40 dB LSPL = $2 \times 10 \log \left(\frac{P_x}{P_{ref}} \right)$

P at 30m $\Rightarrow$ 2m Pa.

113.097 $\mu W = P^2/2$

$I = \frac{P^2}{2}$

$\simeq 10 nw/m^2$

$P = \sqrt{413 \times 113.097 \mu w}$

$= 0.216 Pa$

$10 nw/m^2 = \frac{P_0}{4\pi (30)^2}$

$2 \times 10 \log_{10} \left(\frac{0.216 Pa}{20 \mu Pa} \right)$

$P_0 \simeq$ Power at Source

$= 80.67 dB$

$P_0 = 113.097 \mu W.$