

Light efficiency:

87 Lumen/Watt

Light quality:

CRI: 83.1

Color temperature:

2996 K

Output: 9015 lm

Peak: 21697 cd

Power: 104 W

PF: 1.0

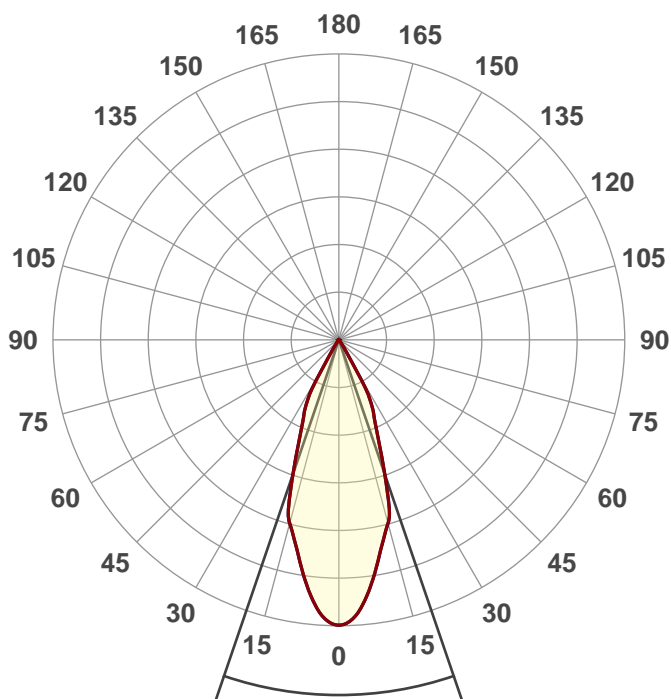


Product name:

680XK-9-CXB-90LM-30K-80-
SA40-10V-MC-S-A16

Date and time:

6/6/2018 8:44:25 AM



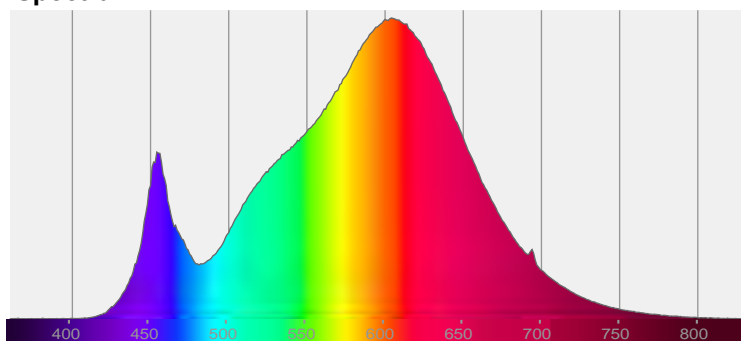
Beam angle

37.7°

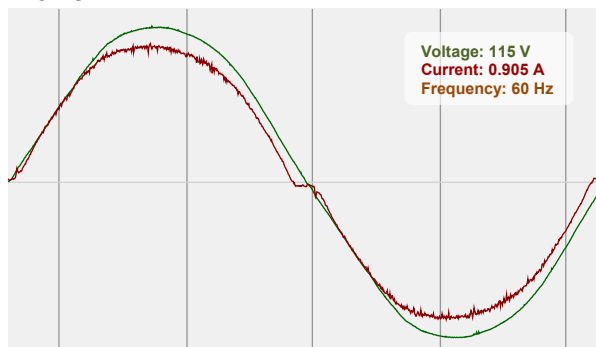


CIE 1931
x: 0.438
y: 0.406

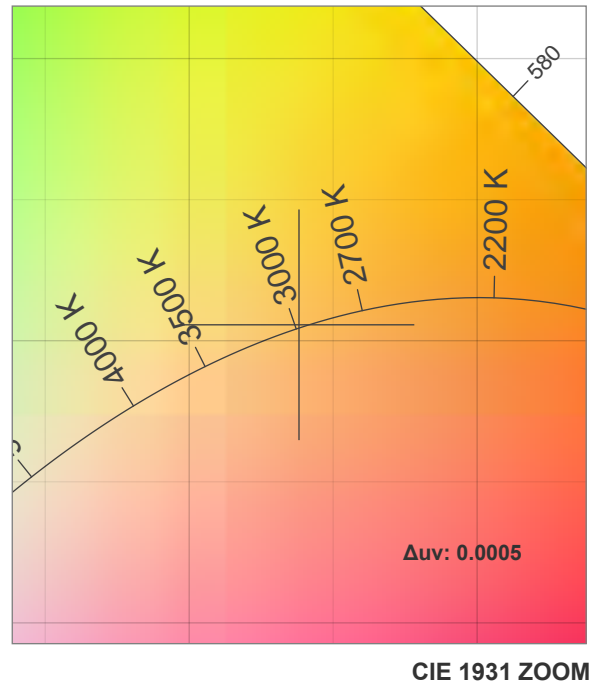
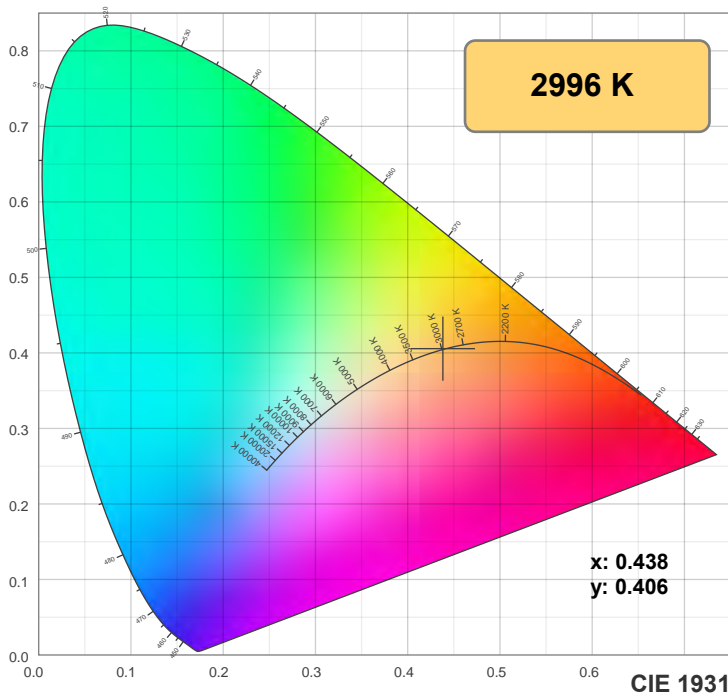
Spectra



