

Light efficiency:

**75 Lumen/Watt**

Light quality:

**CRI: 84.1**

Color temperature:

**3024 K**

**Output: 1709 lm**

**Peak: 1864 cd**

**Power: 22.6 W**

**PF: 0.97**

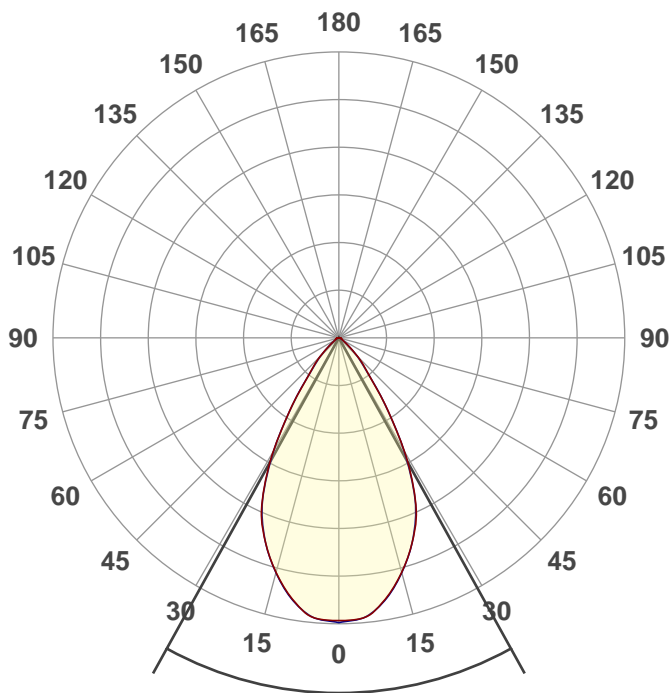


Product name:

**NU3-RD-SW-27LM-30K-80-D60-120-NC-WH-WH**

Date and time:

**12/15/2018 11:25:36 AM**



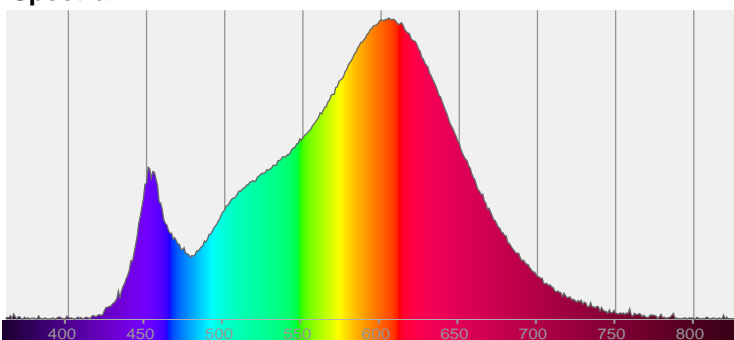
Beam angle

**58°**

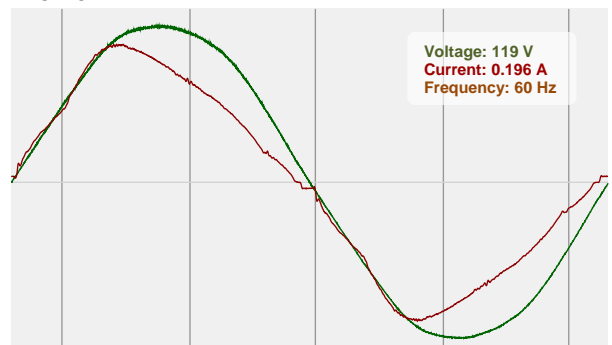


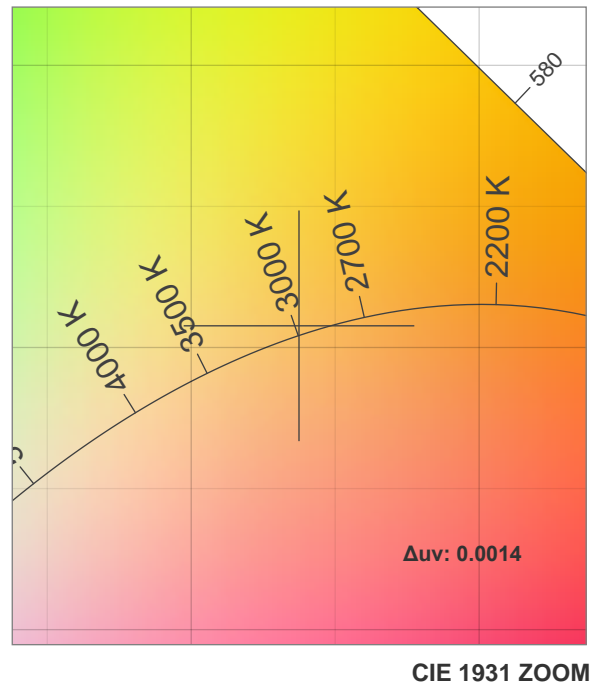
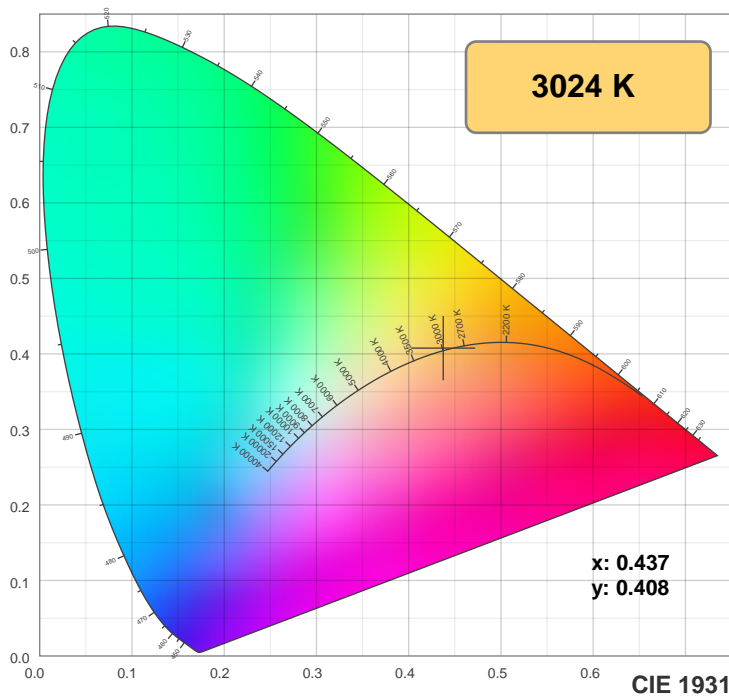
CIE 1931  
x: 0.437  
y: 0.408

