



Risalto LED M VariWhite +

Product code:
F134G000M (Fresnel)
F134G000N (PC)

Last update:
05/12/2023



Risalto LED M VariWhite +

Introducing

● Designed with + electronic and a new OLED display, this Fresnel or PC projector is the evolution of the Risalto Led VW. The + electronic with advanced LED controller enables a smooth dimming and it offers and higher luminous efficiency, with a color rendering index of the white range greater than 95 Very quick setup of the functions thanks to the potentiometer knob

Key Features

- 200 W VariWhite LEDs Module
- High CRI > 95
- CCT Continuously Variable 2.800 K → 6.500 K
- High lumen flux and flat field
- Fresnel or PC lenses (diameter 150 mm / 5.9 in)
● Zoom range from 11° to 71° (with Fresnel lens)
● Zoom range from 11° to 66° (with PC lens)
- Steel and die cast aluminium with High-quality epoxy powder coating protects against corrosion
- Custom color on request (optional)
- Manual (standard) or Pole Operated Pan-Tilt (optional)
- European Conformity certification

| General | |
|---------------------------------------|--|
| ● LED Source | VariWhite LEDs Module |
| ● CCT Range | ● ● ● ● ● Continuously Variable 2.800 K → 6.500 K |
| ● Color Rendition Average | CRI > 95 |
| ● Dimming | 8 or 16 bit, 5 selectable curves: Exponential, Logarithmic, Linear, Halo and Standard |
| ● Dimming Smooth Selection | Fast, Slow and Very Slow |
| ● Strobe | Electronic strobe, synchronized, random, pulse effect |
| ● Lens | Glass Fresnel or PC lenses (diameter 150 mm / 5.9 in) |
| ● Optical | Zoom range from 11° to 71° (with Fresnel lens) Zoom range from 11° to 66° (with PC lens) |
| ● Camera flicker control/Hz range | Flicker-free operation with LEDs frequency controlled via DMX from 600 to 20.000 Hz |
| ● Calibrated Cob | Yes |
| ● L80 Rating (hours to 80% output) | 50.000 Hours |
| Electrical | |
| ● Voltage Input | 90-264 V, 50/60 Hz, auto-sensing |
| ● Power Consumption | 200 W Maximum - 0.92 A at 230 V, 1.83 A at 115 V - cosφ 0.95 |
| ● Power Connection | In and Out PowerCON TRUE1 Top connectors, 1.5 m (4.9 ft) PowerCon cable without power plug |
| ● Data Connection | In and Out DMX 5 pin locking XLR connectors |
| Thermal | |
| ● Ambient Operating Temperature | 0°C - +40°C (32°F - 104°F) |
| ● Fan (controllable) | Yes, 4 different settings: Silent, Studio, Auto, DMX Regulated |
| Control | |
| ● Protocols | DMX-512, RDM (Remote Device Management), Wireless (optional By LumenRadio) |
| ● RDM configuration | Yes |
| ● DMX Channels | 5 / 2 / 1 / Sunrise / Raw / MK1 / 6 Channels |
| ● Display | Graphic OLED with on-board selector for quick setting |
| ● Software Upload | Through DMX with RDM Upgrade USB interface (code AC10011A001) |
| Physical | |
| ● Yoke | Manual (standard) or Pole Operated Pan-Tilt (optional) |
| ● Materials | Steel and die cast aluminium with High-quality epoxy powder coating protects against corrosion |
| ● Weight | 8.5 Kg / 18.74 lbs |
| ● Length | 413 mm / 16.26 in |
| ● Height | 218 mm / 8.58 in - With bracket: 348 mm / 13.70 in |
| ● Width | 281 mm / 11.06 in |
| ● IP Rating | IP20 |
| ● Color options | Black (standard), custom color on request (optional) |
| General accessories | |
| BC10034A003 | 4-Leaf Barndoor (included) |
| GKIT17 (USA) / GKIT16 (EU) | 1.5 m (4.9 ft) power cable with PowerCON TRUE1 Top and bare ends (included) |
| BC10034A006 | Frame holder (included) |



PC lens

Risalto Led + Rear Panel / PC lens

DMX Charts

5 Channels

- 01 → Master Dimmer
- 02 → Dimmer Fine
- 03 → White Tone
- 04 → Strobe Effect
- 05 → Special Functions

Raw Mode

- 01 → Warm White Led
- 02 → Warm White Led Fine
- 03 → Cold White Led
- 04 → Cold White Led Fine

