

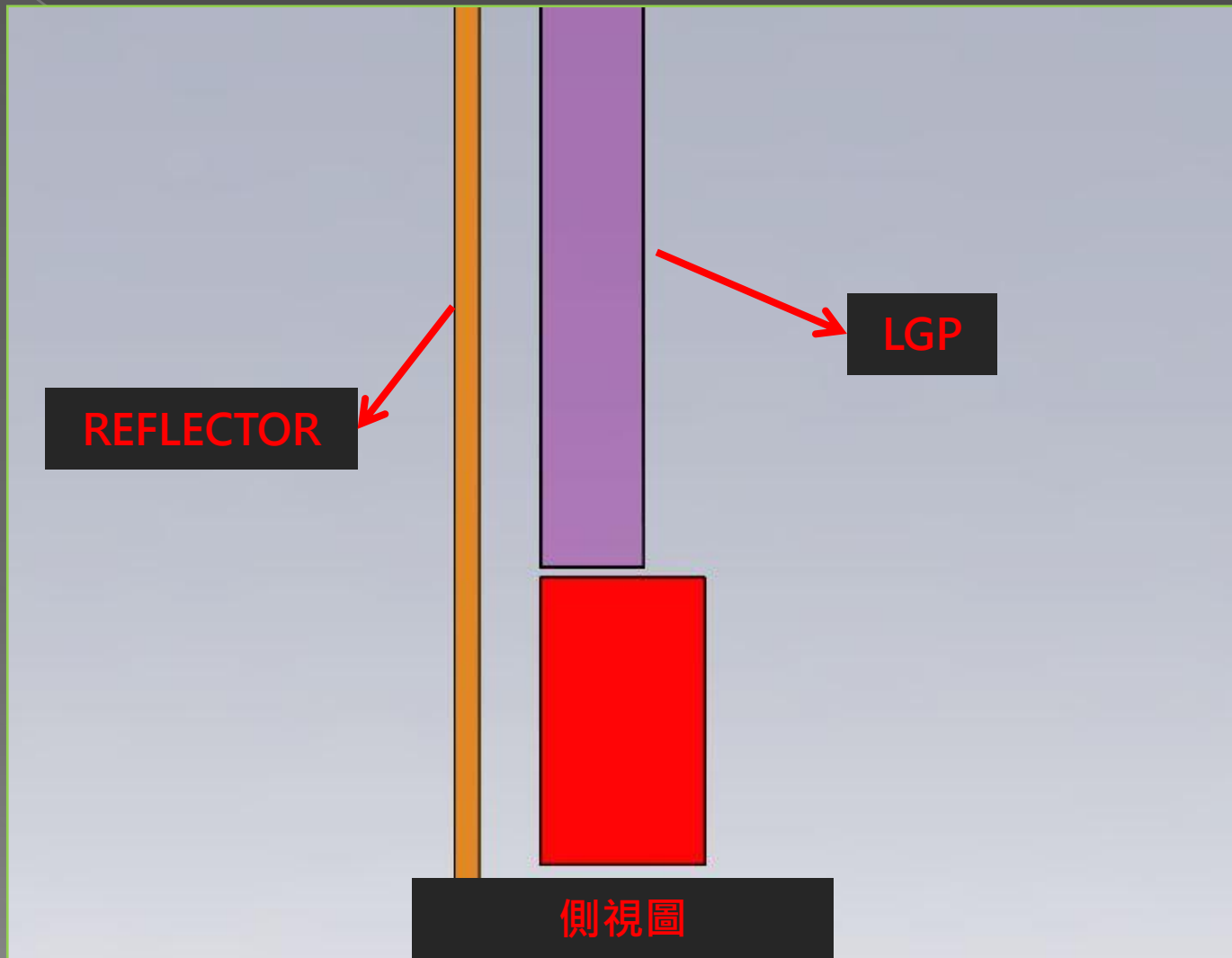


# 導光板喇叭口優化設計