Spectra

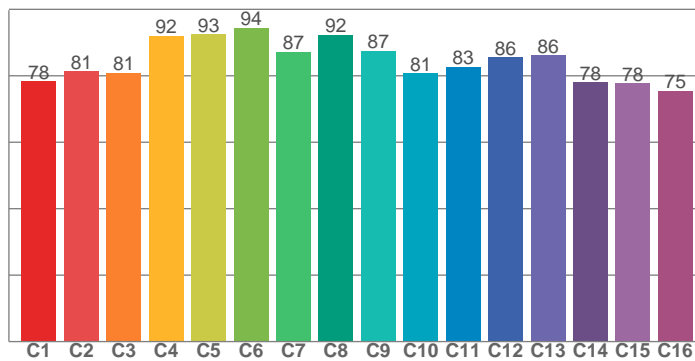


Power

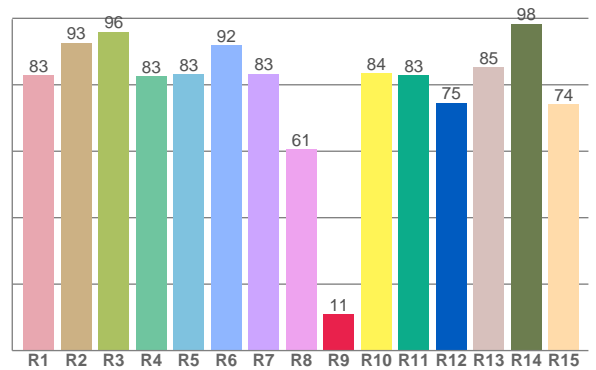




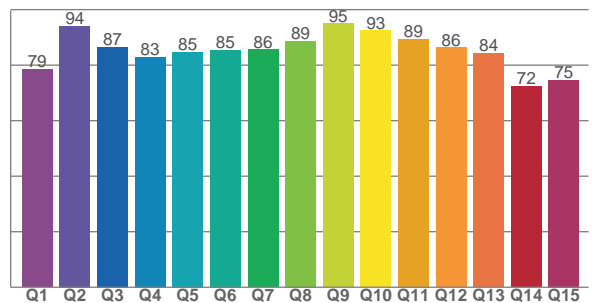
**TM30: 84.7**



**CRI: 84.1 (R1-R8)**



**CQS: 84.0**



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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 82.9 | 92.6 | 95.9 | 82.6 | 83.2 | 91.8 | 83.3 | 60.6 | 11.0 | 83.5 | 82.9 | 74.5 | 85.4 | 98.3 | 74.2 |

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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 78.3 | 81.4 | 80.9 | 91.9 | 92.5 | 94.4 | 87.2 | 92.3 | 87.5 | 80.7 | 82.7 | 85.6 | 86.1 | 78.0 | 77.7 | 75.5 |

CQS Q values

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 78.5 | 94.2 | 86.6 | 82.9 | 84.7 | 85.4 | 85.6 | 88.7 | 94.9 | 92.5 | 89.3 | 86.3 | 84.3 | 72.4 | 74.6 |

## 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                             |
| 3024 K            | 84.1                  | 11.0          | 84.7           | 94.5        | 84.0                | 0.437                     | 0.408                     | 0.249            | 0.349            | 0.0014                          |

