

A diagram of a cantilever beam of length 1.0' with a point load of 1.0' at the free end.

$$F_{D1}(2.236) = F_{C1}(1.414)$$

$$F_D (\cos 63.435)(2.236) = F_{C1}(1.414)$$

$$40(0.447)(2.236) F_{C1}(1.414)$$

$$F_{C1} = \underline{\underline{28.27 \text{ \#}}}$$
$$F_c = \frac{F_{c1}}{\cos 59^\circ}$$

$$F_c = 54.89 \text{ \#}$$

$$F_{c2} = 54.89 (\sin 59^\circ)$$

$$F_{c2} = \underline{\underline{47.05 \#}}$$

$$F_D = \underline{40 \text{ \#}}$$

$$F_{D1} = F_D (\cos 63.435) = \underline{17.89 \text{ N}}$$

$$F_{D2} = F_D (\sin 63.435^\circ) = \underline{35.78 \text{ \#}}$$