2 Channel

- 01 → Master Dimmer
- 02 → White Tone

MK1 Mode

- 01 → Master Dimmer
- 02 → White Tone

1 Channel

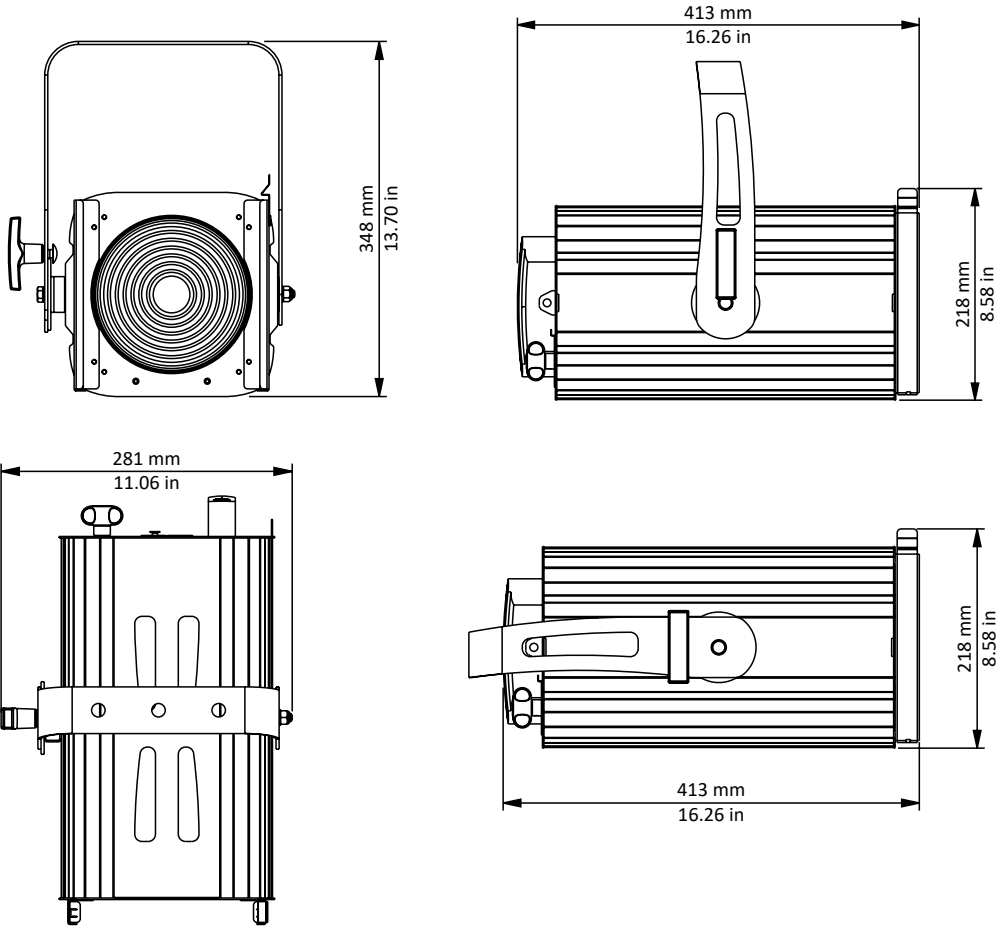
- 01 → Master Dimmer - Color Temperature Settable by Display

6 Channels Mode

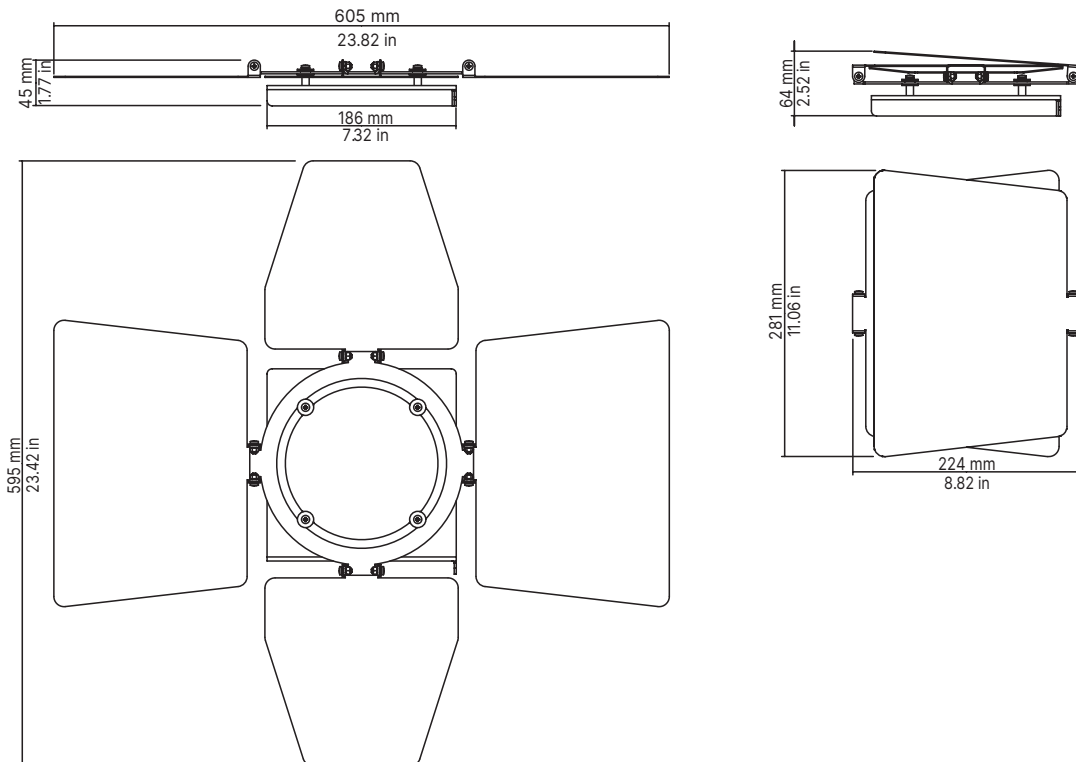
- 01 → Master Dimmer
- 02 → Dimmer Fine
- 03 → White Tone
- 04 → White Temperature Fine
- 05 → Strobe Effect
- 06 → Special Function

