CAN/ULC-S102.3:2018 (R2023)

STANDARD METHOD OF FIRE TEST OF LIGHT DIFFUSERS AND LENSES

ULC Standards
Normes ULC

SCC CCN

Underwriters Laboratories of Canada (ULC) was established in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories and certification services for the examination, testing and certification of appliances, equipment, materials, constructions and systems to determine their relation to life, fire and property hazards as well as providing inspection services.

ULC Standards develops and publishes standards and other related publications for building construction, security and burglar protection, environmental safety, electrical equipment, fire protection equipment, gas and oil equipment, thermal insulation products, materials and systems, energy use in the built environment and electrical utility safety.

ULC Standards is a not-for-profit organization and is accredited by the Standards Council of Canada as a Standards Development Organization.

National Standards of Canada developed by ULC Standards conform to the criteria and procedures established by the Standards Council of Canada. Such standards are prepared using the consensus principle by individuals who provide a balanced representation of interests relevant to the subject area on a national basis.

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

For further information on ULC standards, please contact:

ULC STANDARDS
Telephone: (613) 755-2729
E-mail: Standards@ul.org

To purchase ULC Standards, visit: www.ulc.ca/ulcstandards

The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for the particular application.

Copies of this National Standard of Canada may be ordered from ULC Standards.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

Standard Method of Fire Test of Light Diffusers and Lenses, CAN/ULC-S102.3

Fourth Edition, Dated June 1, 2018

Summary of Topics

This revision of CAN/ULC-S102.3 dated August 25, 2023 is being issued to update the title page to reflect the reaffirmation of this Fourth Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated May 5, 2023.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CAN/ULC-S102.3:2018 (R2023)

STANDARD METHOD OF FIRE TEST OF LIGHT DIFFUSERS AND LENSES

ICS 13.220.50, 19.040, 91.160.10

ULC Standards
Normes ULC

scc ccn

First Edition . . . . . January 1979
Second Edition . . . . . January 1982
Third Edition . . . . . August 2007
FOURTH EDITION . . . . . JUNE 1, 2018
REAFFIRMATION . . . . . AUGUST 25, 2023

Copyright © 2023

ULC Standards

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CONTENTS

ULC STANDARDS COMMITTEE ON FIRE TESTS 7

PREFACE 9

1 SCOPE 11
2 REFERENCE PUBLICATIONS 11
3 TEST SPECIMEN 11
4 CONDITIONING OF TEST SPECIMEN 11
5 TEST EQUIPMENT 11
6 TEST PROCEDURE 12
7 CONDITION OF ACCEPTANCE 12
8 TEST REPORT 12

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

ULC STANDARDS COMMITTEE ON FIRE TESTS

NAME	AFFILIATION	CATEGORY	REGION
S. Craft (Chair)	CHM Fire Consultants	General Interest	Ontario
M. Acheson	City of Edmonton	AHJ/Regulator	Canada
E.Banks	e.w.banks consulting llc	General Interest	USA
B. Banting	Canada Masonry Design Centre	Producer	Canada
B. Cheer	Ontario Building Officials Association	Regulator	Ontario
J. Chisholm	Office of the Fire Marshal and Emergency Management	Regulator	Ontario
G. Chu	Chemistry Industry Association of Canada/Spray Polyurethane Foam Producers & Applicators	Producer	Canada
T. Crimi	A.C. Consulting Solutions Inc.	General Interest	Ontario
J. Current	Ministry of Solicitor General	Government	Ontario
C. Dagenais	FPInnovations	User	Canada
C. Diercks	James Hardie Building Products, Inc.	Producer	USA
I. El-Hajj	DS Consultants Ltd.	General Interest	Canada
D. Esposito	Jensen Hughes	General Interest	Canada
D. Falconer	Falconer Engineering & Testing	General Interest	Ontario
M. Gilfillan	Canadian Fire Safety Association	General Interest	Canada
E. Goldhammer	Hilti INC	Producer	USA
L. Hamre	PLC Fire Safety Solutions	General Interest	New Brunswick
L. Henke	PTW	Producer	Canada
J. Humpries	City of Toronto	Regulator	Ontario
T. Jukes	Wheatland County Fire Services	AHJ/Regulator	Alberta
K. Kooner	Intertek	Testing & Stds Org	Canada
M. Lansdowne	QAI Laboratories Ltd.	Testing & Stds Org	Canada
A. Laroche	Codes Canada, National Research Council Canada	Regulator	Canada
M. McClure	ThermoFire Systems Inc.	General Interest	Ontario
B. McHugh	The McHugh Company (TMC)	General Interest	USA
R McPhee	Canadian Wood Council	Producer	Canada
A.G. Nanji	Standards Individuals	General Interest	Ontario
C. Palumbo	Capital Testing and Certification Services	Testing & Standards Org	USA
J. Roberts	Standards Individuals	General Interest	Canada
R. Roos	Rockwool	Producer	Canada
S. Salem	Lakehead University	General Interest	Ontario
H. Shalabi	Canadian Nuclear Safety Commission	AHJ/Regulator	Canada
P. Shinkoda	CGC Inc.	Producer	Canada
D. Sloan	UL Solutions	Testing & Stds Org	USA
I. Smith	Exova Canada Inc.	User	Canada
J. Su	Fire Safety – National Research Council Canada	User	Canada
L. Uku	Ministry of Municipal Affairs and Housing	Government	Ontario
M. Van Geyn	Canadian Steel Door Manufacturers Association	Producer	Ontario
N. Benichou	National Research Council Canada	Non-Voting	Canada

