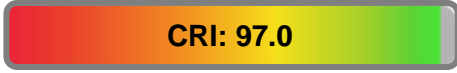


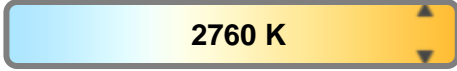
Light efficiency:



Light quality:



Color temperature:



Output: 378 lm

Peak: 1265 cd

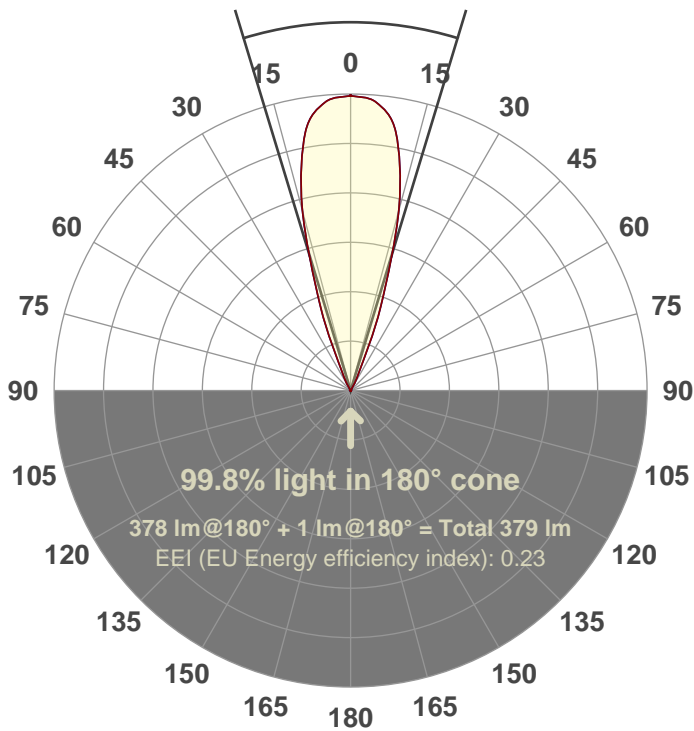
Power: 8.1 W

PF: 0.94



Beam angle

33.8°



Test number:

GRF-XT8-NF-SQ

Luminaire Model:

GRF-XT8-NF-SQ

Date and time:

8/28/2018 1:27:13 PM

Description:

