

**Heat Island Effect:Roof:
Solar Reflective Index (SRI) Calculator (rev 4-11-07)**

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Cool Greetings,

You probably know the U.S. Green Building Council LEED-NC v2.2 Green Building Rating System released October 2005 has new requirements for Sustainable Sites Credit 7.2 Heat Island Effect: Roof. The full LEED-NC v2.2 can be downloaded at:

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=220>

Notice the various requirement options and the following SRI table for Heat Island Effect: Roof:

Roof Type	Slope	SRI
Low-Sloped Roof	$\leq 2:12$	78
Steep-Sloped Roof	$> 2:12$	29

LEED-NC v2.2 incorporates Solar Reflective Index (SRI) values instead of the earlier Energy Star reflectivity values (that were combined with the LEED emissivity requirement of 0.90). The SRI value is calculated according to ASTM E 1980, using values for roofing reflectance and emittance. This calculation of SRI is not necessarily intuitively obvious with the complexities of the ASTM formula and its ratio application.

However, an easy-to-use calculator is now on the Cool Metal Roofing website, provided by Lawrence Berkeley National Laboratory. Inserting product reflectivity and emissivity values into the spreadsheet cells will automatically yield corresponding SRI values for use with the above table. Use the following link:

<http://www.coolmetalroofing.org/content/index.cfm?pageId=12>

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