

Test	Description	Normality gauge			Justification
Histogram CRP	Binned data with PDF curve.	Attained	Closely attained	Not attained	Visually +vely skewed and kurtosed.
Histogram LogCRP		Attained	Closely attained	Not attained	Relatively less skewed and -0 kurtosis.
PP Plot CRP	Plot of theoretical CDF distribution versus observed CDF distribution.	Attained	Closely attained	Not attained	Plot shape indicates less dispersed observed values.
PP Plot LogCRP		Attained	Closely attained	Not attained	Plot shape indicates relatively more dispersed observed values.
QQ Plot CRP	Plot of theoretical inverse CDF (QF) distribution versus observed inverse CDF distribution. <sup>1</sup>	Attained	Closely attained	Not attained	Plot shape indicates less dispersed observed values.
QQ Plot LogCRP		Attained	Closely attained	Not attained	Plot shape indicates relatively more dispersed observed values.
Box Plot CRP	Plot showing the median, Upper/lower quartile, minimum, maximum values and outliers.	Attained	Closely attained	Not attained	Plot shape indicates less dispersed Baseline CRP with heavy positive skewness/Kurtosis including outliers.
Box Plot LogCRP		Attained	Closely attained	Not attained	Plot shape indicates more dispersed transformed data with relatively less skewness and kurtosis.
Shapiro-Wilk (S-W) Test (LogCRP)	Testing our empirical distribution to a normal distribution (Test for normality).	Attained	Closely attained	Not attained	p-value of 0.059 > 0.01 indicates normality. Appropriate for small sample sizes.
Skewness z-score (LogCRP)	Calculate the z-score based on skewness statistic and standard error (SE).	Attained	Closely attained	Not attained	p-value of 0.046 > 0.01 indicates no skewness hence normality. Z-scores within the 99% confidence interval.
Kurtosis z-score (LogCRP)	Calculate the z-score based on kurtosis statistic and standard error (SE).	Attained	Closely attained	Not attained	p-value of 0.552 > 0.01 indicates no kurtosis hence normality. Z-scores within the 99% confidence interval.
Normality (LogCRP)	Aggregation of all the tests above to arrive at a final determination on the normality of our transformed data.	Attained	Closely attained	Not attained	Visual representations indicate closely attained normality; coupled with the S-W tests and skewness/kurtosis z-scores, we arrive at normality attained.

<sup>1</sup> QF = quantile function