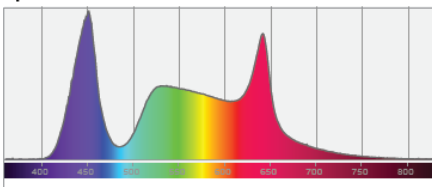
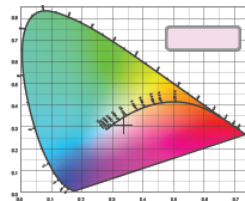


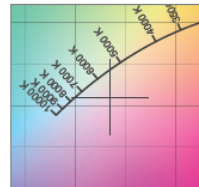
Spectral distribution



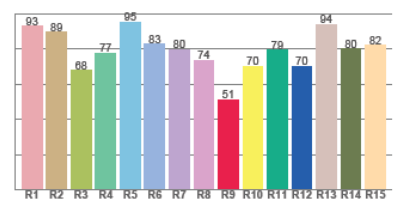
Color coordinates



Zoom color point



CRI R values



Photometric Test Report

*Due to additional product enhancements, an updated version of this report may be available online. Please check www.elationlighting.eu for the latest revision/update of this report.

Light Efficiency:



Light Quality:



Color Temperature:



Output: 2068 lm

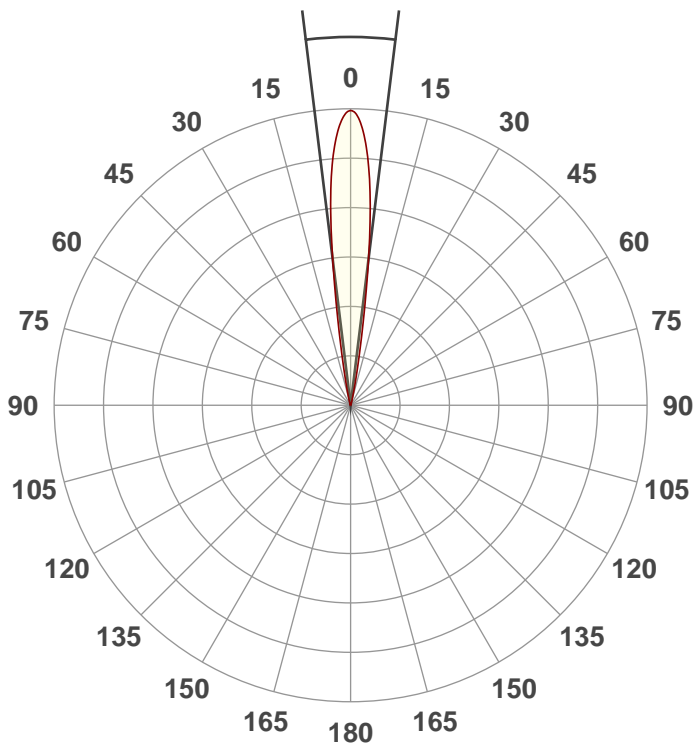
Peak: 33799 cd

Power: 49.1 W

PF: 0.63

Beam Angle

14°

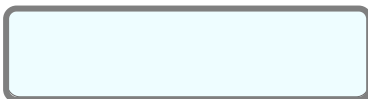


Product Name:
KL Fresnel 4 CW

Test:
Zoom In

Date:
6/12/2018

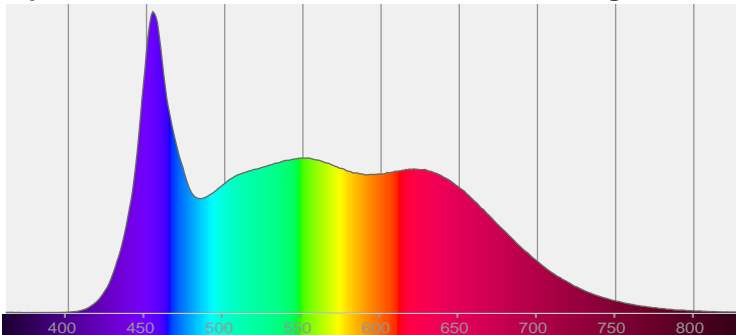
Note:



