Malaysia is a multilingual country. Local speakers of Malaysian English have transferred the features of other local languages into the language. Limited research has conducted to investigate the phonological features of Malaysian English spoken by local Chinese speakers. Hence, this pioneer study was conducted to describe the salient phonological features and to determine the phonological variants of Malaysian English spoken by local Chinese speakers. 90 Chinese adults from Klang Valley were recruited and divided into three groups (Melayu-Melayu, Cina-Melayu and Cina-Cina) according to the types of education they have undergone in primary and secondary school level. Speech samples were obtained using the Malaysian English phonology test which consists of consonants and vowels in RP. Then the speech samples were transcribed phonetically using IPA symbols. Quantitative analysis was carried out based on the production accuracy of consonants and vowels. Statistical analysis using SPSS version 18.0 software revealed that there is no significant difference in the overall consonantal production accuracy among the three study groups (p > 0.05). However, there is significant difference in the production accuracy of vowel among the three groups (p < 0.001). The salient phonological features of Malaysian English were described qualitatively. The consonantal variants identified include 1) deaspiration, 2) aspiration, 3) devoicing, 4) replacement, 5) affrication, and 6) deletion. 11 monophthongs, 5 diphthongs and no triphthongs were identified in Malaysian English. The multiple variants identified were found to be used inconsistently by the local speakers. The current study is the first large-scaled study in Malaysia and the result serves as useful local phonological norm. This helps Speech Language Pathologists in the evaluation and remediation of phonological disorders. It also acts as a baseline for scoring the pronunciation of local children.