Sunrise Mode

- 01 → Master Dimmer
- 02 → Dimmer Fine
- 03 → Proportional White Tone
- 04 → Step White Tone
- 05 → Special Functions



4-Leaf Barndoor

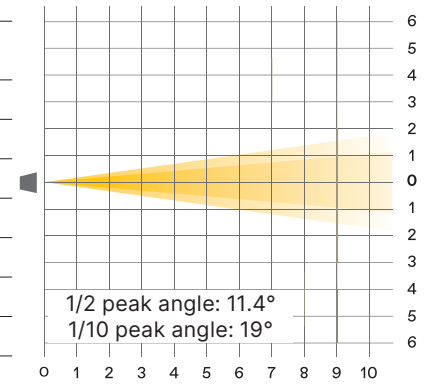


Risalto M VariWhite +, Fresnel

Measurements taken at 4.3 meters

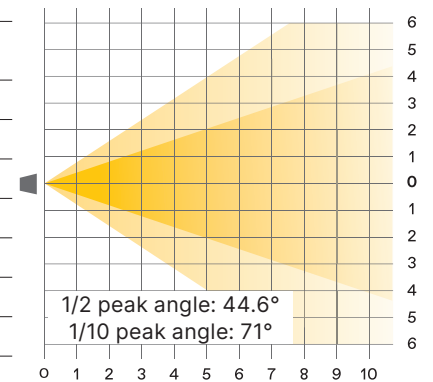
Minimum Zoom

| Distance(m) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------------------|----------------|-----------|-------|-------|------|------|------|------|------|------|------|
| lux | 2.800 K | 63106 | 15777 | 7012 | 3944 | 2524 | 1753 | 1288 | 986 | 779 | 631 |
| | 3.200 K | 73627 | 18407 | 8181 | 4602 | 2945 | 2045 | 1503 | 1150 | 909 | 736 |
| | 4.000 K | 91784 | 22946 | 10198 | 5737 | 3671 | 2550 | 1873 | 1434 | 1133 | 918 |
| | 5.600 K | 100678 | 25170 | 11186 | 6292 | 4027 | 2797 | 2055 | 1573 | 1243 | 1007 |
| | 6.500 K | 91692 | 22923 | 10188 | 5731 | 3668 | 2547 | 1871 | 1433 | 1132 | 917 |
| 1/2 P.A. Ø (m) | 0.20 | 0.40 | 0.60 | 0.80 | 1.00 | 1.20 | 1.40 | 1.60 | 1.80 | 2.00 | |
| 1/10 P.A. Ø (m) | 0.33 | 0.67 | 1.00 | 1.34 | 1.67 | 2.01 | 2.34 | 2.68 | 3.01 | 3.35 | |
| 2.800 K | CRI 97.3 | TLCI 97.1 | | | | | | | | | |
| 3.200 K | CRI 96.6 | TLCI 97.7 | | | | | | | | | |
| 4.000 K | CRI 96.3 | TLCI 97.9 | | | | | | | | | |
| 5.600 K | CRI 96.7 | TLCI 98.4 | | | | | | | | | |
| 6.500 K | CRI 97.4 | TLCI 98.3 | | | | | | | | | |



Maximum Zoom

| Distance(m) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------------------|----------------|-----------|------|------|------|------|------|-------|-------|-------|-----|
| lux | 2.800 K | 10817 | 2704 | 1202 | 676 | 433 | 300 | 221 | 169 | 134 | 108 |
| | 3.200 K | 12795 | 3199 | 1422 | 800 | 512 | 355 | 261 | 200 | 158 | 128 |
| | 4.000 K | 15975 | 3994 | 1775 | 998 | 639 | 444 | 326 | 250 | 197 | 160 |
| | 5.600 K | 17418 | 4354 | 1935 | 1089 | 697 | 484 | 355 | 272 | 215 | 174 |
| | 6.500 K | 15901 | 3975 | 1767 | 994 | 636 | 442 | 325 | 248 | 196 | 159 |
| 1/2 P.A. Ø (m) | 0.82 | 1.64 | 2.46 | 3.28 | 4.10 | 4.92 | 5.74 | 6.56 | 7.38 | 8.20 | |
| 1/10 P.A. Ø (m) | 1.43 | 2.85 | 4.28 | 5.71 | 7.13 | 8.56 | 9.99 | 11.41 | 12.84 | 14.27 | |
| 2.800 K | CRI 96.1 | TLCI 96.5 | | | | | | | | | |
| 3.200 K | CRI 95.4 | TLCI 97.3 | | | | | | | | | |
| 4.000 K | CRI 95.1 | TLCI 97.7 | | | | | | | | | |
| 5.600 K | CRI 95.6 | TLCI 98.3 | | | | | | | | | |
| 6.500 K | CRI 96.7 | TLCI 98.2 | | | | | | | | | |



