



C657-12

Energy performance standard for refrigerated display cabinets (merchandisers)



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Preface

This is the third edition of CSA C657, *Energy performance standard for refrigerated display cabinets (merchandisers)*. It supersedes the previous editions, published in 2004 under the same title, and published in 1995 under the title *Energy Performance Standard for Commercial Refrigerated Display Cabinets and Merchandisers*.

This edition has been revised

- (a) to harmonize this Standard with ANSI/AHRI 1201 (SI)-2010, *Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets*;
- (b) to make use of the test method specified in ANSI/ASHRAE 72-2005, *Method of Testing Commercial Refrigerators and Freezers*, and harmonize its performance levels with those of the U.S. Department of Energy; and
- (c) NSF/ANSI 7-2009, *Commercial Refrigerators and Freezers*, specifies safe temperature levels for perishable food products.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Subcommittee on Refrigerated Display Cabinets, under the jurisdiction of the Technical Committee on Heating, Ventilation, Air-Conditioning, and Refrigeration and the Strategic Steering Committee on Performance, Energy Efficiency, and Renewables, and has been formally approved by the Technical Committee.

Notes:

- (1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- (2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- (3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- (4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include “Request for interpretation” in the subject line:*
 - (a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
 - (b) *provide an explanation of circumstances surrounding the actual field condition; and*
 - (c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*

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 - (a) *Standard designation (number);*
 - (b) *relevant clause, table, and/or figure number;*
 - (c) *wording of the proposed change; and*
 - (d) *rationale for the change.*

C657-12

Energy performance standard for refrigerated display cabinets (merchandisers)

1 Scope

1.1

This Standard provides definitions, classifications, and a method for determining calculated daily energy consumption (CDEC) values and specifies minimum energy efficiency requirements for refrigerated display cabinets.

1.2

This Standard applies to the refrigerated display cabinets (with or without an integral refrigerated storage cabinet) that are described in [Clause 4](#) and intended for displaying and merchandising food products, including canned and bottled beverages, ice intended for human consumption, and other perishable merchandise (e.g., cut flowers).

1.3

This Standard applies to

- (a) refrigerated display cabinets (as described in [Clause 1.2](#)), except as specified in [Clause 1.4](#), provided that the cabinets are designed to work with a remotely located, electrically driven, vapour-compression-type refrigeration system; and
- (b) cabinets in the shape, size, and configuration shipped from the manufacturer.

1.4

This Standard does not apply to

- (a) self-contained commercial refrigerated storage cabinets covered by CAN/CSA-C827;
- (b) refrigerated cabinets that are designed to form the front wall of a refrigerated storage room and where the air space of the cabinet is not separated from the air space of the storage room;
- (c) transitional cabinet fillers (referred to as “wedges” in the industry) used as corner sections between two refrigerated cabinets of similar cross-sections;
- (d) end cabinets;
- (e) combination merchandisers;
- (f) custom-designed refrigerated display cabinets; and
- (g) refrigerated vending machines covered by CAN/CSA-C804.

1.5

The values given in SI units are the units of record for the purposes of this Standard. The values given in parentheses are for information and comparison only.

1.6

In CSA standards, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.