivanescu (D2), J. Veitch (D3), L. Asselin (D4), S. Qutob (D6) and R. Atkins (D8).

## **8. Membership and Elections**

### **8.1 Membership and Elections Subcommittees**

M. Mossman presented her report with discussion and is attached as [Appendix H](#). There was an updated spreadsheet format for our membership list. Geographical membership representation remains a priority.

### **8.2 M & E Subcommittee Membership**

New CNC Operating Guide: When we updated the Terms of Reference last year, we decided to simplify them by keeping only the high-level items in the Terms of Reference and moving the operational and procedural details to a separate new operating guide.

## **9. NRC Annual Performance Review of the CNC/CIE**

C. Suvagau mentioned that last June he and J. Hovis had an online meeting with Dr. Terrie Romano and Shannon Lint from NRC-IAO – they are appreciative of our performance.

## **10. Mirror committee to ISO/TC 274**

### **10.1 Chair's Report**

J.A. Veitch presented her report with discussion and is attached as [Appendix I](#). This is the most time consuming for the VP. Last year there were 29 ballots. Open ballot ISO/CIE 8995-1:2025, Light and lighting — Lighting of work places (need help by Dec 10). ISO TC 274 is looking for a liaison representative to the ISO technical committee on paints, pigments and dyes. The 2025 plenary meeting will be hosted by Canada in Montreal and Conor Samson is our liaison. He is the co-chair for TC 274 of Joint ISO/TC 205 - ISO/TC 274 WG: Indoor Visual Environment. We have an informal relationship with Canadian Standards Association (CSA) on C-419, chaired by C. Suvagau. Task: formally register the Canadian National Committee as a Standards Administering Organization for the SCC.

### **10.2 ISO TC 274 Business**

There's a lot of Canadian activity in TC 274 mostly thanks to Toby Lau. His liaison report is attached as [Appendix J](#). He also made a supporting document for ISO/CIE 20086:2019(E) Light and Lighting — Energy Performance of Lighting in Buildings. A group effort from BC Hydro developed an Excel spreadsheet as a calculation tool for. ISO/CIE 20086:2019(E) energy requirements. Important task for ISO/TC 274 in the next year: update business plan.

## **11. Ad hoc Subcommittees**

### **11.1 Website Subcommittee**

Sharon posts minutes from Division meetings in an area available to CNC Members— she encourages our Division Members to send them. We need to post more news from Canadian activities. We may stick with Joomla platform, as it seems to have better capability to switch between English and French.

### **11.2 Code of Procedures Revision**

M. Mossman has nothing new to report. The task is completed and the subcommittee is informally dissolved.

### **11.3 Events Subcommittee**

ISO/TC 274 2025 Plenary Meeting, Montreal: J.A. Veitch mentioned that half a day there is an open workshop – we'd like to invite people from the lighting community to the workshop. CNC sponsors with 5000\$ the social event, probably at Hydro Quebec Museum.

### **11.4 Lighting Course Update**

J. Hovis mentioned that most of the presentations have been through at least one review. Content: non-copyrighted pictures or images to be inserted into presentations. Recording to be made with Power Point.

## **12. Other Business**

### **12.1 Correspondence**

C. Suvagau mentioned that CIE is in stable financial position - it holds assets of 531 K€, with substantial cash reserve (106 K€). The plan is to increase in 2025 the total income and the gross profit. J. Veitch mentioned that CIE got 40 K€ grant from the Business Agency Vienna to provide public lectures in German on light and health and light pollution. Vienna hosting committee is very active in finding sponsorships. C. Suvagau motioned to approve the CIE central bureau budget. J. Veitch seconded and it was approved unanimously.

### **12.2 Date and Place for next year's meeting**

We didn't have yet a conversation to set the joint CNC/USNC meeting on even years instead of odd years. In 2025, the USNC/CORM meeting will be hosted at NIST - we have to decide if we joint or skip to the following year. Task: C. Suvagau and J. Veitch to discuss with USNC to have hybrid meetings and on even years. Next CNC Board meeting will be on Friday 28 Feb, at 11:30 EST.

## **13. Any Other Business**

### **13.1 Adjournment**

C. Suvagau adjourned the meeting at 14:23.

**Liviu Ivanescu,**

Secretary, Canadian National Committee of the CIE,  
[CNC-CIE-Secretariat@nrc-cnrc.gc.ca](mailto:CNC-CIE-Secretariat@nrc-cnrc.gc.ca)

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Division Member Reports

## APPENDIX A

### CNC/CIE 69th Annual General Meeting

#### Proposed Agenda

DATE: Friday, Nov. 29, 2024

TIME: 11:30-14:30 EST [8:30 – 11:30 PST]

LOCATION: Webex: Register for the meeting here:

<https://canada.webex.com/weblink/register/rd207852493365c5b64a7aa74f78eebdf>

RSVP: Liviu Ivanescu  
Secretary, Canadian National Committee of the CIE  
Tel: 613-993-9363  
Email: [CNC-CIE-Secretariat@nrc-cnrc.gc.ca](mailto:CNC-CIE-Secretariat@nrc-cnrc.gc.ca)

<http://www.cnc-cie.ca/>

PROPOSED AGENDA: (see next page)



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Internationale Beleuchtungskommission



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## CNC/CIE 69<sup>th</sup> Annual Meeting

2024-Nov-29

### Agenda

- |   |              |
|---|--------------|
| 1. Call to Order and Approval of Agenda                       | C. Suvagau   |
| 2. Minutes of the 68th Annual CNC/CIE meeting                 | C. Suvagau   |
| 2.1. Action items   |              |
| 2.2. Matters arising  |              |
| 3. President's report   | C. Suvagau   |
| 4. Vice-President's report                                    | J. A. Veitch |
| 5. Secretary's report   | L. Ivanescu  |
| 6. Treasurer's Report   | S. Coyle     |
| 7. Reports from Division Members                              |              |
| 7.1. Division 1: Vision and Colour                            | M. Brown     |
| 7.2. Division 2: Physical Measurement of Light and Radiation  | L. Ivanescu  |
| 7.3. Division 3: Interior Environment and Lighting Design     | J. Veitch    |
| 7.4. Division 4: Transportation and Exterior Applications     | L. Asselin   |
| 7.5. Division 6: Photobiology and Photochemistry              | S. Qutob     |
| 7.6. Division 8: Image Technology                             | R. Atkins    |
| 8. Membership and Elections                                   |              |
| 8.1. Membership and Elections Subcommittees                   | M. Mossman   |
| 8.2. M & E Subcommittee Membership                            | M. Mossman   |
| 9. NRC Annual Performance Review of the CNC/CIE               | C. Suvagau   |
| 10. Mirror committee to ISO/TC 274                            | J. A. Veitch |
| 10.1. Chair's report  | J.A. Veitch  |
| 10.2. ISO TC 274 Business                                     |              |
| 10.2.1. Chair Advisory Group                                  | T. Lau       |
| 10.2.2. JWG 1 (Energy Requirements for Lighting in Buildings) | T. Lau       |
| 10.2.3. WG 2 (Commissioning)                                  | T. Lau       |

10.2.4. JWG 5 (Lighting of Workplaces)	J. A. Veitch
10.2.5. ISO/TC 205/JWG 12: Joint ISO/TC 205 - ISO/TC 274 WG: Indoor Visual Environment	C. Sampson
10.2.6. Liaison Representatives	
10.2.6.1. ISO/TC 163 to ISO/TC 274	T. Lau
10.2.6.2. ISO/TC 274 to ISO/TC205/WG7	C. Sampson
10.2.7. Outstanding ballots/comments needing discussion	
10.3. SCC Matters	J. A. Veitch
10.3.1.1. MC Administration/ Membership & Balance	
10.3.1.2. MC Accreditation & Financial Assistance	
11. Ad hoc Subcommittees	
11.1. Website Subcommittee	S. McFadden
11.2. Code of Procedures Revision	M. Mossman
11.3. Events Subcommittee	
ISO/TC 274 2025 Plenary Meeting, Montreal	C. Sampson
11.4. Lighting Course Update	J. Hovis
12. Other Business	C. Suvagau
12.1. Correspondence	
12.2. Date and Place for next year's meeting	
13. Any other business	
13.1. Adjournment	C. Suvagau

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**Liviu Ivanescu**

Secretary, Canadian National Committee of the CIE

Email: [CNC-CIE-Secretariat@nrc-cnrc.gc.ca](mailto:CNC-CIE-Secretariat@nrc-cnrc.gc.ca)

## APPENDIX B

### CNC/CIE 69<sup>th</sup> Annual Meeting Attendees

Name	CNC/CIE Affiliation	Other Affiliation
Lynn Asselin	Board - Division 4 member	Holophane (Acuity Controls)
Robin Atkins	Board - Division 8 member	Dolby Labs
Michael Brown	Board - Division 1 member	York University
Jamal Carrington	Affiliate	Axis Lighting
Shirley Coyle	Board - Treasurer	Relevant Light Consulting Inc.
Arnold Gaertner	Board - Member at Large	National Research Council of Canada
Pierre Gallant	Regular member	Natural Resources Canada
Deborah Gottesman	Regular member	Gottesman Associates
Jeff Hovis	Regular member	School of Optometry and Vision Science, University of Waterloo
Liviu Ivanescu	Board - Secretary and Division 2 member	National Research Council of Canada
Sharon McFadden	Regular member	Retired
Sarah Morgan	TC member (CIE roster Q3 2024)	Nano-lit Technologies
Michele Mossman	Board - Member at Large	University of British Columbia
Kristin Poduska	Regular member	Memorial University of Newfoundland
Sami Qutob	Board - Division 6 member	Health Canada
Andrew Silbiger	Regular member	Andrew Silbiger Management Inc.
Cristian Suvagau	Board - President	BC Hydro
Jennifer Veitch	Board - Vice President, Division 3 member	National Research Council of Canada
Lorne Whitehead	Board - Member at Large	University of British Columbia
Yong Liang Zheng	Affiliate	Durham Region Ontario



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## APPENDIX C

### Action Items from the 69<sup>th</sup> Annual Meeting of the CNC/CIE

Action Item	Responsible	Action	Status	Comments
2020-AI-2	J.A. Veitch	Develop a system for disseminating a call for experts and press releases to relevant groups that are interested in the activity of the CNC-CIE.	OPEN	JAV: We already announce to Affiliates, but if Members know of other groups to whom we should send announcements, please inform me.
2020-AI-3	All	Recruit Canadian organizations and individuals involved in the light and lighting community for the purposes of expanding the affiliates list and the outreach of CNC-CIE activity.	OPEN	Ongoing
2020-AI-4	V. Venktaramanan and C. Suvagau	V. Venktaramanan and C. Suvagau will get in touch with contacts in Western Canada about joining the CIE with the intention of improving geographic representation.	OPEN	We could get a joint meeting with IES Vancouver
2022-AI-1	S. Coyle	S. Coyle will follow up with the CIE-CB about the missing wire transfer of funds from the CIE-CB account to the CNC/CIE account.	OPEN	Resolved. Funds (\$835.53 CAD) from CIE-CB deposited Dec 2023
2022-AI-3	S. Coyle	S. Coyle will contact TD Bank about the different products available (i.e., highinterest savings account, GICs, etc.) to offset the cost of inflation.	OPEN	Ongoing
2023-AI-1	J.A. Veitch	By March 2024, select the Canadian Head of Delegation for the 2024 plenary meeting in Milan, Italy in late June.	OPEN	Done. Toby Lau represented Canada there.
2023-AI-2	J.A. Veitch	Meet the website developer by Dec, 8th, 2023, to discuss platform options	OPEN	Done. See Website subcommittee report.

2023-AI-3	J.A. Veitch	J. Hovis proposed to reflect on having the joint CORM-CNC/CIE-US/CIE meeting on even years, to avoid having it during the central CIE meetings. J.A. Veitch has an action item to discuss this idea with CORM and US/CIE partners.	OPEN	Jennifer has placed a call to US-CNC in Nov 2024. Nov. 26: They have responded. Now that we have an open line of communication with them, we can discuss this after Friday's AGM.
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## APPENDIX D

### CNC/CIE President's Report

November 29, 2024

**Cristian Suvagau**

[cristian.suvagau@bchydro.com](mailto:cristian.suvagau@bchydro.com)

This was the first year for me as the President of the Canadian National Committee of CIE, and I would not have been able with all your support. Hence, I want to express my gratitude and a big thank you to everyone who contributed their time and energy to the CNC and CIE this year.

In June, Jeff Hovis and I had a web conference with Dr. Terrie Romano and Shannon Lynd from International Relations at the National Research Council regarding our annual performance review. No concerns were expressed.

The CNC-CIE Board of Administration met 4 times in the past year online. We will try to continue this practice in the upcoming year. If an issue that you think needs to be discussed by the Board, bring it to one of the board member's attention or email CNC-CIE-Secretariat, and we will add it to the agenda for the next meeting.

This year we have hold elections to fill board positions that were due:

- Cristian Suvagau replaces Jeff Hovis as President
- Liviu Ivanescu replaces Ali Ghaemi as Secretary and Joanne Zwinkels as Division 2 member
- Michael Brown replaces Jeff Hovis as Division 1 member
- Lynn Asselin replaces Cristian Suvagau as Division 4 member

As CNC has now a lot of new members and affiliates, the Vice-President, Jennifer Veitch prepared initially a "How-to-Guide for CNC/CIE Members and Division Members" to explain general duties and set a process for distribution and approval of CIE/ISO documents. Later, Michele Mosman has edited them in an Operational and Procedural Details (OPD) document. Text can be modified over time and the OPDs are separate from another document contain the CNC Terms of Reference, a more fixed set of rules.

#### News from the CIE

Following last year's 30<sup>th</sup> CIE Quadrennial Session in Ljubljana, the new leadership under Dr. Jennifer Veitch has embarked in a sustained activity of outreach and promotion of CIE vision via a series of webinars (recordings available on CIE website)

- Informative Q&A session – April
  - as part of CIE commitment to strengthening connections between the members and leadership
  - introduction and initiatives
- "SpotLIGHT on the UN Sustainable Goals" – May 16

- “Research Strategy 2023-2027”- October 10
  - This research plays a crucial role in supporting 12 out of the 17 United Nations' Sustainable Development Goals, addressing major global challenges, including environmental sustainability and human well-being
- “Measuring Light for Vision, Health, and Everything Else” - October 25
  - history and use of  $V(\lambda)$  with the
  - CIE-USNC in collaboration with the Illuminating Engineering Society (IES),
- Informative Q & A session - November 18

## Events

This year main event:

- CCPR/CIE Joint Workshop -100 Years of  $V(\lambda)$  and Future of Photometry June 3, 2024,
  - Workshop (photometry and colorimetry) at Bureau International des Poids et Mesures (BIPM), Sevres, France
  - From CNC- Jennifer Veitch and Lorne Whitehead attended the event
  - Artistic contributions (poems and visual art)

Future events:

- CIE Midterm Meeting, CIE 2025, Vienna, Austria, July 4-12, 2025
  - 4 - 6 July, 2025: CIE Statutory Bodies Meetings
  - 7 - 9 July, 2025: CIE Scientific Conference (6 July, 2025 - Welcome reception)
  - 10 - 11 July, 2025: CIE Division & TC Meetings
  - Registration scheduled to open 26 November, with Early Bird Registration available until 1 May 2025.
- Colour Research Society of Canada (CRCC) is exploring a joint venture event with CNC (seminar/ workshop), joint student competition
  - potential student scholarship (one from CNC-CIE and one from CRCC) to attend CIE midterm in Vienna for presentations
  - Venkat Venkataramanan is liaison
- 2025 Plenary meeting of ISO/TC 274- Montreal at McGill University;
  - CNC funding for \$5,000 was approved to contribute to hosting the ISO meeting
  - Conor Sampson is liaison
- The 31st Quadrennial Session of the CIE, Southeast University, Nanjing, China, July 9-17, 2027

## CIE Publications and Outreach

CIE web shop (Datasets, Technical Notes and Reports, Standards, Proceedings)

<https://store accuristech.com/publishers/60/browse>

- CIE Conference and symposia proceedings (1991-2023)
- <https://cie.co.at/publications/conference-and-symposia-proceedings>

CIE Published international Standards in 2024



- 6 CIE standards (3 ISO/CIE) have been published in 2024 (3 for Div 1, one for Div 3,4 and 6)  
Open access Publications (i.e CIE Position Statements)

<https://cie.co.at/publications/cie-position-statements>

- Position Statement on Integrative Lighting - Recommending Proper Light at the Proper Time, 3rd Edition
- CIE 249:2022 Visual Aspects of Time-Modulated Lighting Systems

Outreach Webinars (recordings available on CIE website)

- "SpotLIGHT on the UN Sustainable Goals" – May 16
- "Research Strategy 2023-2027"- October 10
  - This research plays a crucial role in supporting 12 out of the 17 United Nations' Sustainable Development Goals, addressing major global challenges, including environmental sustainability and human well-being
- "Measuring Light for Vision, Health, and Everything Else" - October 25
  - history and use of  $V(\lambda)$  with the
  - CIE-USNC in collaboration with the Illuminating Engineering Society (IES),
- Informative Q & A session - November 18
  - Jennifer Veitch, and CIE Secretary General, Diana Wernisch
  - as part of CIE commitment to strengthening connections between the members and leadership

### Finance

On the financial side, a deficit is still forecast for next year but the reserves are adequate to cover the shortfall. The 2025 budget was sent for NC approvals in November.

