

324 Binkley Drive Roof Assembly by U-Factor

Component	Cavity R-Value	Rafter R-Value
Exterior Air Film	0.17	0.17
Asphalt Shingles	0.44	0.44
Roofing Felt Paper	0.06	0.06
1/2" plywood exterior sheathing	0.63	0.63
Air Space B/w Sheathing & Baffle	1.00	
1" XPS Insulation Baffle(Site Made)	10.00	
8 1/4" Faced Dense Fiberglass Batt (R30C) Compressed to 7 1/4"	28.18	
2x10" Rafter (9 1/4" nominal)		11.56
5/8" Dry Wall Interior	0.56	0.56
Interior Air Film	0.68	0.68
Total Roof Component R-values	41.72	14.11
Roof Component U-Values	0.02397	0.07090

Compressed R-value => For every x% the insulation material is compressed, the R-value decreases by approximately one half of that percentage or 1/2 x% compressed.
www.insulationinstitute.org

$$= (30) - (((1/8.25)/2) * 30)$$

R30 Fiberglass batt insulation
1" compression R-Value 28.18182

R-30C Kraft Faced
Fiberglass insulation
batt. - Owens Corning

	Component Length	Linear ft	% Composition
% Composition (Rafter - vs - Cavity)	94.0%	6.0%	
% Composition (x) component U-values	0.02253	0.004261	
	Rafters @ 24" O.C = (25)	3.125	6.0%
	length of roof = 52ft	48.875	94.0%

Combined U-Value of Assembly	0.02679	TRUE
------------------------------	---------	------

Assembly U-value ≤ 0.030