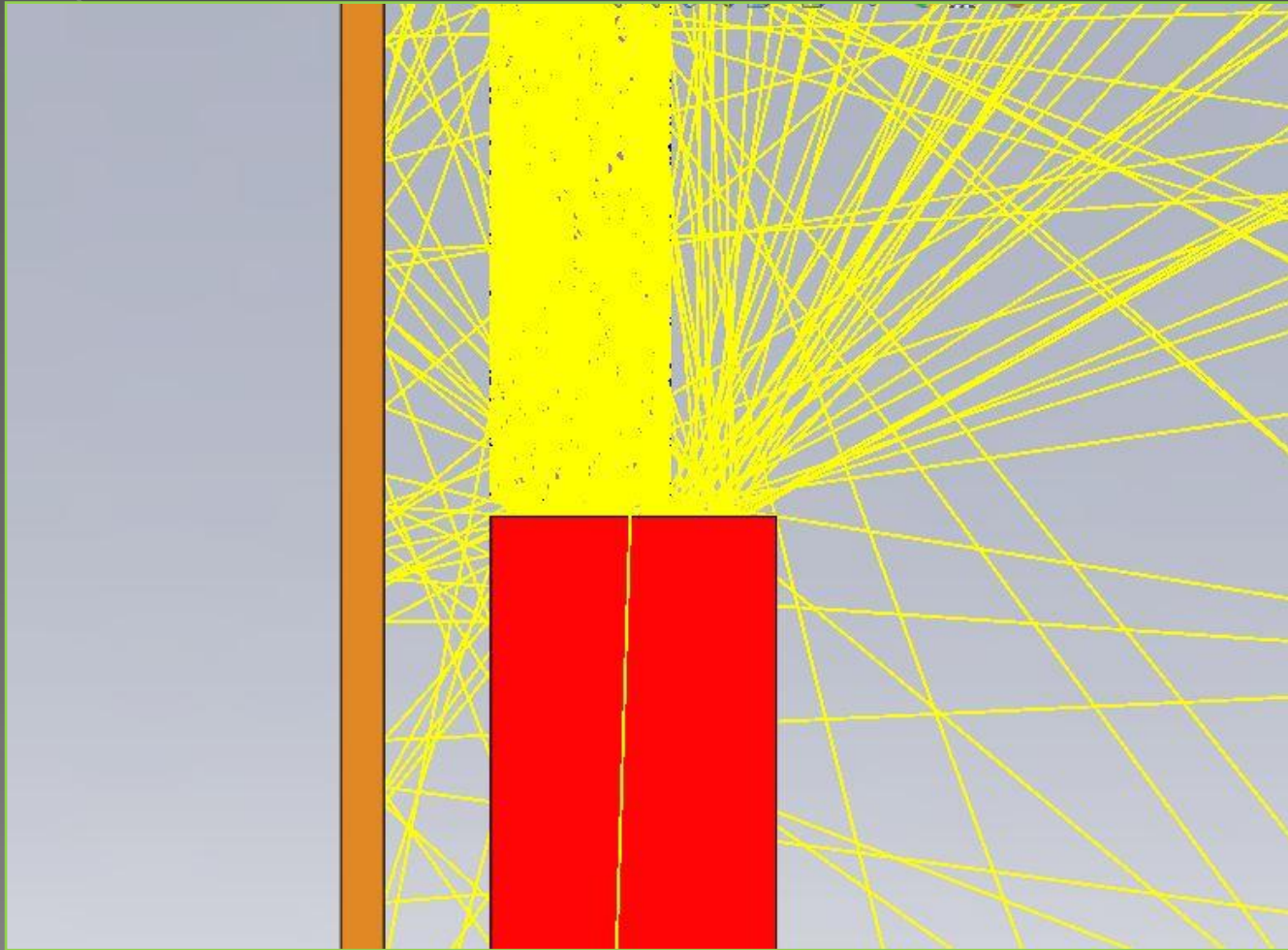
# 單側入光薄型導光板



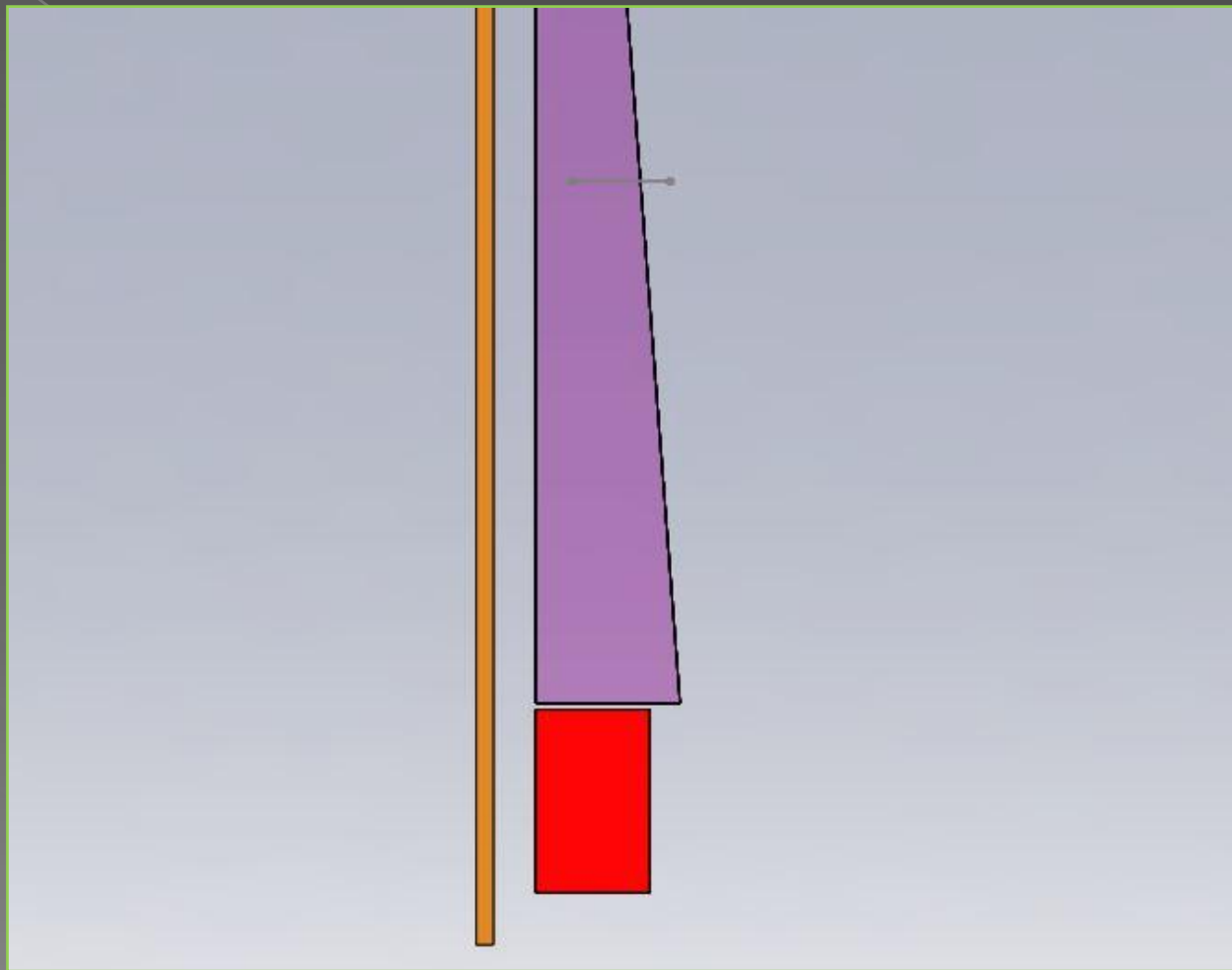
