NOVA FLEX

# Flexible Grazer Test Report

**Light efficiency:**

73 Lumen/Watt

**Light quality:**

CRI: 84.6

**Color temperature:**

2734 K

**Output:** 607 lm
**Peak:** 1633 cd

**Power:** 8.3 W
**PF:** 1.0

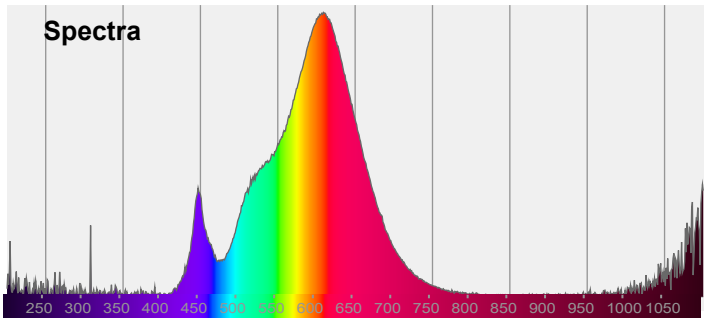
**Tracking number:** VT250718-005560

**Product name:**
GRZ-WT-25-24-IP67-30

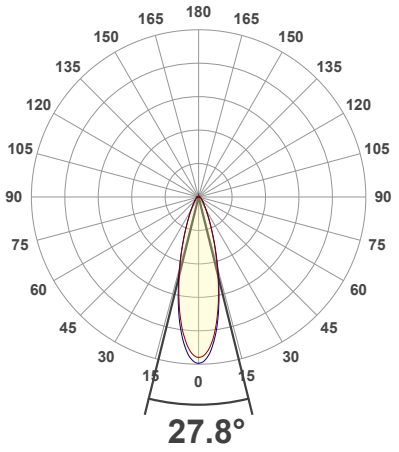
**Item number:**
1 foot GRZ-WT-12-24-IP67-30 25° optic