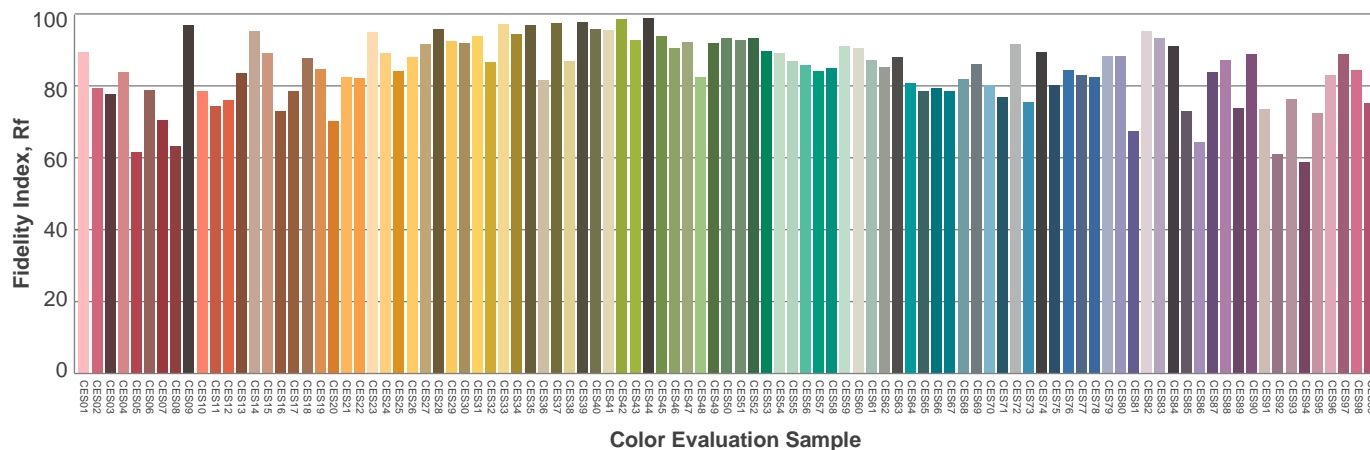
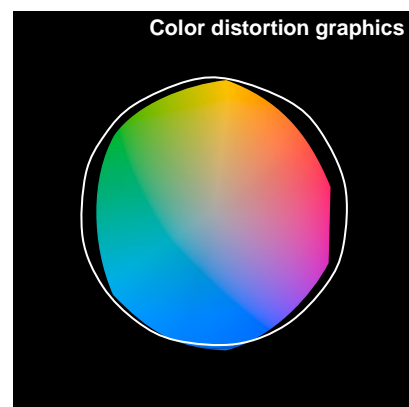
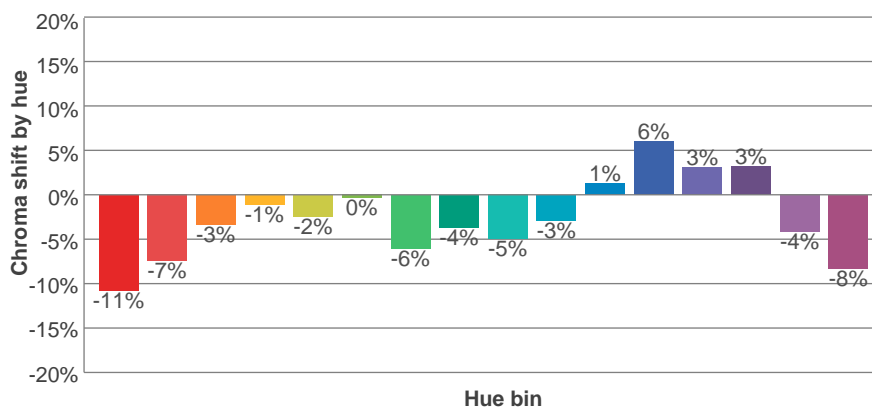
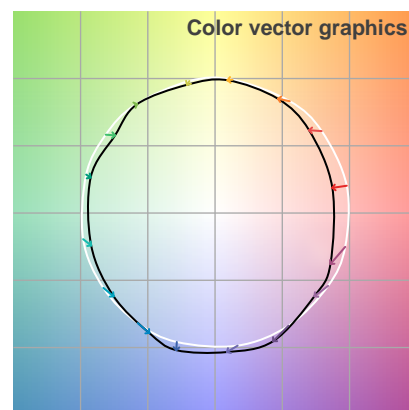
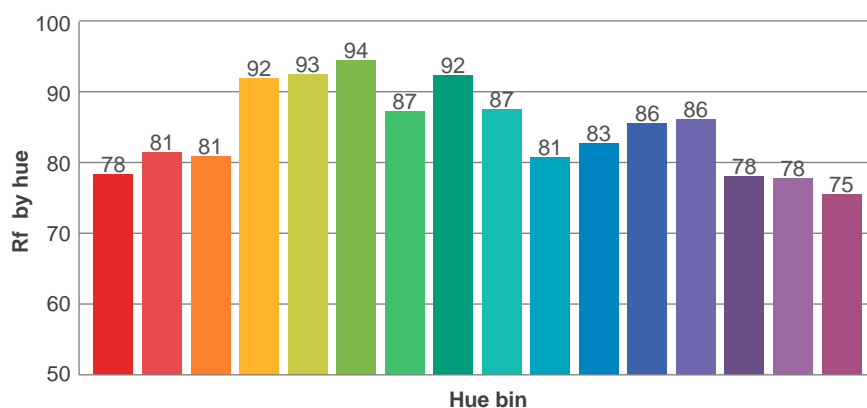
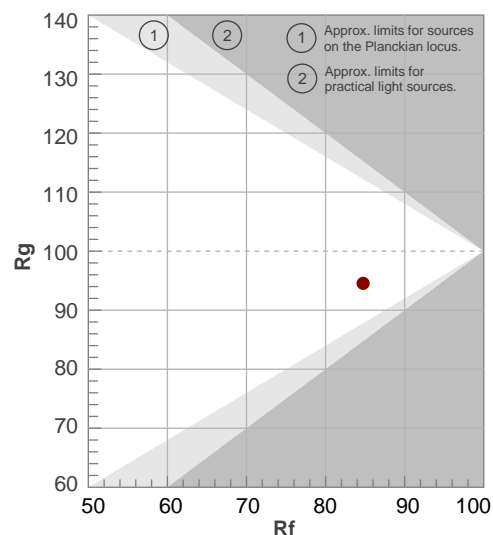
**Rf 84.7**