Risalto M VariWhite +, Fresnel, Minimum Zoom, 2.800K

Measurements taken at 4.3 meters

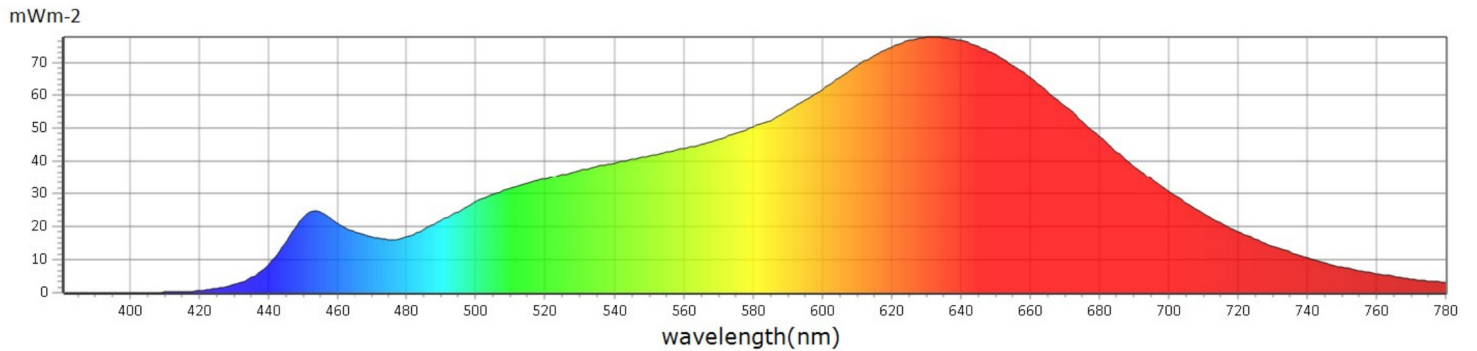
General

| | |
|-----------|--------|
| ● CCT | 2776 K |
| ● x | 0,4551 |
| ● y | 0,4117 |
| ● LambdaD | 584 nm |
| ● LambdaP | 631 nm |

Measurements

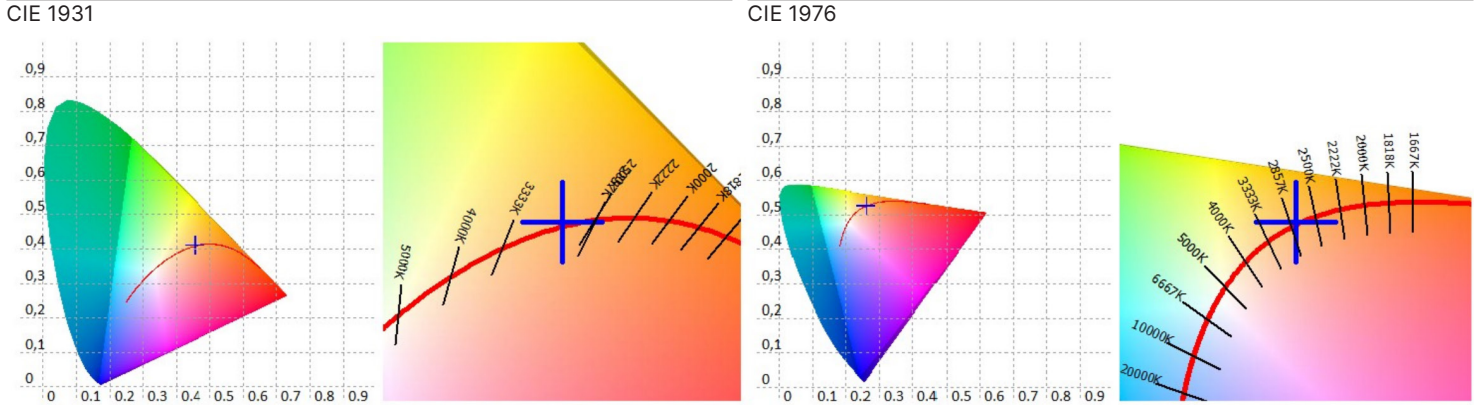
| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 2776 K | x10 : 0,4599 | delta-x : 0,0013 | LambdaD : 584 nm | PPFD : 58,46 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,38 | R3 : 99,1 | R10 : 98,1 |
| LUX : 3413 lx | y10 : 0,4113 | delta-y : 0,0025 | LambdaP : 631 nm | PFD : 64,47 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 12,78 | R4 : 97,6 | R11 : 94,3 |
| I-Time : 3600 us | u'10 : 0,2622 | delta-u' : -0,0003 | Purity : 59,95% | PFD-B : 4,986 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 94,9 | R5 : 98,0 | R12 : 90,2 |
| x : 0,4551 | v'10 : 0,5276 | delta-v' : 0,0012 | fc : 317,2 | PFD-G : 19,93 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 97,3 | R6 : 95,6 | R13 : 98,1 |
| y : 0,4117 | X : 3773,24 | Duv : 0,0008 | Rf : 94,2 | PFD-R : 33,55 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 97,1 | R7 : 96,5 | R14 : 98,5 |
| u' : 0,2589 | Y : 3413,49 | MEL : 1810 lx | Rg : 99,0 | PFD-UV : 0,0005 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 98,5 | R8 : 94,5 | R15 : 97,8 |
| v' : 0,5270 | Z : 1104,92 | LambdaPV : 77,69 | GAI : 49,1 | PFD-FR : 6,010 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 98,7 | R9 : 88,2 | |