### Public Presentations by CNC members

2024 was a busy year for CNC members in the Scientific and Technical Sessions:

Jeff Hovis

- presented a lecture on "Colour Vision Deficiencies in Hypoxic Environments" for the Colour Research Society of Canada, October 24

Liviu Ivanescu

- "Blacklight Fluorescent Excitation of Integrating Spheres Sealing Felt", Optical Radiation News, CORM, number 111, p. 6-7, Summer/Fall 2024
- "UV line irradiance meter calibration", CORM/CIE-USNC Joint Annual Conference, 2024 Nov 12.

Jennifer Veitch

- Review of Health Effects - a series of webinars (with 4E SSL and Controls Platform) in November: Temporal Light Modulation, Circadian, Acute Neuro-Behavioural & Long-Term Effects, Photobiological Safety & Glare
- Inducted as a Fellow of the Royal Society of Canada in November

#### Lorne Whitehead

- “Effects of Near Infrared Radiation in Ambient Lighting on Cognitive Performance, Emotion, and Heart Rate Variability”- Journal of Environmental Psychology
  - Co-authored with Jenifer Veitch and several others
  - It provides evidence that near infrared at the levels normally found in daylight has a modest psychological impact.
- CIE 254-2024 “A roadmap toward basing CIE colorimetry on cone fundamentals”.
  - Chair of “CIE TC1-98. Intention to launch several new CIE TCs on specific aspects of this general topic.

Finally, I thank everyone for their help, participation, and ideas this year. On behalf of the CNC-CIE, we hope everyone stays safe and healthy.

## APPENDIX E

### CNC/CIE Vice-President's Report

November 2024

**Jennifer A. Veitch, Ph.D.**

[j\\_a\\_veitch@jdarchitect.ca](mailto:j_a_veitch@jdarchitect.ca) / [jennifer.veitch@nrc-cnrc.gc.ca](mailto:jennifer.veitch@nrc-cnrc.gc.ca)

In my capacity as Vice-President of the CNC/CIE, this year I undertook five tasks.

1. I supported the co-ordination and administration of the CNC/CIE as an outreach activity within NRC Metrology. Dr. Li-Lin Tay, Team Lead of the Photometry and Spectrophotometry team, has overall responsibility for the CNC/CIE as an activity.

2. I assisted as needed to support the President, Administrator, and Treasurer in the ongoing work of CNC/CIE business. This includes monitoring the CNC/CIE mailbox when the Administrator is unavailable, confirming that our procedures (e.g., for ballots) follow our Code of Procedure, and contributing to various discussions.

In relation to this, I wrote a procedure to describe how people in various roles ought to handle and respond to CNC/CIE, CIE Division, and MC-ISO-TC 274 ballot requests. This is now folded into the draft Procedures document being co-ordinated by Michele Mossman.

3. I served as Chair of the Canadian mirror committee to ISO-TC 274. Details of this committee's work will be discussed during this meeting under MC-ISO-TC 274 business.

4. I contributed to the preparation of input to the annual performance report (APR) to the NRC Government and International Affiliations Office (NRC-GIA), which was led by the President.

## APPENDIX F

### CNC/CIE Secretary's Report November 2024

Liviu Ivanescu

[CNC-CIE-Secretariat@nrc-cnrc.gc.ca](mailto:CNC-CIE-Secretariat@nrc-cnrc.gc.ca)

I officially accepted CNC/CIE Secretary duty in February 2024, but the following tasks cover the entire period since the last CNC/CIE Annual General Meeting in 27 Nov 2023.

#### 1- Communications

- CIE notifications, announcements and Press Releases were distributed by the CIE-CB to the NC's via email with supporting documents available on the CIE website ([www.cie.co.at](http://www.cie.co.at)) using Collaboration Tools. Documents with no commercial value were downloaded and made available on the CNC/CIE website. Several announcements of new (paid) CIE publications were merged before sharing to CNC/CIE-ALL contacts list in order to minimize the risk of spamming. Letter ballots were distributed to Members or the Board of Administration as required.
- In communication with the Secretary, please use the NRC email address [CNC-CIE-Secretariat@nrc-cnrc.gc.ca](mailto:CNC-CIE-Secretariat@nrc-cnrc.gc.ca). Both the Secretary and Vice-President have access to this mailbox which is monitored at a minimum, every few days.

#### 2- Letter Ballots

CIE Ballots: National Committee Letter Ballots circulated by the CIE Central Bureau were distributed to members for voting. Related documents were posted on the members area of the CNC/CIE website. Decisions were taken based on the consensus of those voting, as per the CNC/CIE Code of Procedure. Letter ballots for 2023/24 were:

- NC2310, TMB2301, D02-2305 Ballot on CIE FDIS 027 of TC 2-67 the Final Draft International Standard CIE FDIS 027:2023 "Photometry of road illumination devices, light signalling devices and retroreflective devices for road vehicles" of TC 2-67 (Photometry of Lighting and Light-Signalling Devices for Road Vehicles).
- NC2311, TMB2302, D03-2306 Ballot on ISO/CIE DIS 8995-1:2023 the Draft International Standard ISO/CIE DIS 8995-1:2023 "Light and lighting — Lighting of work places —Part 1: Indoor" of CIE-JTC 15 (Lighting of Indoor Workplaces) and ISO/TC 274 (Light and Lighting).
- NC2312 Approval of CIE Budget FY 2024
- TMB2304, D01-2307 Ballot on AD/TR of TC 1-91 on the Approval Draft Technical Report AD/TR of TC 1-91 "Methods for Evaluating the Colour Quality of White-Light Sources".

- NC2401 and D03-2401 Systematic Review of ISO/CIE 20086:2019 "Light and lighting — Energy performance of lighting in buildings".
- NC2402 Approval of Minutes of the CIE General Assembly, September 23, 2023
- NC2403, TMB2404, D01-2401 Ballot on ISO/CIE FDIS 11664-5:2024 on the Final Draft International Standard (FDIS) ISO/CIE FDIS 11664-5:2024 "Colorimetry — Part 5: CIE 1976 L\*u\*v\* colour space and u', v' uniform chromaticity scale diagram".
- NC2404 and D01-2403 Systematic Review of ISO/CIE 11664-1:2019 on "ISO/CIE 11664-1:2019 "Colorimetry —Part 1: CIE standard colorimetric observers".
- NC2405 and D01-2404 Systematic Review (SR) of ISO/CIE 11664-3:2019 on ISO/CIE 11664-3:2019 "Colorimetry —Part 3: CIE tristimulus values".
- NC2406 and D06-2401 Systematic Review of ISO/CIE 17166:2019 on ISO/CIE 17166:2019 "Erythema reference action spectrum and standard erythema dose".
- NC2407 and D01-2405 Systematic Review (SR) of ISO/CIE 11664-4:2019 on ISO/CIE 11664-4:2019 "Colorimetry —Part 4: CIE 1976 L\*a\*b\* colour space".
- NC2408, TMB2405, D06-2402 Ballot on ISO/CIE DIS 28077.2:2024 on ISO/CIE DIS 28077.2:2024 "Photocarcinogenesis action spectrum (non-melanoma skin cancers)".
- NC2409, TMB2406, D03-2402 Ballot on ISO/CIE FDIS 10916:2024 on ISO/CIE FDIS 10916:2024 "Light and lighting – Energy performance of lighting in buildings — Calculation of the impact of daylight utilization".
- NC2410, TMB2410, D01-2407 Ballot on ISO/CIE FDIS 23603:2024 on the Final Draft International Standard (FDIS) ISO/CIE FDIS 23603:2024 "Standard method of assessing the spectral quality of daylight simulators for visual appraisal and measurement of colour".
- NC2411, TMB2414, D03-2403 Ballot on ISO/CIE FDIS 8995-1:2024 on the Final Draft International Standard ISO/CIE FDIS 8995-1:2024 "Light and lighting — Lighting of work places —Part 1: Indoor" of CIE-JTC 15 (Lighting of Indoor Workplaces) and ISO/TC 274 (Light and Lighting).

- 3- **Annual Performance Review of the CNC/CIE:** The 2023 president Jeff Hovis provided the completed APR questionnaire to report on the 2023 calendar year to the International Innovation Office of the National Research Council.
- 4- **Requests for Funding:** None received. CNC/CIE committed to support financially the hosting of the 2025 Plenary meeting of ISO/TC 274 at McGill University.
- 5- **CNC/CIE Website:** The website operates at the web address of [www.cnc-cie.ca](http://www.cnc-cie.ca). See the separate Website subcommittee report. For a short period, NRC blacklisted internally this site, but now it's ok.
- 6- **Mailing Lists:** At the present time 4 mailing lists are maintained: Members (35), Affiliates (61), Board of Administration (13) and All (96). Affiliates and All receive CIE material (press releases of CIE



International Commission on Illumination  
Commission Internationale de l'Éclairage  
Internationale Beleuchtungskommission



Canadian National Committee Comité national canadien

publications) and notices of conferences. Members and Board of Administration receive more CNC information including ballots, and the Minutes of the annual meeting a related information.

AGM minutes: Minutes of the 68th CNC/CIE Annual General Meeting 2023 were circulated in March 2024 to the attendees and were approved.

## APPENDIX G

### CNC/CIE Treasurer's Report to the CNC/CIE 69th Annual Meeting

29 November 2024

**Shirley Coyle**

[scoyle6889@gmail.com](mailto:scoyle6889@gmail.com)

The financial statement for the period 31 Oct 2023 to 31 October 2024 is presented below.

		Income	Expense	Balance
31-Oct-23	<b>Opening Balance</b>			\$25,292.39
	<b>Income</b>			
09-Nov-23	Reg Fees(shared) - Joint Conference CNC-CIE/CIE-US/CORM	\$4,911.72		
07-Dec-23	Payout of Accrued Credit Notes by CIE CB	\$835.53		
	<b>Total Income</b>	\$5,747.25		
	<b>Expenses</b>			
12-Mar-24	Payout 1/3 reg fees to CIE-US (\$1,183.33 USD)	\$1,649.81		
12-Mar-24	Payout 1/3 reg fees to CORM (\$1,183.33 USD)	\$1,649.81		
11-Apr-24	Reimbursement to Bob Bridges- domain fees to Aug 25/2026	\$37.26		
	<b>Total Expenses</b>		\$3,336.88	
	Net Income for entire period is \$2,410.37			
31-Oct-24	<b>Ending Balance</b>			\$27,702.76

Respectfully submitted,

**Shirley Coyle**

Treasurer, CNC/CIE

CNC/CIE Annual Report

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69th Annual Meeting: 29 November 2024



## APPENDIX H

### CNC/CIE Membership Subcommittee – Chair's Report

November 2024

**Michele Mossman**

[michele.mossman@ubc.ca](mailto:michele.mossman@ubc.ca)

#### Current CNC/CIE Membership

The current membership includes:

- 38 Members: 13 Board Members  
18 Elected Members  
7 Automatic Members (participating in CIE Technical Committees)
- 59 Affiliates

The current CNC/CIE Board Members are:

<u>Member name</u>	<u>Board role</u>	<u>Term expires</u>
Cristian Suvagau	President	2027
Jennifer Veitch	Vice President and Division 3 Member	2027
Liviu Ivanescu	Secretary and Division 2 Member	2027
Shirley Coyle	Treasurer	2027
Michael Brown	Division 1 Member	2027
Lynn Asselin	Division 4 Member	2027
Sami Qutob	Division 6 Member	2027
Robin Atkins	Division 8 Member	2027
Arnold Gaertner	Member at Large	2027
Michele Mossman	Member at Large	2024
Venkat Venkataramanan	Member at Large	2027



Lorne Whitehead	Member at Large	2027
Joanne Zwinkels	Member at Large	2027

Geographic representation: The CNC aims to have as diverse geographic representation as possible. Currently, the geographic representation of the 38 CNC Members is: British Columbia (10), Newfoundland (1), Ontario (23), Prince Edward Island (1), and Quebec (3).

### Changes to membership

In February 2024, we welcomed three new Division Members: Michael Brown (Division 1), Liviu Ivanescu (Division 2), and Lynn Asselin (Division 4). They were elected to serve in these roles for a 4-year term, until December 2027. Joanne Zwinkels, having completed her role as Division 2 Member, transferred to a Member at Large role on the Board.

Eight Affiliates were removed from the list during 2024, either because they are no longer working in a CIE-related field, they relocated outside of Canada, or we were no longer able to reach them at their contact email address.

### Membership nominations:

As part of the updated Terms of Reference approved last year, we eliminated the 4-year terms for Elected Members. As per this updated process, an email ballot is required for new Members to join, and once appointed by the formal election process, they remain as Members for as long as it is mutually acceptable. This is a change from our previous process, when Elected Members were elected for a 4-year term and we had to go through a renewal process via a ballot every 4 years for them to remain members.

As a result of this change to continuous membership, only one Board member term expires this year (Michele Mossman, Member at Large) and Michele has confirmed that she is willing to renew for another 4-year term. An email ballot will be circulated.

### Other membership-related updates:

Updated membership database: We have slightly updated the format of the spreadsheet that we use to maintain our membership list, so that the details are consistent with the membership categories

described in the updated Terms of Reference. This is not a substantive change, but it makes it easier for us to keep track of the details.

New CNC Operating Guide: When we updated the Terms of Reference last year, we decided to simplify them by keeping only the high-level items in the Terms of Reference and moving the operational and procedural details to a separate new operating guide. The intent is for this operating guide to be a “living” document that we can routinely update, revising or adding details as they arise, especially for tasks that may only be required on an annual or quadrennial basis. A draft version has been circulated to Board members for their input.

#### **Additional membership activities for consideration during 2025:**

We have previously discussed identifying individuals as Affiliate Division members, to enable greater collective effort and continuity by CNC participants in support of Division activities. Now that new Division member terms are confirmed, we may resume this effort.