**Date and time:**
7/18/25 10:51:19 AM

**All values scaled to 1 foot**
**From 0.75 M sample tested @ 11 M**

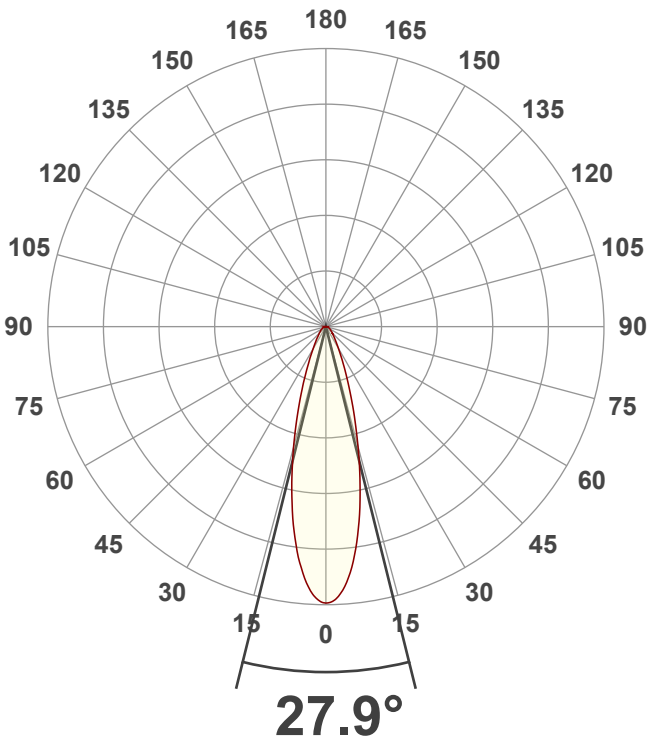



**Average Beam Angle**

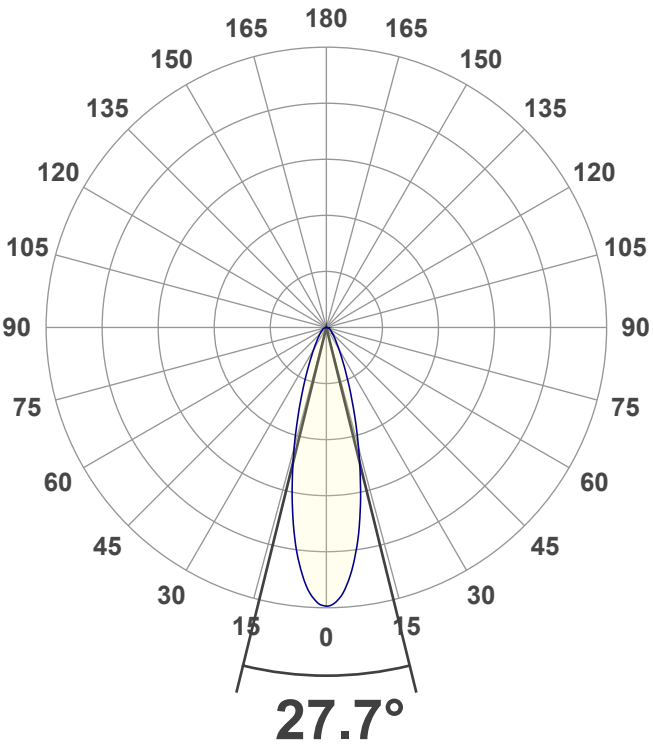



C Plane Resolution: 5°

**Angular Distribution 0 ° Plane**

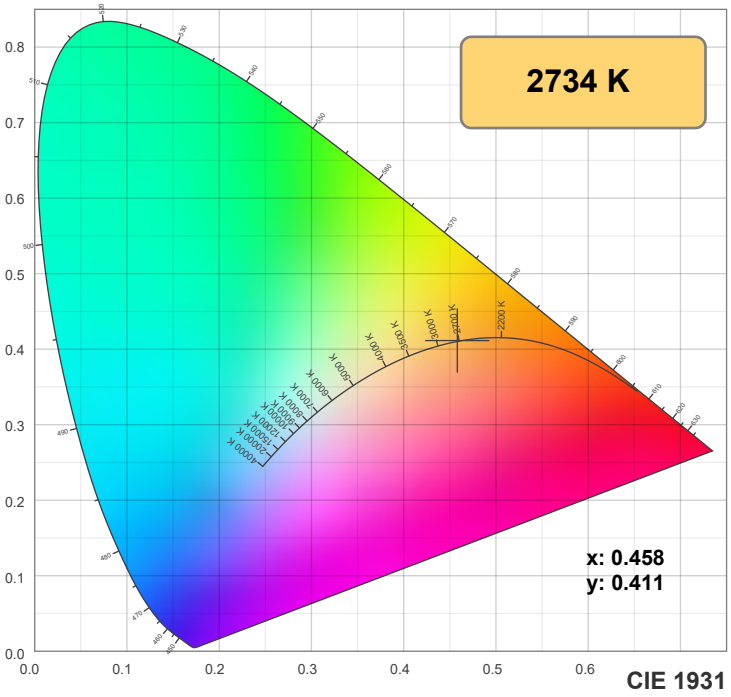


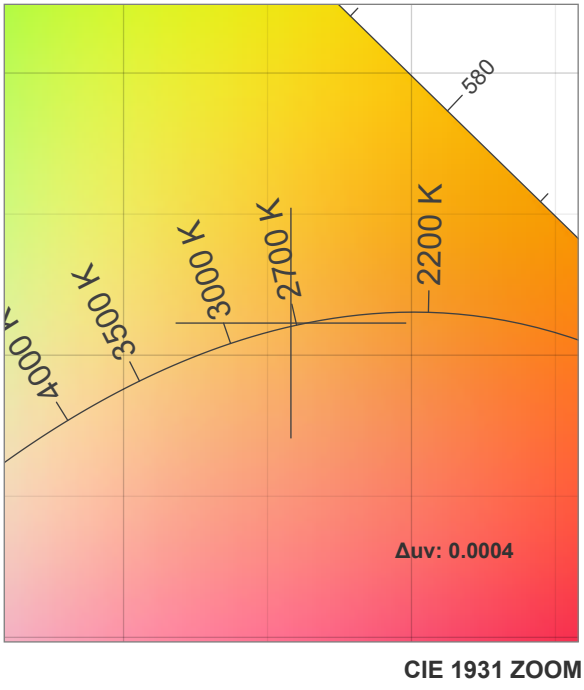

**Angular Distribution 90 ° Plane**



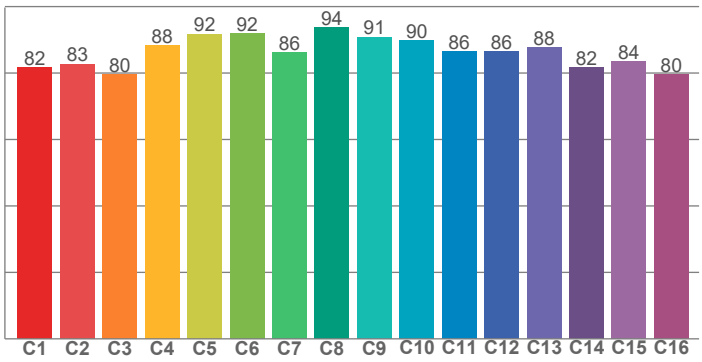
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# Color details

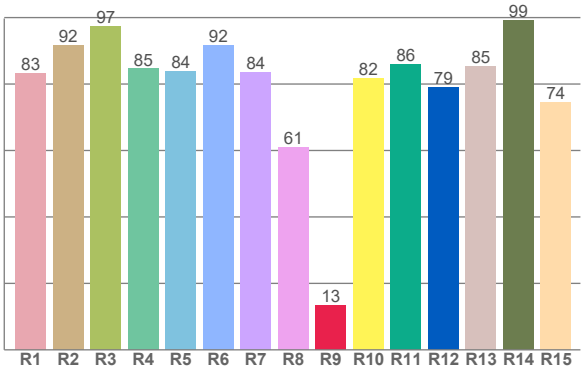



## TM-30: 86.2




## CRI: (R1-R8): 84.6




**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83.3 | 91.7 | 97.4 | 84.6 | 83.7 | 91.6 | 83.6 | 60.9 | 13.4 | 81.9 | 86.1 | 78.9 | 85.3 | 99.2 | 74.5 |

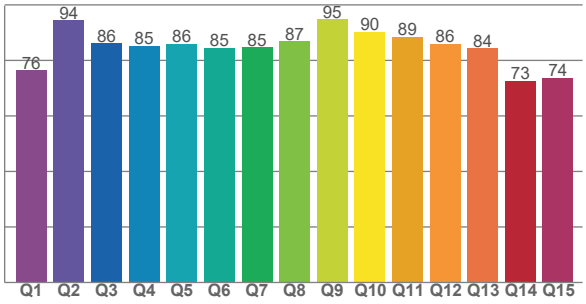
**TM30 C values, 16 binned values out of total of 99 C values**

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 81.7 | 82.7 | 79.5 | 88.3 | 91.7 | 91.8 | 86.3 | 93.7 | 90.8 | 89.7 | 86.4 | 86.5 | 87.6 | 81.8 | 83.6 | 79.6 |

**CQS Q values**

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76.4 | 94.4 | 86.1 | 85.2 | 85.9 | 84.6 | 84.7 | 86.9 | 94.8 | 90.3 | 88.6 | 85.9 | 84.4 | 72.6 | 73.7 |

## CQS: 83.5




## 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 diviation from black body |
|---|---|---|---|---|---|---|---|---|---|---|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | x | y | u | v | Δuv |
| 2734 K | 84.6 | 13.4 | 86.2 | 97.8 | 83.5 | 0.458 | 0.411 | 0.261 | 0.352 | 0.0004 |