# 單側入光薄型導光板



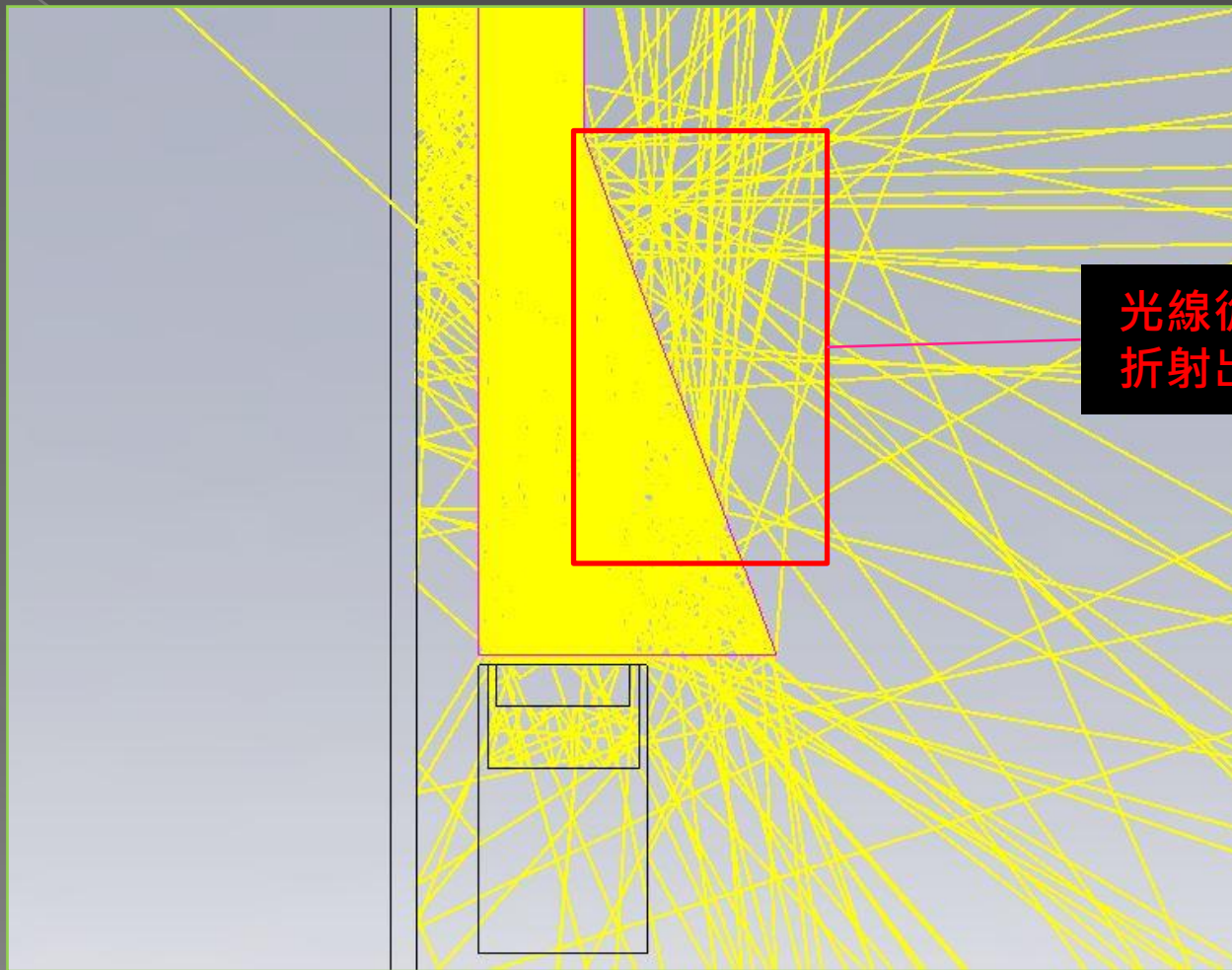
# 導光板 Ray Tracing