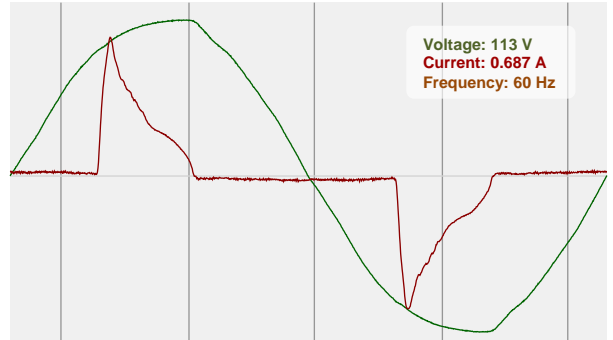
CIE 1931
x: 0.325
y: 0.331

Spectra

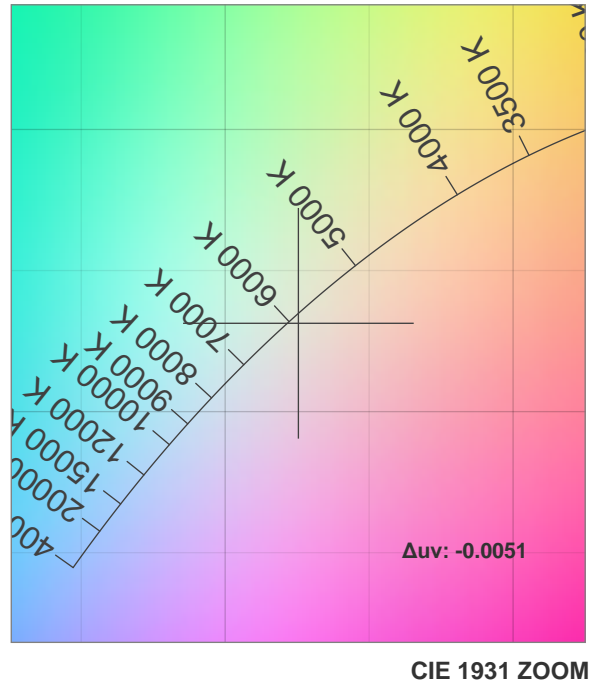
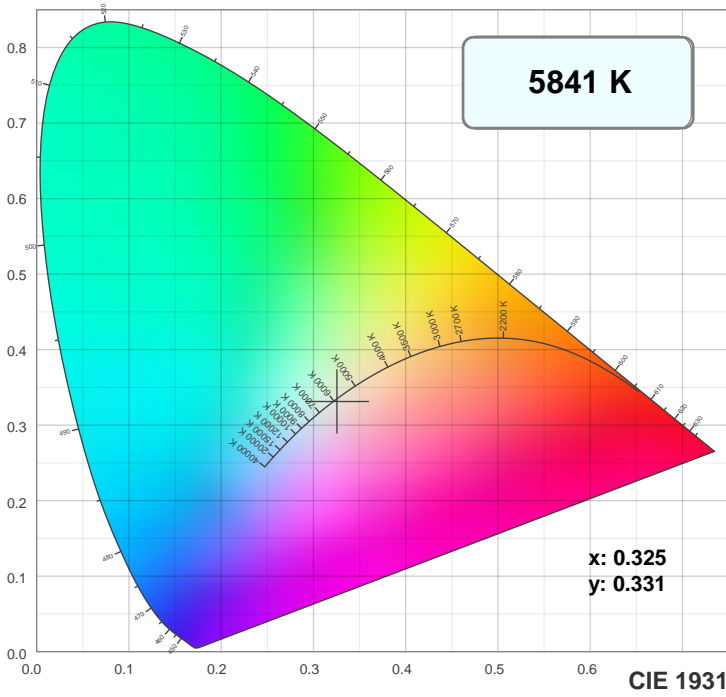
Dominant Wavelength: 598nm



