Table 19 Rafters – 40 psf Live Load, 10 psf Dead Load, 240 Deflection, C_D = 1.15 (Snow)

Size (inches)	Spacing (inches on center)	Grade									
		Visually Graded				Machine Stress Rated (MSR)			Machine Evaluated Lumber (MEL)		
		DSS	No.1	No.2	No.3	2400f - 2.0E	1650f - 1.5E	1500f - 1.6E	M-14 (1800-1.7)	M-29 (1550-1.7)	M-12 (1600-1.6)
2x6	12.0	13-0	12-3	11-7	8-9	13-3	12-0	12-3	12-6	12-6	12-3
	16.0	11-10	11-2	10-0	7-7	12-0	10-11	11-2	11-5	11-5	11-2
	19.2	11-1	10-6	9-2	6-11	11-4	10-3	10-6	10-8	10-8	10-6
	24.0	10-4	9-6	8-2	6-2	10-6	9-6	9-9	9-11	9-11	9-9
2x8	12.0	17-2	16-2	14-8	11-0	17-5	15-10	16-2	16-6	16-6	16-2
	16.0	15-7	14-8	12-8	9-7	15-10	14-5	14-8	15-0	15-0	14-8
	19.2	14-8	13-5	11-7	8-9	14-11	13-6	13-10	14-1	14-1	13-10
	24.0	13-7	12-0	10-4	7-10	13-10	12-7	12-10	13-1	13-1	12-10
2x10	12.0	21-10	19-11	17-4	13-5	22-3	20-2	20-8	21-1	21-1	20-8
	16.0	19-10	17-3	15-1	11-7	20-2	18-4	18-9	19-2	19-2	18-9
	19.2	18-8	15-9	13-9	10-7	19-0	17-3	17-8	18-0	18-0	17-8
	24.0	17-4	14-1	12-3	9-6	17-8	16-0	16-5	16-9	16-9	16-5
2x12	12.0	26-0*	23-7	20-5	15-10	26-0*	24-7	25-1	25-7	25-7	25-1
	16.0	24-2	20-5	17-9	13-9	24-7	22-4	22-10	23-3	23-3	22-10
	19.2	22-9	18-8	16-2	12-6	23-1	21-0	21-6	21-11	21-11	21-6
	24.0	21-1	16-8	14-6	11-2	21-6	19-6	19-11	20-4	20-4	19-11

The spans in these tables were determined on the same basis as the code-recognized *Span Tables for Joists & Rafters* and *Wood Structural Design Data*, both published by the American Wood Council; concentrated loads and uplift loads caused by wind were not considered. See *Using These Tables* and *Design Assumptions* for additional information. Applied loads are given in pounds per square foot (psf). Deflection is limited to the span in inches divided by 360, 240 or 180 and is based on live load only. The load duration factor, C_D, is 1.0 unless shown as 1.15 for snow or 1.25 for construction loads. Listed spans are for dry-service conditions unless the table is labeled as Wet-Service. Check sources of supply for available grades and sizes, and for lumber longer than 20 feet; an asterisk (*) indicates the listed span has been limited to 26'-0" based on availability.

Reference design values for Southern Pine lumber are published by the Southern Pine Inspection Bureau after approval by the Board of Review of the American Lumber Standard Committee. Reference design values are based on normal load duration under the moisture service conditions specified. Because the strength of wood varies with conditions under which it is used, design values should only be applied in conjunction with appropriate design and service recommendations from the National Design Specification® (NDS®) for Wood Construction published by the American Wood Council.

The Southern Forest Products Association (SFPA) does not test lumber or establish design values. Accordingly, neither SFPA, nor its members, warrant that the design values and adjustment factors on which the span tables are based are correct, and disclaim responsibility for injury or damage resulting from the use of such span tables.

The conditions under which lumber is used in construction may vary widely, as does the quality of workmanship. Neither SFPA, nor its members, have knowledge of the quality of the materials, workmanship or construction methods used on any construction project, and, accordingly, do not warrant the technical data, design or performance of the lumber in completed structures.