# 導光板喇叭口



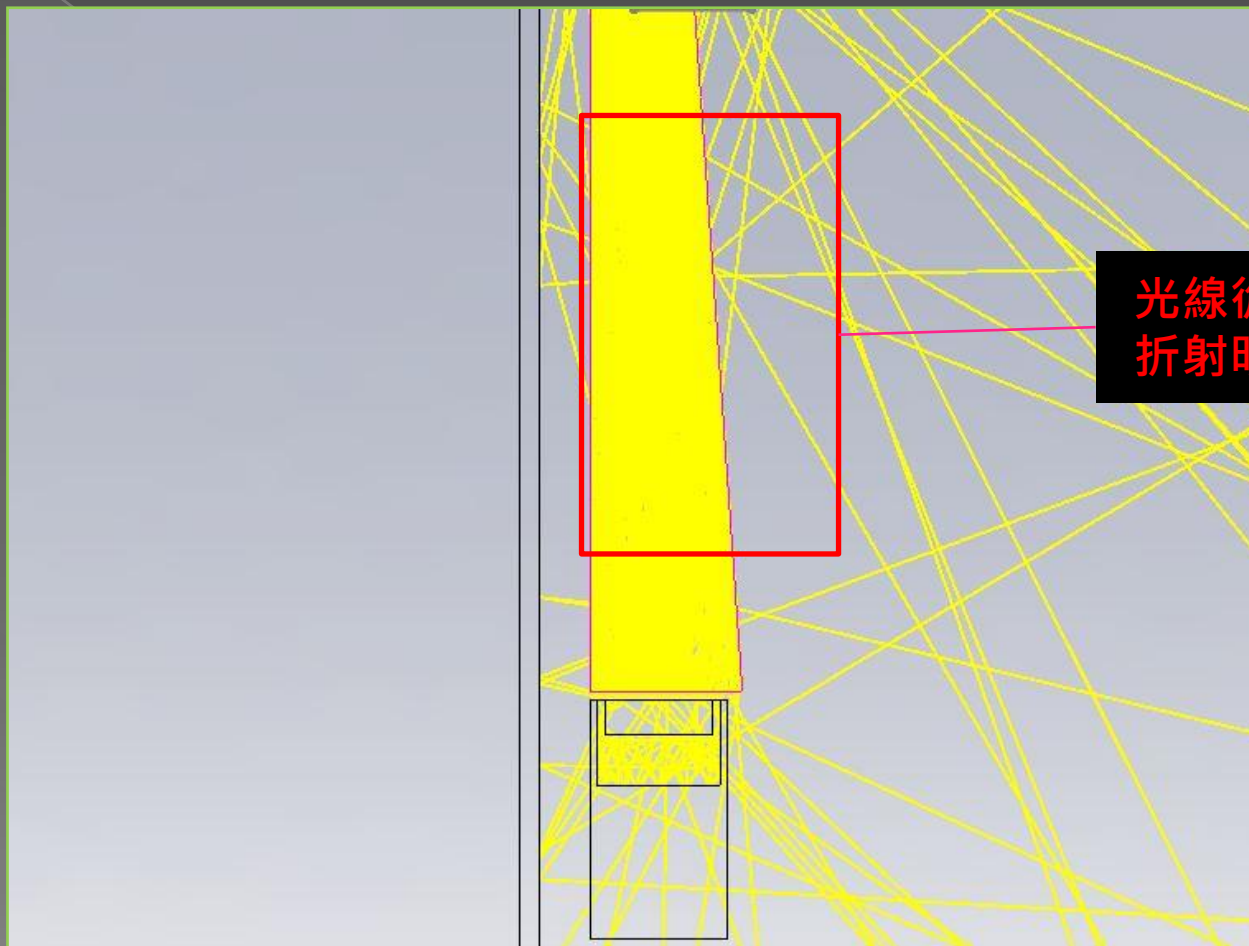
# 導光板大喇叭口 II



光線從斜坡處  