350mA faceted

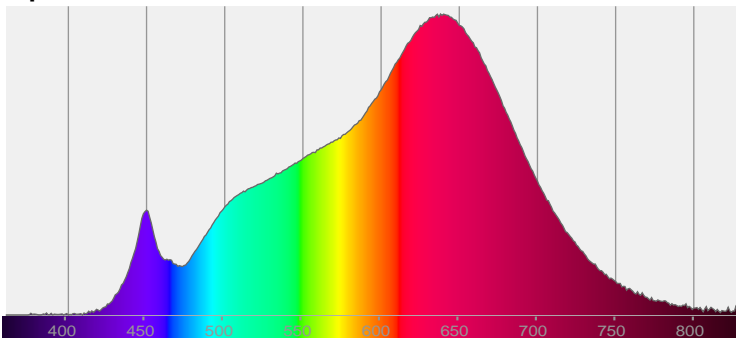
LUM: 378

PPF: 7.80

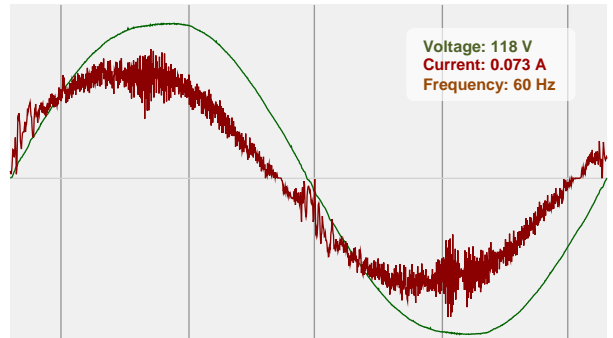


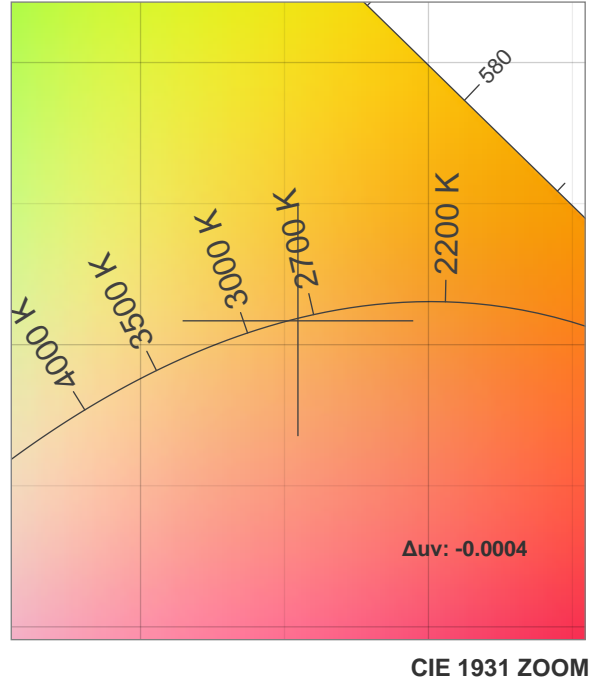
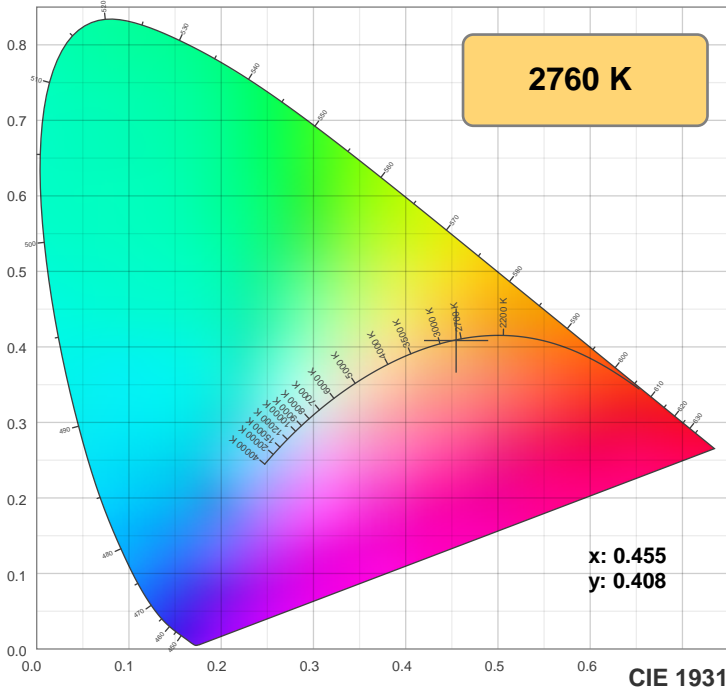
CIE 1931  
x: 0.455  
y: 0.408

