LMP-Staff Scheduling

You are the supervisor for a large manufacturing company. The facility is open 24 hours a day and employees 2500 people (2000 specialists and 500 rovers). There are 20 different departments. The number of employees needed by each department in each hour is given is some table with 480 elements. Dept 1 needs 8 people 12 am to 1 am and 7 from 1 am to 2 am. People work up to 40 hours a week at $15 an hour and any overtime costs $25 an hour and can work up to 60 hours a week. Employees work for 4 hours and then are off for an hour lunch and then another 4 hours off an hour and then overtime. There needs to be at least twice as many employees working between 8 and 5 as any other time due to union negotiations. Develop a mathematical program to optimize this staffing problem.