折射出導光板

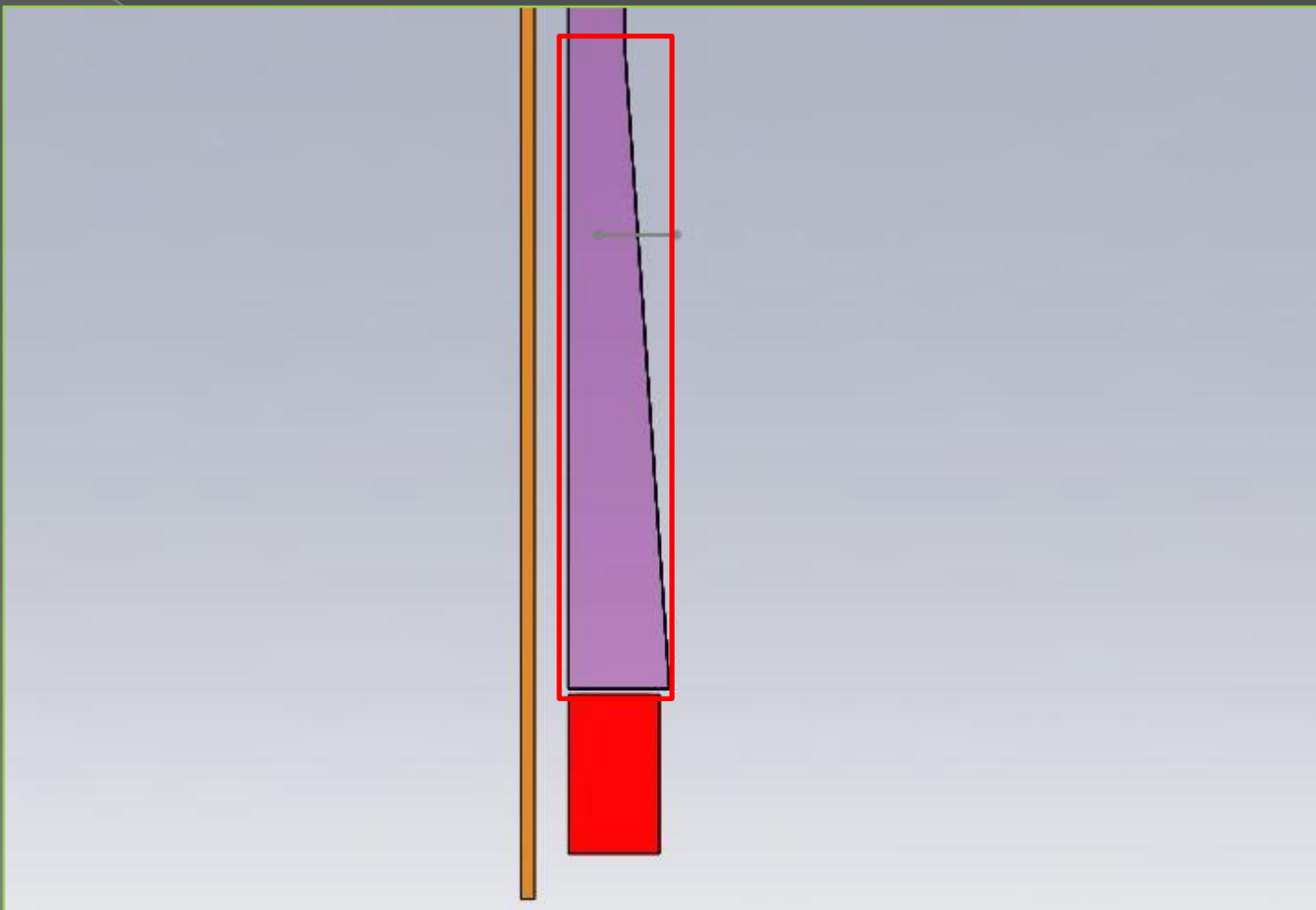
然而其開口角度卻有其限度,過大則導致全反射被破壞.

