

## 日立照明器具 照明特性

| 名称: 交換形LEDトラフ形               | 天井<br>反射率 | 80%                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      | 70%  |      |      |      | 50%  |      |      | 30%  |      |      | 0%   |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|----|-----|-----|------|------|------|------|---|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|-----|-----|--|--|----|-----|----|-----|--|--|----|----|----|----|--|--|----|----|---|----|--|--|-----|----|--|----|--|--|-----|----|--|---|--|--|-----|----|--|---|--|--|-----|---|--|---|--|--|-----|---|--|---|--|--|-----|---|--|---|--|--|-----|--|--|--|--|--|-----|--|--|--|--|--|-----|--|--|--|--|--|
|                              |           | 壁                                                                                                                                                                                        | 70%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 50%  | 30%  | 70%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0% |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 形式: WGP8A1                   | 床<br>室指数  | 10%                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    | 0%  |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              |           | 固有照明率 S/H=1.0                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| <備考><br>防湿・防雨形<br>(オイルミスト対応) | 0.6       | 0.56                                                                                                                                                                                     | 0.44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.36 | 0.54 | 0.43 | 0.35 | 0.30 | 0.41 | 0.35 | 0.30 | 0.40 | 0.34 | 0.29 | 0.27 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 0.8       | 0.65                                                                                                                                                                                     | 0.53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.45 | 0.63 | 0.52 | 0.45 | 0.39 | 0.51 | 0.44 | 0.39 | 0.49 | 0.43 | 0.38 | 0.35 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 姿図<br>                       | 1         | 0.71                                                                                                                                                                                     | 0.60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.52 | 0.69 | 0.59 | 0.52 | 0.46 | 0.57 | 0.50 | 0.45 | 0.55 | 0.49 | 0.44 | 0.42 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 1.25      | 0.77                                                                                                                                                                                     | 0.67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.59 | 0.75 | 0.66 | 0.59 | 0.53 | 0.63 | 0.57 | 0.52 | 0.61 | 0.55 | 0.51 | 0.48 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 1.5       | 0.81                                                                                                                                                                                     | 0.72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.65 | 0.79 | 0.71 | 0.64 | 0.59 | 0.68 | 0.62 | 0.57 | 0.66 | 0.61 | 0.56 | 0.53 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 2         | 0.87                                                                                                                                                                                     | 0.79                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.73 | 0.85 | 0.78 | 0.72 | 0.67 | 0.75 | 0.70 | 0.65 | 0.72 | 0.68 | 0.64 | 0.60 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 2.5       | 0.91                                                                                                                                                                                     | 0.84                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.78 | 0.88 | 0.82 | 0.77 | 0.72 | 0.79 | 0.74 | 0.70 | 0.76 | 0.72 | 0.69 | 0.65 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 3         | 0.93                                                                                                                                                                                     | 0.87                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.82 | 0.91 | 0.85 | 0.80 | 0.76 | 0.82 | 0.78 | 0.74 | 0.79 | 0.75 | 0.72 | 0.69 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 光源形式<br>WGE405LE-N14A1       | 4         | 0.96                                                                                                                                                                                     | 0.91                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.87 | 0.94 | 0.89 | 0.85 | 0.82 | 0.86 | 0.83 | 0.80 | 0.83 | 0.80 | 0.77 | 0.74 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 5         | 0.98                                                                                                                                                                                     | 0.94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.90 | 0.96 | 0.92 | 0.89 | 0.86 | 0.89 | 0.86 | 0.83 | 0.86 | 0.83 | 0.81 | 0.77 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 器具光束<br>9,760 lm             | 7         | 1.01                                                                                                                                                                                     | 0.98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.95 | 0.99 | 0.96 | 0.93 | 0.91 | 0.93 | 0.90 | 0.88 | 0.89 | 0.88 | 0.86 | 0.82 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 10        | 1.03                                                                                                                                                                                     | 1.01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.99 | 1.01 | 0.99 | 0.97 | 0.95 | 0.96 | 0.94 | 0.92 | 0.92 | 0.91 | 0.90 | 0.86 |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 器具効率 Ft= 100%                |           | <div>単体照度分布(初期値)</div> <div>5.0 2.5 0.0 2.5 5.0</div> <div>0.0 2.5 5.0</div> <div>A← 水平距離(m) →B</div> <div>(m) 軸</div> <div>0-200<br/>200-400<br/>400-600<br/>600-800<br/>800-1000</div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 上方光束 Fu= 5.2%                |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 下方光束 Fd= 94.8%               |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 最大取付間隔                       |           | <div>配光曲線</div> <div>(cd/1000 lm)</div> <div>180 150 120 90 60 30 0</div> <div>350.0 300.0 250.0 200.0 150.0 100.0 50.0 0.0</div> <div>— A<br/>- - - B<br/>- · - C-C'</div>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| A-A 1.28 H                   |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| B-B 1.26 H                   |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 保守率                          | 良         | 0.88                                                                                                                                                                                     | <div>光度 (cd/1000 