Geographic representation remains a priority and we will continue our efforts to increase membership from Alberta, Saskatchewan, and Manitoba, as well as Atlantic Canada. We have the option to recruit up to 2 additional Members at large for the Board, which is an opportunity to increase diversity on the Board, including geographic representation.

We will continue our efforts to identify division interests among our membership, so that we can share notices of division-related CIE technical reports and committee participation opportunities to those who may be particularly interested.



## APPENDIX I

### MC-ISO-TC 274 Chair's Report

November 27, 2023

**Jennifer A. Veitch, Ph.D.**

[j\\_a\\_veitch@jdarchitect.ca](mailto:j_a_veitch@jdarchitect.ca) | [jennifer.veitch@nrc-cnrc.gc.ca](mailto:jennifer.veitch@nrc-cnrc.gc.ca)

#### **A. Membership at 2024-11-29**

Chair: Jennifer Veitch  
Vice-Chair: Cristian Suvagau  
Members: Michael Brown  
Shirley Coyle  
Chad Greene  
Jeff Hovis  
Liviu Ivanescu  
Toby Lau  
Sharon McFadden  
Sami Qutob  
Conor Sampson

Any Canadian is welcome to join, but especially anyone already affiliated with the CNC/CIE. It does require a separate application to the SCC, which can be done here: <https://www.scc.ca/en/standards/committees/iso-tc-274-light-and-lighting>.

New Division members elected to the CNC/CIE in 2023 have been asked to enroll as members of MC-ISO-TC274.

#### **B. Activities**

##### *1. Ballots*

Annex A shows the record of our voting since the last annual meeting. There have been 29 ballots. We abstained a few times when there was no indication of consensus or no one was available to review the material, but in general our record is good.

I thank the committee members for their participation. This demonstration of our activity is among the measures of our evaluation by SCC.

##### *2. ISO/TC 274 Plenary meeting*

This year's meeting was a hybrid one, with the in-person attendance in Milan and others attending online. Toby Lau served again as our Head of Delegation, attending in person with funding from the SCC. Conor Sampson attended virtually. I attended the meeting of JWG 5 virtually.

A highlight of the meeting was the creation of two Ad-hoc Groups to consider standardization needs in Daylight (AHG 1) and Sports Lighting (AHG 2).

The 2025 plenary meeting will be held in Montreal from June 2-6, hosted by McGill University. We are grateful to BC Hydro, CSA Group, and the CNC/CIE in addition to McGill University School of Architecture for their sponsorship.

**Decision to be taken:** Who will represent Canada as our Head of Delegation at the 2025 plenary meeting?

### 3. Contributions to ISO/TC 274

We have strong participation in the parent committee in ISO, although additional volunteer experts are always welcome:

<i>Current Activities</i>			<i>Comment</i>
ISO/TC 274 CAG	Chair Advisory Group	T. Lau	This group is revising the ISO/TC 274 Strategic Business Plan.
ISO/TC 274-JWG 1 [CIE JTC 6 (CIE-ISO)]	Energy performance of lighting in buildings	T. Lau	<p>This committee published <i>ISO/CIE 10916:2024 Light and lighting — Energy performance of lighting in buildings — Calculation of the impact of daylight utilization</i> and <i>ISO/TS 7127:2023 Light and lighting — Building information modelling properties for lighting — Lighting systems</i></p> <p>And has this open project: <i>ISO/CIE AWI 25176 Light and lighting — Daylight in buildings — BSDF data generation for complex fenestration systems</i></p>
	ISO/CIE AWI TR 3092 <i>Light and lighting – Energy performance of lighting in</i>	T. Lau – Project leader	The document was published in September 2023. Following discussion, the Excel spreadsheet will be published on the <a href="#">ISO TC/274</a> web page as public information.

Current Activities			Comment
	<i>buildings – Explanation and justification of ISO/CIE 20086</i>		
ISO/TC 274 WG 2	Commissioning process of lighting systems	T. Lau	ISO/TR 5911:2023 Light and lighting – Commissioning of lighting systems in buildings – Explanation and justification of ISO/TS 21274  There is a new project currently being balloted, which will convert ISO/TS 21274 into an International Standard.
ISO/TC 274 JWG 5 [CIE JTC 15 (CIE-ISO)]	Lighting for workplaces	J. Veitch	ISO/CIE 8995-1 is out for FDIS ballot, closing Dec. 10. This JWG will be closed following publication.
ISO/TC 163	Liaison representative from ISO TC 163 to ISO TC 274	T. Lau	Presented a report on ISO/TC274 at the ISO/TC 163 virtual plenary meeting in September. The Liaison report is available from the Chair.
ISO/TC 205/WG 10 [Commissioning]	Liaison representative from ISO TC 274 to ISO TC 205/WG10	T. Lau	.
ISO /TC 274	Liaison representative from ISO TC 274 to ISO TC 205/WG 7	C. Sampson	
ISO/TC 205/JWG 12	ISO/TC 274 co-convenor	C. Sampson	Conor co-leads this joint working group, acting from the TC 274 side. Its active project is: <i>ISO/WD 20734</i> <i>Building Environment Design — Daylighting design procedure for indoor visual environment</i>

### C. Relations between the CNC/CIE and SCC:

#### 1. Mirror committee accreditation and funding

In January 2024, on our behalf, I completed our annual [Application for Committee Accreditation](#) [Annex C] and Financial Assistance for the fiscal year 2024-25. It is not appended because there were minimal changes from the prior year. We were [successful, although neither scores nor rankings were reported this year. We receiving \\$3000 from the SCC in addition to \\$4500 in support from external stakeholders, BC Hydro and CSA. This enabled us to support Toby Lau's attendance at the plenary in Milan in June.](#)

## *2. Registration of CNC/CIE as a Standards Administering Organization*

Now that we have a Secretary of the CNC/CIE, I will resume this matter sometime in the next year.

The CNC/CIE had applied in 2019 to the SCC for recognition as a Standards Administering Organization. This would be advantageous because it would confirm the Secretariat of the CNC/CIE as the administering entity overseeing the MC and would confirm our Code of Procedure terms that govern such matters as the selection of the Chair and Vice-Chair of the mirror committee.

The application requires modification, which continues to be held up at my end because of other duties. However, one of the modifications concerned the need for an internal archiving system that members could query in case of interest. We now have server space on an NRC server (DocZone) for the CNC/CIE, accessible to me and to the CNC/CIE Secretary. This should facilitate resolving this matter, and I hope to resubmit the application in the coming months.

## **D. Other organizations in liaison**

We continue to have an informal liaison with CSA C419, with several members in common including its Chair, Cristian Suvagau. I gave a presentation to C419 in June about the work of the CNC/CIE and MC-ISO-TC 274.

## **E. Upcoming actions and issues**

The big activity for the next year is the hosting of the plenary meeting of ISO/TC 274. Conor is the lead on local arrangements, and has things in hand.

**Table A – Record of MC-ISO-TC274 Voting between 2022-11-21 and 2023-11-27**

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
	Survey for comments on ISO DIS 16813	2023-11-20	2024-01-11	Do you have any comments on ISO/DIS 16813? Yes * No Abstention	Abstention	2023-01-11
	ISO/CIE DIS 8995-1 ballot	2023-12-19	2024-01-05	Scope of ISO 10916  Do you approve Draft Resolution 154/2024? Yes No * Abstain	Yes	2024-01-02
	ISO/CIE DIS 8995-1 ballot	2023-10-25	2024-01-03	ISO/CIE DIS 8995-1 1 Do you approve the technical content of the final draft? Approval Approval with corrections* Disapproval* Abstention  (* ) A Comment is required for this position. ISO/IEC commenting template.	Yes with comments	2024-01-02
	SR of ISO/TC 21274:2020 commissioning of lighting systems in buildings	2023-12-19	2024-01-15	2023 activity report and funds request  1. Is the mirror committee significantly revising the previously submitted activity report? Yes, the mirror committee has significantly revised its activity report. The report is posted below. No 2. Is the mirror committee seeking financial assistance from SCC? Yes No 3. Is the mirror committee providing external financial contributions? Yes, our Form B(s) are attached No	1. No, but... There are minor updates. The report is posted below. 2. Yes 3. Yes, our Form B(s) are attached	2024-01-15
	Survey for comments on ISO/TR 5863	2024-01-13	2024-01-24	Do you have any comments on ISO/TR 5863? Yes * No Abstention	Yes	2024-01-23

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
	SR of ISO/TC 21274:2020 commissioning of lighting systems in buildings	2023-10-18	2024-02-18	<p>SR of ISO/TC 21274:2020 commissioning of lighting systems in buildings</p> <p>1 Recommended action Withdraw *</p> <p>Revise/Amend *</p> <p>Confirm</p> <p>Abstain due to lack of consensus</p> <p>Abstain due to lack of national expert input</p> <p>Stabilize</p> <p>2 Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication? Yes *</p> <p>No * If not, what is used instead</p> <p>3 Is the national publication identical to the International Standard or was it modified? 1 Identical</p> <p>Modified *</p> <p>4 If this International Standard has not been nationally adopted, is it applied or used in your country without national adoption or are products/processes/services used in your country based on this standard? 2 Yes</p> <p>No *</p> <p>5 Is this International Standard, or its national adoption, referenced in regulations in your country? Yes</p> <p>No *</p> <p>6 If the committee decides to revise or amend, do you propose an expert and/or project leader for the development of that project? Yes (name(s) and proposed role(s): expert or project leader) *</p> <p>No</p> <p>(*) A Comment is required for this answer value. ISO/IEC commenting template.</p> <p>(1) This question only appears if the answer to question 2 is "Yes"</p> <p>(2) This question only appears if the answer to question 2 is "No"</p>	<p>1. Revise/Amend</p> <p>2. No ; CSA Z5000 Building commissioning for energy using systems is used in Canada.</p> <p>3. N/A</p> <p>4, No</p> <p>5, No</p> <p>6, No</p>	2024-02-16



Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
	ISO-TC 274_N950_S urvey for comments on ISO-CIE FDIS 11664-5	2024-03-26	2024-04-05	Do you have comments to ISO/CIE FDIS 11664-5? Yes (comment table mandatory) * No Abstain (* A Comment is required for this answer value	Abstain	2024-03-28
	Survey for comments on ISO/TR 22411-2	2024-03-23	2024-04-07	Do you have comments on ISO/TR 22411-2 (see N 949)? Yes (comment table mandatory) No Abstain (* A Comment form is required for this answer value	No *	2024-04-07
	Survey for comments on IEC DTR 63540	2024-03-28	2024-04-19	Do you have any comments on IEC DTR 63540? Yes (comment table mandatory) * No Abstain (* A Comment is required for this answer value	Yes	2024-04-19
N957	Survey for comments on ISO/CIE DIS 28077, Photocarcino genesis action spectrum (non- melanoma skin cancers)	2024-04-06	2024-04-22	Summary of questions: Do you have comments on ISO/CIE DIS 28077? Yes (please provide by comment table) * No Abstain (* A Comment is required for this answer value	yes	2024-04-22
	Category A Liaison with GLA	2024-05-09	2024-05-23	Vote on Draft Res.155/2024 - Category A liaison with the Global Lighting Association (GLA) Note: Draft Resolution 155/2024 Category A liaison with the Global Lighting Association (GLA) Noting the written request from the Global Lighting Association, ISO/TC 274 agrees to establish a Category A Liaison with the Global Lighting Association. Summary of questions: Do you approve draft resolution 155 to confirm the Category A liaison with GLA?	Summary of questions: Do you approve draft resolution 155 to confirm the Category A liaison with GLA?  Yes	2024-05-20

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
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Yes  
No \*  
Abstain  
(\* ) A Comment is required for this answer value

	SR of ISO/CIE 20086:2019 Energy requirements for lighting in buildings	2024-01-15	2024-05-20	<p>1 Recommended action Withdraw *</p> <p>Revise/Amend *</p> <p>Confirm</p> <p>Abstain due to lack of consensus</p> <p>Abstain due to lack of national expert input</p> <p>Stabilize</p> <p>2 Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication? Yes *</p> <p>No * If not, what is used instead</p> <p>3 Is the national publication identical to the International Standard or was it modified?1 Identical</p> <p>Modified *</p> <p>4 If this International Standard has not been nationally adopted, is it applied or used in your country without national adoption or are products/processes/services used in your country based on this standard?2 Yes</p> <p>No *</p> <p>5 Is this International Standard, or its national adoption, referenced in regulations in your country? Yes</p> <p>No *</p> <p>6 If the committee decides to revise or amend, do you propose an expert and/or project leader for the development of that project? Yes (name(s) and proposed role(s): expert or project leader) *</p> <p>No</p> <p>(* ) A Comment is required for this answer value. ISO/IEC commenting template.</p> <p>(1) This question only appears if the answer to question 2 is "Yes"</p>	<p>1 Recommended action</p> <p>Revise/Amend *</p> <p>2 Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication?</p> <p>No * If not, what is used instead</p> <p>C873.4-14 Building energy estimation methodology – Part 4 – Energy consumption for lighting [which influenced the development of this IS]</p> <p>3 Is the national publication identical to the International Standard or was it modified?1</p>	2024-05-20
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Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
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(2) This question only appears if the answer to question 2 is "No"

N/A

4 If this International Standard has not been nationally adopted, is it applied or used in your country without national adoption or are products/processes/services used in your country based on this standard?2  
No \* ...not directly, although C873.4 has many similarities.

5 Is this International Standard, or its national adoption, referenced in regulations in your country?

No

6 If the committee decides to revise or amend, do you propose an expert and/or project leader for the development of



Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
					that project?  Yes. Toby Lau as an expert member  (* ) A Comment is required for this answer value. ISO/IEC commenting template.  (1) This question only appears if the answer to question 2 is "Yes"  (2) This question only appears if the answer to question 2 is "No"	
	Liaison to ISO/TC 159/WG2	2024-05-04	2024-05-19	O you want to nominate an liaison representative for ISO/TC 159/WG 2 "Ergonomics for people with special requirements"?  Yes (nomination with name and a short CV) * No Abstain	Abstain	2024-05-20
	Light and lighting — Daylight in buildings — BSDF data generation for complex	2024-03-27	2024-06-05	No. Question Possible options 1 1a. Do you approve, disapprove or abstain on this NWIP? Approval Disapprove* Abstain 2 Please also select from one of the	Approve Draft document will be registered as new project in the committee's work	2024-06-05

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
	fenestration systems			<p>following options (note that if no option is selected, the default will be the first option):1 Draft document will be registered as new project in the committee's work programme (stage 20.00)</p> <p>Draft document can be registered as a Working Draft (WD - stage 20.20)</p> <p>Draft document can be registered as a Committee Draft (CD - stage 30.00)</p> <p>Draft document can be registered as a Draft International Standard (DIS - stage 40.00)</p> <p>3 In case of disapproval, do you believe that further study and consultations are needed first among committee members on this proposal as a preliminary work item before this proposal can be formally accepted?2 Yes</p> <p>No</p> <p>4 1b. Did you consult with the range of relevant stakeholders identified in the proposal in the development of this voting position and related comments? Yes</p> <p>No</p> <p>5 2. Standard(s), regulation(s), and other relevant documentation existing in our country, with any remarks concerning their application if necessary and consequences for global relevance, as well as copyright information on these documents, are attached: Yes (references provided below) *</p> <p>No</p> <p>6 3. Do you wish to add any additional comments? Yes *</p> <p>No</p> <p>7 4. We are committed to participating actively in the development of the project, at least by commenting on working drafts (P-members voting "Disapprove" in Qu.</p>	<p>programme (stage 20.00)</p> <p>N/A</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>	