Spectrum



Risalto M VariWhite +, Fresnel, Minimum Zoom, 2.800K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 98,5 | 98,7 | 99,1 | 97,6 | 98,0 | 95,6 | 96,5 | 94,5 | 88,2 | 98,1 | 94,3 | 90,2 | 98,1 | 98,5 | 97,8 |

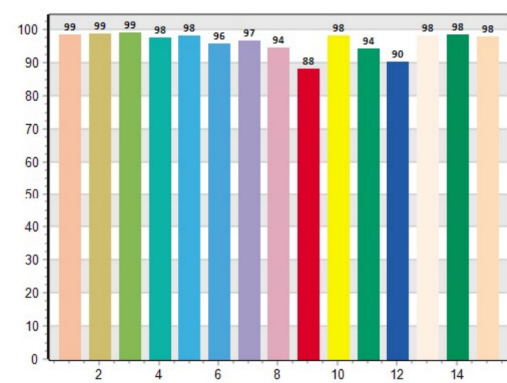
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,0 | 97,4 | 95,6 | 91,6 | 94,5 | 95,5 | 91,4 | 94,6 | 93,6 | 93,5 | 94,0 | 91,2 | 91,6 | 91,4 | 92,4 | 90,0 |

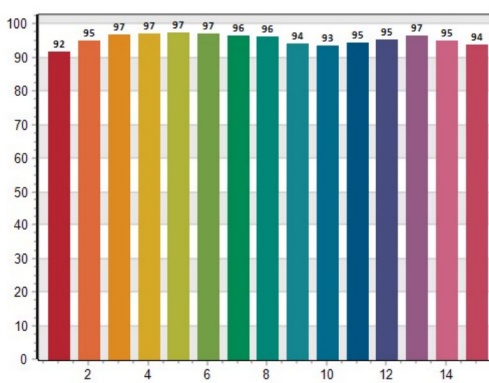
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 91,8 | 95,0 | 96,9 | 97,2 | 97,4 | 97,2 | 96,4 | 96,1 | 94,2 | 93,5 | 94,6 | 95,2 | 96,6 | 95,0 | 93,8 |

