

$$\sum M_c = 0$$

$$308.65 * 12.8 \cos 50^\circ + 25.5 \cos 22.5^\circ - [F_p \sin(95^\circ - 22.5^\circ)] 8.5 = 0$$

$$F_p = \frac{308.65 * 31.78}{\sin(95^\circ - 22.5^\circ) * 8.5} = 1210.75 \text{ lbs}$$

$$\uparrow \sum F_y = 0$$

$$F_p * \sin 85^\circ - C_y - 308.65 = 0$$

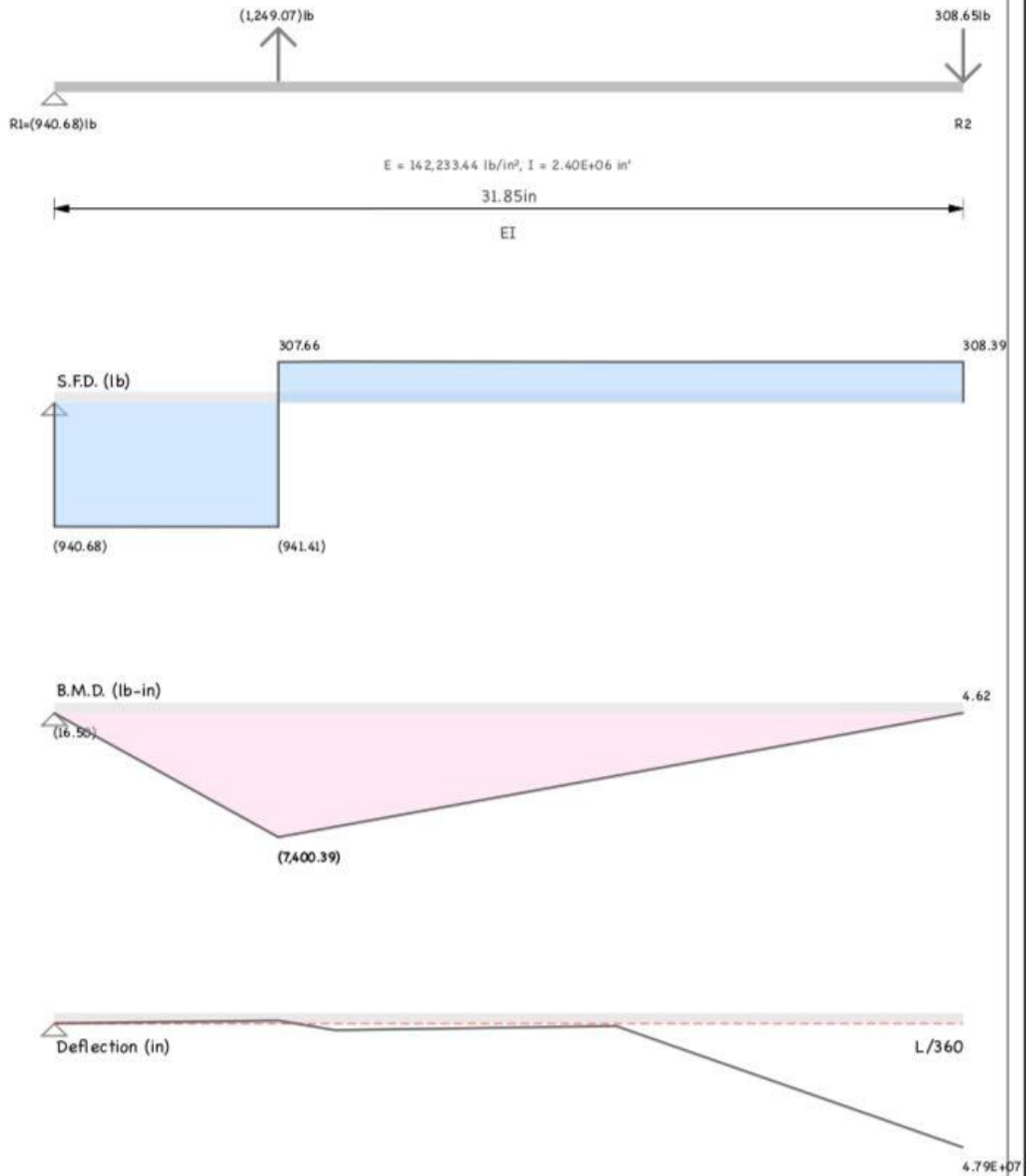
$$C_y = 897.5 \text{ lbs}$$

$$\leftarrow \sum F_x = 0$$

$$C_x - F_p * \cos 85^\circ = 0$$

$$C_x = 27.55 \text{ lbs}$$

Beam Calculation - B-66:



Notel Detail Notel

Note 2 Detail Note2

Prepared by:

Calculation Date:

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Considerando un factor de dos calculo el módulo de sección

$$\sigma_{b_{allow}} = \frac{.66 * Sy}{FS} = \frac{.66 * 46.1 \text{ ksi}}{2} = 15.21 \text{ ksi}$$

$$M_{m\acute{a}x} = 7.4 \text{ ksi}$$

$$\sigma_{b_{allow}} = \frac{M_{m\acute{a}x}}{S}$$

$$S = \frac{M_{m\acute{a}x}}{\sigma_{b_{allow}}} = \frac{7.4}{15.21} = .4865$$