**Final Results**

Overall, there were several issues with this sensor, it was not very accurate and the range was somewhat lacking, but it was at least rather consistent. It would return to the same static points or at least general area when not actively measuring something for me, and whenever it did start measuring something it always had a noticeable change in output so you could tell that there was in fact something new in front of the sensor. I believe that at least a good piece of the error found with this sensor is from my own mistakes in conducting my experiments, as I know I had several moments where I realized that I had made a mistake somewhere in the code or wiring or the actual testing set-up that was causing me to have significant errors. I had fixed as many issues as I was able to find, but I could not help but think there was some other mistake or mistakes I had made that were affecting my final data. I believe there could be use for this sensor, and that given enough time to work out any issues that might arise, anyone could make use of this sensor. But overall, within my testing, the TCS3200 color sensor was rather inaccurate, had a range about half of what it theoretically should have, suffered slightly from drift, but had good repeatability and decent precision.