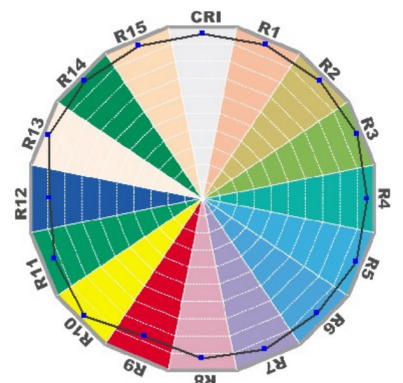
CRI: 97.30



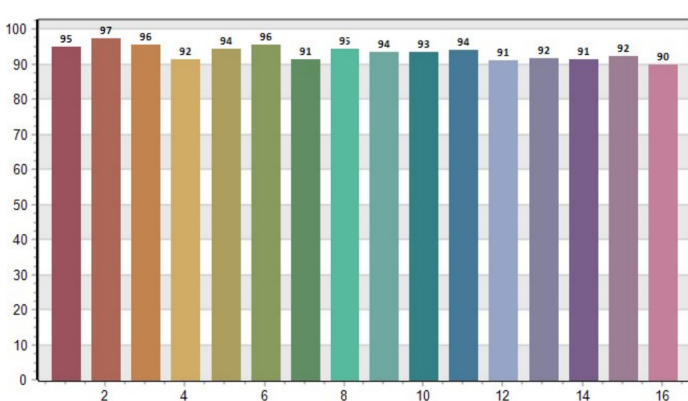
CQS: 94.94



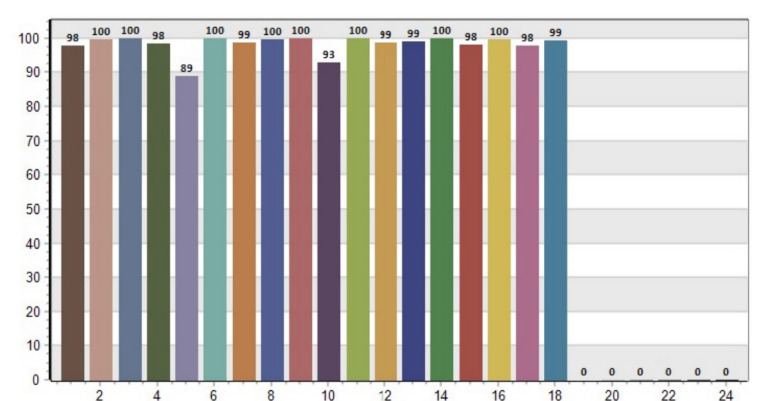
CRI-2



TM30: 94.24



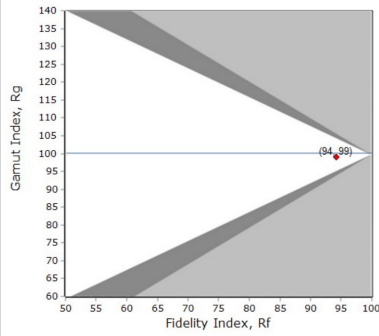
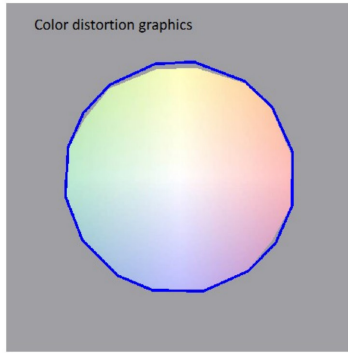
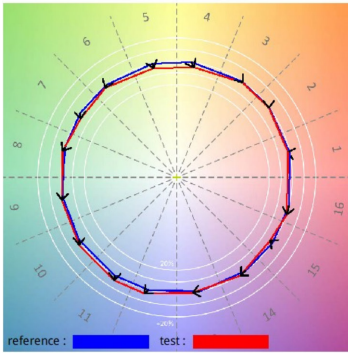
TLCI: 97.05



Risalto M VariWhite +, Fresnel, Minimum Zoom, 2.800K

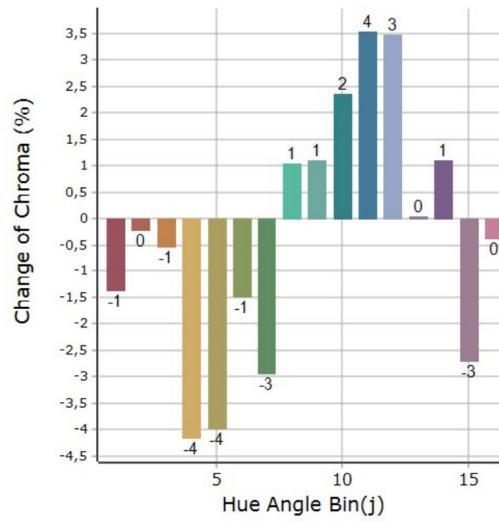
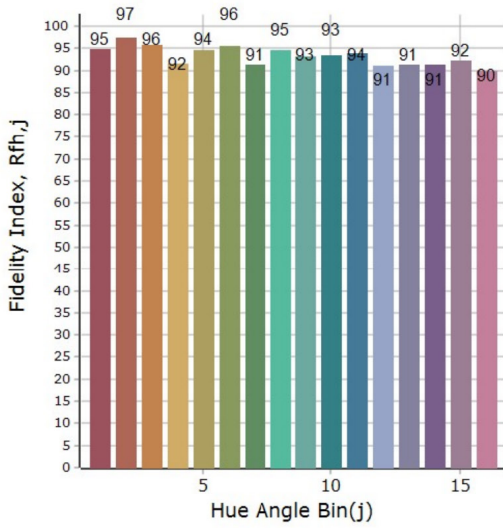
Measurements taken at 4.3 meters

General Color Rendition



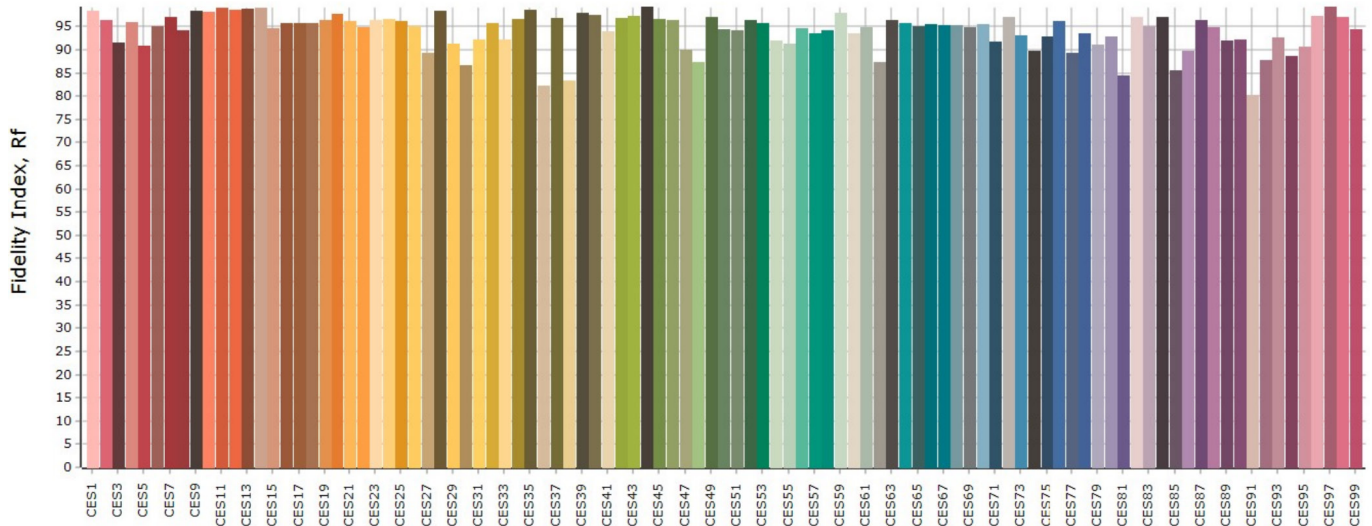
| |
|-------------------------------------|
| Rf 94,1 Fidelity index Rf |
| Rg 99,0 Gamut index Rg |