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
				<p>1a may nevertheless nominate experts): Yes (and we nominate an expert below) *</p> <p>No</p> <p>(*) A Comment is required for this answer value. Justification statement as per National Body ISO/IEC commenting template. (NB) perspective (short) *</p> <p>(1) This question does not appear if the answer to question 1 is "Disapprove"</p> <p>(2) This questions only appears if the answer to question 1 is "Disapprove"</p>		
	Light and lighting – Energy performance of lighting in buildings — Calculation of the impact of daylight utilization [ISO/CIE 10916]	2024-05-17	2024-06-28	<p>No. Question Possible options</p> <p>1 Do you approve the technical content of the final draft? Approval Approval with corrections* Disapproval* Abstention</p> <p>(*) A Comment is required for this position. ISO/IEC commenting template.</p>	Approve	2024-06-28
	SO/TC 274/AHG 2 „Sports lighting” - Call for experts	2024-07-12	2024-08-08	<p>1 Do you want to nominate experts for the AHG "Sports lighting"? Yes (please list their names and nominate them via ISO GD) *</p> <p>No</p> <p>Abstain</p>	Abstain	2024-08-08
	Colorimetry - Part 3: CIE tristimulus values	2024-06-22	2024-08-08	<p>1 Do you have any comments on the SR on ISO/CIE 11664-3:2019? Yes (comment table mandatory) *</p> <p>No</p> <p>Abstain</p>	No	2024-08-08
	Colorimetry - Part 4: CIE 1976 L*a*b* Colour space (ISO 11664-4:2008)	2024-06-22	2024-08-08	<p>1 Do you have any comments on the SR on ISO/CIE 11664-4:2019-06? Yes (comment table mandatory) *</p> <p>No</p> <p>Abstain</p>	No	2024-08-08
	Colorimetry - Part 1: CIE standard	2024-06-22	2024-08-08	<p>1 Do you have any comments on the SR of ISO/CIE 11664-1:2019? Yes (comment table mandatory) *</p>	No	2024-08-08

Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
	colorimetric observers			No Abstain		
	Erythema reference action spectrum and standard erythema dose	2024-06-22	2024-08-08	1 Do you have any comments on the SR on ISO/CIE 17166:2019-05? Yes (comment table mandatory) * No Abstain	No	2024-08-08
	ISO/TC 274/AHG 1 "Daylight" - Call for experts	2024-07-12	2024-08-08	Do you want to nominate experts for the AHG "Daylight"? Yes (please list their names and nominate them via ISO GD) * No Abstain	Yes Conor Sampson	2024-08-09
	Survey for comments on ISO/CIE FDIS 23603	2024-07-12	2024-08-12	1 Do you have comments on ISO/CIE FDIS 23603? Yes * No Abstain	No	2024-08-12
	Survey for comments on ISO/FDIS 16813	2024-07-23	2024-08-13	1 Do you have any comments on ISO/FDIS 16813? Yes (comment table mandatory) * No Abstain	Abstain	2024-08-13
	Revision of the ISO/TC 274 Strategic Business Plan (SPB) — Call for input	2023-07-16	2024-09-11	Revision of the ISO/TC 274 Strategic Business Plan (SPB) — Call for input Note: Please provide comments on the main part of the ISO/TC 274 SPB, Annex 3 Overview of topics/potential future work items, for this please note N 756 which lists extended background information. Comments can also include proposals to delete items from Annex 3 or to add new topics. Please use the ISO commenting template.	Comments provided	2024-09-11
	Comments on IEC 63158-1	2024-10-18	2024-10-23	1 Do you want to provide comments on IEC CD 63158-1? Yes * No Abstain	yes	2024-10-23
	Comments on IEC 63158-2	2024-10-18	2024-10-23	1 Do you want to provide comments on IEC CD 63158-2? Yes *	yes	2024-10-23



Item #	Title	Circulated	SCC due date	Questions	Vote	Date ballot cast
				No Abstain		
	Comments on IEC 63158-3 new work item proposal	2024-10-18	2024-10-23	Do you want to provide comments on the IEC/TC 34 proposal document for a new standard to address phantom array effects (TLM)? Yes * No Abstain	yes	2024-10-23
	ISO/DTR 5863.2 "Integrative design of the building envelope — General principles"	2024-11-06	2024-11-05	ISO/DTR 5863.2 "Integrative design of the building envelope — General principles" Note: Please submit comments on ISO/DTR 5863.2 "Integrative design of the building envelope — General principles". The comments will be forwarded to ISO/TC 205 as liaison comments.	yes, comments provided	2024-11-18
	Vote on Res. 168 - Activation of ISO/TS PWI 21274	2024-10-31	2024-11-28	Do you approve Draft Resolution 168/2024? Yes No (comment required) * Abstain	Yes	2024-11-28





## APPENDIX J

### Standards Council of Canada (SCC) Liaison Report

November 2024

Toby K.W. Lau

[Toby.Lau@bchydro.com](mailto:Toby.Lau@bchydro.com)

#### Background:

The ISO/TC274 Light & lighting held their 12<sup>th</sup> plenary between June 26<sup>th</sup> and 27<sup>th</sup>, 2024 in Milan, Italy. Resolutions passed at the TC274 12<sup>th</sup> plenary were shown in the table below:

#### **Resolution 156/2024**

##### Revision of the Strategic Business Plan (SBP)

##### ISO/TC 274

- asks the Secretariat to start a review to collect comments on the current SBP,
- asks the CAG to prepare a revised SBP taking into account,
  - comments received in the review,
  - an update for the implementation guide to the PSDO with CIE, aligning with changes in ISO and CIE regulations.

#### **Resolution 157/2024**

##### Spreadsheet for ISO/CIE TR 3092

Noting ISO/TC 274/JWG 1 recommendation 1/2024, ISO/TC 274/JWG 1 is asked to provide the spreadsheet with the agreed changes to the ISO/TC 274 secretariat. The spreadsheet will be added to the ISO/TC 274 homepage as public information.

### **Resolution 158/2024**

#### **Further procedure ISO/TS PWI 21274**

Noting ISO/TC 274/WG 2 recommendation 1/2024,

- the CIE is asked to provide feedback on the question whether a change to the route of cooperation is required,
- with consideration of the CIE feedback, the ISO/TC 274 secretariat is asked to initiate a ballot on the activation of the project with the following parameters.
  - Deliverable: conversion ISO/TS 21274 into an International Standard
  - Title: Light and Lighting- Commissioning of lighting systems
  - Scope: This document specifies requirements for the commissioning of lighting systems to meet design specifications. This document presents details of the commissioning of lighting systems without focusing on the technical characteristics of specific components.  
This document can be applied to new installations of lighting systems for non-residential buildings and public spaces of multi-residence buildings, transportation and exterior applications.  
This document does not cover the commissioning of lighting systems concerning the electrical power connection aspects which are deemed to be in compliance with relevant legislation or standards.  
This document is not applicable to the commissioning of emergency lighting.
- SDT: 36 months
- SDGs: 9 and 11

### **Resolution 159/2024**

#### **Future of JWG 5**

Noting ISO/TC 274/JWG 5 recommendation 2/2024, ISO/TC 274 resolves to disband ISO/TC 274/JWG 5 after the final publication of ISO/CIE 8995-1. ISO/TC 274 thanks both Co-Convenors, Mrs. Etsuko Mochizuki and Mr. Peter Dehoff for their work.

### **Resolution 160**

#### **Convenor of CAG 2025-2027**

ISO/TC 274 decides to re-appoint Mr. Peter Thorns as Convenor of ISO/TC 274/CAG for a period of 3 years starting 2025-01-01.

### **Resolution 161**

#### **Convenor of JAG 2025-2027**

ISO/TC 274 decides to re-appoint Mr. Peter Thorns as Convenor of ISO/TC 274/JAG for a period of 3 years starting 2025-01-01.

#### **Resolution 162/2024**

##### Cooperation with ISO/TC 269/SC 2/WG 13

ISO/TC 274 decides to appoint Ms. Yandan Lin as liaison representative to ISO/TC 269/SC 2/WG 13 to allow better involvement on the ISO/TC 269/SC 2 projects related to interior electric lighting in rolling stock.

#### **Resolution 163/2024**

##### Cooperation with ISO/TC 159/WG 2

ISO/TC 274 decides to appoint Ms. Yandan Lin as liaison representative to ISO/TC 159/WG 2.

#### **Resolution 164/2024**

##### New cooperation representative for CEN/TC 169

ISO/TC 274 decides to appoint Mr. Fabio Pagano as new cooperation representative to CEN/TC 169.

#### **Resolution 165/2024**

##### Termination of liaison with ISO/TC 159/SC 5

ISO/TC 274 decides to terminate the liaison to ISO/TC 159/SC 5.

#### **Resolution 166/2024**

##### AHG "Daylight"

Noting the proposal given in N 964, ISO/TC 274 decides to establish an Ad hoc group "Daylight" within ISO/TC 274 and appoints Mr. Jens Christoffersen as Convenor, the secretariat being allocated to Danish Standards (DS).

The AHG is tasked to research and identify available information about daylight requirements as currently referenced in existing building codes, standards, guidelines, or rating systems in various countries to identify possibility or opportunities of developing a new international standard regarding daylight provision in buildings. The AHG should provide a recommendation for further action to ISO/TC 274 within 3 years. The ISO/TC 274 secretariat is asked to launch a Call for Experts for the AHG. The CIE is invited to nominate experts to the AHG.

**Resolution 167/2024****AHG "Sports Lighting"**

Noting the proposal given in N 965, ISO/TC 274 decides to establish an Ad hoc group "Sports lighting" within ISO/TC 274 and appoints Mr. Shuxiao Wang as Convenor, the secretariat being allocated to SAC. Noting JAG recommendation 2/2024 the AHG "Sports lighting" is tasked to prepare a proposal for a preliminary work item for a standard or technical specification on "Calculation parameters for sports lighting" within 2 years for presentation in JAG.

The ISO/TC 274 secretariat is asked to launch a Call for Experts for the AHG. The CIE is invited to nominate experts to the AHG.

Toby K.W. Lau, M.Sc., FEC, FCSSE, P.Eng.

Standards Council of Canada (SCC)

Liaison Officer of ISO/TC163 to ISO/TC274

## APPENDIX K

### CNC/CIE Website Report November 2024

Sharon McFadden and Jennifer Veitch

#### Domain

We are and will remain [www.cnc-cie.ca](http://www.cnc-cie.ca).

#### Usage

Usage increased slightly over the past year. During the last 12 months we averaged 394 unique visits and 439 visits per month as compared to 305 unique visits and 375 visits in 2023. However, only 5% of the visits or 24 per month lasted longer than 30 seconds. On average, 2 pages were viewed per visit. The most visitors were from the United States with Canada second and China third.

Eight members logged into the members only area at least once during the past year. Members can retrieve their usernames and passwords using the built-in retrieval facility, or they may contact the Secretariat for more information.

#### Content

- Sharon continues to upload press releases for new publications and provide direct access to free CIE publications on the website.
- As well as providing information on CIE events, Sharon posts notices about relevant national and international lighting events. Members are encouraged to send information on lighting events to have them put on the website.

We encourage all members to visit the website and offer suggestions for improvements and additions.

#### History of Lighting in Canada

No progress was made on the project this year. There is much still to do! If you have an interest, or if you know someone who does, we do have lots of material that could be compiled. It would be an interesting student project.

#### Maintenance

As stated in last year's report, the individual who has hosted and maintained our website since its inception does not wish to continue. As well, the version of Joomla that our website is based on is no longer supported and the template that our website uses was not upgraded to work with the current version of Joomla. For all these reasons we let a contract to investigate the best way forward. It is relatively simple to



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port the website to a new host, but it is less simple to recreate our website on either Joomla or an alternative platform. The simplest solution appears to be to select a new template that will provide a suitable look and feel. This template could either be on Joomla or an alternative platform. The subcommittee is currently considering its options and will make a decision shortly. When the new site is available, we expect to also move to a new host.



## Division 1: VISION AND COLOUR

Report to CNC/CIE 69th Annual Meeting  
National Research Council of Canada  
1200 Montreal Road, Ottawa, Ontario K1A 0R6 Canada  
Zoom Web Conference  
Friday, Nov. 29, 2024  
11.30AM to 2:30 PM EST

Michael S. Brown  
Email: mbrown@yorku.ca

### 1. Introduction

The annual Division 1 Meeting was held on May 31, 2024, in Paris, France and online through Webex. Forty-three people from 15 countries attended included 14 guests. The minutes can be found at the Members Section of the CNC-CIE website.

Officers were

Division Director	Kaida Xiao (GB)
Associate Director – Vision	Yoko Mizokami (JP)
Associate Director – Colour	Aditya Sole (NO)
Division Editor	Peter Hanselaer (BE)
Division Secretary	Li-Chen Ou (TW)

### 2. Highlights

The following is from the Director's report presented at the Division 1 Meeting in Paris. Report included activities from 2023 and 2024.

- 4 new TCs were established (TC1-100 to TC1-103)
  - 1 new TC proposal, 3 new reportership proposals are received
  - 4 TCs are nearly finished (2 with AD ballot approved, 2 at the AD ballot stage)
  - 1 reportership is closed with report (DR1-62)
- CIE Research Strategy 2023-2027
- Measuring, modelling, perceiving, and reproducing colour
- CIE Code of Procedure
- Extension of TC, progress of TC



International Commission on Illumination  
Commission Internationale de l'Éclairage  
Internationale Beleuchtungskommission



Canadian National Committee Comité national canadien

CIE2023 LR & T special Edition

- Two papers recommended by CIE D1.

CIE 2025 Midterm Meeting- invited talk

- D1 recommended Prof Steve Westland, Colour in AI Colour Research and Application
- Endorsing from CIE D1.



## 2.1 New Technical Committees and Reporterships

### **TC1-100 (C) To recommend CAM16-UCS as the CIE uniform colour space.**

Ronnier Luo (Chair)

No CA members

### **TC1-101 (V) Influence of ipRGCs on brightness perception.**

Sei-ichi Tsujimura (Chair)

No CA members

### **TC1-102 (C) Method for calculating CIE tristimulus value.**

Changjun Li (Chair)

No CA members

### **TC1-103 (V) Research Methods for Psychophysical Studies of Discomfort from Glare.**

Steve Fotios (Chair)

No CA members

## 2.2 Division publications (2024)

### **1. ISO/CIE 23603:2024 Standard method of assessing the spectral quality of daylight simulators for visual appraisal and measurement of colour**

Establishes a standard method for assessing the spectral quality of daylight simulators, aiming to ensure consistent and reliable evaluation of these simulators in applications requiring precise daylight replication.

### **2. ISO/CIE 11664-5:2024 (E) Colorimetry – Part 5: CIE 1976 $L^*u^*v^*$ colour space and $u'$ , $v'$ uniform chromaticity scale diagram**

Revises its 2016 edition, enhancing its technical specifications for uniformity in color perception.

### **3. CIE 254:2024 A roadmap toward basing CIE colorimetry on cone fundamentals**

Develops new LMS-based measures, expand wavelength ranges, and study colorimetric effects of cone diversity reflecting age, view field, and individual differences in cone perception.

2.3 Future meetings

- 2025 CIE Midterm Meeting CIE 2025, Vienna, Austria, July 4-12, 2025.
- 2027 The 31st Quadrennial Session of the CIE Nanjing, China, 9-17 July 2027.

3. Current Canadian participation in Division 1 activities

List Canadians who Chair or participate in Technical Committees, handle a Reportership, act as a Division Officer or act as a liaison.