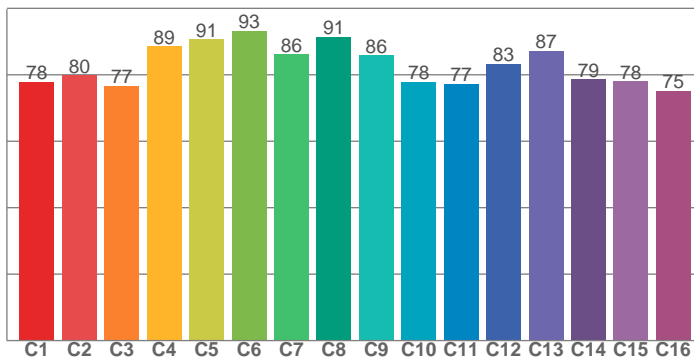
Power



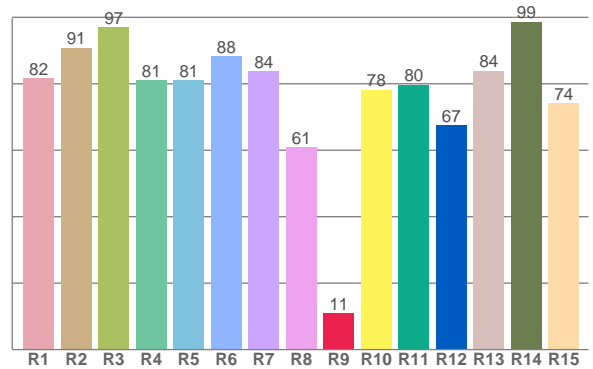
Color details



TM30: 82.9



CRI: 83.1 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 81.6 | 90.9 | 97.0 | 81.0 | 81.0 | 88.4 | 83.8 | 60.9 | 10.8 | 78.2 | 79.7 | 67.5 | 83.9 | 98.7 | 74.0 |

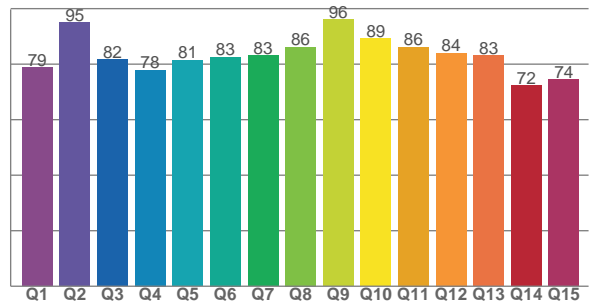
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 77.9 | 79.8 | 76.7 | 88.5 | 90.6 | 93.2 | 86.2 | 91.4 | 85.8 | 77.9 | 77.3 | 83.2 | 87.2 | 78.7 | 78.0 | 75.2 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 78.8 | 95.0 | 81.6 | 77.9 | 81.4 | 82.6 | 83.0 | 86.1 | 96.0 | 89.3 | 86.1 | 84.1 | 83.1 | 72.2 | 74.5 |

CQS: 82.2



Color parameters

| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Color coordinate cie 1931 | Color coordinate cie 1931 | Color coordinate | Color coordinate | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | x | y | u | v | Δuv |
| 2996 K | 83.1 | 10.8 | 82.9 | 95.5 | 82.2 | 0.438 | 0.406 | 0.251 | 0.348 | 0.0005 |