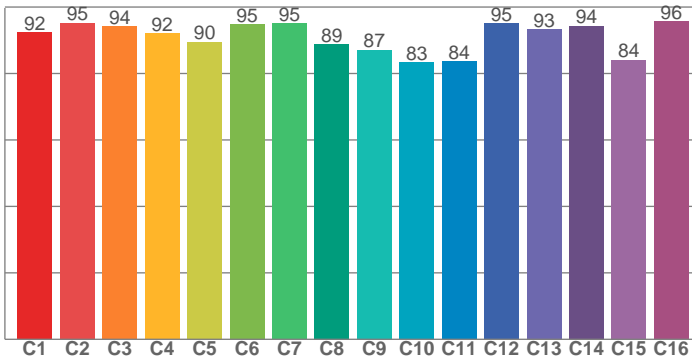
Power



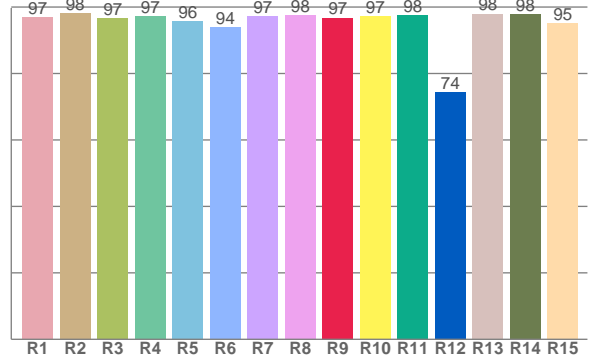
Color Details



TM30: 90.8



CRI: 96.7 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.9 | 98.2 | 96.5 | 97.1 | 95.8 | 93.8 | 97.3 | 97.6 | 96.7 | 97.2 | 97.6 | 74.4 | 98.0 | 97.8 | 95.2 |

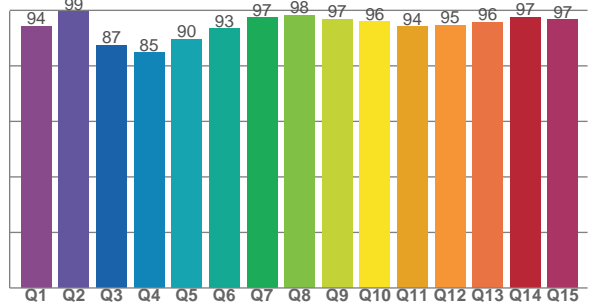
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92.3 | 95.2 | 94.1 | 92.1 | 89.5 | 94.8 | 95.0 | 88.8 | 87.2 | 83.3 | 83.6 | 95.1 | 93.3 | 94.4 | 84.0 | 95.7 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94.4 | 99.5 | 87.5 | 84.7 | 89.6 | 93.4 | 97.4 | 98.2 | 96.9 | 95.8 | 94.1 | 94.7 | 95.8 | 97.5 | 96.6 |

