BSR/ASHRAE/IES Addendum cq
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum cq to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (April 2025)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum adds the Cool Roof Rating Council (CRRC) S100 standard as an alternative compliance path for determining the solar reflectance and thermal emittance of walls. The updated year for the standard is also included, as well as some general editorial updates.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum cq to 90.1-2022

Revise text as follows:

5.5.3.2.2 Wall Solar Reflectance, ~~and~~ Thermal Emittance, and Shading. For Climate Zone 0, *above-grade east-*, *south-*, and *west-oriented walls*, shall comply with ~~subparagraph~~ (a) or (b):

a. ~~A minimum of~~ Not less than 75% of the *opaque wall* area shall have an ~~a minimum~~ area-weighted initial solar reflectance of not less than 0.30 and an *emittance* or emissivity of not less than 0.75. Initial solar reflectance shall be determined using one of the following: ~~when~~ where tested in accordance with ASTM C1549 with AM1.5GV output; ~~or~~ ASTM E903 with the AM1.5GV output; CRRC S100; or determined in accordance with *generally accepted engineering standards*. ~~, and a minimum *emittance* or emissivity of 0.75~~ *Emittance* or emissivity shall be determined by testing in accordance with one of the following: ~~when~~ ASTM C835, C1371, E408, CRRC S100; or determined in accordance with *generally accepted engineering standards.* For the portion of the *opaque wall* that is glass spandrel area, a solar reflectance of 0.29 or greater, determined in accordance with NFRC 300 or ISO 9050, shall be permitted. Area-weighting is permitted only between the *south-*, *east-*, and *west-oriented walls* and only between *walls* ~~of~~ enclosing the same *space conditioning category*.

b. ~~A minimum of~~ Not less than 30% of the *above-grade wall* area shall be shaded by ~~through the use of human-made~~ *structures*, *existing buildings*, hillsides, permanent *building* projections, *on-site renewable energy systems*, or a combination of these. Shade coverage shall be calculated by projecting the shading surface downward on the *wall* at an angle of 45 degrees

Exception to 5.5.3.2.2: *Exterior walls* of *semiheated spaces*.

[…]

13. NORMATIVE REFERENCES

Cool Roof Rating Council (CRRC)
2435 N. Lombard St., Portland, OR 97217, United States

ANSI/CRRC S100 (~~2021~~2025) Standard Test Methods for Determining Radiative Properties of Materials

5.5.3.1.4, 5.5.3.2.2