# 導光板小喇叭口 III

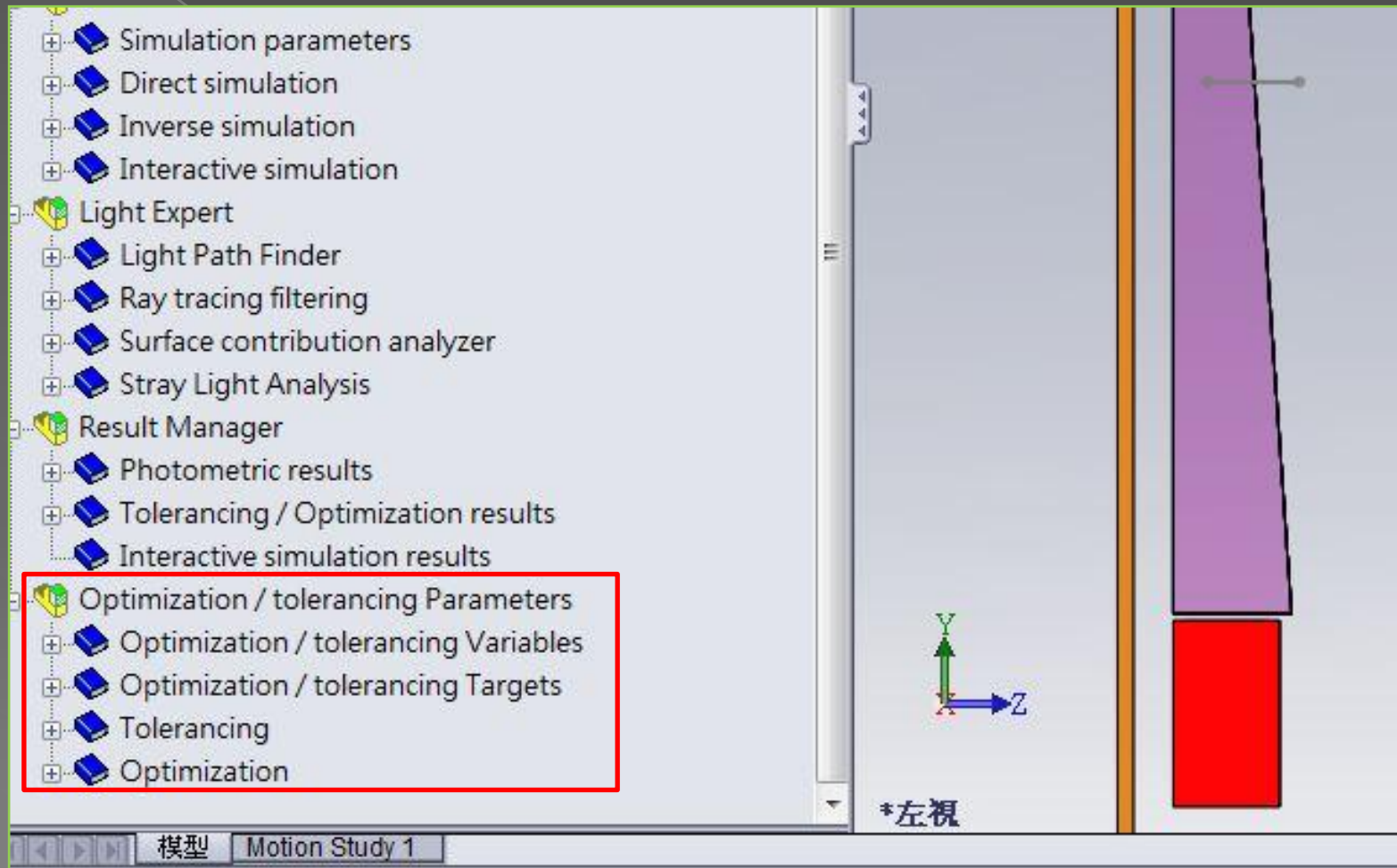


光線從斜坡處  
折射明顯降低

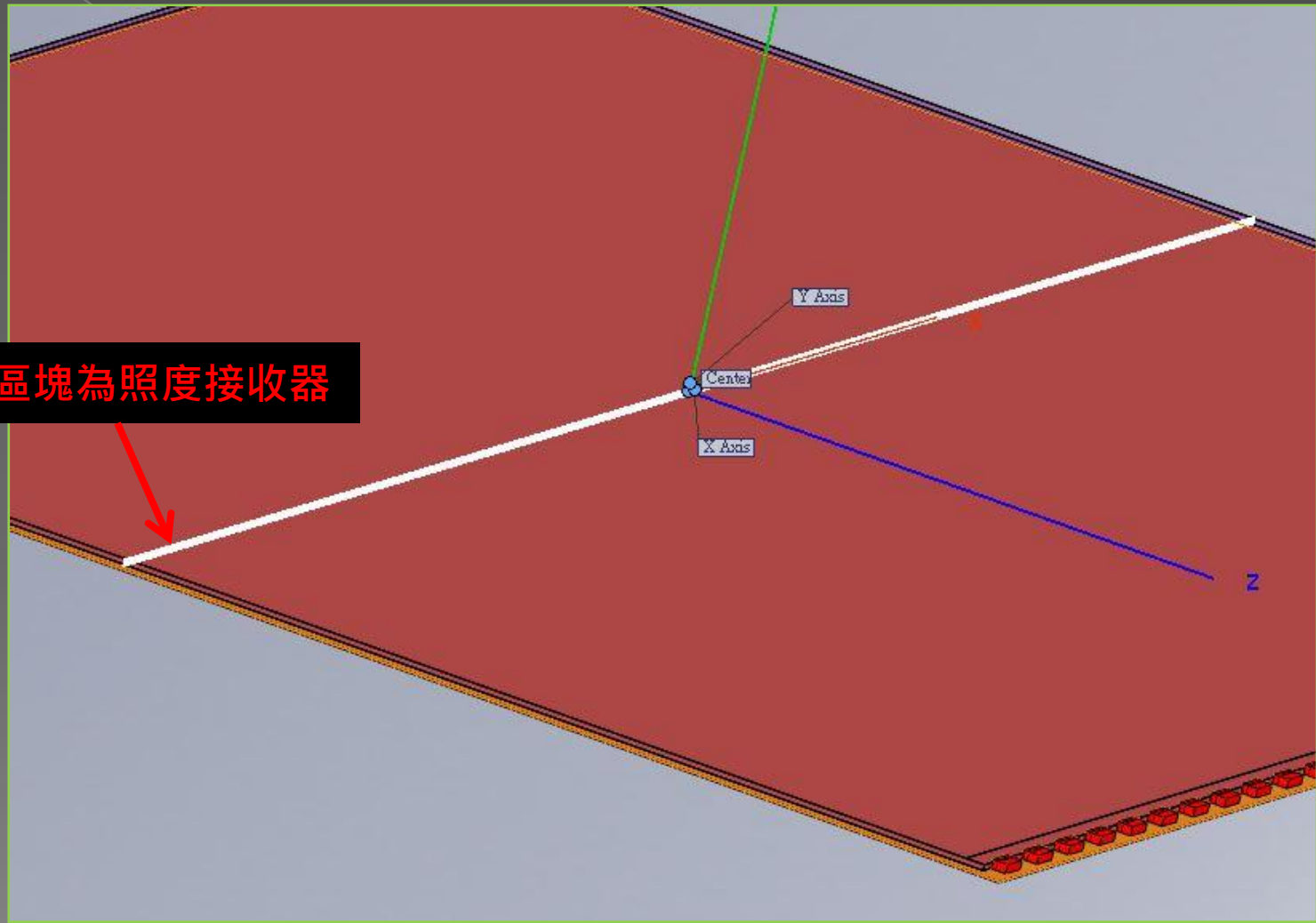
# 導光板喇叭口 IV



# OW 優化 I



# OW 優化 II



白色區塊為照度接收器

首先,於導光板截面處建立一照度接收器.能量越高,表示開口入光越多!

# OW 優化 III

OptisWorks - Extended map [ILLUMINANCE DETECTOR 2]

File Edit View Tools Filtering Operation Help

Black to white (color) All layers

截面模擬結果

Surface / Section

Shape

- Rectangle
- Ellipse
- Polygon
- Surface 3D

Section

- Horizontal
- Vertical
- User line

Center

X 0 mm

Y 0 mm