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# TM-30 details

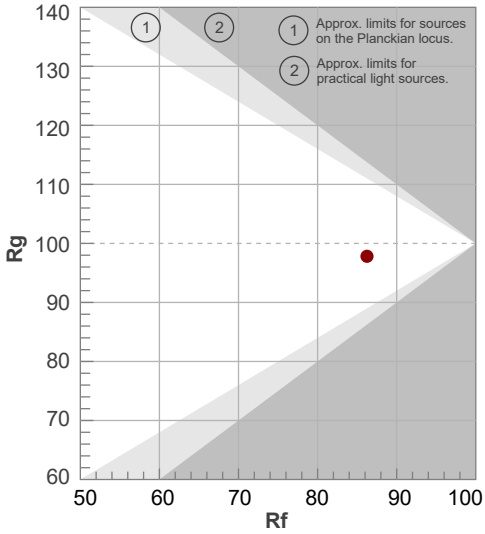
**Rf 86.2**

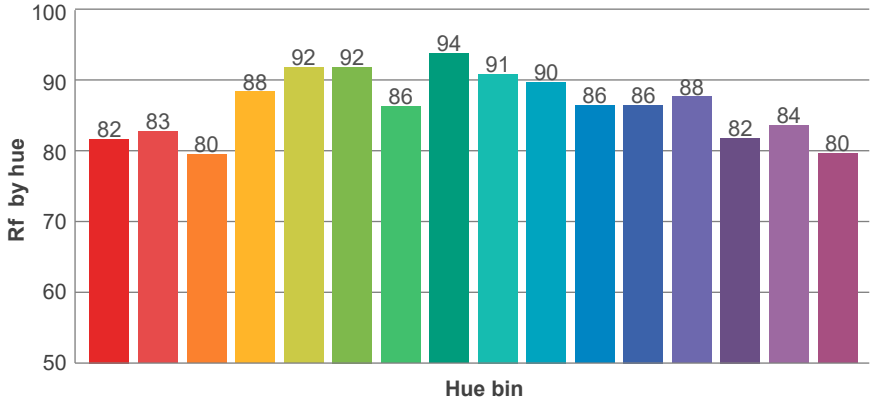
Fidelity index Rf

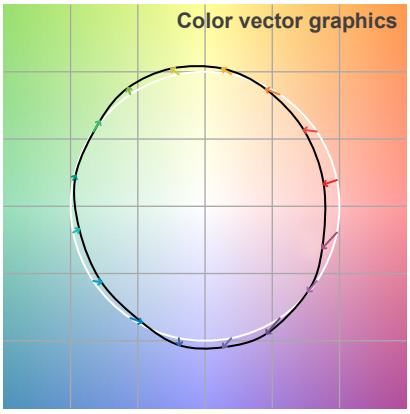
**Rg 97.8**

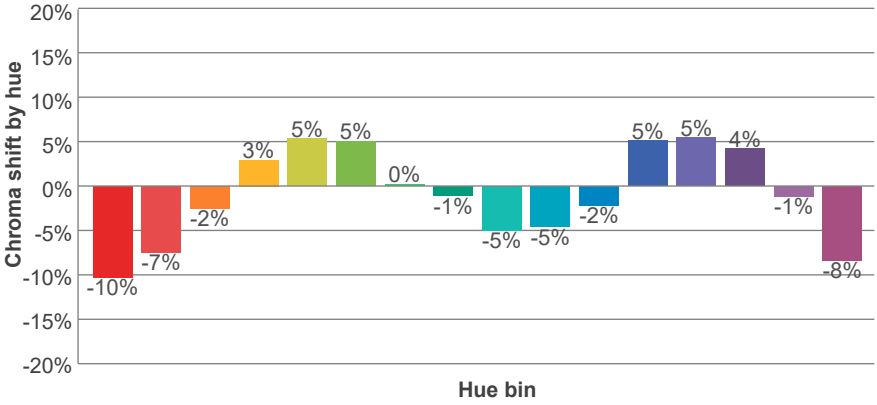
Gamut index Rg

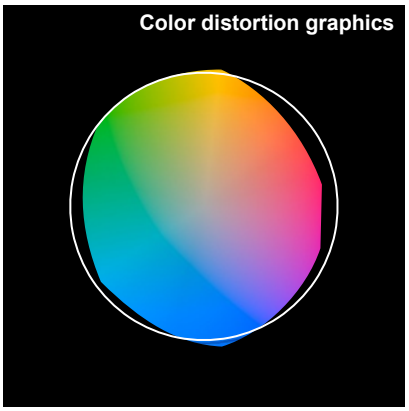
| Hue Bin | $R_f$ | Shifts (%) Chroma | Hue |
|---|---|---|---|
| 1 | 82 | -10% | -1% |
| 2 | 83 | -7% | 7% |
| 3 | 80 | -2% | 11% |
| 4 | 88 | 3% | 7% |
| 5 | 92 | 5% | 5% |
| 6 | 92 | 5% | -1% |
| 7 | 86 | 0% | -9% |
| 8 | 94 | -1% | -4% |
| 9 | 91 | -5% | -2% |
| 10 | 90 | -5% | 4% |
| 11 | 86 | -2% | 9% |
| 12 | 86 | 5% | 2% |
| 13 | 88 | 5% | -7% |
| 14 | 82 | 4% | -14% |
| 15 | 84 | -1% | -10% |
| 16 | 80 | -8% | -14% |