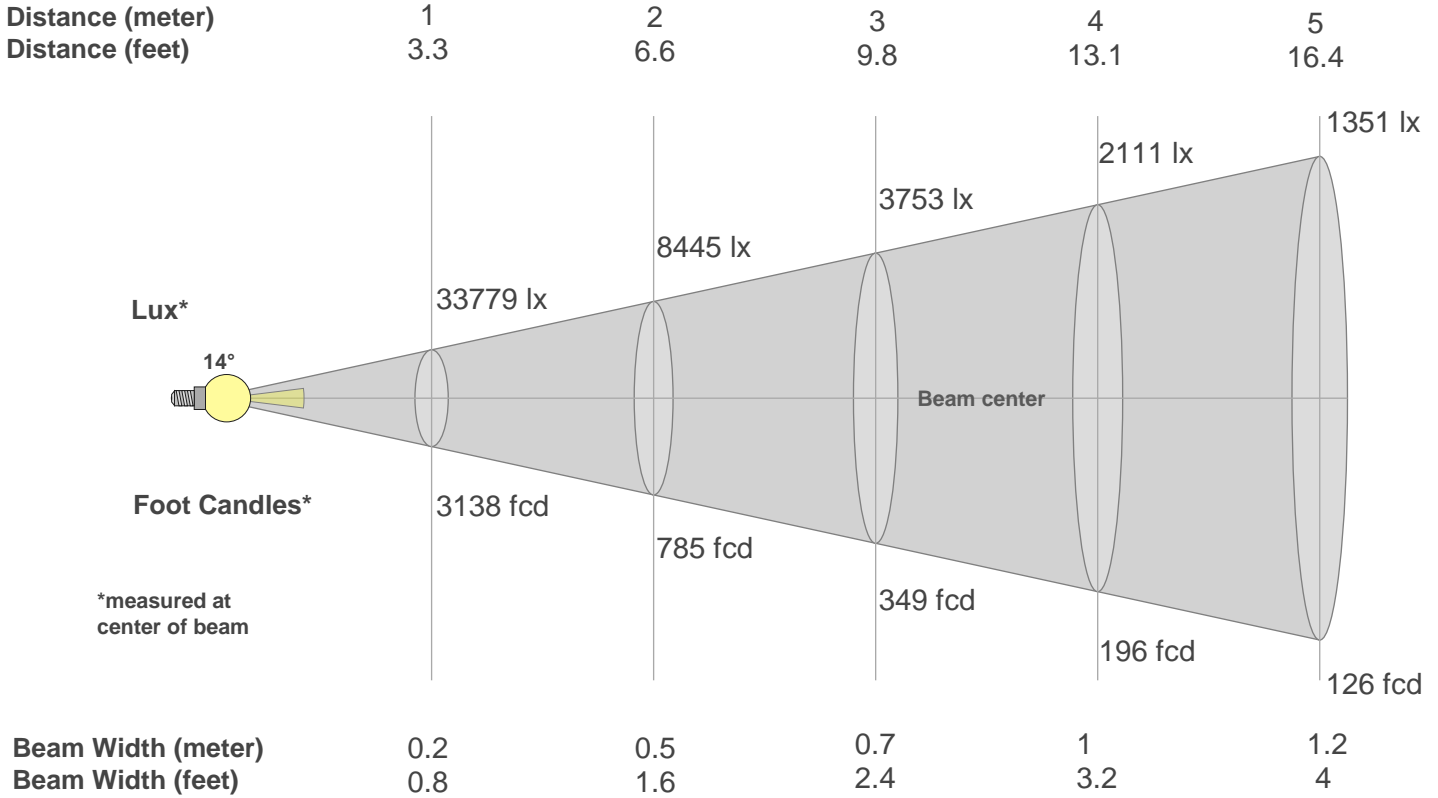
CQS: 93.1



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 |
| 5841 K | 96.7 | 96.7 | 90.8 | 99.8 | 93.1 | 0.325 | 0.331 | 0.206 | 0.314 | -0.0051 |

Beam Details



Beam Intensities from 1-20m

| m | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----|--------|-------|-------|-------|-------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ft | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| lx | 33779 | 8445 | 3753 | 2111 | 1351 | 938 | 689 | 528 | 417 | 338 | 279 | 235 | 200 | 172 | 150 | 132 | 117 | 104 | 94 | 84 |
| fcd | 3138.2 | 784.5 | 348.7 | 196.1 | 125.5 | 87.2 | 64 | 49 | 38.7 | 31.4 | 25.9 | 21.8 | 18.6 | 16 | 13.9 | 12.3 | 10.9 | 9.7 | 8.7 | 7.8 |

Intensities in 0° C-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 33.8K | 33.4K | 32.4K | 30.8K | 28.6K | 25.7K | 21.7K | 16.9K | 12.1K | 8.1K | 5.3K | 3.5K | 2.4K | 1.6K | 1.2K | 0.8K | 0.6K | 0.5K | 0.4K | 0.3K |
| 100% | 99% | 96% | 91% | 85% | 76% | 64% | 50% | 36% | 24% | 16% | 10% | 7% | 5% | 3% | 2% | 2% | 1% | 1% | 1% |

Intensities in 90° C-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 33.8K | 33.4K | 32.4K | 30.8K | 28.6K | 25.7K | 21.7K | 16.9K | 12.1K | 8.1K | 5.3K | 3.5K | 2.4K | 1.6K | 1.2K | 0.8K | 0.6K | 0.5K | 0.4K | 0.3K |
| 100% | 99% | 96% | 91% | 85% | 76% | 64% | 50% | 36% | 24% | 16% | 10% | 7% | 5% | 3% | 2% | 2% | 1% | 1% | 1% |

Intensities in 180° C-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 33.8K | 33.5K | 32.4K | 30.7K | 28.3K | 25.2K | 21.4K | 16.9K | 12.2K | 8.3K | 5.5K | 3.5K | 2.2K | 1.5K | 1.0K | 0.7K | 0.5K | 0.4K | 0.3K | 0.3K |
| 100% | 99% | 96% | 91% | 84% | 75% | 63% | 50% | 36% | 25% | 16% | 10% | 7% | 4% | 3% | 2% | 2% | 1% | 1% | 1% |

