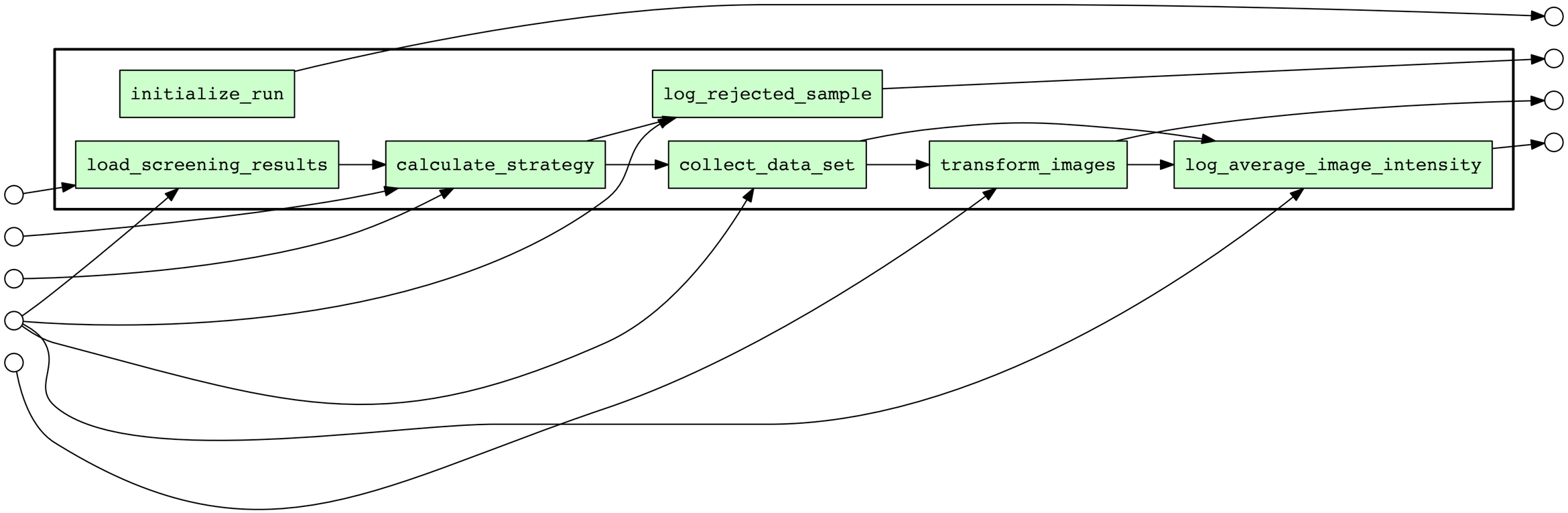simulate_data_collection