TM30 details

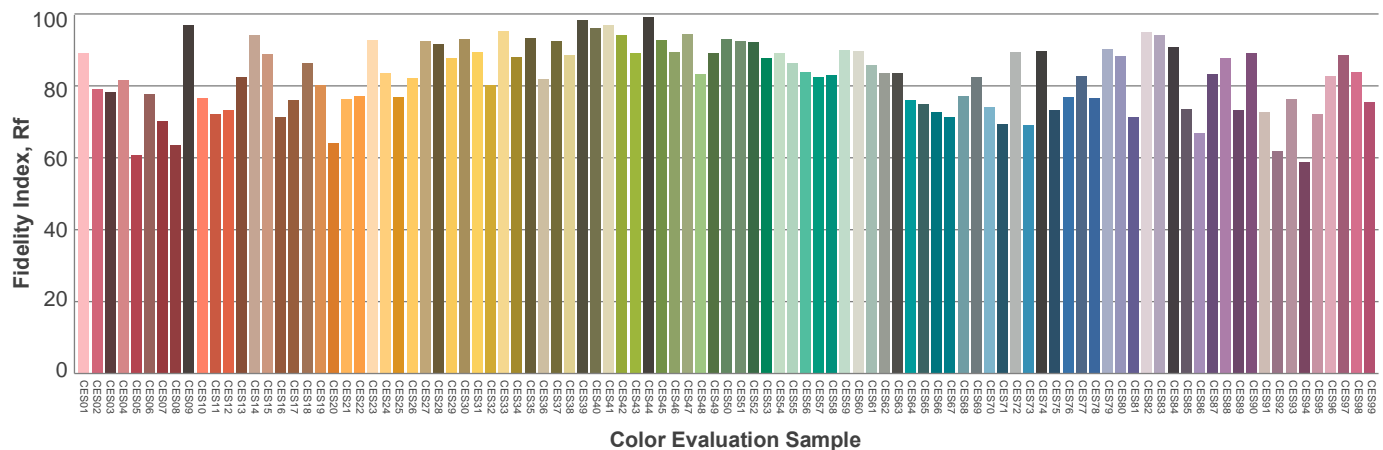
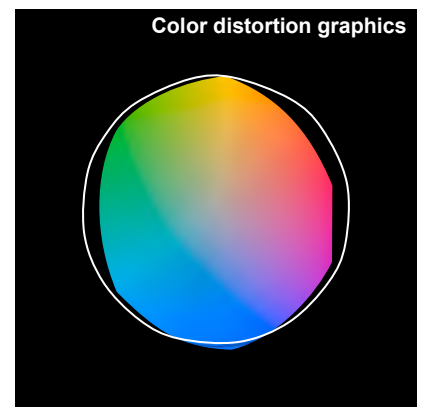
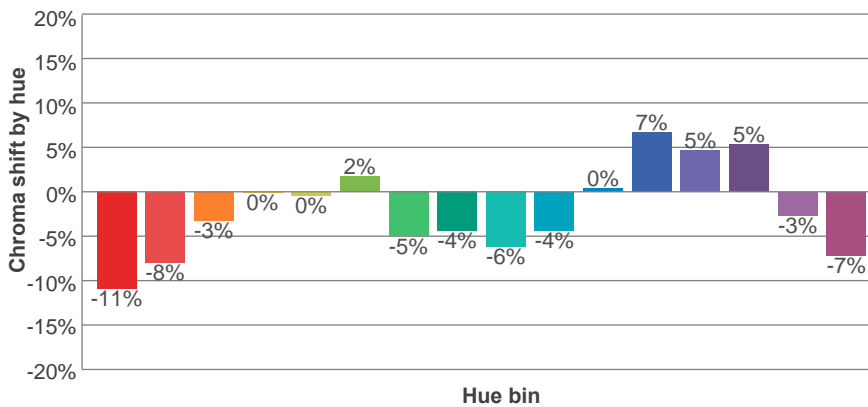
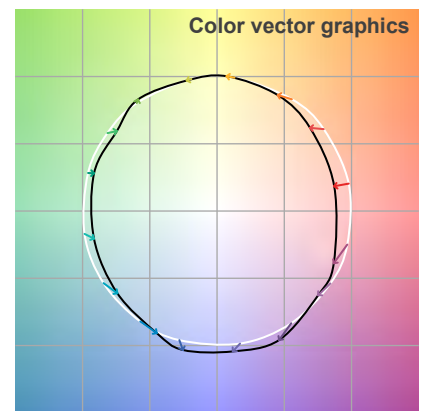
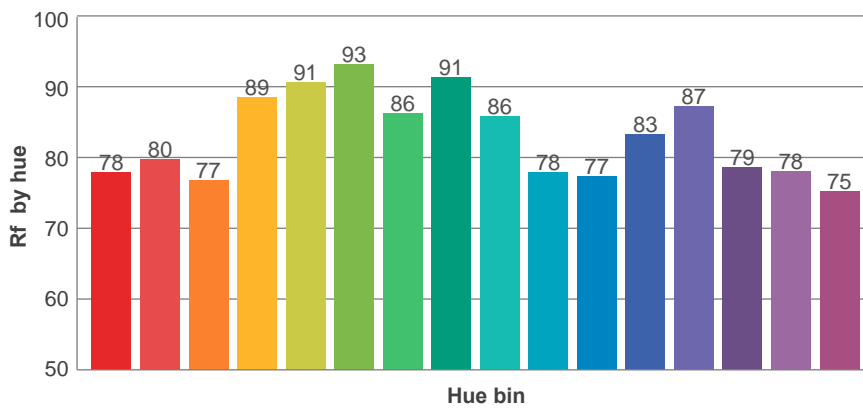
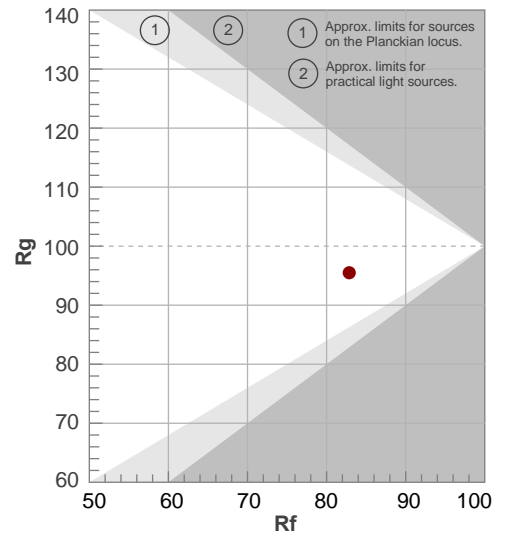
Rf 82.9

