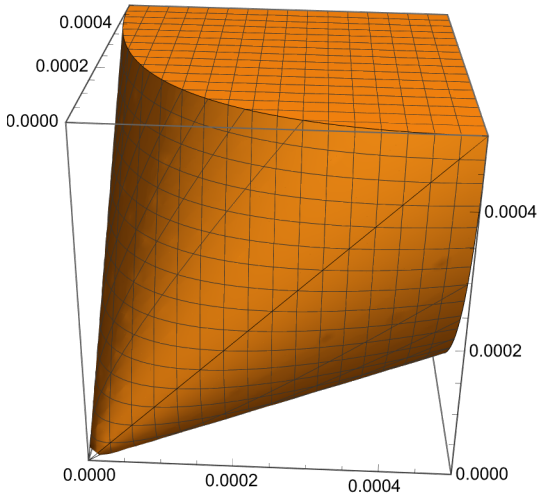
In[ ]:=
```
RegionPlot3D[{x, y, z}.Normalize[{1, 1, 1}] ≥ Sqrt[x^2 + y^2 + z^2] Sqrt[2 / 3],
 {x, 0, boxlen}, {y, 0, boxlen}, {z, 0, boxlen}, PlotPoints → 40,
 PlotRange → {{0, boxlen}, {0, boxlen}, {0, boxlen}}]
```

Out[ ]=



In[ ]:=
```
boxlen = 0.0005;
```

In[ ]:=
```
d[b_] := 3 b / (2 Sqrt[2]);
```

In[ ]:=
```
RegionPlot3D[({x, y, z}.Normalize[{1, 1, 1}] ≥ Sqrt[x^2 + y^2 + z^2] Sqrt[2 / 3]) &&
  (x^2 + y^2 + z^2 ≤ d[boxlen]^2), {x, 0, boxlen}, {y, 0, boxlen}, {z, 0, boxlen},
 PlotPoints → 40, PlotRange → {{0, boxlen}, {0, boxlen}, {0, boxlen}}]
```

Out[ ]=