Activity	Title	Canadian Members
TC1-98	A road map forward basing CIE colorimetry on cone fundamentals	Lorne Whitehead, Chair
TC1-103	Research Methods for Psychophysical Studies of Discomfort from Glare	Member, Jennifer Veitch

Jennifer Veitch

## 4. Highlights of the Division Work Programme

### 4.1 Overview of the status of TCs and Reporterships

#### 4.1.1 Current Technical Committees

- TC1-84 Definition of visual field for conspicuity.** Nana Itoh (JP); Chair  
Committee Draft  
No CA members
- TC1-91 New method for evaluating the colour quality of white-light sources.** Yandan Lin (CN); Chair  
Committee Draft #3 is being prepared  
No CA members
- TC1-92 Skin Colour database.** Kaida Xiao (GB); Chair  
Waiting for the AD ballot  
No CA members
- TC1-95 Validity of the CIE Whiteness and Tint Equations.** Minchen Wei (HK); Chair  
Working Draft in progress.  
No CA members
- TC1-96 A comprehensive model of colour vision.** Ronnier Luo (GB); Chair  
Committee Draft is in progress  
No CA members
- TC1-97 Age- and Field-Size-Parameterised Calculation of Cone-Fundamental-Based Spectral Tristimulus Values.** Jan Henrik Wold (NO); Chair  
Completed, waiting to set-up of CIE website Version 1.0 released on GitHub. Suggested that there is a Technical Reference that accompanies the program
- TC1-98 A road map forward basing CIE colorimetry on cone fundamentals.** Lorne Whitehead (CA); Chair  
Committee Draft in Progress. Also suggesting that 5 new Technical Committees be established to act on recommendations and proposals that will be set out in the report&
- TC1-99 Modelling two-dimensional colour appearance scales.** Ronnier Luo (GB); Chair  
Pre-Working Draft & additional data was collected and published  
No CA member

### 1.1.2 Current Joint Technical Committees

#### **JTC 8 (D1/D2/D3/D4/D6/D8) Terminology in Light and Lighting ,**

Looking for someone to replace Sharon McFadden & Peter Zwick

Joanne Zwinkels, Member

Continual updating and harmonizing with other dictionaries

#### **JTC 12 (D2/D1/D8) The measurement of sparkle and graininess. Alejandro Ferrero (ES); Chair**

Working on a draft Technical Report

No CA member

#### **JTC 16 (D1/D8) Validity of Chromatic Adaptation. Minchen Wei (HK); Chair**

Delayed progress due to COVID 19, more experiments will be carried out

No CA member

#### **JTC 17 (D1/D2/D8) Gloss measurement and gloss perception: A framework for the definition and standardization of visual cues to gloss. Frederick Leloup (BE); Chair**

Progress in the development of an image-based measurement, Pre-Working Draft

No CA member

### 4.1.3 Current Reportships

#### **R1.60 Future colour difference-evaluation – Reporter: Manuel Melgosa (ES)**

Proposal for a new person to work for this reportership

#### **R1.62 Typical LED Spectra – Reporter: Sophie Jost (FR)**

Results available from Kokka et al. Metrologia 2018 Vol. 55 Pages 526-534.

#### **R1.64 Real Colour Gamuts – Reporter: Changjun Li (CN)**

Technical Note in Preparation

#### **R1.67 Revisiting Correlated Colour Temperature – Reporter: Youngshin Kwak (KR)**

No report this year

#### **R1.69 Applicability of Metrics for Evaluating Reflected Glare on Displays: Shao-Tang Hung (TW)**

Technical note in preparation

## **R1. 70 Visual assessment methods of perceptual colour shifts in high-dynamic-range luminance conditions Jisoo Hwang (KR)**

Report by the end of 2024

### **4.2 Dissolution of and changes to TCs and Reporterships**

None to report.

### **5. Other Division News**

In the past year, Michael S. Brown became the new national representative of Canada, Petrica Prundeanu became the new national representative of Romania, and Pieter du Toit became the new national representative of South Africa for CIE Division 1.

### **6. Thank you**

As my first year, I'd like to thank Jeffery Hovis and Jennifer Veitech for their guidance in getting started.

## Division 2: Physical Measurement of Light and Radiation

Report to 2024 Annual Meeting of CNC/CIE  
Friday, November 29, 2024 (via Webex)

Dr. Liviu Ivanescu

Email: [Liviu.Ivanescu@nrc-cnrc.gc.ca](mailto:Liviu.Ivanescu@nrc-cnrc.gc.ca)

### 7. Introduction

The 2024 annual meeting of CIE Division 2 (D2) took place with hybrid attendance on Saturday, 1<sup>st</sup> June 2024, from 08:30 to 12:30 CEST (UTC +2). I attended remotely to this meeting through Webex. It was in connection with the CCPR-CIE Expert Workshop “100 Years of V(Lambda) and The Future of Photometry” on 3<sup>rd</sup> June 2024 in Paris, France.

### 8. Highlights

#### 8.1 New Technical Committees, Reportership

- TC 2-99 “**Standard File Format for Electronic Transfer of Optical Radiation Data for Luminaires, Lamps and LED modules**” created in May 2024.
- Division reporter proposal for **Equivalence of measurement results of scalar quantities in photometry**: Anders Thorseth, (DK) Technical University of Denmark, with assistance from: Tony Bergen (AU), Photometric Solutions International, Tobias Schnider (DE), Instrument Systems, Armin Sperling (DE), PTB.

#### 8.2 Division letter ballots

- Ballot (LB D02-2402) on extension of JTC 12 (D2/D1/D8) and TCC of JTC 12 (“**The measurement of sparkle and graininess**”) until end of 2025.
- Ballot on the creation of a new JTC D8/D2 on **Data representation space for spectral imaging**, with Jean-Baptiste Thomas (FR) as JTCC from D8 and Cherry Li (CN) as co-chair from D2.
- Ballot on the publication of CIE DR 2-87 Technical Note on **Terminology in Single/Few-Photon Metrology**.

#### 8.3 Division publications

- **CIE S 027:2024** Photometry of road illumination devices, light-signaling devices and retroreflective devices for road vehicles.
- **CIE x050:2023** Proceedings of the 30th Session of the CIE, Ljubljana, Slovenia, September 15 - 23, 2023.
- **CIE 251:2023** LED Reference Spectrum for Photometer Calibration.
- **ISO/CIE 23539-2023** Photometry.

## 8.4 Future meetings

- **D2 2025 meetings** in connection with **CIE 2025 (Midterm Conference)**, Vienna, Austria, July 4-12, 2025.
- **D2 2026 annual meeting**: IMNISA (South Africa) resigned. Potential replacement KRISS (KR).
- **D2 2027 meetings** in connection with **CIE 2027 (31<sup>st</sup> Quadrennial Session)**, Nanjing, China, July 9-14, 2027.

## 8.5 Other D2 activities

- **Agenda of the CCPR/CIE Expert Workshop 100 Years of  $V(\lambda)$  and Future of Photometry**
  - Session 1 History of  $V(\lambda)$  and photometric units
  - Session 2 History of CIE Colorimetry and Cone Fundamentals
  - Session 3 Photometry with Cone Fundamentals
  - Session 4 Discussion for future directions for photometry and colorimetry
- **Decision List of the D2 2024 Annual Meeting**
  - TC 2-62 and its TCC are extended until 2025.
  - TC 2-68 and its TCC are extended until 2025.
  - Appointment of Geiland Porrovecchio as new TCC2-81
  - TC 2-81 extended until 2025
  - TC 2-84 extended until 2025.
  - Extension of TCC2-84 until end of 2024.
  - Appointment of Lou Gevaux as new TCC2-85
  - TC 2-85 extended until 2025
  - TC 2-91 and its TCC are extended until 2025.
  - TC 2-94 and its TCC are extended until 2025.
  - Change of the ToR of DR2-94 as "To write a TN on recent progress on the methods for evaluating uncertainty of spectral.

## 9. Canadian participation in Division 2 activities in 2022-2023

Activity	Title	Canadian Member
<i>Two TCs/JTCs</i>		
TC 2-94	Measurement of total transmittance, diffuse transmittance and transmittance haze	L. Sandilands (member)
TC 2-98	Revision of CIE 130-1998 Practical methods for the measurement of reflectance and transmittance	L. Sandilands (member)
<i>One Liaison</i>		
L2-3	ISO TC6: Paper, Pulp and Board	L. Sandilands (member)

## 10. Highlights of Division 2 Work Programme

### 10.1 Overview of the status of D2 JTCs, TCs and Reporterships

#### 10.1.1 TC2-xx or JTC-xx: Title (chair)

- **JTC 20 (D6/D2)** Wearable alpha-opic dosimetry and light logging methods, limitations, device calibration and data schemes (D2TCC: Spitschan) (NEW).
- **JTC-17 (D1/D2/D8)** Gloss measurement and gloss perception: A framework for the definition and standardization of visual cues to gloss (D2TCC: Obein)
- **JTC-12 (D1/D2/D8)** The measurement of sparkle and graininess (D2TCC: Ferrero)
- **JTC-08 (D1/D2/D3/D4/D6/D8)** Terminology (D2TCC: Blattner)
- **JTC-01 (D4/D1/D2)** Implementation of mesopic photometry in outdoor lighting (D2TCC: Goodman)
- **TC 2-99** Standard File Format for Electronic Transfer of Optical Radiation Data for Luminaires, Lamps and LED modules (Giannetti) (NEW)
- **TC 2-98** Revision of CIE 130-1998 Practical methods for the measurement of reflectance and transmittance (Cooksey)
- **TC 2-97** Revision of CIE S025/E:2015 Test methods for LED lamps, LED luminaires and LED modules and its Supplements (Thorseth)
- **TC 2-96** Revision of ISO/CIE 19476:2014 Characterisation of the performance of illuminance meters and luminance meters (Sperling)
- **TC 2-95** Measurement of obtrusive light and sky glow (Bouroussis)
- **TC 2-94** Measurement of total transmittance, diffuse transmittance and transmittance haze (H-L Yu)
- **TC 2-91** Optical measurement methods of LED packages and LED arrays (Schneider) - **report review**
- **TC 2-89** Measurement of Temporal Light Modulation of Light Sources and Lighting Systems (Q.Li)
- **TC 2-86** Glare Measurement by Imaging Luminance Measurement Device (ILMD); (Wienold)
- **TC 2-85** Recommendation on the geometrical parameters for the measurement of the Bidirectional Reflectance Distribution Function (BRDF) (Obein)
- **TC 2-84** Recommendations on LED package test data reporting (Poppe) - **report review**
- **TC 2-82** Revision of CIE S014-2 (Csuti)
- **TC 2-81** Update of CIE 065:1985 (Absolute Radiometers); (Smid)
- **TC 2-79:** Integrating sphere photometry and spectroradiometry (D.H.Lee)



- TC 2-78:** The Goniophotometry of Lamps and Luminaires (Bergen)
- TC 2-77:** Fundamental Concepts (Bergen)
- TC 2-68:** Optical Measurement Methods for OLEDs used for Lighting (Shitomi)
- TC 2-67:** Photometry of Lighting and Light-signaling Devices for Road Vehicles (Reiners)
- TC 2-62:** Imaging-Photometer-Based Near-Field Goniophotometry (Bredemeier) - **report review**

#### 10.1.2 Reporterships DR2-xx: (Reporter) Title

- DR2-64** (Edwin Mofokeng) TN on Errors of Measurement in Spectrophotometry
- DR2-69** (Johannes Ledig) TN on the validation of a near-field goniophotometer
- DR 2-80** (Anders Thorseth) Metrology of laser-based lighting
- DR 2-81** (Dennis Couzin) Flash effective intensity calculation
- DR 2-82** (Thiago Menegotto) TN on clarification of the difference between adjustment, calibration and verification
- DR 2-87** (Dong-Hoon Lee) Terminology in single/few photon metrology
- DR 2-91** (Tony Bergen) Appropriate calibration and use of UV radiometers
- DR 2-92** (Tobias Schneider) Recommendation for standardization of the maximum luminous efficacy for a given photometric condition
- DR 2-93** (Udo Krüger) Implementing CIE 198-SP2 using Monte Carlo Simulation

### 11. Call for Experts for CIE D2 TCs

**TC 2-99** Standard File Format for Electronic Transfer of Optical Radiation Data for Luminaires, Lamps and LED modules, Chair Danilo Giannetti (IT): <https://cie.co.at/technicalcommittees/standard-file-format-electronic-transfer-optical-radiation-data-luminaires-lamps>.

### 12. Appendix: Division Members

AT	Austria	Wolfgang Bechter
AU	Australia	Tony Bergen
BE	Belgium	Jean-Michel Deswert
BG	Bulgaria	Plamen Tsankov

BR	Brazil	Thiago Menegotto
CA	Canada	Liviu Ivanescu
CH	Switzerland	Constantinos Bouroussis
CN	China	Jianguan Pan
CZ	Czechia	Marek Smid
DE	Germany	Armin Sperling
DK	Denmark	Anders Thorseth
ES	Spain	Maria del Mar Gandolfo de Luque
FI	Finland	Erkki Ikonen
FR	France	Gaël Obein
GB	United Kingdom	Teresa Goodman
GR	Greece	Konstantinos Kalamakis
HK	Hong Kong SAR China	TM Chung
HU	Hungary	Peter Csuti
IL	Israel	Alex Yarmolinsky
IT	Italy	Pietro Fiorentin
JP	Japan	Hiroshi Shitomi
KR	South Korea	Dong-Hoon Lee
MY	Malaysia	Lim Sai Seong
NL	Netherlands	Paul Dekker
NO	Norway	Knut Opdal
NZ	New Zealand	Francois Shindo
PL	Poland	Lukasz Litwiniuk
RO	Romania	Ion Constantin
RS	Serbia	Vladan Skerovic

RU	Russia	Raissa Stolyarevskaya
SE	Sweden	Stefan Källberg
SI	Slovenia	Grega Bizjak
SK	Slovakia	Roman Dubnicka
TR	Türkiye	Kamuran Türkoglu
TW	Taiwan	Cheng-Hsien Chen
US	United States	Yuqin Zong
ZA	South Africa	Rheinhardt Sieberhagen



## Division 3: Interior Environment and Lighting Design

Report to CNC/CIE 69th Annual Meeting  
Online, 2024-Nov-29

Jennifer A. Veitch, Ph.D.  
Email: [j\\_a\\_veitch@jdarchitect.ca](mailto:j_a_veitch@jdarchitect.ca)

### 1. Introduction

The 2024 meeting of Division 3 was held online by Webex on July 3, 2024. I represented Canada in person at this meeting. The minutes will be available to CNC/CIE Members on the Members area of the website.

### 2. Highlights

#### 2.1 New Technical Committees, Reporterships, and Other Activities

#### 2.2 Division publications

Since the last CNC/CIE report in November 2023, D3 has completed one publication:

[CIE 252:2024 Assessment of Discomfort Glare from Daylight in Buildings](#)

ISO/CIE 8995-1:2024 Light and lighting — Lighting of work places — Part 1: Indoor is in the final approval ballot stage, with the ballot closing on Dec. 10 for the SCC ballot (Canada's vote in the ISO ballot) and Dec. 16 in the CIE D3 ballot.

#### 2.3 Future meetings

2025: July 4-12, Vienna, Austria

2026: Online

2027: July 9-17, Nanjing, China

### 3. Current Canadian participation in Division 3 activities

Canadians who Chair or participate in Technical Committees, handle a Reportership, act as a Division Officer or act as a liaison are listed below. This list includes activities that ended during the reporting period. Increased participation by Canadians in CIE TCs – including students and those early in their careers – would be most welcome.

