



**Area Weighted Average Calculation Worksheet** **WS-2R**

**Residential** **(Page 1 of 1)**

<b>Site Address:</b>	<b>Enforcement Agency:</b>	<b>Date:</b>
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This worksheet should be used to calculate weight-averaged U-factors or averaged SHGC values for prescriptive envelope compliance. R-values can never be area weighted; only area-weighted U-factors.

Whenever two or more types of a building feature, material, or construction assembly occur in a building, a weighted average of the different types must be calculated. Weighted averaging is simply a mathematical technique for combining different amounts of various components into a single number. Weighted averaging is frequently done when there is more than one level of floor, wall, or ceiling insulation in a building, or more than one type of window (the SHGC values of skylights cannot be averaged per §151(f)4A).

- a. "Area" can be replaced throughout the formula by "Length" or any other unit of measure used for the value being averaged.
- b. "Value" can be replaced throughout the formula by "U-factor," "Solar Heat Gain Coefficient," or any other value that varies throughout a residence and is appropriate to weight average.

Item No.	Type 1 Value <sup>b</sup>	x	Type 1 Area <sup>a</sup>	+	Type 2 Value <sup>b</sup>	x	Type 2 Area <sup>a</sup>	+	Type 3 Value <sup>b</sup>	x	Type 3 Area <sup>a</sup>	÷	Total Area	=	Weighted Average Value
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	
	[( )]	x	( )	+	( )	x	( )	+	( )	x	( )	÷		=	