

**CIE-SEMINAARI**  
**SVS 19.8.2009**

## **DIVISION 4**

# **Lighting and signalling for transport**

Pentti Hautala

# **Terms of Reference of CIE Division 4:**

To study lighting and visual signalling and information requirements of transport and traffic, such as road and vehicle lighting, delineation, signing and signalling for all types of public roads and all kinds of users and vehicles, and visual aids for modes other than road transport.

# Division 4 officers

Director of Division	Ad de Visser
Associate Director	Tapani Nurmi
Secretary of Division	Hans Huijben
Editor of Division	Doug Simpson

# Division 4 official members

		AUSTRALIA	Steve E. Jenkins
AUSTRIA	Michael Fritthum	BELGIUM	Marc Gillet
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NORWAY	Eirik Bjelland	POLAND	Wojciech Zagan
ROMANIA	Alexandru Sere	RUSSIAN FEDERATION	V. M. Pchelin
SERBIA	Ana Drndarevic	SLOVAK REPUBLIC	Dionyz Gasparovsky
SLOVENIA	Marko Bizjak	SOUTH AFRICA	Robby Yates
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SWITZWERLAND		THAILAND	Utis Chanchenchop
TURKEY	Sermin Onaygil	U.S.A.	Richard Stark

**Yhteensä 37. Kokouksissa noin puolet.**

# Division 4 technical committees

No.	Chairman	Title
4-15	Sermin Onaygil	Road Lighting Calculations, test data and measurements
4-19	Michelle Colomb	Road Visibility in Fog
4-21	Marc Gillet	Interference by Light with Astronomical Observations
4-24	Marcel Justin	Calculation and Measurement of Tunnel Lighting Quality Criteria
4-26	Giuseppe Rossi	Systems for Measurement of Photometric Quantities of Road Lighting Installations
4-32	Jürgen Ewald	Surface Colours for Traffic Signs
4-33	Ronald B. Gibbons	Discomfort Glare in Road Lighting
4-36	Richard E. Stark	Visibility Design for Roadway Lighting
4-40	Paul J. Carlson	Requirements for Retroreflective Traffic Signs
4-43	Marc Gillet	Emergency lighting in tunnels
4-44	Pentti Hautala	Management and Maintenance of Road Lighting
4-45	Geoff Draper	Performance assessment method for vehicle headlamps
4-46	Carl Andersen	Traffic Lights
4-47	Steve Jenkins	Application of LEDs in Transport Signalling and Lighting
4-48	Stefan Voelker	White light on road lighting

**Yhteensä 15. Aktiivisia 13.**

# Reporters:

	<b>Reporter</b>	<b>Title</b>
R4-14	Carl K. Andersen	Road Lighting and Accidents
R4-30	Giuseppe Rossi	Measuring systems for in-situ Road Characteristics
R4-31	Hans Huijben	Inventory D4 publications on Possible Energy Improvement Review
R4-32	Cyril Chain	Reflection Properties of Road Surfaces
R4-33	Norbert Johnson	Review of CIE publication72
R4-34	Norbert Johnson	Retro-reflective and other Passive Devices as Energy Savers
R4-35	Otto Letamendi	Crime and Road Lighting

<b>Organisation/ Subject</b>	<b>Liaison Officer</b>
CEN/TC 226: Road Equipment	Pentti Hautala
GTB	Ad de Visser
Internat. Astronom.	Elizabeth M. Alvarez del Castillo
Internat.Civil Av.Org.	Brian W. Tansley
PIARC	
Mesopic vision (TC1-58)	Stephan Völker
Lighting for elderly (Liaison to CIE TC3-44)	Axel Stockmar

# Publications from Division 4

No.	Title	Year	ISBN
180:2007	Road Transport Lighting for Developing Countries	2007	978 3 901 906 61 9
88:2004	Guide for the Lighting of Road Tunnels and Underpasses	2004	3 901 906 31 2
144	Road Surface and Road Marking Reflection Characteristics	2001	3 901 906 12 6
S004	Colours of light signals	2001	
143	International recommendations for colour vision requirements for transport	2001	3 901 906 09 6
140	Road lighting calculations	2000	3 901 906 03 7
137	The conspicuity of traffic signs in complex backgrounds	2000	3 901 906 00 2
136	Guide to the lighting of urban areas	2000	3 900 734 98 4
X008	Urban sky glow, a worry for astronomy	1994	3 900 734534
S006	Road traffic light - roundel signals photometric properties	1998	
132	Design methods for lighting of roads	1999	3 900 734 92 5
126	Guidelines for minimizing sky glow	1997	3 900 734 836
115	Recommendations for the lighting of roads for motor and pedestrian traffic	1995	3 900 734 593
113	Maintained night-time visibility of retroreflective road signs	1995	3 900 734 569
111	Variable message signs	1994	3 900 734 542
107	Review of the official recommendations of the CIE for the colours of signal lights	1994	3 900 734 496