Activity	Title	Canadian Members
JTC 15	Lighting of Indoor Workplaces	Jennifer Veitch (Member), Lorne Whitehead (Member)
TC 3-57	Generic Discomfort Glare Sensation Model	Don McLean (Member)
TC 3-59	The integration of daylight and electric lighting – photometric, colorimetric and radiometric requirements for the spectral design of indoor lighting	Deborah Gottesman (Member)
TC 3-60	Spectral daylight characteristics	Lucas Wen Tang (Member)
TC 3-61	Resilient Lighting	Andrew Silbiger (Member)
RF-02	Matters Relating to Temporal Light Modulation	J. Veitch (Convenor), Patrick Gauthier, Sarah Morgan (Members)

In addition, Canadians are active in D3-related activities through the Canadian mirror committee to ISO TC 274. Although these are not, strictly speaking, CIE activities, they are indicative of Canadian participation in the broader work of recommendations and standards for light and lighting.

ISO/TC 274-JWG 1	Energy performance of lighting in buildings	T. Lau
[CIE JTC 6] (CIE-ISO)		
ISO/TC 274 JWG 2	Commissioning process of lighting systems	T. Lau
ISO/TC 163	Liaison representative from ISO TC 163 to ISO TC 274	T. Lau
ISO/TC205	Alternate liaison representative from ISO/TC 274 to ISO/TC 205	T. Lau
ISO/TC 205/WG7	Liaison representative from ISO/TC 274 to ISO/TC 205/WG7 Integration of nature and biodiversity in building design	C. Sampson
ISO/TC 205/JWG 12	Co-Convenor Joint ISO/TC 205 - ISO/TC 274 WG: Indoor Visual Environment	C. Sampson
ISO/TC205/WG10	Liaison representative from ISO TC 274 to ISO TC 205/WG10	T. Lau

#### 4. Highlights of Division Work Programme

TC 3-61 conducted a global survey of daylighting regulations. I obtained information from my Canadian network and contributed our content last year for inclusion in their report.

The leadership of D3 is developing a strategic plan for the Division. It consists of Research Strategy and Activity Policies. Workshop themes can be aligned with this research strategy, and the establishment of new TCs will be discussed accordingly. D3MT is now discussing the possibility of the next online workshop for young researchers.

In June, D3 held a meeting of its TCCs, DRs, and LRs to discuss issues and concerns. This is part of a concerted effort to better support the experts in their work and to improve coordination.

#### 4.1 Overview of the status of TCs and Reporterships

Reports on each TC are available as part of the meeting minutes available to CNC/CIE Members at [www.cnc-cie.ca](http://www.cnc-cie.ca).

Activity	Title	Chairman	Status
JTC 6 (CIE-ISO)	Energy Performance of Lighting in Buildings	L. Bellia [IT]	This JTC has an ongoing life as new work items are created through the ISO system. It has new items related to BIM for daylight louver system and to BSDF data generation.
JTC 8 (all Ds)	Terminology	P. Zwick [DE]	Procedures for ongoing maintenance of the vocabulary are being created, for faster incorporation of new terms.
JTC 13 (D4/D3)	Depreciation and Maintenance of Lighting Systems	D. Gasparovsky [D4]	The term was extended for 2 years. A new D3 co-chair is needed. (Don McLean from CA stepped down.)
JTC 15	Lighting of Indoor Workplaces	E. Mochizuki [JP]	Final ballot under way. This will be closed in the next year following publication.
JTC 18 (D3/D4)	Lighting Education	D3: Mandana Khanie [GB]	Work resuming with the new TCC.
TC 3-57	Generic Discomfort Glare Sensation Model	G. Vissenberg [NL]	TCC stepping down. A new TCC is needed, else it will be closed.
TC 3-58	Visual ergonomics and digital display use	P. Thorns [UK]	The report is in final editing before its ED ballot.
TC 3-59	The integration of daylight and electric lighting – photometric, colorimetric	Xue Peng [CN]	First draft report with committee.

Activity	Title	Chairman	Status
	and radiometric requirements for the spectral design of indoor lighting		
TC 3-60	Spectral daylight characteristics	Martine Knoop [DE]	Round robin data collection and processing under way. An R package of some sample spectral data is available online.
TC 3-61	Review of regional daylight requirement to assess the feasibility of global harmonization	C. Amorim [BR]	International survey completed, classification and summarization under way.
TC 3-62	Resilient Lighting	Yuki Akizuki [JP]	Work under way with a draft TR in preparation.
TC 3-63	Decision scheme to determine lighting requirements for indoor environments	Anna Pellegrino [IT]	Start delayed, but first meeting was to have happened over the summer.
DR 3-38	Evaluation of the Impact of Lighting Environment on the Perception of Spaciousness	Hiroyuki Miyake [JP]	
DR 3-39	Emergency Lighting	Michael A. Myers [US]	
DR 3-37	Use of VR for lighting research on indoor spaces	Kynthia Chamilothori [NL]	
RF-02	Matters Relating to Temporal Light Modulation	J. Veitch [CA]	Ongoing. A Webex meeting is planned for January 2025.

#### 4.2 Dissolution of and changes to TCs and Reporterships

TC 3-54	Revision of CIE 16-1970: Daylight	Y. Sutter [FR]	Closed. The TCC resigned, and no replacement could be found. The work is archived and could be resumed with new leadership.
TC 3-56	Assessment of Discomfort Glare from Daylight in Buildings	T. Iwata [JP]	Closed following publication of CIE 252:2024 Assessment of Discomfort Glare from Daylight in Buildings.

### 4.3 Liaison representatives (LRs)

Official liaisons (denoted L below) exist between committees in organizations for which there is a formal relationship between the CIE and the other organization. Division Correspondents (DC in the table below) are information relationships with organizations who share common interests.

Activity	Partner committee	Representative
L 3-02	ISO/TC 159/SC 4 Ergonomics of Human-System Interactions	Shahidul Islam Diana Wernisch
L 3-03	ISO/TC159/SC 5 Ergonomics of the Physical Environment	Peter Thorns
L 3-04	ISO/TC 163/SC 2 Thermal Performance and Energy Use in the Built Environment / Calculation Methods (Daylight)	
L 3-05	ISO/TC 205/WG 7 Indoor Visual Environment	Michail Papanikolaou
L 3-09	CEN/TC169/WG2 Lighting of Work Places	Tapio Kallasjoki
L 3-10	CEN/TC169/WG11 Daylight	Jan Wienold
L 3-11	CEN/TC169/WG3 Emergency Lighting in Buildings	Peter Thorns
L 3-12	CEN/TC169/WG9 Energy Performance of Buildings	Peter Thorns
L 3-13	ISO/TC163/WG4 Joint ISO/TC 163 - ISO/TC 205 WG: Energy performance of buildings using holistic approach	Laura Bellia
L 3-14	ISO/TC160/Glass in buildings	Peng Xue
L 3-15	ISO/TC 274 (AHG) 1 "Daylight"	Cláudia Naves David Amorim Anna Pellegrino Hiroyuki Miyake
DC 3-01	Illuminating Engineering Institute of Japan	Yoshiki Nakamura
DC 3-02	International Dark-Sky Association	Terry K McGowan

## 5. Other Division News

The leaders continue for the rest of the term:

Division Director: Prof. Nozomu Yoshizawa [JP]

Associate Director – Electric Lighting: Dr. Adrie de Vries [NL]

Associate Director – Daylighting: Prof. Anna Pellegrino [IT]

Division Secretary – Dr. Cláudia Naves David Amorim [BR]

Division Editor – Dr. Veronica Garcia-Hansen [AU]



As always, we would like to see more Canadian participation in Division 3 activities and TCs. Anyone interested in becoming more active in the CIE should contact me for more information about opportunities.

## Division 4: Transportation and Exterior Applications

Report to CNC/CIE 68th Annual Meeting  
Webinar, November 29, 2024

Lynn Asselin  
Email: [lynn.asselin@holophane.com](mailto:lynn.asselin@holophane.com)

### Division 4 Scope:

**To study and prepare guides for the design of exterior lighting and light.**

Last Div. 4 meeting was held in hybrid participation mode on 23-24 Sept. 2022 following Lux Europa in Prague (CZ)

[SAVE THE DATE: CIE Research Webinar on "CIE Research Strategy 2023-2027" | CIE](#)

SAVE THE DATE: CIE Research Webinar on "CIE Research Strategy 2023-2027" | CIE

### Div. 4 Officers

Division Director **Dionyz Gasparovsky** (SK)  
Division Secretary **Steve Lau** (CN) replaced Maurice Donners (NL)  
Division Editor **Nigel Parry** (GB)

### Div. 4 Associate Directors

AD#1-**Steve Fotios** (GB) - Fundamentals in outdoor lighting  
AD#2- **Maurice Donners** (NL) - Lighting & signaling for transport  
AD#3-**Sermin Onaygil** (TR) - Exterior applications

### 2024 Division Activities

January 24, 2024

[CIE Research Strategy 2023-2027 has been published](#) Research Strategy DOI [10.25039/vudfq44z](https://doi.org/10.25039/vudfq44z)

June 11, 2024

**Article published by CIE members in the OIML Bulletin - “Metrology of light pollution on a legal basis: Current and future challenges”**

October 14, 2024

**Recording Available: Webinar on CIE Research Strategy 2023-2027**

DIV 4: The 12nd International Forum on Automotive Lighting, China ( IFAL 2024 ) will be hold during Oct.17 - 18 in Shanghai.

**Division Publications in 2024**

Here is summary of the existing/ current publications in the scope of Division 4:

NEW:CIE S 027/E:2024

Photometry of road illumination devices, light-signalling devices and retroreflective devices for road vehicles

1 publication expired in 2023 (CIE 150- Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations)

10 publications expired before 2023; subject to review in 2024

14 publications are marked as “current”

4 publications are prepared or suggested for revision

4 publications are proposed for archival / withdrawal

6 publications have pending reviews

4 publications are due to review in 2024

Highlights of Division Work Program

Currently the Division 4 incorporates 12 Technical Committees, 7 Reporterships, participates in 3 Joint Technical Committees and has 6 Liaison Officers with other organizations

Technical Committees with advanced reports/ publications

**TC 4-47 Application of LED's in Transport Lighting and Signaling** - Chair: Hugh Barton (GB)

- Draft finished- focus only on LED signaling– Sent to publication

**TC 4-50 Road Surface Characterization for Lighting Applications-** Chair: Valerie Muzet (FR)

- CIE 144 -v.2 Road surface and road marking reflection characteristics and CIE 66 will be withdrawn and embedded into the new CIE 144 version 3. Extension of the deadline accepted until end 2025.

**TC 4-53 Tunnel Lighting Evolution**-Chair: Jerome Dehon (BE)

- Work is progressing well and an extension has been requested until Jan 2024 to allow achieving the revision work, and further decide on CIE 150

**TC 4-57 Guide for Sports Lighting** - Chair: Alan Smith (GB)

- Document is in final form and awaiting approval from all TC members

**Highlights of Division Work Program (cont.)**

**TC 4-58 Obtrusive Light (light pollution) from Colourful and Dynamic Lighting and its Limitation-** Chair: Steve Lau (CN)

- Applied for extension of the reference date both for the TR and the chair until 31st December 2025

**TC 4-59 Guide for Lighting Urban Elements** – Chair: Diana del Negro (IT)

- The TC has restarted in 2023 and under the workplan proposed the final document should be done by end of 2025.

**TC 4-60 Road Traffic Lights – Photometric Properties of Roundel Signals-** Chair: Ron Gibbons (US)

- Delivery of the draft standard is delaying; extension has been requested in ISO.

**TC 4-61: Artificial Lighting and its Impact on the Natural Environment** - Chair: Annika K. Jägerbrand (SE)

- First two drafts of TR were done in 2022; to be finalized in 2023

**TC 4-62: Adaptive Road Lighting-** Chair: Paolo Di Lecce (IT)

- Technical Note to be published in 2023. Working on the final document and expected to complete by end of 2024.

## Highlights of Division JTC and Reporterships

### **JTC 01 (D1/D2/D4) Implementation of the CIE191:2010 Mesopic Photometry In Outdoor Lighting -**

Chair: Stuart Mucklejohn (GB)

- Working draft is completed and soon it will move to the ballot

### **JTC 18 (D3/D4) Lighting Education - Dionyz Gasparovsky (SK)**

#### **DR-4-53 Environmental Aspects of Obtrusive Light from Outdoor Lighting Installations -**

Reporter: Constantinos Bouroussis (GR)

- Participation into the UN-organized conference “Dark and Quiet Skies”. Work recommended for the update of limits and key tables of CIE 150:2017

### **DR-4-54 Lighting for Cycling – establishing the State of Knowledge - Reporter: Jim Uttley (GB)**

- A draft of annotated bibliography has been produced in 2022 and since it requires further work will be presented as a Technical Note to Div. 4 members by the end of 2024.

## Div.4 Liaisons and Interorganizational collaboration

**L 4-06 LUCI (Lighting Urban Community International) - Tuba Bostanci Baskan**

**L 4-08 CEN/TC 169/WG12 Road Lighting - Sermin Onaygil**

**L 4-09 ISO TC22 SC35 Lighting and visibility - Paola Iacomussi**

**DC 4-01 IAU (International Astronomical Union) - Richard Wainscoat**

**DC 4-03 GTB (The International Automotive Lighting and Light Signalling Expert Group - Groupe de Travail "Bruxelles 1952") - Yandan Lin**

**DC 4-04 IALA (International Association of Marine) - Alwyn Williams**

## Other Division News

## Research Priorities

**Adaptive Lighting** - update, develop and consult for merging inputs with Div.3

**Obtrusive Lighting** – guidelines for limitation of the effects from outdoor lighting, for minimizing urban sky glow near observatories

## Other News

**DR Proposal** -Underpinning and development of current road lighting recommendations (M. Donners)

Research Forum Proposal- Toward a new CIE reference observer non-biological (Paola Iacomussi)

- The development and market proliferation of vision-based systems in automotive will need a different metric from the current one based only on the human observer.

**Proposed Standard-** Intrusive Light (D. Gasparovsky)

## Div. 4 Future Meetings and Symposiums

- **2025 Vienna (AT)** CIE Mid-term Meeting (incl. workshops) -04.-12.07.2025
- **2026** Call for proposals
- **2027 Nanjing (CN)** CIE Quadrennial Session

## Division 6: Photobiology and Photochemistry

### Report to CNC/CIE 69th Annual Meeting

CNC/CIE 69th WEBEX Annual Meeting will be held on 29th November 2024 starting at 11:30 AM EST.

Sami Qutob (Canadian representative for Division 6)  
Email: Sami.Qutob@hc-sc.gc.ca

#### 1 Introduction

The CNC/CIE is Canada's collective voice for light and lighting science and art, supporting the Standards Council of Canada by contributing core members to the Canadian mirror committee for ISO/TC 274 – Light and Lighting. This committee standardizes specific lighting applications and coordinates draft standards with the CIE. For more on ISO/TC 274, visit the ISO website.

