```
For a tolerance of 0.100000 the approx area = 0.657162.
The exact area = 0.549360.
The approximate error = 1.458449e-02.
The exact error(comp) = 1.078015e-01.
The difference in integrals is 1.078015e-01.
The number of function evaluations is 8.
The number of points 5.
For a tolerance of 0.001000 the approx area = 0.551637.
The exact area = 0.549360.
The approximate error = 2.487841e-03.
The exact error(comp) = 6.510018e-03.
The difference in integrals is 2.276214e-03.
The number of function evaluations is 40.
The number of points 21.
For a tolerance of 0.000100 the approx area = 0.550120.
The exact area = 0.549360.
The approximate error = 6.700963e-04.
The exact error(comp) = 1.447460e-03.
The difference in integrals is 7.593906e-04.
The number of function evaluations is 84.
The number of points 43.
For a tolerance of 0.000010 the approx area = 0.549526.
The exact area = 0.549360.
The approximate error = 1.498758e-04.
The exact error(comp) = 3.190275e-04.
The difference in integrals is 1.657701e-04.
The number of function evaluations is 176.
The number of points 89.
For a tolerance of 0.000001 the approx area = 0.549401.
The exact area = 0.549360.
The approximate error = 3.431725e-05.
The exact error(comp) = 6.733533e-05.
The difference in integrals is 4.098522e-05.
The number of function evaluations is 380.
The number of points 191.
For a tolerance of 0.000001 the approx area = 0.549401.
The exact area = 0.549360.
The approximate error = 3.431725e-05.
The exact error(comp) = 6.733533e-05.
The difference in integrals is 4.098522e-05.
The number of function evaluations is 380.
The number of points 191.
```