lm)</div> <table><tr><th></th><th>A-0</th><th>B-B</th><th>C-0</th><th>A'-0</th><th>C'-0</th></tr><tr><td>0</td><td>303</td><td>303</td><td>303</td><td></td><td></td></tr><tr><td>10</td><td>297</td><td>300</td><td>298</td><td></td><td></td></tr><tr><td>20</td><td>283</td><td>282</td><td>282</td><td></td><td></td></tr><tr><td>30</td><td>260</td><td>257</td><td>257</td><td></td><td></td></tr><tr><td>40</td><td>230</td><td>221</td><td>225</td><td></td><td></td></tr><tr><td>50</td><td>193</td><td>176</td><td>185</td><td></td><td></td></tr><tr><td>60</td><td>160</td><td>130</td><td>142</td><td></td><td></td></tr><tr><td>70</td><td>119</td><td>81</td><td>102</td><td></td><td></td></tr><tr><td>80</td><td>83</td><td>30</td><td>62</td><td></td><td></td></tr><tr><td>90</td><td>54</td><td>1</td><td>33</td><td></td><td></td></tr><tr><td>100</td><td>33</td><td></td><td>17</td><td></td><td></td></tr><tr><td>110</td><td>18</td><td></td><td>7</td><td></td><td></td></tr><tr><td>120</td><td>11</td><td></td><td>5</td><td></td><td></td></tr><tr><td>130</td><td>6</td><td></td><td>4</td><td></td><td></td></tr><tr><td>140</td><td>4</td><td></td><td>3</td><td></td><td></td></tr><tr><td>150</td><td>4</td><td></td><td>2</td><td></td><td></td></tr><tr><td>160</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>170</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>180</td><td></td><td></td><td></td><td></td><td></td></tr></table> |      |      |      |      |      |      |      |      |      |      |      |      |    |     | A-0 | B-B  | C-0  | A'-0 | C'-0 | 0 | 303 | 303 | 303 |  |  | 10 | 297 | 300 | 298 |  |  | 20 | 283 | 282 | 282 |  |  | 30 | 260 | 257 | 257 |  |  | 40 | 230 | 221 | 225 |  |  | 50 | 193 | 176 | 185 |  |  | 60 | 160 | 130 | 142 |  |  | 70 | 119 | 81 | 102 |  |  | 80 | 83 | 30 | 62 |  |  | 90 | 54 | 1 | 33 |  |  | 100 | 33 |  | 17 |  |  | 110 | 18 |  | 7 |  |  | 120 | 11 |  | 5 |  |  | 130 | 6 |  | 4 |  |  | 140 | 4 |  | 3 |  |  | 150 | 4 |  | 2 |  |  | 160 |  |  |  |  |  | 170 |  |  |  |  |  | 180 |  |  |  |  |  |
|                              |           | A-0                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    | B-B | C-0 | A'-0 | C'-0 |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 0         | 303                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    | 303 | 303 |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
|                              | 10        | 297                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    | 300 | 298 |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 20                           | 283       | 282                                                                                                                                                                                      | 282                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 30                           | 260       | 257                                                                                                                                                                                      | 257                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 40                           | 230       | 221                                                                                                                                                                                      | 225                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 50                           | 193       | 176                                                                                                                                                                                      | 185                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 60                           | 160       | 130                                                                                                                                                                                      | 142                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 70                           | 119       | 81                                                                                                                                                                                       | 102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 80                           | 83        | 30                                                                                                                                                                                       | 62                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 90                           | 54        | 1                                                                                                                                                                                        | 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 100                          | 33        |                                                                                                                                                                                          | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 110                          | 18        |                                                                                                                                                                                          | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 120                          | 11        |                                                                                                                                                                                          | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 130                          | 6         |                                                                                                                                                                                          | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 140                          | 4         |                                                                                                                                                                                          | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 150                          | 4         |                                                                                                                                                                                          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 160                          |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 170                          |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 180                          |           |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 中                            | 0.86      |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |
| 否                            | 0.81      |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |      |      |      |      |      |      |      |    |     |     |      |      |      |      |   |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |     |     |  |  |    |     |    |     |  |  |    |    |    |    |  |  |    |    |   |    |  |  |     |    |  |    |  |  |     |    |  |   |  |  |     |    |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |   |  |   |  |  |     |  |  |  |  |  |     |  |  |  |  |  |     |  |  |  |  |  |