**Terms of Reference of Division 6:** To study and evaluate the effects of optical radiation on biological and photochemical systems (exclusive of vision). The list of TCs, their terms of reference and current status is available on the Division web page: <https://cie.co.at/technical-work/divisions/division6>

#### DIVISION OFFICERS

Wei Zhang (WZ)	CN	China	DD6 (Division Director)
Eric Liggins (EL)	GB	United Kingdom	DE6 (Division Editor)
Laura Bellia (LB)	IT	Italy	DS6 (Division Secretary)
Yandan Lin (YL)	CN	China	ADD6 (Associate Division Director)
David H. Sliney (DHS)	US	United States	ADD6 (Associate Division Director)
			LR 6 01 (Liaison Representative)
			DC 6-03 (Division Correspondent)

#### Official Division 6 Members

Karl Schulmeister	AT	Austria
Urbain de Plessis	AU	Australia
Guy Vandermeersch	BE	Belgium

Kamelia Nikolova	BG	Bulgaria
Isac Roizenblatt	BR	Brazil
Sami Qutob	CA	Canada
Beat Gerber	CH	Switzerland
Tongsheng Mou	CN	China
Ralf Zuber	DE	Germany
Anne Bay	DK	Denmark
David Baeza Moyano	ES	Spain
Timo Partonen	FI	Finland
Coralie Barrau	FR	France
Luke Price	GB	United Kingdom
TM Chung	HK	Hong Kong S.A.R., CN
László Balázs	HU	Hungary
Alex Goldin	IL	Israel
Laura Bellia	IT	Italy
Shu Takeshita	ST	Japan
Meeryoung Cho	KR	South Korea
Vineetha Kalavally	MY	Malaysia
Luc Schlangen	NL	Netherlands
Terje Christensen	NO	Norway
Urszula Blaszcak	PL	Poland
Razvan Catalin Bucuresteanu	RO	Romania
Zoran Ledinski	RS	Serbia
Roman Belyaev	RU	Russia
Thorbjörn Laike	SE	Sweden
Katja Malovrh Rebec	SI	Slovenia
Banu Manav	TR	Turkey
Chien-Yue Chen	TW	Chinese Taipei
George C Brainard	US	United States
Edwin Mofokeng	ZA	South Africa



## 2 Highlights

- The D6 ballots over the year were: LB D06-2401, the CIE internal Systematic Review of ISO/CIE 17166:2019 **"Erythema reference action spectrum and standard erythema dose"**. Given the ballot results, DD6 and DS6 will make a recommendation to CIE CB on the next action, which will be to confirm or prepare a revision. This recommendation will be passed to the ISO/TC 274 Joint Advisory Group (JAG) for the next steps. The second ballot is LB D06-2402, DIS of ISO/CIE 28077.2:2024 **"Photocarcinogenesis action spectrum (non-melanoma skin cancers)"**. The document was approved, and it was decided to proceed directly to publication and is going to be published by ISO on 2024-11-06.
- CIE Research Webinar on "CIE Research Strategy 2023-2027" took place on October 10 at 3 PM CEST via Zoom.

### 2.1 New Technical Committees and Reporterships

#### TC Reports and Committees (4)

JTC 05 (D6/D2)	Review of IEC 62471/CIE S009
JTC 08 (D1/D2/D3/D4/D6/D8)	Terminology in light and lighting
JTC 19 (D6/D2)	Terms and definitions of horticultural lighting
(NEW) JTC 20 (D6/D2)	Wearable alpha-opic dosimetry and light logging methods, limitations, device calibration and data schemes

#### Division Reporterships (4)

Title	Reporter
DR 6-43 Illuminators for treatment of infant hyperbilirubinemia	Michael Lynn
DR 6-45 Publication and maintenance of the CIE S026 toolbox	Luke Price
DR 6-47 The role of light and lighting conditions in the prevention, development and mitigation of myopia: a literature review	Coralie Barrau
DR 6-48 A comprehensive checklist for reporting light characteristics	Raymond Najjars

in in-laboratory human studies using light as an intervention

DR 6-49 The ipRGC influenced responses to light: From mechanisms to policy Manuel Spitschan

## Reports from Liaison Representatives and Division Correspondents (8)

### **L6-01 IEC/TC76/WG1&9L Optical radiation safety and laser equipment - Optical Radiation Safety and Non-Coherent Sources**

DS reported that JOH chairs IEC/TC76 WG9, focusing on lasers and optical sources. Seven standards were published in 2006, along with six vertical standards on topics like projector systems, medical light sources, UV lamps, and measurement techniques. A standard on IR lamps is under development, and a joint standard with TC34 on visible light from luminaires is in progress. WG1 oversees laser standards but faces delays due to challenges with correction factors for repetitive pulses.

ZW asked about the progress of the IR lamp standard. DS noted it is with an Editorial Group and explained that IR sources, primarily used for communication and imaging at short distances, are considered non-hazardous, though risk assessment methods remain unclear. A draft is expected soon. ZW suggested collaboration between IEC/TC76, CIE, and IEC/TC34, as CIE/D6 focuses on photobiological safety and IEC/TC34 on product standards.

Reporter: David Sliney (US)

### **L6-08 CEN TC169 WG8 Lighting Applications - Photobiology**

No activity reported.

Reporter: John O'Hagan (GB)

### **L6-10 IEC/TC 34 Lighting**

ZW outlined the scope and structure of the liaison committee, which includes four subcommittees, various WGs, a Maintenance Team, JWGs, Advisory Groups, and a Joint Advisory Group under TC 34. Key WGs relevant to D6 include WG 19 (Horticultural Lighting), WG 23 (UV Radiation for Germicidal Purposes), IEC/TC 34/MT 2 (Terminology, linked to CIE JTC 8), and JWG 21 (Photobiological Safety of Visible Light Sources and Luminaires, linked to TC 34 and TC 76). ZW also listed relevant publications and noted the next IEC/TC 34 plenary meeting in November 2024.

ZW highlighted issues requiring D6's attention, such as terminology for horticulture and a WG 23 proposal to reference ACGIH 2022 instead of IEC 62471/CIE S 009, which is inappropriate. IEC/TC 34 plans to collaborate with CIE on reviewing IEC 62471/CIE S 009, as stated in CIE JTC 05's ToR, though the collaboration mechanism remains unclear. JOH noted that differing policies and procedures between CIE and IEC complicate JTC 05 activities. LB emphasized that CIE's active role with IEC is limited to JTC 05 and suggested strengthening CIE D6's collaboration with IEC to address other topics.  
Reporter: John O'Hagan (GB)

### **L6-11 ISO/TC142/WG2 Cleaning equipment for air and other gases - UV-C technology**

The second revision of ISO DIS 15858:2016 was not approved, primarily due to controversy over extending the standard to cover all UVC wavelengths down to 180 nm. The current version is mainly focused on 254 nm low-pressure mercury lamps.

Reporter: Ewan Eadie (GB)

### **DC6-01 WHO**

Progress report on activity since last Division meeting (September 2023):  
WHO is preparing Basic Safety Standards for Non-Ionising Radiation, including optical radiation. CIE is represented on the Core Group tasked with preparing the draft document by John O'Hagan.

Progress has been slow due to other priorities for the WHO radiation team. The draft is now with the WHO editing team, but it is proving difficult to get priority above other more important issues being addressed by WHO.

Reporter: John O'Hagan (GB)

### **DC6-02 ICNIRP**

JOH announced that ICNIRP (International Commission on Non-Ionizing Radiation Protection) has elected a new commission for the 2024-2028 term and is seeking experts in optical radiation. In September 2024, ICNIRP's Scientific Secretary, Dr. Dan Baaken, attended a meeting with senior representatives from Special Liaison Organizations (SLOs) formally associated with the International Commission on Radiological Protection (ICRP), including WHO. JOH is working to include CIE among the SLOs. Additionally, ICNIRP has several project groups addressing key topics such as UV exposure and evidence of adverse health effects.

Reporter: John O'Hagan (GB)

### DC6-03 ASP

ASP is the American Society of Photobiology, and it is one of the larger organizations holding scientific meetings in photobiology, the other being the European Society of Photobiology, ESP. The two alternate years for their meetings, ASP was held in 2024 in Chicago. It was a highly productive meeting covering molecular biology, chemistry, and biological studies. Several new topics of interest were discussed, including biochemical reactions influenced by optical radiation, which are also relevant to D6.

Reporter: David Sliney (US)

### DC6-04 World Meteorological Organisation (WMO)

The report on the World Meteorological Organization (WMO) by Ann Webb was presented. Ann Webb, along with Peter Blattner, engaged in correspondence regarding a review of radiation terminology in the WIGOS (WMO Integrated Global Observing System) metadata and WMO codes registry. She also worked to ensure that the extensive Guide to Instruments and Meteorological Observations aligns with the ILV wherever possible.

Reporter: Ann Webb (US)

## 2.2 Division publications

1. **ISO/CIE DIS 28077(E):2024 Photocarcinogenesis action spectrum (non-melanoma skin cancers).** ISO/CIE 28077 was prepared by CIE Technical Committee 6-32, Action Spectrum for Photocarcinogenesis, as CIE S 019. The committee responsible for this document is ISO/TC 274, Light and lighting.
2. **ISO/CIE 28077:2024 - Photocarcinogenesis action spectrum (non-melanoma skin cancers).** This ISO/CIE International Standard was prepared by the International Commission on Illumination (CIE) Technical Committee 6-32, Action Spectrum for Photocarcinogenesis, in cooperation with Technical Committee ISO/TC 274, Light and lighting. This third edition cancels and replaces the second edition (ISO/CIE 28077:2016), which has been technically revised.

## 2.3 Future meetings

The CIE 2025 midterm meeting would be in Vienna, Austria, July 4-11, 2025. The CIE Midterm Meeting features the CIE 2025 Scientific Conference, to be held from July 10-11, 2025. This three-day conference brings together the CIE community and its stakeholders to advance the science of light and lighting, as well as the technical and organizational work of the CIE. The scientific conference will be preceded by the CIE General assembly and other administrative meetings from July 4-6, 2025, and followed by the CIE Division and Technical Committee (TC) meetings on July 10-11, 2025.

Important Dates:

- September 13, 2024: Call for Contributions is published, submission system opens
- November 15, 2024: Conference early registration opens
- December 10, 2024: Submission deadline for conference contributions (“Short Papers”: abstracts + short summary)\*, start of peer review
- March 1, 2025: Review results will be announced
- March 1, 2025: Submission of Full-length Papers (and revised Short Papers) opens
- May 1, 2025: Submission deadline for revised papers (incl. Full-length Papers)
- May 1, 2025: Early bird registration ends
- June 16, 2025: Open access fees payment deadline

CIE Australia Lighting Research Conference, Brisbane Australia, February 24, 2025

Society for Light, Rhythms, and Circadian Health, (formerly SLTBR), Boston MA, June 14-16, 2025

American Society for Photobiology Biennial Meeting, Scottsdale, AZ, May 16-19, 2026

### 3      **Current Canadian participation in Division 6 activities**

List Canadians who Chair or participate in Technical Committees, handle Reporterships, act as a Division Officer or act as a liaison.

Activity	Title	Canadian Members
CNC/CIE Annual Report		

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TCx-xx		Name (position)
JTC-8	International Lighting Vocabulary	Sharon McFadden
JTC-14	Integrative Lighting (ISO JWG 4)	Jennifer Veitch (President-CIE)
JTC-19	Horticultural Lighting	Ian Ashdown

## 4 Highlights of Division Work Program

### 4.1 Overview of the status of TCs and Reporterships

#### 4.1.1 JTC 05 (CIE-IEC): Joint Technical Committee to Revise CIE S009/IEC 62471

**Scope:** To update CIE S009; to take account of revised exposure limit guidelines from the International Commission on Non-Ionizing Radiation Protection; to provide a clearer rational for the definition of the risk groups; and to improve the guidance on measurements in conjunction with Division 2. To work with IEC TC76 and IEC TC34 on the development of product-specific requirements of the revised standard. However, responsibility for the product-specific requirements will rest with IEC. To work with IEC to produce a dual-logo standard to replace CIE S009/IEC 62471.

**Status:** The draft standard is nearly finalized and was set to move to a JTC ballot. However, progress stalled due to the need to initiate work within IEC TC 76 for a joint IEC/CIE logo standard, as advised by IEC management. This issue was resolved at an IEC TC 76 meeting in Japan in August 2024. Despite some ongoing differences on pulsed emissions and UV weighting functions, the current draft will be circulated as a working document in JTC 05 and a New Work Item Proposal in IEC TC 76 (also copied to IEC TC34) in the coming weeks..

Chair: John O'Hagan (GB)

#### 4.1.2 JTC 19 (D2/D6): Terms and Definitions for Horticultural Lighting

**Scope:** To write an international standard for terms and definitions in the field of horticultural lighting, taking into account terms from existing national or regional publications.

**Status:** No activities of JTC-19 last year. Since July 2023: A 2nd draft international standard was prepared and provided to CIE technical manager, and the feedback was that CIE CB would need more time/internal communication regarding the deliverable as to whether it would be an "SP to CIE S 017" or independent publication. Waiting for decision/suggestion from the CB for the next steps.

Chair: Wei Zhang (CN)

#### 4.1.3 (NEW) JTC 20 Wearable alpha-opic dosimetry and light logging methods, limitations, device calibration and data schemes

**Scope:** The technical report will review current state-of-the-art of wearable alpha-opic light dosimetry methods in the scientific literature and beyond. It will also define limitations of current CIE-recommended practices for wearable alpha-opic light dosimeters, propose a calibration protocol for wearable alpha-opic light dosimeters adding to current CIE-recommended practices, discuss limitations of wearable dosimeters vis-a-vis the physiologically relevant quantification of alpha-opic light exposure. Finally it will provide an inventory of needs and options for metadata and data schemes for alpha-opic dosimetry data collections.

**Status:** Since the last hybrid meeting in Ljubljana, the JTC has developed the first working draft (WD) of the Technical Report, focusing on the calibration and characterization requirements for wearable light loggers. The writing has been collaborative, with different TCMs contributing sections. Currently, the document is being integrated by the TCC, a process taking longer than anticipated due to the complexity of the content and the need to harmonize and streamline the information and writing styles. The TCC is confident that significant progress can be made in the coming months to produce a final WD..

Chair: Manuel Spitschan (MS)

#### 4.1.4 R6-43 Illuminators for Treatment of Infant Hyperbilirubinemia

**Scope:** referencing of the progress of phototherapy for neonatal jaundice in the last sixty years, a section on photo-chemistry and a section on photo-physics with spectral analysis from different LED and tube-based units.

**Status:** A revised draft of the document will be sent to the DE in the next weeks.

Reporter: Michael Lynn

#### 4.1.5 R6-45 Publication and maintenance of the CIE S026 Toolbox

**Scope:** A Toolbox to support the use of the international standard CIE S 026:2018 CIE System for Metrology of Optical Radiation for ipRGC-Influenced Responses to Light has been developed. A beta version of the Toolbox was shared last year with attendees at the tutorial held on this new system of metrology. After further testing the Toolbox is now available to support the use of the standard. The S 026 Toolbox and S 026 User Guide are freely available on the CIE Website. <https://cie.co.at/news/launch-cie-s-026-toolbox-and-user-guide>

**Status:** This is a CIE managed resource, so this DR is open and currently no action is necessary.

Reporter: Luke Price

#### **4.1.6 R6-47 The Role of Light and Lighting Conditions in the Prevention, Development and Mitigation of Myopia: a Literature Review**

**Scope:** Myopia was the main cause of irreversible blindness and myopia prevalence is increasing rapidly. It is known that spending time outdoors during the day is protective against the progression of myopia, but more research is ongoing and needed to understand mechanisms and come up with preventative strategies. This report reviews the literature on the role light has on myopia

**Status:** No report was received. However, the importance of this topic was highlighted to due to the global prevalence of myopia.

Reporter: Coralie Barrau

#### **4.1.7 R6-48 The ENLIGHT checklist for reporting light characteristics in laboratory human studies**

**Scope:** There is no consensus on reporting light characteristics in studies investigating non-visual responses to light. The ENLIGHT Checklist is the first consensus-based checklist for documenting and reporting ocular light-based interventions for human studies. The implementation of the checklist will enhance the impact of light-based research by ensuring comprehensive documentation, enhancing reproducibility, and enabling data aggregation across studies.

**Status:** A current draft of the TN was presented and RN is addressing the received comments and is expected to be finalized soon.

Reporter: Raymond P. Najjars

#### **4.1.8 R6-49 The ipRGC influenced responses to light: From mechanisms to policy.**

**Scope:** The goal of this reportship is to summarize and report on the discussions taking place in the upcoming Ladenburg Roundtable Light for health and well-being – from the biological principles to policy, taking place from 14 to 16 April 2024 in Ladenburg, Germany. The Roundtable is an international meeting involving experts from the field of the non-visual effects of light, focussing on the following three questions:

- How solid and robust is our laboratory evidence when applied to the real world?