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 94,8 | -1,4% | 0,8% |
| 2 | 97,4 | -0,2% | -0,5% |
| 3 | 95,7 | -0,5% | -1,2% |
| 4 | 91,6 | -4,1% | -3,2% |
| 5 | 94,5 | -4,0% | 0,0% |
| 6 | 95,6 | -1,5% | 2,1% |
| 7 | 91,2 | -2,9% | 4,0% |
| 8 | 94,6 | 1,0% | 3,2% |
| 9 | 93,2 | 1,1% | 3,4% |
| 10 | 93,3 | 2,4% | 3,3% |
| 11 | 93,8 | 3,5% | 2,3% |
| 12 | 91,0 | 3,5% | -2,9% |
| 13 | 91,4 | 0,1% | -6,0% |
| 14 | 91,2 | 1,1% | -6,1% |
| 15 | 92,2 | -2,7% | 0,2% |
| 16 | 89,8 | -0,4% | -7,6% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Maximum Zoom, 2.800K

Measurements taken at 4.3 meters

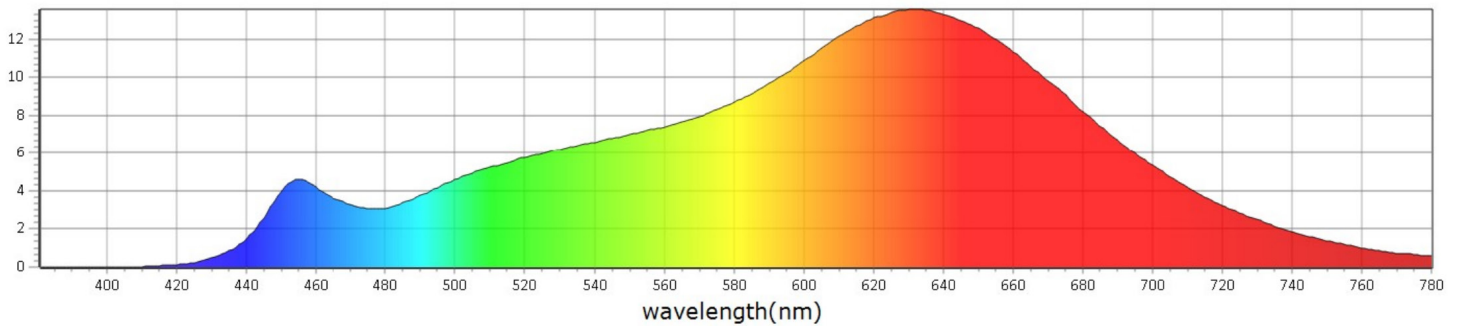
General

| | |
|-----------|--------|
| ● CCT | 2725 K |
| ● x | 0,4550 |
| ● y | 0,4050 |
| ● LambdaD | 585 nm |
| ● LambdaP | 632 nm |

Measurements

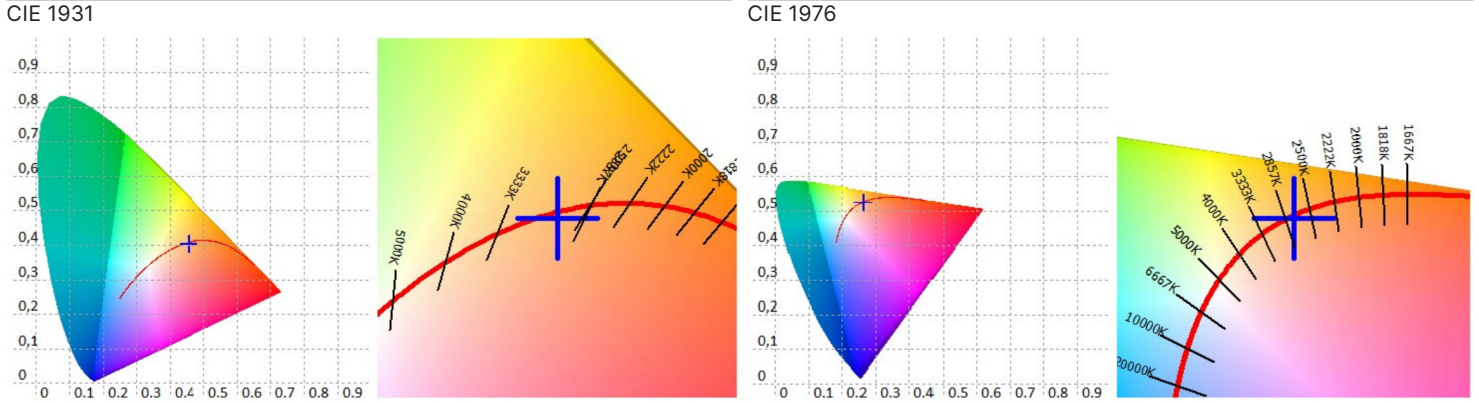
| | | | | | | | |
|-------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 2725 K | x10 : 0,4593 | delta-x : -0,0029 | LambdaD : 585 nm | PPFD : 10,14 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,38 | R3 : 98,3 | R10 : 94,9 |
| LUX : 585,4 lx | y10 : 0,4050 | delta-y : -0,0051 | LambdaP : 632 nm | PFD : 11,20 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 2,220 | R4 : 98,0 | R11 : 94,2 |
| I-Time : 18000 us | u'10 : 0,2646 | delta-u' : 0,0004 | Purity : 57,94% | PFD-B : 0,9059 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 95,3 | R5 : 97,0 | R12 : 88,0 |
| x : 0,4550 | v'10 : 0,5251 | delta-v' : -0,0024 | fc : 54,41 | PFD-G : 3,390 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 96,1 | R6 : 93,0 | R13 : 97,0 |
| y : 0,4050 | X : 657,60 | Duv : -0,0017 | Rf : 94,4 | PFD-R : 5,847 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 96,5 | R7 : 94,8 | R14 : 99,0 |
| u' : 0,2618 | Y : 585,44 | MEL : 313,7 lx | Rg : 100,1 | PFD-UV : 0,0000 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 97,8 | R8 : 93,1 | R15 : 98,4 |
| v' : 0,5245 | Z : 202,37 | LambdaPV : 13,58 | GAI : 52,2 | PFD-FR : 1,055 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 97,3 | R9 : 87,3 | |

