Light-strength distribution

```
1   import numpy as np
2   import matplotlib.pyplot as plt
3   from math import pi
4
5   Lambda = 0.5
6   d = 30
7   a = 15
8   n = 10
9   sintheta = np.linspace(-0.06, 0.06, 12000)
10  alpha = pi*a*sintheta/Lambda
11  beta = pi*d*sintheta/Lambda
12  id = (np.sin(alpha)/alpha)**2
13  id = id/max(id)
14  ii = (np.sin(n*beta)/np.sin(beta))**2
15  ii = ii/max(ii)
16  i = id*ii
17
18  plt.plot(sintheta, id, label="$I_d$")
19  plt.plot(sintheta, i, label="$I$")
20  plt.xlabel("$\sin{\\theta}$")
21  plt.ylabel("$I/I_0$")
22  plt.title("Light-strength distribution")
23  plt.legend()
24  plt.show()
```