Fidelity index Rf

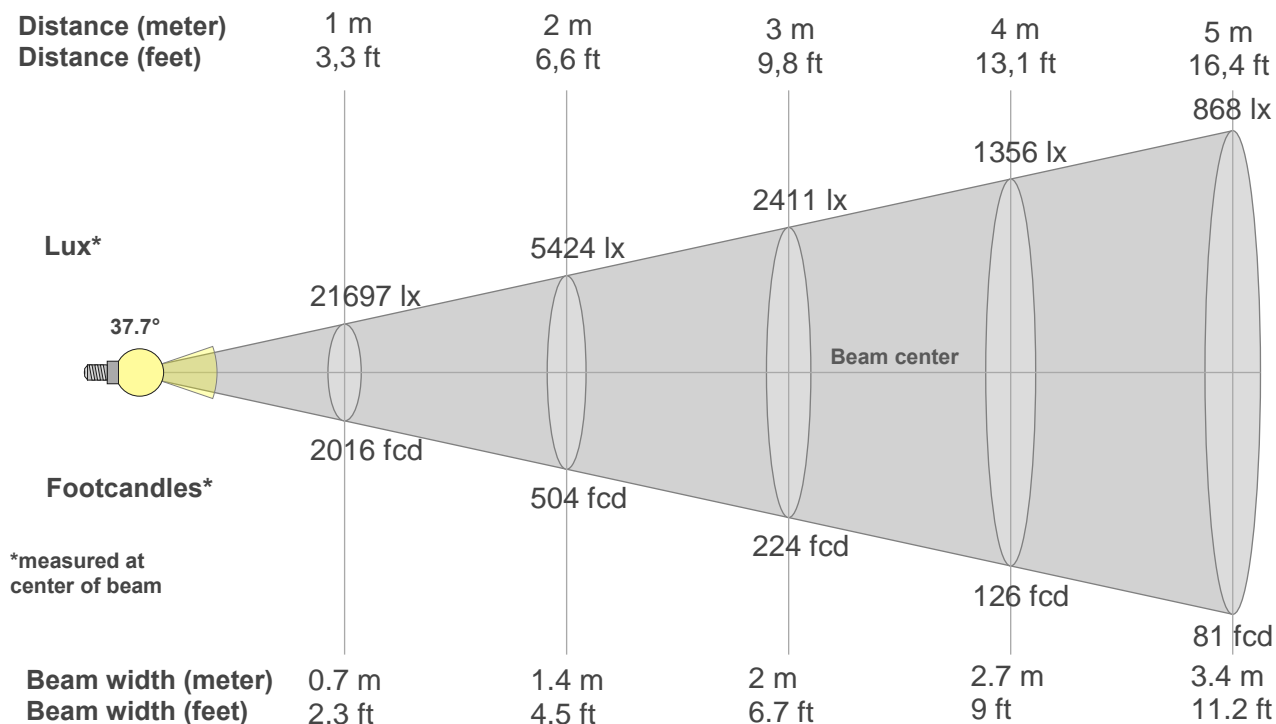
Rg 95.5

Gammut index Rg

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 78 | -11% | 0% |
| 2 | 80 | -8% | 6% |
| 3 | 77 | -3% | 10% |
| 4 | 89 | 0% | 6% |
| 5 | 91 | 0% | 4% |
| 6 | 93 | 2% | -2% |
| 7 | 86 | -5% | -5% |
| 8 | 91 | -4% | -1% |
| 9 | 86 | -6% | 5% |
| 10 | 78 | -4% | 12% |
| 11 | 77 | 0% | 15% |
| 12 | 83 | 7% | 4% |
| 13 | 87 | 5% | -6% |
| 14 | 79 | 5% | -14% |
| 15 | 78 | -3% | -12% |
| 16 | 75 | -7% | -16% |



Beam details



Beam intensities from 1-20m

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
|-----------|----------|--------|--------|---------|--------|---------|---------|---------|---------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|
| 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| 21697lx | 5424lx | 2411lx | 1356lx | 868lx | 603lx | 443lx | 339lx | 268lx | 217lx | 179lx | 151lx | 128lx | 111lx | 96lx | 85lx | 75lx | 67lx | 60lx | 54lx |
| 2015.8fcd | 503.9fcd | 224fcd | 126fcd | 80.6fcd | 56fcd | 41.1fcd | 31.5fcd | 24.9fcd | 20.2fcd | 16.7fcd | 14fcd | 11.9fcd | 10.3fcd | 9fcd | 7.9fcd | 7fcd | 6.2fcd | 5.6fcd | 5fcd |

Intensities in 0° c-plane

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 21.7K | 21.5K | 20.9K | 19.8K | 18.5K | 17.2K | 16.0K | 14.9K | 13.9K | 11.8K | 9.7K | 8.0K | 6.7K | 5.9K | 4.7K | 2.8K | 1.0K | 0.5K | 0.3K | 0.2K |