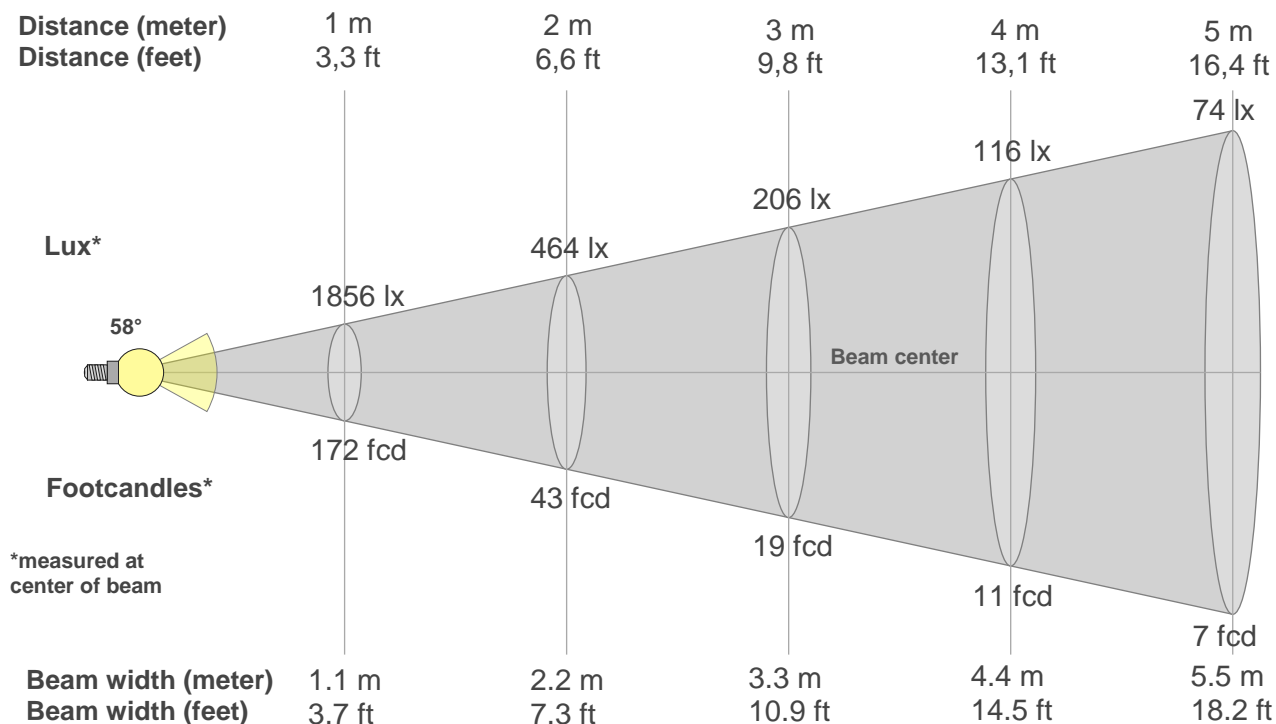
Fidelity index Rf

**Rg 94.5**

Gamut index Rg

| Hue Bin | R <sub>f</sub> | Graphic shifts (%) |      |
|---------|----------------|--------------------|------|
|         |                | Chroma             | Hue  |
| 1       | 78             | -11%               | 1%   |
| 2       | 81             | -7%                | 6%   |
| 3       | 81             | -3%                | 8%   |
| 4       | 92             | -1%                | 4%   |
| 5       | 93             | -2%                | 2%   |
| 6       | 94             | 0%                 | -2%  |
| 7       | 87             | -6%                | -3%  |
| 8       | 92             | -4%                | 1%   |
| 9       | 87             | -5%                | 6%   |
| 10      | 81             | -3%                | 9%   |
| 11      | 83             | 1%                 | 11%  |
| 12      | 86             | 6%                 | 1%   |
| 13      | 86             | 3%                 | -9%  |
| 14      | 78             | 3%                 | -16% |
| 15      | 78             | -4%                | -12% |
| 16      | 75             | -8%                | -15% |





**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 |
| 1856lx   | 464lx   | 206lx   | 116lx   | 74lx   | 52lx   | 38lx   | 29lx   | 23lx   | 19lx   | 15lx   | 13lx   | 11lx   | 9lx    | 8lx    | 7lx    | 6lx    | 6lx    | 5lx    | 5lx    |
| 172.4fcd | 43.1fcd | 19.2fcd | 10.8fcd | 6.9fcd | 4.8fcd | 3.5fcd | 2.7fcd | 2.1fcd | 1.7fcd | 1.4fcd | 1.2fcd | 1fcd   | 0.9fcd | 0.8fcd | 0.7fcd | 0.6fcd | 0.5fcd | 0.5fcd | 0.4fcd |