# Publications from Division 4

No.	Title	Year	ISBN
104	Daytime running lights (DRL)	1993	3 900 734 402
102	Recommended file format for electronic transfer of luminaire photometric data	1993	3 900 734 402
100	Fundamentals of the visual task of night driving	1992	3 900 734 372
93	Road lighting as an accident countermeasure	1992	3 900 734 305
79	A guide for the design of road traffic lights	1988	3 900 734 151
74	Roadsigns	1988	3 900 734 100
73	Visual aspects of road markings (joint technical report CIE/PIARC; French translation: Aspects visuels des marquages routiers is available from PIARC)	1988	3 900 734 097
72	Guide to the properties and uses of retroreflectors at night	1987	3 900 734 089
66	Road surfaces and lighting (joint technical report CIE/PIARC)	1984	
61	Tunnel entrance lighting: A survey of fundamentals for determining the luminance in the threshold zone	1984	963 7251 07 3
48	Light signals for road traffic control	1980	92 9034 048 7
47	Road lighting for wet conditions	1979	92 9034 047 9
39.2	Recommendations for surface colours for visual signalling, 2nd ed.	1983	92 9034 039 8
34	Road lighting lantern and installation data: photometrics, classification and performance	1977	
33/AB	Depretiation of installation and their maintenance (in road lighting) Dpreciation et entretien des installations d'clairage public	1977	
32/AB	Lighting in situations requiring special treatment (in road lighting) Points spciaux en clairage public	1977	
31	Glare and uniformity in road lighting installations	1976	
23	International recommendations for motorway lighting	1973	



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COMMISSION INTERNATIONALE DE L'ECLAIRAGE  
INTERNATIONAL COMMISSION ON ILLUMINATION  
INTERNATIONALE BELEUCHTUNGSKOMMISSION

# TECHNICAL REPORT

**LIGHTING OF ROADS FOR MOTOR  
AND PEDESTRIAN TRAFFIC**  
**2<sup>ND</sup> EDITION**

CIE 115:2009

UDC: 628.971.6

Descriptor: Street lighting (fixed)



ISBN 978 3 901906 xx y

Deadline for BA and DIV vote:  
2009-09-23

COMMISSION INTERNATIONALE DE L'ECLAIRAGE  
INTERNATIONAL COMMISSION ON ILLUMINATION  
INTERNATIONALE BELEUCHTUNGSKOMMISSION

# TECHNICAL REPORT

**CALCULATION OF TUNNEL  
LIGHTING QUALITY CRITERIA**

**CIE 18x:2009**

UDC:

Descriptor:



ISBN 978 3 901906 xx y

Deadline for BA and DIV vote:  
2009-09-23

COMMISSION INTERNATIONALE DE L'ECLAIRAGE  
INTERNATIONAL COMMISSION ON ILLUMINATION  
INTERNATIONALE BELEUCHTUNGSKOMMISSION

# TECHNICAL REPORT

**PERFORMANCE ASSESSMENT  
METHOD FOR VEHICLE  
HEADLIGHTING SYSTEMS**

**CIE 18x:2009**

UDC:

Descriptor:



COMMISSION INTERNATIONALE DE L'ÉCLAIRAGE  
INTERNATIONAL COMMISSION ON ILLUMINATION  
INTERNATIONALE BELEUCHTUNGSKOMMISSION

Draft Standard

CIE DS 021/E:2009

Div/BA voting begins on:  
2009-08-12

Div/BA voting ends on:  
2009-11-12

## Vehicle Headlighting Systems Photometric Performance - Method of Assessment

Systèmes d'éclairage des véhicules routiers - efficacité photométric - méthode pour évaluer  
Kraftfahrzeugscheinwerfer - Photometrische Leistungsmerkmale - Bewertungsmethode

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CIE Central Bureau, Vienna  
Kegelgasse 27, A-1030 Vienna, Austria

CIE DS 021/E:2009

UDC: 628.971.85  
628.971.85:629.113.06

Descriptor: Lighting by lamps attached to the vehicle  
Lighting by motor vehicle lamps