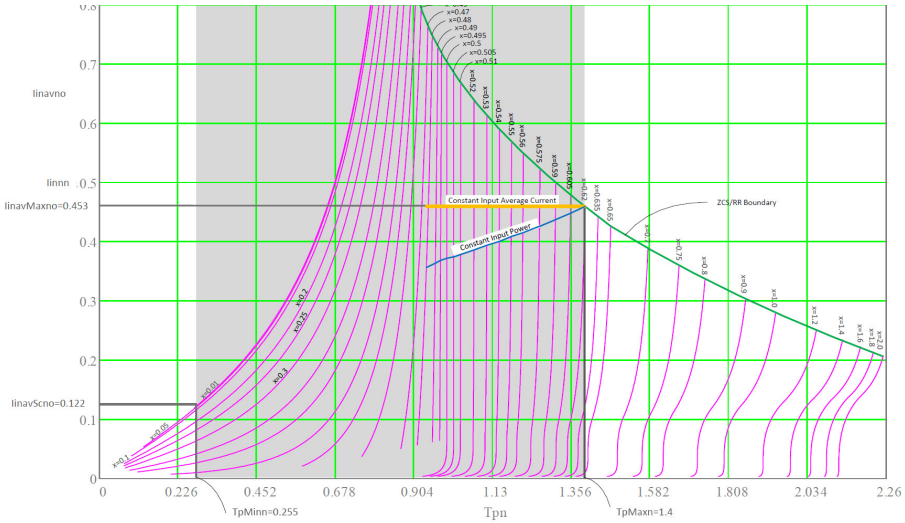

Figure 18. LLC Steady-State Normalized Operating Characteristic for Fixed Output Voltage lm = 5

Clearly, there are a range of constant power curves running between these two gain curves that could be used to deliver the required input voltage regulation range. For a particular input power, the curve that is highest up the Y-axis delivers the highest characteristic impedance (Zn) and hence the lowest total RMS current. To avoid excess switching power loss (and possibly damage to the primary MOSFETs) avoid having the peak power regulation curve cross the ZCS /RR Boundary curve. This forces us to place the peak power regulation curve no higher than the position of the blue curve indicated in Figure 18.

- Because our application is with fixed input (380V) and fixed output(5V) for 400W- all GaN, we need to optimize in a very different way. Our controller is ½ of Delfino(CPU2) so we essentially need to figure out n, Lm, k and Cr. Can we get the mathworks file used for this design guide?