Footnote to blog post p-values are inconsistent.

From Schervish's paper:

Using the UMPU (uniformly most powerful unbiased) test, the p-value for the interval hypothesis $\mu \in [\mu_1, u_2]$ and data $X = x$ is

$$p_{\mu_1,\mu_2}(x) = \begin{cases} \Phi(x-\mu_1) + \Phi(x-\mu_2) & \text{if } x < (\mu_1+\mu_2)/2 \\ \Phi(\mu_1-x) + \Phi(\mu_2-x) & \text{if } x \geq (\mu_1+\mu_2)/2 \end{cases}$$

For more information, see:

Mark J. Schervish. P values: What They Are and What They Are Not. The American Statistician, August 1996, Vol. 50, No. 3.