

Modulus of Elasticity and Flexural Strength

D4761 and D198 call for one type of testing that applies a central load. D198 also discusses a distributed load. We performed both. Because the Rumber boards have a natural sag that a piece of lumber does not, we reduced the span, which is the distance between the supports to about 25:1. The span is a ratio of the distance between the supports to the material thickness. The sample is loaded at a very slow rate. This test is very similar to flexural loading, which is ASTM D790 "Flexural Properties of Plastics".

Center Point Loading – 52” span

Sample	Modulus (psi)
1.75” thick board	19,000
1.75” thick board	23,955
1.75” thick board	21,255
Average	21,405
Tongue and groove board	15,955
Tongue and groove board	14,075
Tongue and groove board	16,855
Average	15,290

Two Point Loading – 52” Span

Loading nose 17” centers. Flexure Test ASTM D198

Sample	Modulus (psi)
1.75” thick board	32,035
1.75” thick board	30,340
1.75” thick board	29,760
1.75” thick board	27,130
Average	29,815
Tongue and groove board	24,460
Tongue and groove board	26,475
Tongue and groove board	20,940
Average	23,960