Dimension

Width 201 mm

Height 0.5 mm

Maximum

Value 2.221e+005 lx

X 6.934e+001 mm

Y 2.188e-001 mm

Minimum

Value 8.815e+004 lx

X 1.003e+002 mm

Y -3.125e-002 mm

Average 1.689e+005 lx

Flux 1.677e+001 lm

Sigma X 5.784e+001 mm

Sigma Y 1.431e-001 mm

Barycentre X -3.597e-001 mm

Barycentre Y -4.037e-004 mm

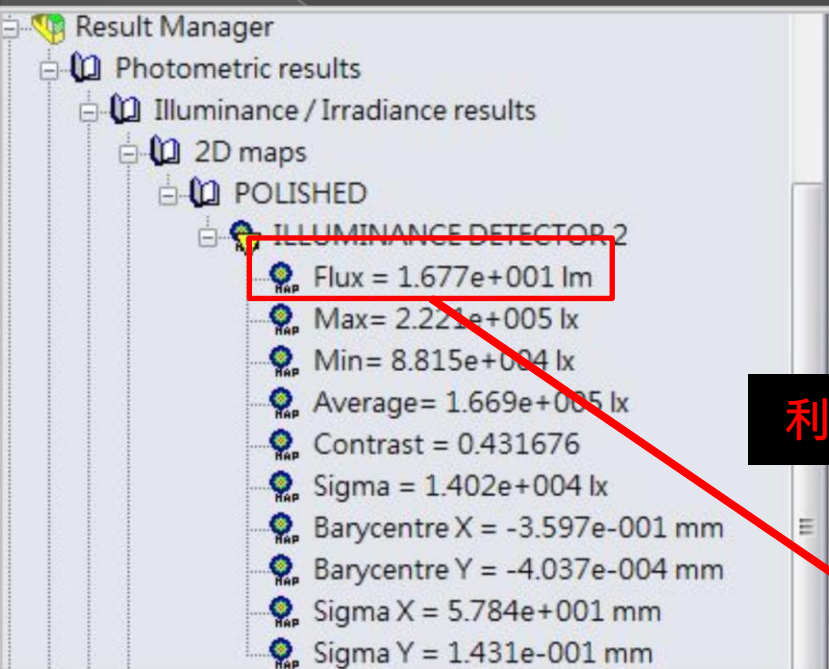
Sigma 1.402e+004 lx

Contrast 0.4317

RMS contrast 0.0840

illuminance = Filter

# OW 優化 IV



利用滑鼠拖拉新增



將欲初步模擬數值納入優化目標

# OW 優化 V

Target definition ?