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

NAME	AFFILIATION	CATEGORY	REGION
(Associate Member)			
M. Birk (Associate Member)	Queen's University	Non-Voting	Ontario
E. Dahan (Associate Member)	Department of National Defence/Government of Canada	Non-Voting	Canada
G. Edwards (Project Manager)	UL Standards & Engagement	Non-Voting	USA
D. Haithcock (Associate Member)	UL Standards & Engagement	Non-Voting	USA
L. Kearns (Associate Member)	National Defence and the Canadian Armed Forces Standards Individuals	Non-Voting	Canada
Y. Ko (Associate Member)	National Research Council of Canada	Non-Voting	Canada
H. Locke (Associate Member)	Locke & Locke Inc.	Non-Voting	British Columbia
E. Sopeju (Associate Member)	Underwriters Laboratories of Canada	Non-Voting	Canada
B. Weckman (Associate Member)	University of Waterloo	Non-Voting	Ontario

This list represents the membership at the time the Committee balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

PREFACE

This is the Fourth Edition of the Standard Method of Fire Test of Light Diffusers and Lenses, CAN/ULC-S102.3.

This Edition of the Standard was developed by the ULC Standards Task Group on Surface Burning Characteristics and has been formally approved by the ULC Standards Committee on Fire Tests.

The hazard with which this test is concerned is the rapid propagation of fire across a ceiling. Such rapid propagation poses a direct life threat in an area such as an open office complex and a secondary threat in a smaller enclosure by virtue of reducing the time to flashover. It is desirable to delay fire development, even in a small room, to minimize smoke hazard in adjacent areas, to minimize the risk of fire breaking out of compartments and to facilitate fire fighting.

This Standard has been developed in compliance with the requirements of SCC for accreditation of a Standards Development Organization.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Fourth Edition National Standard of Canada is based on, and now supersedes, the Third Edition.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. ULC Standards shall not be held responsible for identifying any or all such patent rights.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

This CAN/ULC-S102.3 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

This Standard is intended to be used for conformity assessment.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

1 SCOPE

1.1 This test method is applicable to materials employed in light diffusers and lenses.

1.2 The testing procedure described in this Standard is intended to assess the propensity of material employed in light diffusers and lenses to fall from its installed position before igniting when subjected to test fire exposure conditions in CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies, as required in the National Building Code of Canada.

2 REFERENCE PUBLICATIONS

2.1 The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this ULC Standard.

Document Published by the National Research Council Canada
1200 Montreal Road, Bldg. M-58, Ottawa, ON K1A 0R6 Canada
Telephone: (613) 993-9101 or 1-877-672-2672
www.nrc-cnrc.gc.ca

• National Building Code of Canada, 2015

Documents Published by ULC Standards
171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada
Telephone: (613) 755-2729
www.ulc.ca/ulcstandards

• CAN/ULC-S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

3 TEST SPECIMEN

3.1 For this test procedure a test specimen having a total length of at least 3600 mm is required. The width of the specimen shall be sufficient to provide a bearing of 13 mm along each edge when installed in the test equipment. The specimen shall comprise a number of light diffusers or lenses having lengths representative of those used in building construction.

3.2 The formulation, maximum mass per unit area and other significant characteristics of the light diffusers and lenses shall be representative of that used in building construction.

4 CONDITIONING OF TEST SPECIMEN

4.1 The specimens shall have been conditioned uniformly for a period of 5 d in an environment where the temperature is maintained at 23 ± 3 °C and at a relative humidity of 50 ± 5 %.

5 TEST EQUIPMENT

5.1 The test equipment shall be as described in CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.