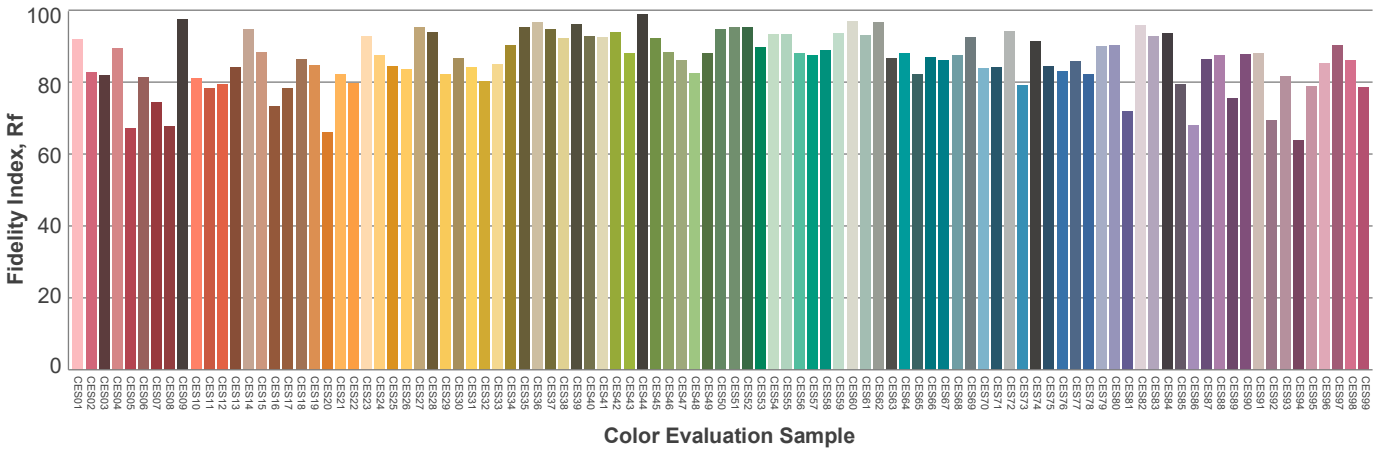


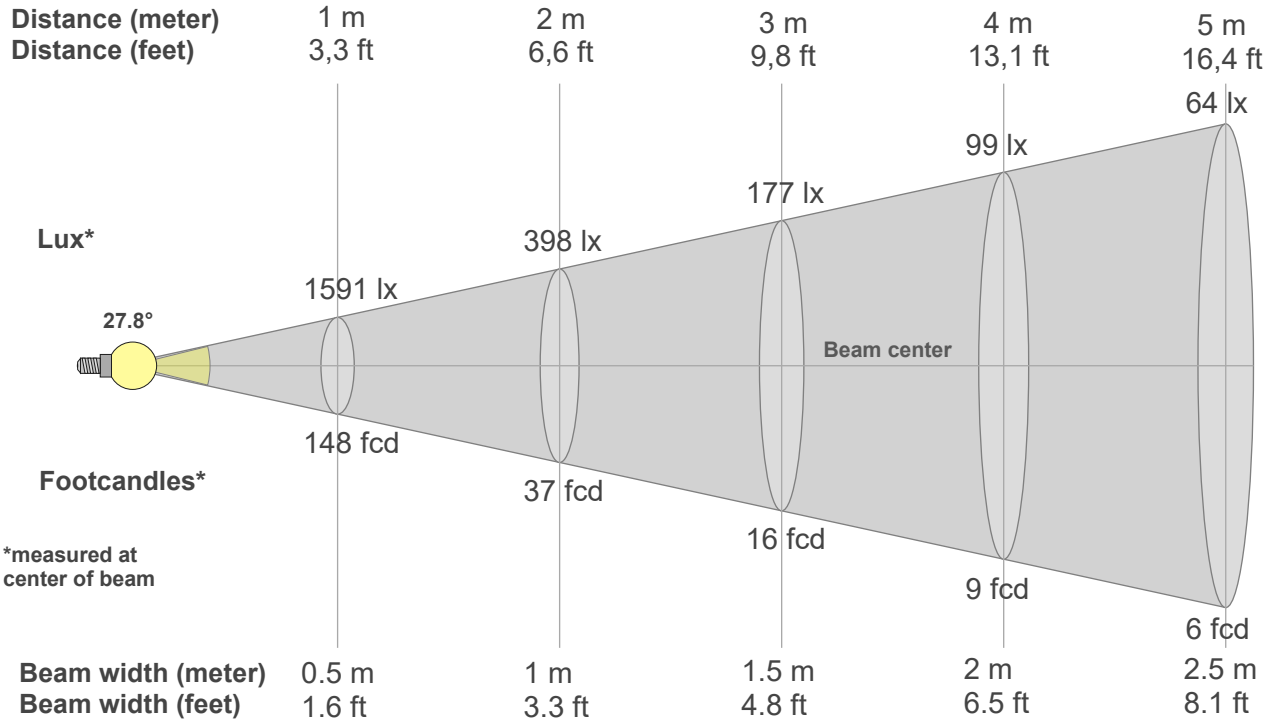



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# Beam details




**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 |
| 1591lx | 398lx | 177lx | 99lx | 64lx | 44lx | 32lx | 25lx | 20lx | 16lx | 13lx | 11lx | 9lx | 8lx | 7lx | 6lx | 6lx | 5lx | 4lx | 4lx |
| 147.8fc | 37fcd | 16.4fcd | 9.2fcd | 5.9fcd | 4.1fcd | 3fcd | 2.3fcd | 1.8fcd | 1.5fcd | 1.2fcd | 1fcd | 0.9fcd | 0.8fcd | 0.7fcd | 0.6fcd | 0.5fcd | 0.5fcd | 0.4fcd | 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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591 | 1555 | 1491 | 1388 | 1252 | 1100 | 937 | 783 | 637 | 515 | 410 | 326 | 263 | 212 | 172 | 142 | 119 | 101 | 87 | 77 |
| 100% | 98% | 94% | 87% | 79% | 69% | 59% | 49% | 40% | 32% | 26% | 21% | 16% | 13% | 11% | 9% | 7% | 6% | 5% | 5% |

**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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591 | 1609 | 1539 | 1427 | 1290 | 1129 | 965 | 804 | 659 | 530 | 423 | 338 | 271 | 219 | 179 | 149 | 126 | 106 | 92 | 82 |
| 100% | 101% | 97% | 90% | 81% | 71% | 61% | 51% | 41% | 33% | 27% | 21% | 17% | 14% | 11% | 9% | 8% | 7% | 6% | 5% |

**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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591 | 1549 | 1479 | 1371 | 1240 | 1093 | 936 | 783 | 644 | 521 | 419 | 336 | 268 | 216 | 177 | 146 | 123 | 104 | 92 | 79 |
| 100% | 97% | 93% | 86% | 78% | 69% | 59% | 49% | 40% | 33% | 26% | 21% | 17% | 14% | 11% | 9% | 8% | 7% | 6% | 5% |