Intensities in 270° C-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 33.8K | 33.5K | 32.4K | 30.7K | 28.3K | 25.2K | 21.4K | 16.9K | 12.2K | 8.3K | 5.5K | 3.5K | 2.2K | 1.5K | 1.0K | 0.7K | 0.5K | 0.4K | 0.3K | 0.3K |
| 100% | 99% | 96% | 91% | 84% | 75% | 63% | 50% | 36% | 25% | 16% | 10% | 7% | 4% | 3% | 2% | 2% | 1% | 1% | 1% |

| Beam Angle 50% | Field Angle 10% | Cutoff Angle 2,5% | Intensity Ratio in 120° Cone | Intensity Ratio in 90° Cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 14° | 22.1° | 29.4° | 100.0% | 100.0% |

Light Efficiency:



Output: 2358 lm

Light Quality:



Peak: 7323 cd

Color Temperature:

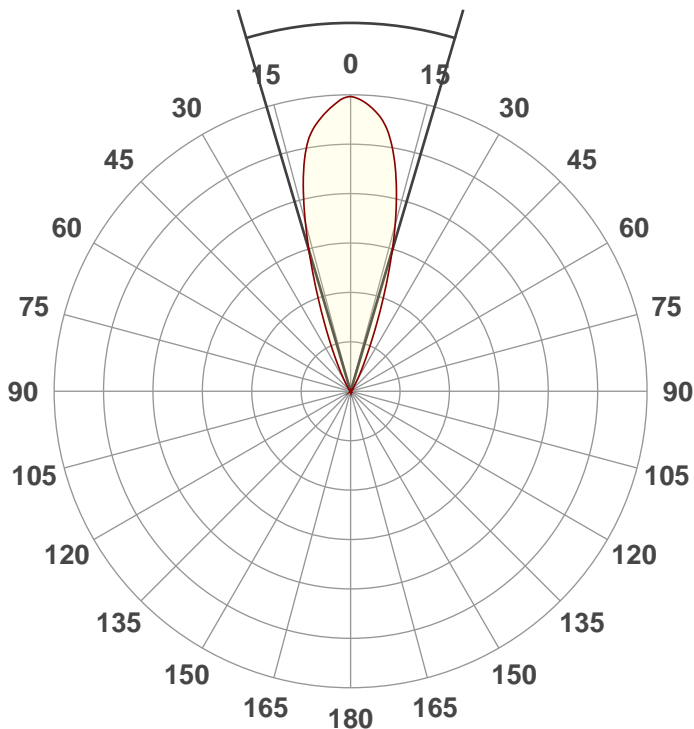


Power: 49.1 W

PF: 0.63

Beam Angle

32.9°

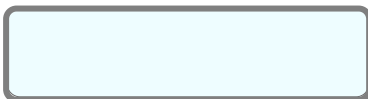


Product Name:
KL Fresnel 4 CW

Test:
Zoom Out

Date:
6/12/2018

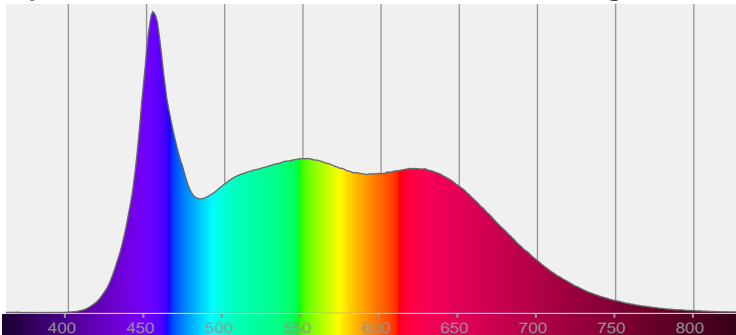
Note:



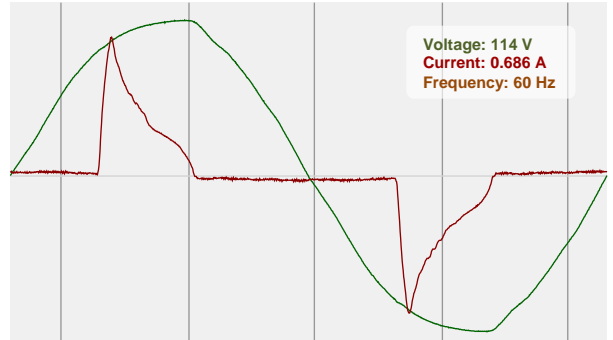
CIE 1931
x: 0.326
y: 0.331

Spectra

Dominant Wavelength: 599nm

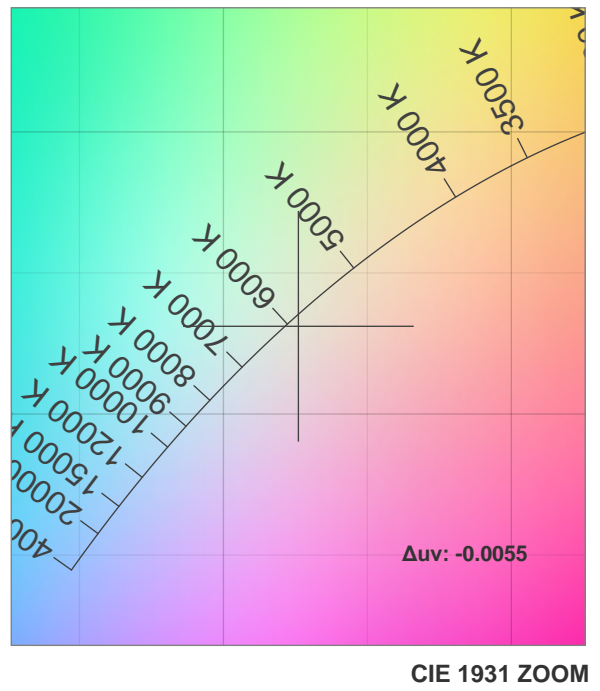
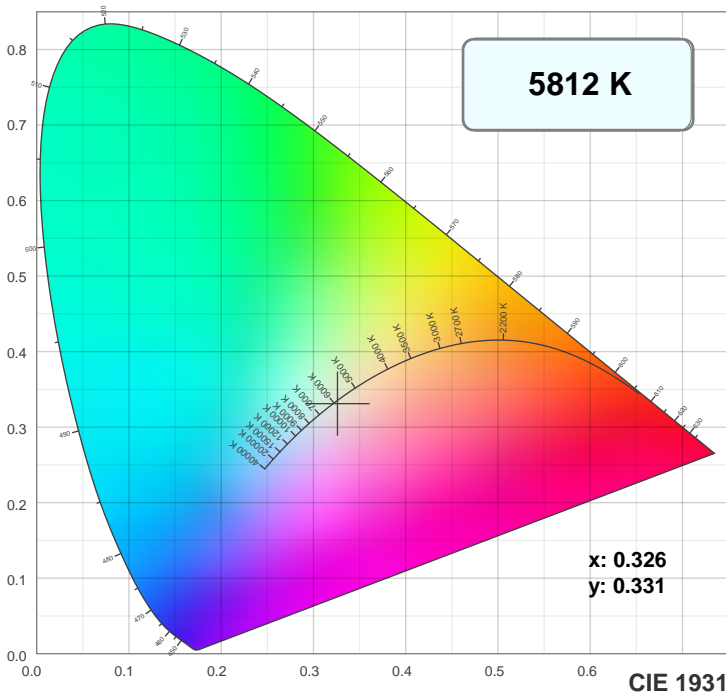


