

California Electrical Examinations Statistical Overview 2019

Background: PSI began administering the following California Electrical examinations in 2009: General Electrician, Residential Electrician, Non-Residential Lighting Technician, Fire-Life Safety Technician, and Voice Data Video Technician. PSI currently administers both English and Spanish versions of these examinations.

Statistical Review of the Examinations: PSI recently conducted a statistical review of the California Electrical examinations from January 1, 2019 to December 31, 2019. The statistical results are compiled in the table below.

Exam	Annual # of Attempts	Test Length	First Time Pass Rate	Repeat Pass Rate	Average P-Value	Average PBIS	Average Item N
General Electrician	5361	100	49.22%	32.83%	.676	.338	769.41
General Electrician – SPANISH	17	100	12.5%	0.0%	NA	NA	NA
Residential Electrician	375	80	26.61%	28.03%	.616	.325	99.37
Residential Electrician - SPANISH	5	80	NA	NA	NA	NA	NA
Non-Residential Lighting Technician	131	50	47.95%	41.38%	.695	.280	53.09
Non-Residential Lighting Technician - Spanish	11	50	NA	NA	NA	NA	NA
Fire-Life Safety Technician	426	50	61.15%	50.68%	.729	.332	142.12
Fire-Life Safety Technician – Spanish	2	50	NA	NA	NA	NA	NA
Voice Data Video Technician	220	50	60.63%	55.0%	.696	.296	75.04
Voice Data Video Technician - SPANISH	0	50	NA	NA	NA	NA	NA

The statistics listed in each of the table's columns is described below:

Annual # of Attempts: The approximate number of candidates (both first time candidates and repeat candidates) taking the exam each year.

Test Length: The number of items in the test.

First Time Pass Rate: The passing percentage of those candidates taking the test for the first time.

Repeat Pass Rate: The passing percentage of those candidates taking the test for the second (or more) time.

Average P-Value: The average number of candidates that get each test question correct

Average PBIS: The biserial correlation is an indication of how well each item differentiates between the good candidates and the poorer candidates. These correlations can range from -1.00 (negatively correlated) to 0 (no correlation) to +1.00 (positive correlation). For exams with a high enough sample size (over 30), an average PBIS over 0.20 is acceptable, and an average PBIS over 0.30 is considered to be good.

Average Item N: The average number of candidates that have taken each item. Statistics generated from sample sizes below 30 are typically regarded as being unstable.

N/A: Not enough candidate data to calculate meaningful averages