- How can we translate recommendations into policy?
- How can we communicate and engage with the public?

**Status:** This DR reports on the findings from the Ladenburg Roundtable (14-16 April 2024) on light exposure and policy. The Roundtable produced a White Paper outlining a plan for an internationally coordinated campaign on the non-visual effects of light, which was cited in the 3rd edition of the CIE position statement. The DR is currently inactive, as further work may not be timely or productive.

Reporter: Manuel Spitschan

#### 4.2 Dissolution of and changes to TCs and Reporterships

List of TCs and Reporterships that have been closed in the past year and/or changes in Chairs or Terms of Reference.

#### 4.3 Division Liaisons and interorganizational collaboration

List of Liaisons/ international collaborations

#### 4.4 Research Fora

Proposed priority research topics:

- David Baeza Moyano (E) on “UV tanning” and “Circadian rhythm of the skin”, DBM gave a presentation on Circadian rhythm of the skin, showing how the skin is a peripheral clock affected by light exposure. YL asked if an action spectrum exists for this. DBM replied that it does not exist, and DS observed that it will be important to recognize the penetration of radiation connected to different wavelengths.
- María del Pilar Dubois C (CO) on “Light pollution and life in nocturnal ecosystems”,
- Irina Terenetskaya (Ukraine) for an involvement in D6 with a research forum on Vitamin D.

#### Other Division News

none

**Note: the following acronyms may be used in this report:**

APR	Annual Progress Report
CIE	Commission Internationale de l'Éclairage
CIE-BA	CIE Board of Administration
CIE-CB	CIE Central Bureau
CIE-DD	CIE Division Director
CIE-USNC	US National Committee
CISET	NRC Advisory Committee on International Science, Engineering and Technology
CNC/CIE	Canadian National Committee of the CIE
CNC-BA	Canadian National Committee Board of Administration
CORM	Council for Optical Radiation Measurement
CoP	CNC/CIE Code of Procedure
CIE/USA	US National Committee of the CIE
DC	Division Correspondent
DE	Division Editor
DIS	Draft International Standard
DMV, DMA and DA	Division Members and Division Associates
DR	Division Reporterships
ICSU	International Council for Science
IESNA	Illuminating Engineering Society of North America
IEV	International Electrotechnical Vocabulary
IS	International Standard
ISO	International Organization for Standardization
IRO	International Relations Office of the NRC
ITC and JTC	Interdivisional TCs (within CIE) and Joint TCs (with other organizations)

JTC	Joint CIE Technical Committee
LB	Letter Ballot
LR	Liaison Representative
M/AM	Members and Advisory Members of the CNC/CIE
MC	Mirror Committee
NC	CIE National Committee
NRC	National Research Council of Canada
NRC-IRO	NRC Government and International Relation office
NRC-MSS	NRC Measurement Science and Standards portfolio
NRC-CONST	NRC Construction portfolio
NRCan	Natural Resources Canada
SCC	Standards Council of Canada
SP	Supplement
TC	CIE Technical Committee
Types of technical publications	e.g. DRR and PS

## Division 8: Image Technology

Report to CNC/CIE 69th Annual Meeting  
Nov 29 2024

Robin Atkins  
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### 1. Introduction

To study procedures and prepare guides and standards for the optical, visual and metrological aspects of the communication, processing, and reproduction of images, using all types of analogue and digital imaging devices, storage media, and imaging media.

Division Director	Noel Richard (FR)
Division Secretary	Hermine Chatoux (FR)
Division Editor	Manual Melgosa (ES)

The CIE Division 8 Annual Meeting was held August 30<sup>th</sup>, 2024. Robin Atkins was the sole attendee representing Canada.

### 2. Highlights

#### 2.1 New Technical Committees and Reporterships

No new Technical Committees or Reporterships in the last year

#### 2.2 Division publications

No new publications in the last year

#### 2.3 Future meetings

Next Division Meeting at the CIE Midterm in Vienna, July 10-11 2025.

A new meeting specific to discussing liaisons was to be organized in October (no update on this). Johan Bergquist of ICDM was present and encouraged the opportunity.

### 3. Current Canadian participation in Division 8 activities

No Canadian participation in Division 8 activities last year

### 4. Highlights of Division Work Program

#### 4.1 Overview of the status of TCs and Reporterships

Current Technical Committees

TC#	Title	TC Chair	Year	Remarks
TC 8-12	<a href="#">Image and Video Compression Assessment</a>	Pascal Bourdon (FR)	2013	Report at committee stage (CD)
TC 8-14	<a href="#">Specification of Spatio-Chromatic Complexity</a>	Noël Richard (FR)	2015	Report at committee stage (CD)
TC 8-16	<a href="#">Consistency of Colour Appearance within a Single Reproduction Medium</a>	Craig Revie (UK)	2017	WD in ballot at TC level
TC 8-17	<a href="#">Methods for Evaluating Colour Difference between 3D Colour Objects</a>	Kaida Xiao (GB)	2017	WD in progress
TC 8-18	<a href="#">Guidelines for Definition and Evaluation of High Dynamic Range Images and Image Sequences</a>	Mekides Assefa Abebe (NO)	2021	In progress No info on CIE platform
JTC 12	<a href="#">Terminology in light and lighting</a>	Alejandro Ferrero (ES) D8: Noël Richard (FR)	2018	WD in progress
JTC 16	<a href="#">Validity of Chromatic Adaptation</a>	Minchen Wei (HK) D8: Kaida Xiao (GB)	2018	In progress No info on CIE platform
JTC 17	<a href="#">Gloss measurement and gloss perception: A framework for the definition and standardization of visual cues to gloss</a>	Frederic Leloup (BE) D8: Empty	2019	Extension to the end of 2024 No info on CIE platform

\* WD working draft at the TC level

\*\* CD committee draft at the Central Bureau level

#### 4.1.1 8-12 Image and Video Compression Assessment

To establish and report on the display and viewing conditions and materials for image and video compression quality evaluation in different applications including, but not limited to, web, mobile phones, HDTV, home cinema and digital cinema.

Chair: [Pascal Bourdon](#) (FR)

Members: Bodrogi P, Bourdon P, Bovik A, Charrier C, Fernandez-Maloigne C, Hardeberg J, Larabi M.C, Lopez J.M, Otazu X, Pedersen M, Richard N, Rizzi A, Saad M, Saadane H

Status: Committee Draft 5 submitted on April 28th 2023 with all remarks addressed. Dr Hermine Chatoux assigned as external expert reviewed on math. Formulations

#### **4.1.2 8-14 Specification of Spatio-Chromatic Complexity**

To produce a state-of-the-art report on the existing definitions of the complexity notation related to the aspects of non-uniform surfaces, generally defined as textured. To combine these definitions in order to produce a single embedding of the spatial and chromatic variations in a generic and vector form.

Chair: [Noel Richard](#) (FR)

Members: Deborah H., Ghorbel F., Ivanovici M., Kinjiro A., Lafon D., Melgosa M., Richard N., Hardeberg J., Fernandez-Maloigne C., Tanaka M.

Status: Committee Draft 2 submitted on August 28th 2024 with all remarks addressed

#### **4.1.3 8-16 Consistency of Colour Appearance within a Single Reproduction Medium**

To study and report on sets of reproductions of the same source image that have a consistent colour appearance and are most similar to a reference reproduction of the source image. The report will include a recommendation for assessment methods that measure the similarity of reproductions of an image with different colour gamuts, for printed images on substrates with approximately similar characteristics in a fixed viewing environment. Only the effect of colour reproduction on appearance will be considered by this TC and so the assessment will be performed using hardcopy or softcopy proofing. To identify methods of assessment of, and comparison between, colour reproduction strategies considering their ability to maintain consistency of colour appearance with respect to a reference reproduction of the source image.

Chair: [Yasuki Yamauchi](#) (JP), [Craig Revie](#) (GB)

Members: 24 members from 9 countries

Status: Working Draft 9 submitted on August 13th 2024 with all remarks addressed. Working Draft 10 proposed to ballot (TC level) at the end of September 2024

#### **4.1.4 8-17 Methods for Evaluating Colour Difference between 3D Colour Objects**

To study the subjective assessment methods and recommend a dataset for colour difference evaluation of pairs of 3D colour objects. To prepare a report on the investigations of the effects on the perception of colour difference that may be caused by differences of 3D shape, gloss and material.

Chair: [Kaida Xiao](#) (GB)

Members: Cui G. (CN), Melgosa M. (ES); Richard N. (FR); Perales E. (ES), He R. (GB), Sun P.-. (TW), Chen G. (CN), Morovic P. (ES), Ramasamy S. (US), Huang M. (CN), Bressler Y. (IL), Pointer M. (GB)

Status: Lubjana 2023 - 4 journals and 1 Phd published. A big 3D colour difference dataset produced. TC report in preparation by Ruili He and Kaida Xiao.

#### **4.1.5 8-18 Guidelines for Definition and Evaluation of High Dynamic Range Images and Image Sequences**

To propose a definition of High Dynamic Range (HDR) images and image sequences (Images, hereafter), including luminance level, contrast, and spatial/temporal distribution. To define luminance levels, observing environment, adopted white point, the kinds of Images to be used in research experiments and their assessment. To recommend methods of calculating key characteristics of the HDR Images.

Chair: [Mekides Assefa Abebe](#) (NO)

Members: Cui G. (CN), Wei M. (HK), Simone G. (IT), Suessl F. (DE), Mizokami Y. (JP), Kim Y. J. (KR), Melgosa M. (ES), Green P. (UK), Luo R. (UK/CN), Kunkel T. (US), Wanat R. (US), Hung P.C. (US), Aizu M. (JP), Ferrero A. (ES), JEONG J. (KR), Kuniba H. (JP)

Status: Meetings and advancement on the working draft. A first version is expected by the end of the year

#### **4.1.6 JTC 08 (D1/D2/D3/D4/D6/D8) Terminology in light and lighting**

To address any issues regarding terms and definitions related to the International Lighting Vocabulary (ILV). This includes coordination within CIE Divisions to maintain and update the ILV, coordination with IEC on questions related to the incorporation of ILV terms and definitions into IEC 60050-845 "International Electrotechnical Vocabulary. Lighting", coordination with ISO/TC 12 on questions related to the incorporation of ILV terms and definitions into ISO 80000-7 "Quantities and units – Part 7: Light and radiation" and any further terminology issues within CIE.

Chair: [Peter Zwick](#) (DE)

Members: ?

Status: ?

#### **4.1.7 JTC 12 (D2/D1/D8) The measurement of sparkle and graininess**

To provide a methodology to measure sparkle and graininess, and to develop a measurement scale. Measurands will be defined and the requirements for their measurements will be well normalized, in such a way that different instruments can provide the same spectrophotometric data from the same specimen. A psychophysical method will be recommended to obtain visual data, and its correlation with the spectrophotometric data will be worked out to develop the measurement scale for sparkle and graininess.

Chair: [Alejandro Ferrero](#) (ES)

Members: 32 members, 11 countries

Status: WD in course

#### **4.1.8 JTC 16 (D1/D8) Validity of Chromatic Adaptation**

Recent experimental work revealed the incomplete chromatic adaptation under white light, especially those with low CCT and off-Planckian chromaticities, which are important to the performance of chromatic adaptation transforms. This was not considered in existing chromatic adaptation transforms (CATs). The TC will review the existing CATs and propose modifications by including a two-step transform to take the effect of white light chromaticity on degree of chromatic adaptation into consideration.

Chair: [Minchen \(Tommy\) Wei](#) (HK)

Members: ?

Status: A new experiment is being carried out by TCC, with expected data analysis to be performed in Sep 2023. WD1 will be prepared by Feb 2024. Comments from TC member by Jun 2024. Voting by Sep 2024.

#### **4.1.9 JTC 17 (D1/D2/D8) Gloss measurement and gloss perception: A framework for the definition and standardization of visual cues to gloss**

To describe recommendations for standardised visual assessment conditions of individual, established cues to gloss, to make recommendations for the definition of a standard gloss observer for individual diagnostic cues and, based on the findings from the above, to suggest optical methods and metrics for describing gloss in correlation with the established gloss cues.

Chair: [Frédéric Leloup](#) (BE)



Members: ?

Status: ?

## 4.2 Dissolution of and changes to TCs and Reporterships

No Changes

## 4.3 Division Liaisons and interorganizational collaboration

	Title	Reporter
<b>L 8-01</b>	ISO/TC 36: Cinematography	CIE Central Bureau
<b>L 8-02</b>	ISO/TC 130: Graphic Technology	Andreas Kraushaar
<b>L 8-03</b>	ISO/TC 42: Photography	Hideyasu Kuniba
<b>L 8-04</b>	ISO/TC 159/SC 4/WG 2: Visual Display Requirements	Po-Chieh Hung
<b>L 8-05</b>	ISO/IEC/JTC 1/SC 29: Coding of Audio, Picture, Multimedia and Hypermedia Information	Olfa Ben Ahmed
<b>L 8-06</b>	IEC/TC 100/TA 2: Multimedia Systems and Equipment	Hideyasu Kuniba
<b>L 8-08</b>	ISO/IEC/JTC 1/SC 28: Office Equipment	Klaus Richter
<b>DC 8-01</b>	ASTM/E12: Colour and Appearance	Ellen Carter
<b>DC 8-02</b>	International Color Consortium (ICC)	Maxim Derhak

## 4.4 Research Fora

### 4.4.1 RF-01 Spectral imaging

To discuss the future prospect of multispectral and hyperspectral imaging technology and identify the work items to be performed in the next step.

Chair: Masahiro Yamaguchi (JP)

Members: 25 members from 11 countries

Status: TC proposal reviewed by the D8 editor. To be submitted to the CB by early September

## 5. Appendix: Division Members

	Country	Name
<b>AU</b>	Australia	Maitreyee Roy
<b>BE</b>	Belgium	Marc Mahy
<b>BG</b>	Bulgaria	Kiril Kasev

<b>BR</b>	Brazil	Leandro Augusto Frata Fernandes
<b>CA</b>	Canada	Robin Atkins
<b>CN</b>	China	Qingmei Huang
<b>DE</b>	Germany	Florian Suessl
<b>ES</b>	Spain	Antonio Alvarez Fernandez-Balbuena
<b>FI</b>	Finland	Max Lindfors
<b>FR</b>	France	Hermine Chatoux
<b>GB</b>	United Kingdom	Kaida Xiao
<b>HK</b>	Hong Kong S.A.R., China	Minchen (Tommy) Wei
<b>HU</b>	Hungary	Krisztián Samu
<b>IL</b>	Israel	Yossi Meiri
<b>IT</b>	Italy	Alice Plutino
<b>JP</b>	Japan	Masahiro Yamaguchi
<b>KR</b>	South Korea	Jongho Chong
<b>MY</b>	Malaysia	Tan Ching Seong
<b>NO</b>	Norway	Jon Y Hardeberg
<b>NZ</b>	New Zealand	Andrew Chalmers
<b>PL</b>	Poland	Dariusz Sawicki
<b>RO</b>	Romania	Silviu Gheorghe
<b>RU</b>	Russia	Vladimir Budak
<b>SE</b>	Sweden	Mikael Pettersson
<b>SI</b>	Slovenia	Gorazd Golob
<b>TR</b>	Turkey	Berker Yurtseven
<b>TW</b>	Chinese Taipei	Ming-Jing Shyu
<b>US</b>	United States	Maxim Derhak
<b>ZA</b>	South Africa	Abner Naidoo