Power

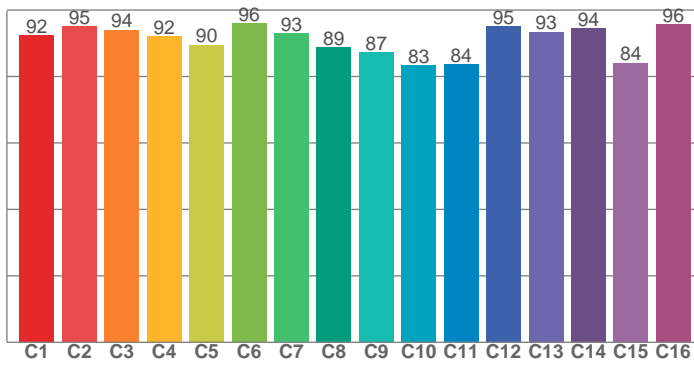


Voltage: 114 V
Current: 0.686 A
Frequency: 60 Hz

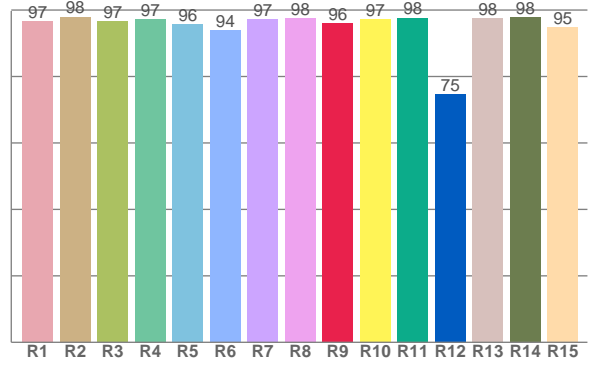
Color Details



TM30: 90.8



CRI: 96.6 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.7 | 98.0 | 96.6 | 97.3 | 95.7 | 93.8 | 97.3 | 97.6 | 95.9 | 97.3 | 97.7 | 74.7 | 97.6 | 97.8 | 94.9 |

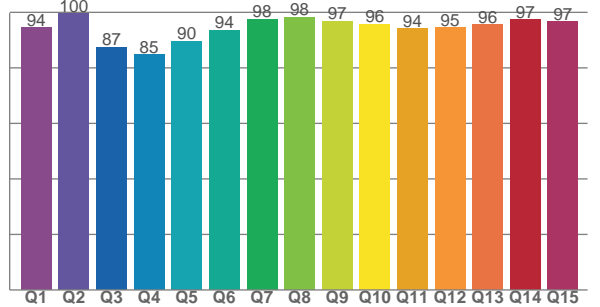
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92.3 | 95.1 | 94.1 | 92.1 | 89.6 | 96.0 | 92.9 | 88.7 | 87.2 | 83.4 | 83.6 | 95.1 | 93.4 | 94.4 | 84.1 | 95.6 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94.5 | 99.5 | 87.4 | 84.8 | 89.7 | 93.6 | 97.5 | 98.3 | 96.8 | 95.8 | 94.1 | 94.6 | 95.6 | 97.4 | 96.7 |