**Intensities in 270° c-plane**

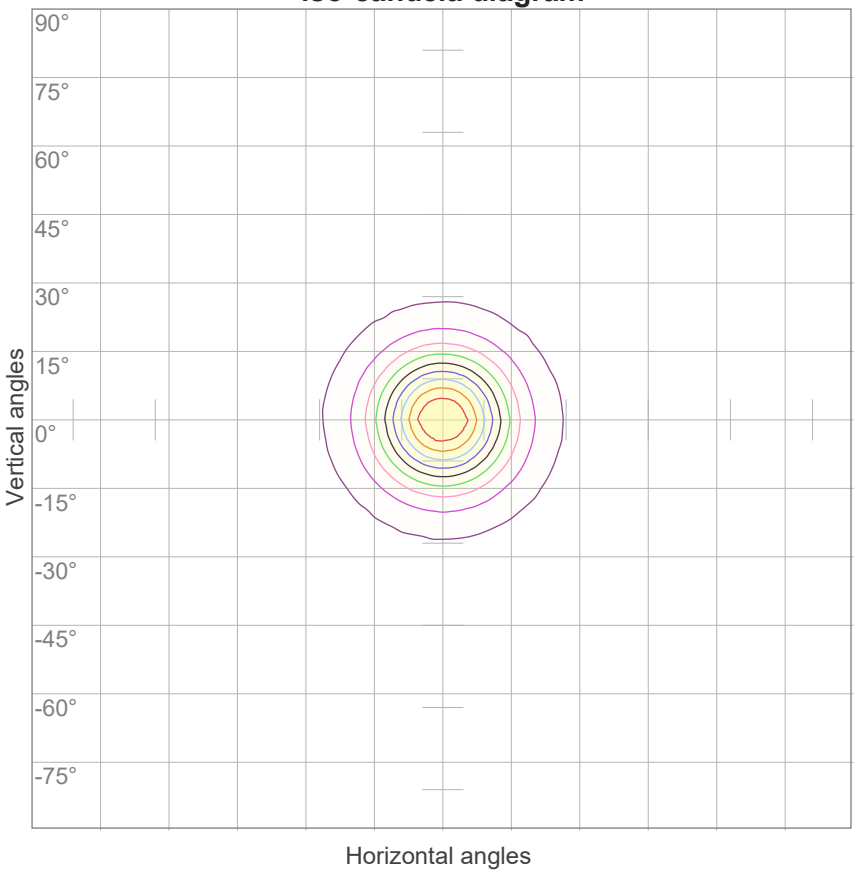
| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591 | 1608 | 1539 | 1429 | 1290 | 1131 | 964 | 805 | 658 | 531 | 424 | 336 | 270 | 216 | 179 | 148 | 124 | 105 | 92 | 80 |
| 100% | 101% | 97% | 90% | 81% | 71% | 61% | 51% | 41% | 33% | 27% | 21% | 17% | 14% | 11% | 9% | 8% | 7% | 6% | 5% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|---|---|---|---|---|
| 27.8° | 58° | 101.7° | 93.7% | 85.7% |