Spectra

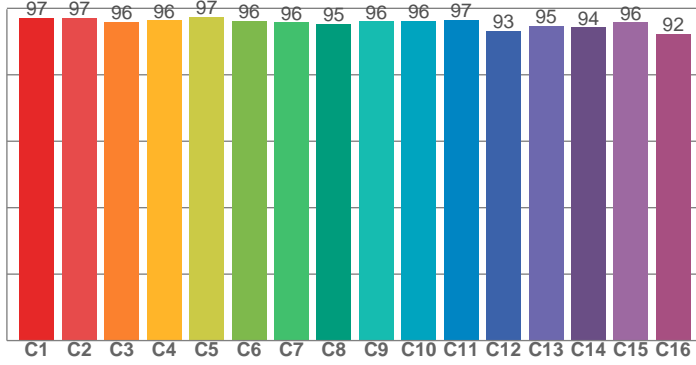


Power

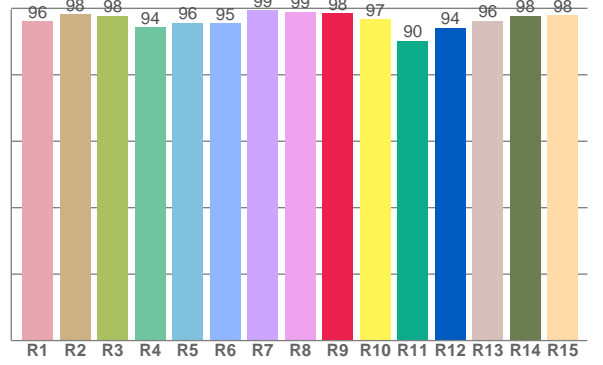




**TM30: 95.9**



**CRI: 97.0 (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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.1 | 98.2 | 97.7 | 94.3 | 95.7 | 95.5 | 99.5 | 98.9 | 98.5 | 96.7 | 90.3 | 94.1 | 96.3 | 97.8 | 98.0 |

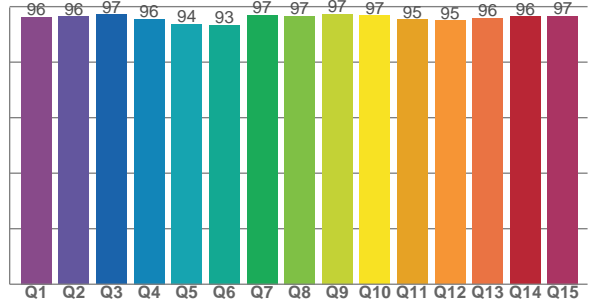
**TM30 C values, 16 binned values out of total of 99 C values**

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97.1 | 97.2 | 95.9 | 96.3 | 97.5 | 96.2 | 95.8 | 95.3 | 96.1 | 96.2 | 96.5 | 93.3 | 94.7 | 94.3 | 95.8 | 92.3 |

**CQS Q values**

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.3 | 96.4 | 97.1 | 95.5 | 93.8 | 93.4 | 97.0 | 96.6 | 97.4 | 96.8 | 95.3 | 95.0 | 95.8 | 96.4 | 96.6 |

