Five Stage Pipeline:

Trace File	prediction_method=0 (cycles)	prediction_method=1 (cycles)	% Reduction in Cycles
sample.tr	1102	1079	2.0871143
sample2.tr	1159167	1152374	0.5860243
sample3.tr	1278927	1266462	0.9746452
sample4.tr	3671198	3549906	3.3038806

Eight Stage Pipeline:

Trace File	prediction_method=0 (cycles)	prediction_method=1 (cycles)	% Reduction in Cycles
sample.tr	3044	2994	1.6425756
sample2.tr	3131749	3125167	0.9978983
sample3.tr	3369978	3366964	0.9991056
sample4.tr	10015948	9995981	0.9980065

On average, (considering prediction_method = 0) the number of cycles increased by a factor of 2.707 times when moving from five-stage to eight-stage. With prediction_method set to 1, this actually increases to a factor of 2.740 times since branch prediction is less effective on the eight-stage pipeline. On average (considering numbers from both the eight-stage and five-stage architectures), branch prediction reduces the number of cycles by 1.449%. What's interesting here is that on the five-stage pipeline a branch predictor reduces the number of cycles by an average of 1.738% while on the eight-stage pipeline, the branch predictor only reduces the number of cycles by 0.535%. A branch predictor isn't even 1/3 as effective on the eight-stage as it is on the five-stage.