Author solution:

Step 1: Connect E and C.
Step 2: BE divides <ABC, so <CBE = <ABE. As, AE = BE so <ABE = <BAE, therefore we can find <AEB. As, BE = BC so <BEC = <BCE. Therefore we can also find <AEC.

Step 3: from triangle BEC, using Sine law find CE.
Step 4: from triangle AEC, using Cosine law find AC.
Step 5: from triangle AEC, using Sine law find <EAC.

Alternate Solution:

As given data, say <EAD = <EBA = <EBC = theta.

Step 1: Draw perpendicular from E to AB, say this is ED.

Step 2: Draw perpendicular from C to AB, say this is CF.

Step 3: from triangle BFC, using sin <CBF = CF / BC, find CF.

Step 4: from triangle BFC, using cos <CBF = BF / BC, find BF.

Step 5: from triangle AFD, using cos <EAD = AD / AE, find AD.

Step 6: from triangle CAF, tan < CAF = CF / AF. Find AF, Find <CAF.

Step 7: <EAC = <CAF - <EAD.