**CQS: 95.6**



## Color parameters

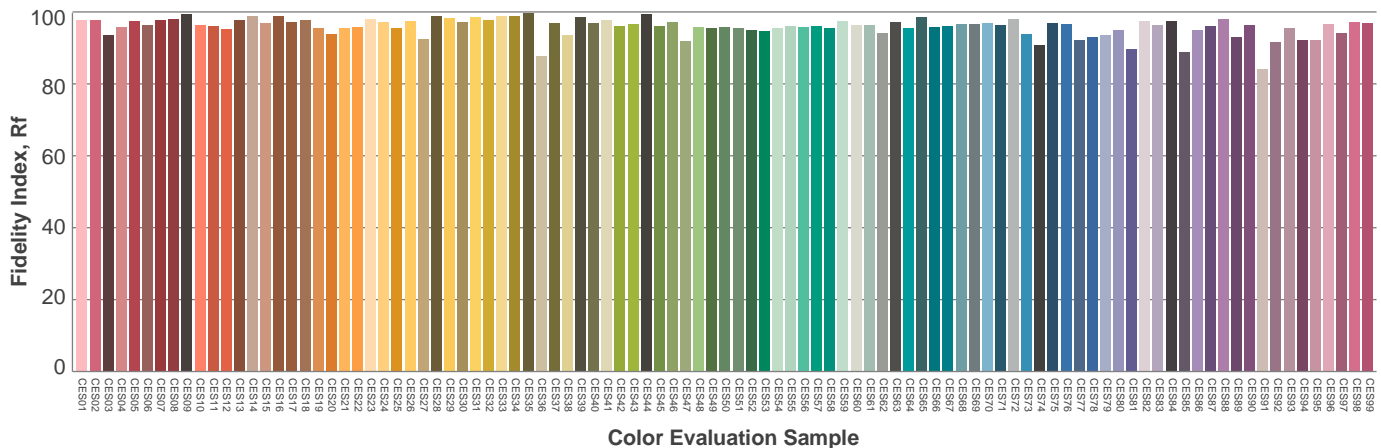
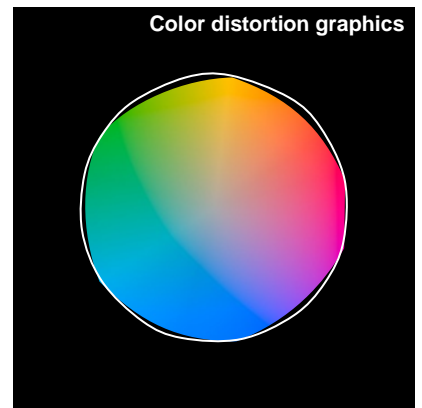
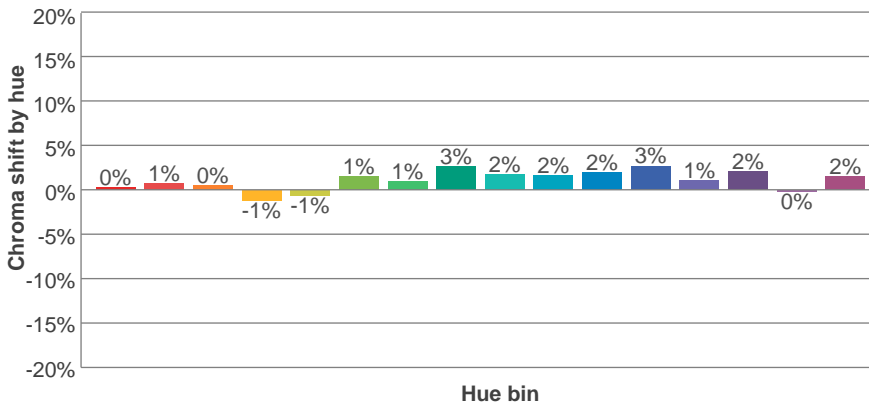
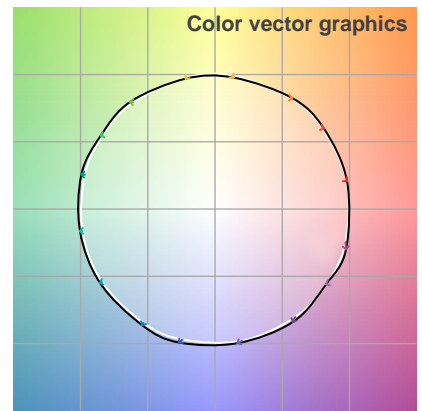
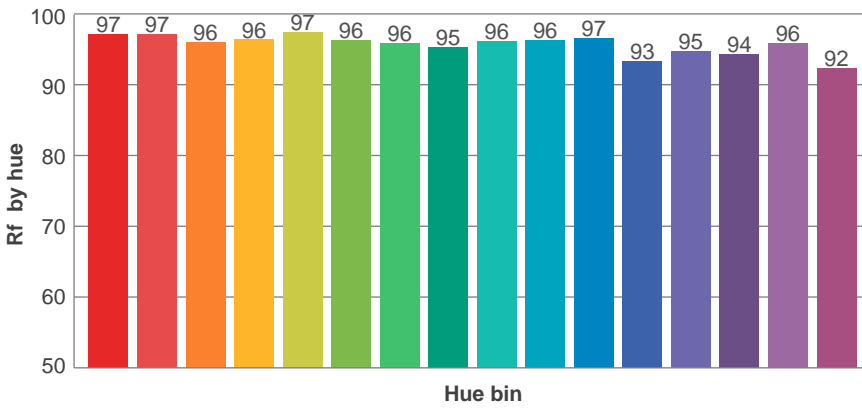
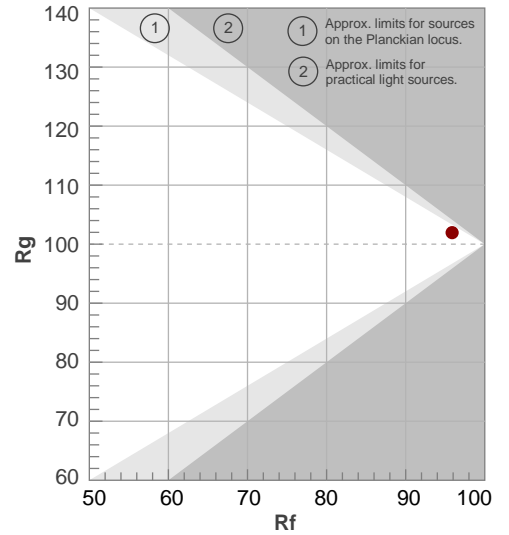
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Color coordinate cie 1931 | Color coordinate cie 1931 | Color coordinate | Color coordinate | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT               | CRI                   | CRI R9        | TM30 Rf        | TM30 Rg     | CQS                 | x                         | y                         | u                | v                | Δuv                             |
| 2760 K            | 97.0                  | 98.5          | 95.9           | 101.9       | 95.6                | 0.455                     | 0.408                     | 0.260            | 0.350            | -0.0004                         |