**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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1856 | 1848 | 1848 | 1821 | 1784 | 1741 | 1683 | 1624 | 1556 | 1487 | 1413 | 1330 | 1246 | 1124 | 996 | 862 | 720 | 577 | 471 | 366 |
| 100% | 100% | 100% | 98%  | 96%  | 94%  | 91%  | 87%  | 84%  | 80%  | 76%  | 72%  | 67%  | 61%  | 54% | 46% | 39% | 31% | 25% | 20% |

**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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1856 | 1857 | 1847 | 1829 | 1787 | 1745 | 1687 | 1625 | 1559 | 1486 | 1413 | 1323 | 1231 | 1121 | 987 | 853 | 717 | 581 | 465 | 370 |
| 100% | 100% | 99%  | 99%  | 96%  | 94%  | 91%  | 88%  | 84%  | 80%  | 76%  | 71%  | 66%  | 60%  | 53% | 46% | 39% | 31% | 25% | 20% |

**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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1856 | 1848 | 1848 | 1821 | 1784 | 1741 | 1683 | 1624 | 1556 | 1487 | 1413 | 1330 | 1246 | 1124 | 996 | 862 | 720 | 577 | 471 | 366 |
| 100% | 100% | 100% | 98%  | 96%  | 94%  | 91%  | 87%  | 84%  | 80%  | 76%  | 72%  | 67%  | 61%  | 54% | 46% | 39% | 31% | 25% | 20% |

**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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1856 | 1857 | 1847 | 1829 | 1787 | 1745 | 1687 | 1625 | 1559 | 1486 | 1413 | 1323 | 1231 | 1121 | 987 | 853 | 717 | 581 | 465 | 370 |
| 100% | 100% | 99%  | 99%  | 96%  | 94%  | 91%  | 88%  | 84%  | 80%  | 76%  | 71%  | 66%  | 60%  | 53% | 46% | 39% | 31% | 25% | 20% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 58°            | 89°             | 108.8°            | 96.8%                        | 91.4%                       |