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# Iso Diagrams

## iso-candela diagram



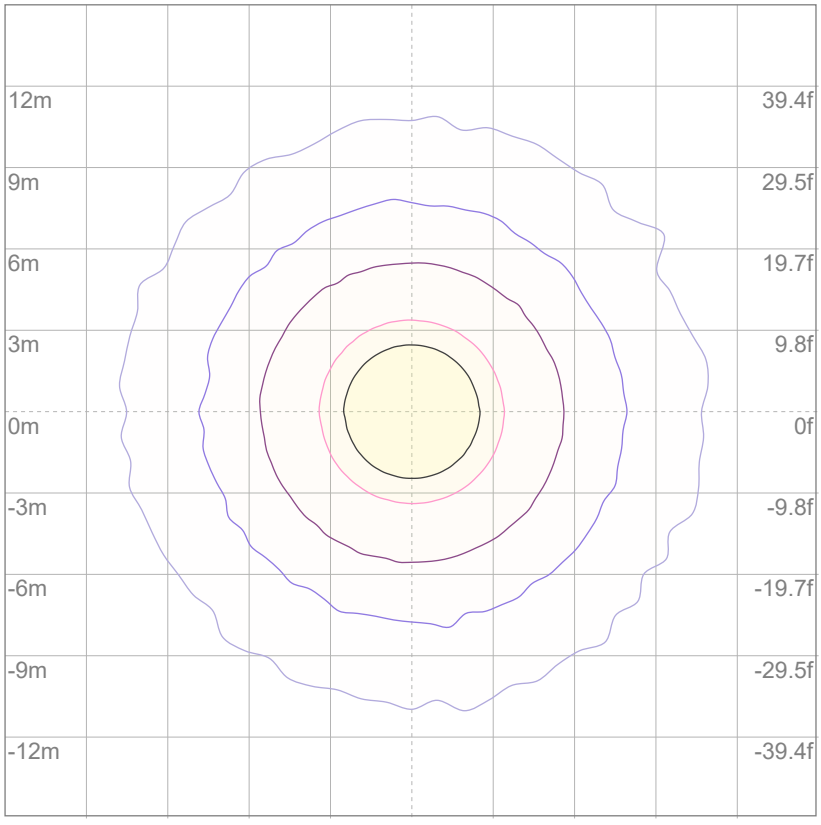

| | |
|---|---|
| 10% | 159 cd |
| 20% | 318 cd |
| 30% | 477 cd |
| 40% | 637 cd |
| 50% | 796 cd |
| 60% | 955 cd |
| 70% | 1114 cd |
| 80% | 1273 cd |
| 90% | 1432 cd |

Conditions:

Number of c-planes: 72

Candela at center: 1591 cd

## iso-lux diagram




Mounting height: 10 meters (33 feet)

| | |
|---|---|
| 3% | 0.477 lx |
| 5% | 0.796 lx |
| 10% | 1.59 lx |
| 30% | 4.77 lx |
| 50% | 7.96 lx |

Conditions:

Number of c-planes: 72

Lux at center: 15.9 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

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| p Ceiling | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|
| p Walls | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X Y | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | |
| n/a | n/a | | | | | n/a | | | | |
| n/a | n/a | | | | | n/a | | | | |
| n/a | n/a | | | | | n/a | | | | |
| CIE 117-1995. Corrected glare indices referring to 607 lm total luminous flux | | | | | | | | | | |

UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

## Coefficients of Utilization

| Ceiling reflectance | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall reflectance | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| Floor reflectance | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 0 |
| RCR | (RCR: Room Cavity Ratio) | | | | Room Values are expressed as percentage of Lumens delivered to the task surface | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 |
| 2 | 107 | 102 | 97 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 85 |
| 3 | 102 | 95 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 84 | 88 | 85 | 82 | 86 | 83 | 81 | 79 |
| 4 | 97 | 89 | 83 | 79 | 95 | 88 | 83 | 79 | 86 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 74 |
| 5 | 92 | 84 | 78 | 74 | 91 | 83 | 78 | 73 | 81 | 76 | 73 | 80 | 75 | 72 | 78 | 74 | 72 | 70 |
| 6 | 88 | 79 | 74 | 69 | 87 | 79 | 73 | 69 | 77 | 72 | 69 | 76 | 71 | 68 | 74 | 71 | 68 | 66 |
| 7 | 85 | 76 | 70 | 66 | 83 | 75 | 69 | 65 | 74 | 69 | 65 | 72 | 68 | 65 | 71 | 67 | 64 | 63 |
| 8 | 81 | 72 | 66 | 62 | 80 | 71 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 61 | 60 |
| 9 | 78 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 57 |
| 10 | 75 | 66 | 61 | 57 | 74 | 66 | 60 | 57 | 65 | 60 | 57 | 64 | 60 | 56 | 63 | 59 | 56 | 55 |

## Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 127 lm | 196 lm | 113 lm | 61.8 lm | 41.2 lm | 29.5 lm | 20.4 lm | 12.7 lm | 5.18 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 0.111 lm | 0.000 lm | 0.000 lm | 0.000 lm | 0.000 lm | 0.000 lm | 0.000 lm | 0.000 lm | 0.000 lm |

## LCS table

| BUG rating: | B1 U0 G0 | |
|---|---|---|
| **Forward light** | Lumens | Lumens % |
| Low(0-30): | 217.9 | 35.9% |
| Medium(30-60): | 66 | 10.9% |
| High(60-80): | 16.7 | 2.7% |
| Very high(80-90): | 2.7 | 0.4% |
| **Back light** | | |
| Low(0-30): | 218.4 | 36% |
| Medium(30-60): | 66.4 | 10.9% |
| High(60-80): | 16.4 | 2.7% |
| Very high(80-90): | 2.5 | 0.4% |
| **Uplight** | | |
| Low(90-100): | 0 | 0% |
| High(100-180): | 0 | 0% |