# TM30 details

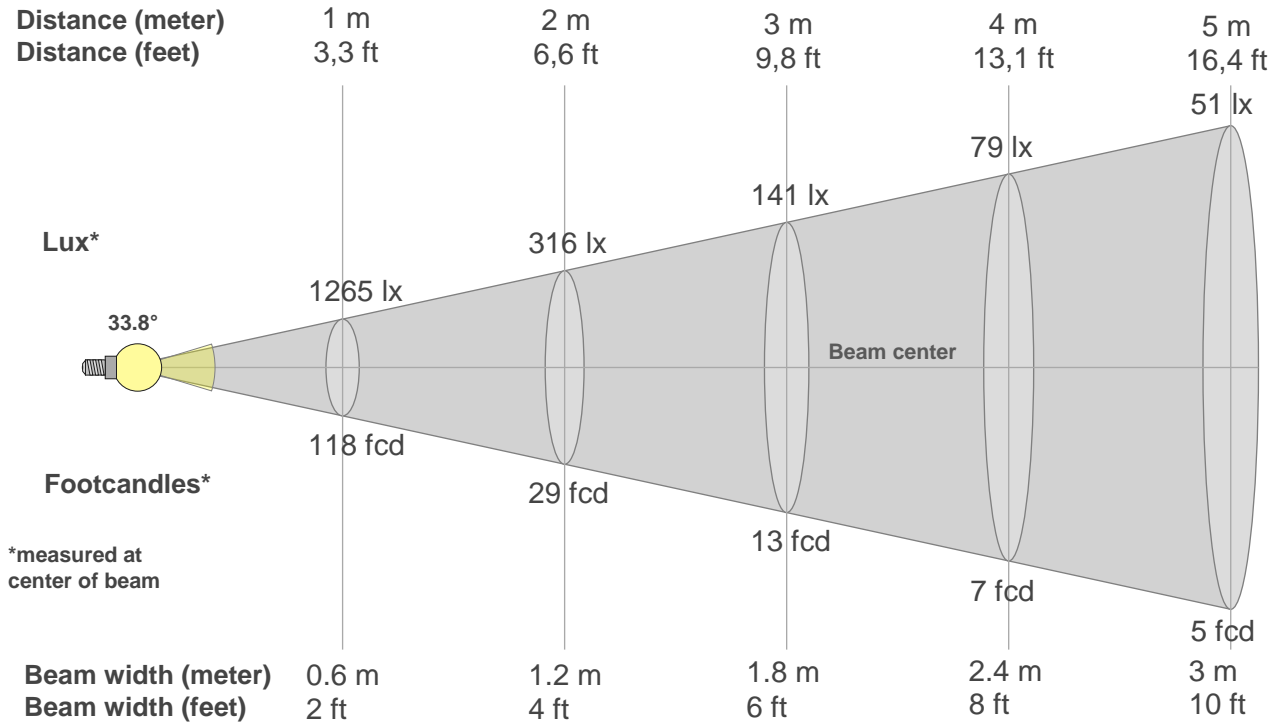
**Rf 95.9**  
Fidelity index Rf

**Rg 101.9**  
Gammut index Rg

| Hue Bin | R <sub>f</sub> | Graphic shifts (%) |     |
|---------|----------------|--------------------|-----|
|         |                | Chroma             | Hue |
| 1       | 97             | 0%                 | 0%  |
| 2       | 97             | 1%                 | -1% |
| 3       | 96             | 0%                 | -1% |
| 4       | 96             | -1%                | -2% |
| 5       | 97             | -1%                | 1%  |
| 6       | 96             | 1%                 | 2%  |
| 7       | 96             | 1%                 | 1%  |
| 8       | 95             | 3%                 | 0%  |
| 9       | 96             | 2%                 | 0%  |
| 10      | 96             | 2%                 | 0%  |
| 11      | 97             | 2%                 | 0%  |
| 12      | 93             | 3%                 | -2% |
| 13      | 95             | 1%                 | -4% |
| 14      | 94             | 2%                 | -3% |
| 15      | 96             | 0%                 | 0%  |
| 16      | 92             | 2%                 | -5% |



# 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 |
| 1265lx   | 316lx   | 141lx   | 79lx   | 51lx   | 35lx   | 26lx   | 20lx   | 16lx   | 13lx   | 10lx   | 9lx    | 7lx    | 6lx    | 6lx    | 5lx    | 4lx    | 4lx    | 4lx    | 3lx    |
| 117.5fcd | 29.4fcd | 13.1fcd | 7.3fcd | 4.7fcd | 3.3fcd | 2.4fcd | 1.8fcd | 1.5fcd | 1.2fcd | 1fcd   | 0.8fcd | 0.7fcd | 0.6fcd | 0.5fcd | 0.5fcd | 0.4fcd | 0.4fcd | 0.3fcd | 0.3fcd |

### 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° |
|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1265 | 1256 | 1247 | 1220 | 1172 | 1122 | 993 | 865 | 710 | 535 | 367 | 246 | 125 | 63  | 31  | 5   | 4   | 3   | 2   | 2   |
| 100% | 99%  | 99%  | 96%  | 93%  | 89%  | 79% | 68% | 56% | 42% | 29% | 19% | 10% | 5%  | 2%  | 0%  | 0%  | 0%  | 0%  | 0%  |

### 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° |
|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1265 | 1256 | 1247 | 1220 | 1172 | 1122 | 993 | 865 | 710 | 535 | 367 | 246 | 125 | 63  | 31  | 5   | 4   | 3   | 2   | 2   |
| 100% | 99%  | 99%  | 96%  | 93%  | 89%  | 79% | 68% | 56% | 42% | 29% | 19% | 10% | 5%  | 2%  | 0%  | 0%  | 0%  | 0%  | 0%  |

### 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° |
|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1265 | 1256 | 1247 | 1220 | 1172 | 1122 | 993 | 865 | 710 | 535 | 367 | 246 | 125 | 63  | 31  | 5   | 4   | 3   | 2   | 2   |
| 100% | 99%  | 99%  | 96%  | 93%  | 89%  | 79% | 68% | 56% | 42% | 29% | 19% | 10% | 5%  | 2%  | 0%  | 0%  | 0%  | 0%  | 0%  |

### 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° |
|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1265 | 1256 | 1247 | 1220 | 1172 | 1122 | 993 | 865 | 710 | 535 | 367 | 246 | 125 | 63  | 31  | 5   | 4   | 3   | 2   | 2   |
| 100% | 99%  | 99%  | 96%  | 93%  | 89%  | 79% | 68% | 56% | 42% | 29% | 19% | 10% | 5%  | 2%  | 0%  | 0%  | 0%  | 0%  | 0%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 33.8°          | 48°             | 55.9°             | 99.2%                        | 98.9%                       |



THIS PAGE INTENTIONALLY LEFT BLANK