A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds. IV. A Final Census

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We summarize the results of our four year survey searching for Wolf-Rayet (WR) stars in the Large Magellanic Cloud (LMC) and Small Magellanic Cloud (SMC). Over the course of this survey we've discovered 15 new WRs and 12 Of-type stars. In this last year we discovered two rare Of-type stars: an O6.5f?p and an O6nfp in addition to the two new Of?p stars discovered in our first year and the three Onfp stars discovered in our second and third years. However, even more exciting was our discovery of a new type of WR, ones we are calling WN3/O3s due to their spectroscopic signatures. We describe the completeness limits of our survey and demonstrate that we are sensitive to weak-lined WRs several magnitudes fainter than any we have discovered, arguing that there is not a population of fainter WRs waiting to be discovered. We discuss the nature of the WN3/O3s, summarizing the results of our extensive spectroscopy and modeling. We also examine the important claim made by others that the WN3/O3s are isolated compared to other massive stars. We find that if we use a more complete sample of reference massive stars, the WN3/O3s show the same spatial distribution as other early WNs, consistent with a common origin. Finally, we use this opportunity to present the "Fifth Catalog of LMC Wolf-Rayet Stars," which includes revised coordinates and updated spectral types for all 154 known LMC WRs.

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