| 100% | 99% | 96% | 91% | 85% | 79% | 74% | 69% | 64% | 54% | 45% | 37% | 31% | 27% | 22% | 13% | 5% | 2% | 1% | 1% |

Intensities in 90° c-plane

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 21.7K | 21.5K | 20.9K | 19.8K | 18.5K | 17.2K | 16.0K | 14.9K | 13.9K | 11.8K | 9.7K | 8.0K | 6.7K | 5.9K | 4.7K | 2.8K | 1.0K | 0.5K | 0.3K | 0.2K |
| 100% | 99% | 96% | 91% | 85% | 79% | 74% | 69% | 64% | 54% | 45% | 37% | 31% | 27% | 22% | 13% | 5% | 2% | 1% | 1% |

Intensities in 180° c-plane

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 21.7K | 21.5K | 20.9K | 19.8K | 18.5K | 17.2K | 16.0K | 14.9K | 13.9K | 11.8K | 9.7K | 8.0K | 6.7K | 5.9K | 4.7K | 2.8K | 1.0K | 0.5K | 0.3K | 0.2K |
| 100% | 99% | 96% | 91% | 85% | 79% | 74% | 69% | 64% | 54% | 45% | 37% | 31% | 27% | 22% | 13% | 5% | 2% | 1% | 1% |

Intensities in 270° c-plane

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 21.7K | 21.5K | 20.9K | 19.8K | 18.5K | 17.2K | 16.0K | 14.9K | 13.9K | 11.8K | 9.7K | 8.0K | 6.7K | 5.9K | 4.7K | 2.8K | 1.0K | 0.5K | 0.3K | 0.2K |
| 100% | 99% | 96% | 91% | 85% | 79% | 74% | 69% | 64% | 54% | 45% | 37% | 31% | 27% | 22% | 13% | 5% | 2% | 1% | 1% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 37.7° | 61.1° | 67.2° | 99.4% | 99.0% |