✓ ✗

Target name

Target 1

Optimization \ Tolerancing parameters

Target value

16.7747606

Defines the maximum value used in tolerancing

22

Defines the minimum value used in tolerancing

15

Target weight

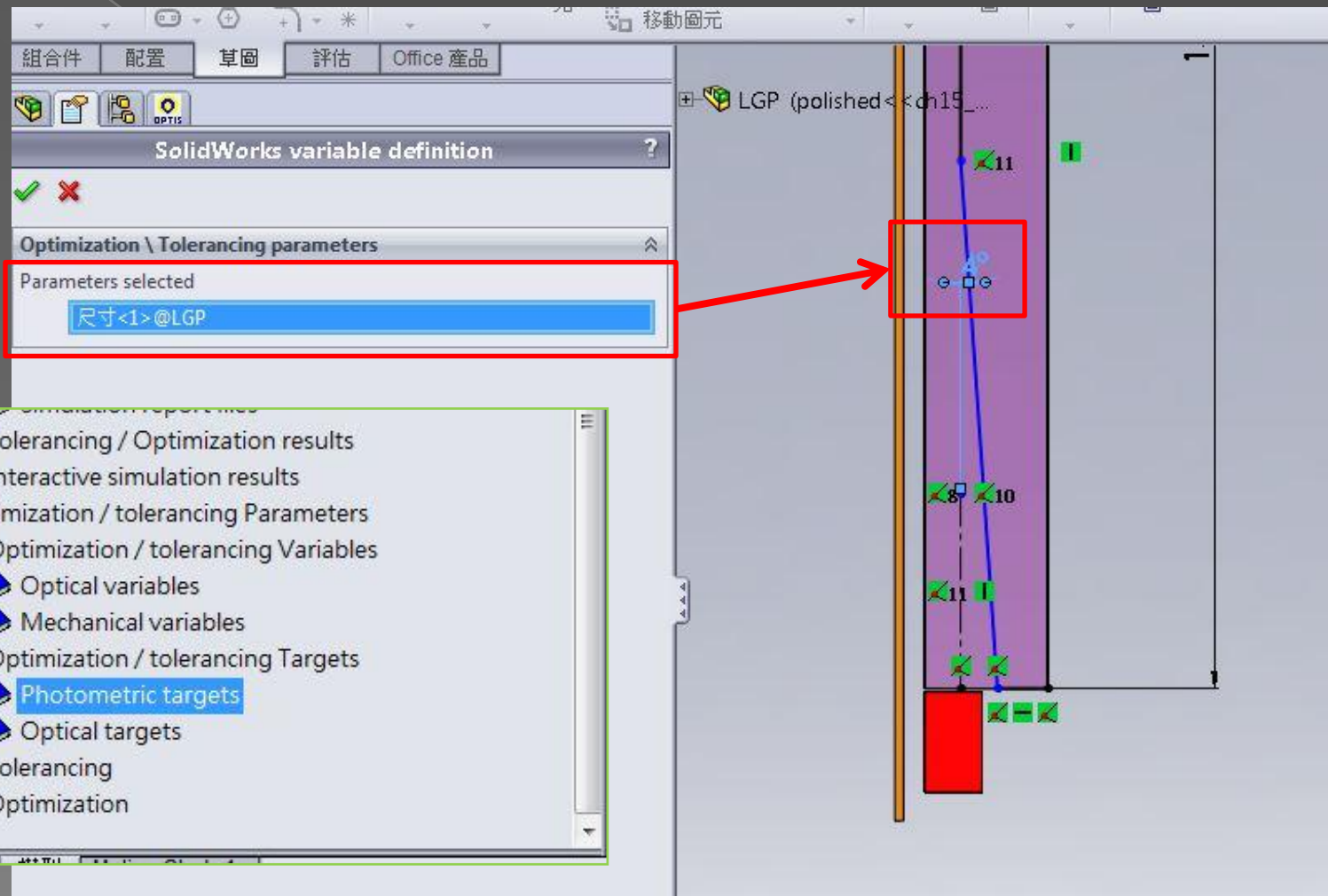
1

Optimization \ Tolerancing parameters

Target parameters

Target parameters

# OW 優化 VI



# OW 優化 VII

(Current) Tolerancing.txt - 記事本

| 角度                 | 編式      | 照度     | 狀態 | (V) | 說明(H) |
|--------------------|---------|--------|----|-----|-------|
| Tolerancing Report |         |        |    |     |       |
| D1                 | Flux    | Status |    |     |       |
| 1.0084             | 17.8652 | Fail   |    |     |       |
| 1.05882            | 17.8501 | Fail   |    |     |       |
| 1.10924            | 17.865  | Fail   |    |     |       |
| 1.15966            | 17.8872 | Fail   |    |     |       |
| 1.21008            | 17.9834 | Fail   |    |     |       |
| 1.2605             | 17.8489 | Fail   |    |     |       |
| 1.31092            | 18.0729 | Fail   |    |     |       |
| 1.36134            | 18.0505 | Fail   |    |     |       |
| 1.41176            | 19.7873 | Fail   |    |     |       |
| 1.46218            | 19.3429 | Fail   |    |     |       |
| 1.51261            | 19.6523 | Fail   |    |     |       |
| 1.56303            | 19.4323 | Fail   |    |     |       |
| 1.61345            | 19.2411 | Fail   |    |     |       |
| 1.66387            | 19.3799 | Fail   |    |     |       |
| 1.71429            | 19.124  | Fail   |    |     |       |
| 1.76471            | 18.8858 | Fail   |    |     |       |
| 1.81513            | 18.8164 | Fail   |    |     |       |
| 1.86555            | 18.7303 | Fail   |    |     |       |
| 1.91597            | 18.9212 | Fail   |    |     |       |
| 1.96639            | 18.6949 | Fail   |    |     |       |