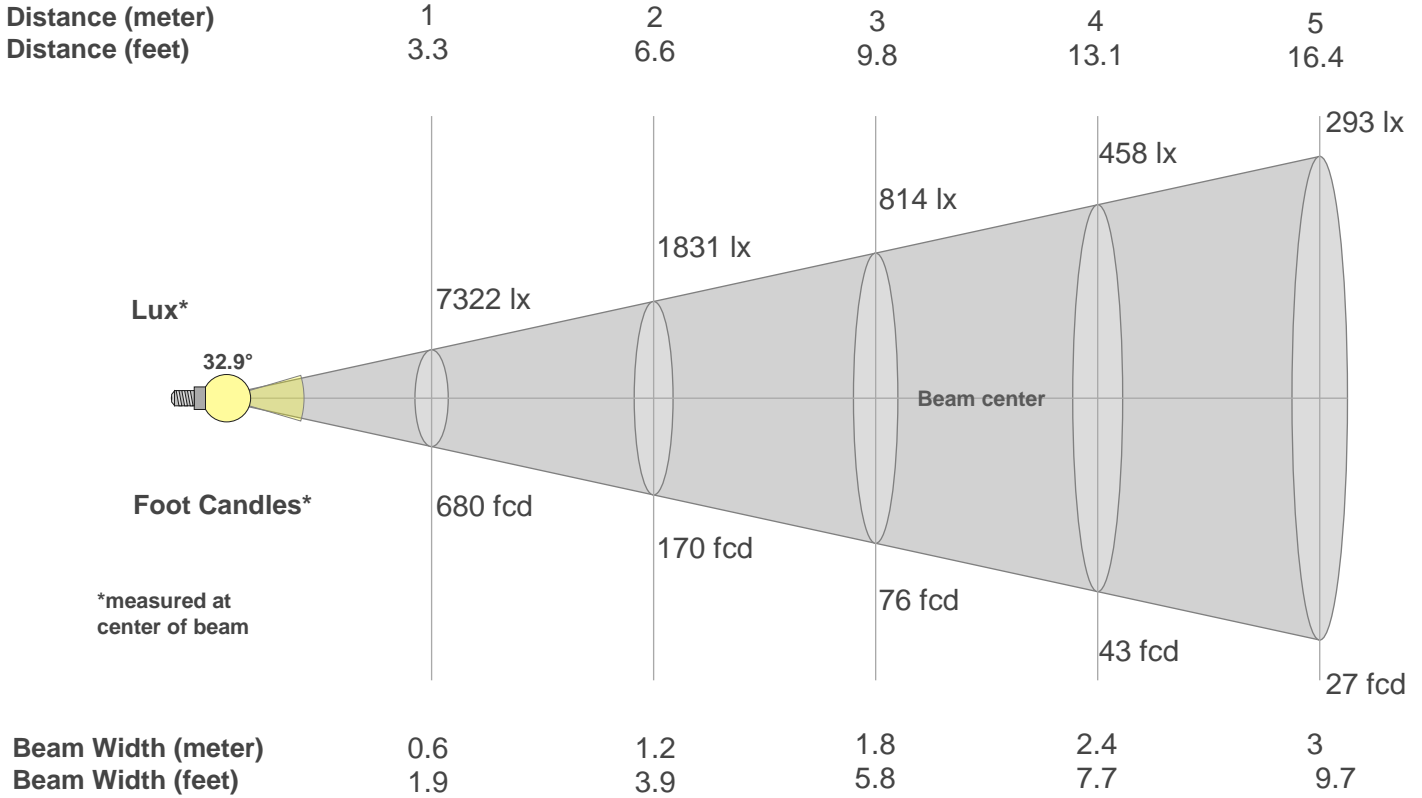
CQS: 93.1



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 |
| 5812 K | 96.6 | 95.9 | 90.8 | 99.9 | 93.1 | 0.326 | 0.331 | 0.206 | 0.314 | -0.0055 |

Beam Details



Beam Intensities from 1-20m

| m | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ft | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| lx | 7322 | 1831 | 814 | 458 | 293 | 203 | 149 | 114 | 90 | 73 | 61 | 51 | 43 | 37 | 33 | 29 | 25 | 23 | 20 | 18 |
| fcd | 680.3 | 170.1 | 75.6 | 42.5 | 27.2 | 18.9 | 13.9 | 10.6 | 8.4 | 6.8 | 5.6 | 4.7 | 4 | 3.5 | 3 | 2.7 | 2.4 | 2.1 | 1.9 | 1.7 |

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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 7322 | 7241 | 7063 | 6852 | 6602 | 6213 | 5598 | 4792 | 3870 | 2964 | 2163 | 1521 | 1031 | 699 | 473 | 325 | 225 | 162 | 117 | 90 |
| 100% | 99% | 96% | 94% | 90% | 85% | 76% | 65% | 53% | 40% | 30% | 21% | 14% | 10% | 6% | 4% | 3% | 2% | 2% | 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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 7322 | 7241 | 7063 | 6852 | 6602 | 6213 | 5598 | 4792 | 3870 | 2964 | 2163 | 1521 | 1031 | 699 | 473 | 325 | 225 | 162 | 117 | 90 |
| 100% | 99% | 96% | 94% | 90% | 85% | 76% | 65% | 53% | 40% | 30% | 21% | 14% | 10% | 6% | 4% | 3% | 2% | 2% | 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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 7322 | 7239 | 7085 | 6871 | 6556 | 6055 | 5420 | 4676 | 3859 | 2996 | 2204 | 1539 | 1044 | 723 | 505 | 357 | 255 | 187 | 139 | 102 |
| 100% | 99% | 97% | 94% | 90% | 83% | 74% | 64% | 53% | 41% | 30% | 21% | 14% | 10% | 7% | 5% | 3% | 3% | 2% | 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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 7322 | 7239 | 7085 | 6871 | 6556 | 6055 | 5420 | 4676 | 3859 | 2996 | 2204 | 1539 | 1044 | 723 | 505 | 357 | 255 | 187 | 139 | 102 |
| 100% | 99% | 97% | 94% | 90% | 83% | 74% | 64% | 53% | 41% | 30% | 21% | 14% | 10% | 7% | 5% | 3% | 3% | 2% | 1% |

| Beam Angle 50% | Field Angle 10% | Cutoff Angle 2,5% | Intensity Ratio in 120° Cone | Intensity Ratio in 90° Cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 32.9° | 51.7° | 67.4° | 99.8% | 99.2% |