Spectrum

mWm⁻²

Risalto M VariWhite +, Fresnel, Maximum Zoom, 2.800K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,8 | 97,3 | 98,3 | 98,0 | 97,0 | 93,0 | 94,8 | 93,1 | 87,3 | 94,9 | 94,2 | 88,0 | 97,0 | 99,0 | 98,4 |

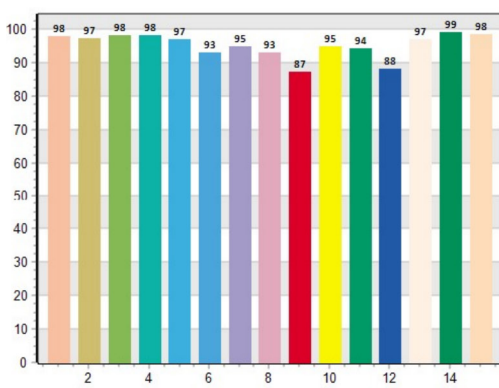
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,7 | 97,0 | 95,8 | 93,0 | 95,6 | 96,8 | 94,6 | 95,9 | 93,7 | 93,5 | 93,6 | 90,0 | 90,5 | 90,2 | 92,4 | 89,4 |

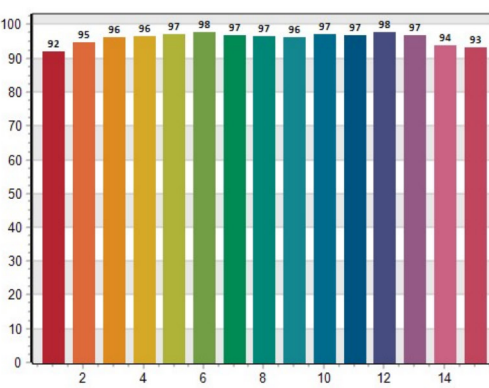
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92,0 | 94,8 | 96,1 | 96,4 | 97,0 | 97,7 | 96,7 | 96,5 | 96,3 | 97,1 | 96,9 | 97,6 | 96,7 | 93,7 | 93,2 |

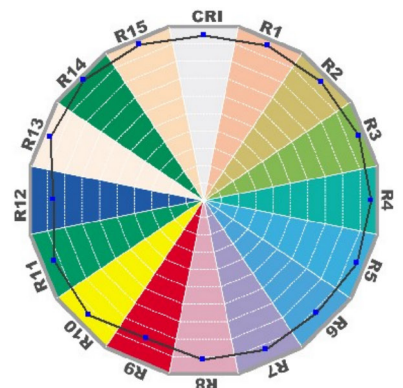
CRI: 96.15



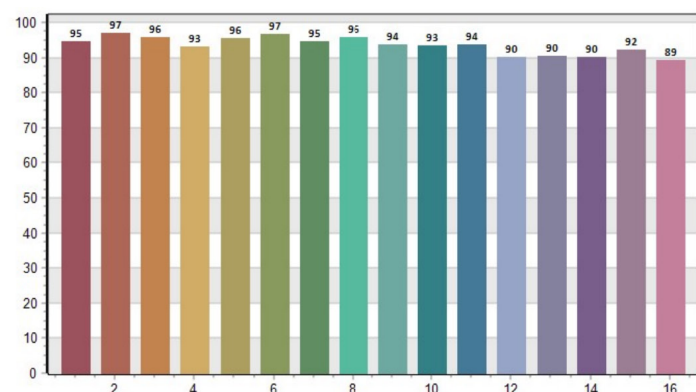
CQS: 95.30



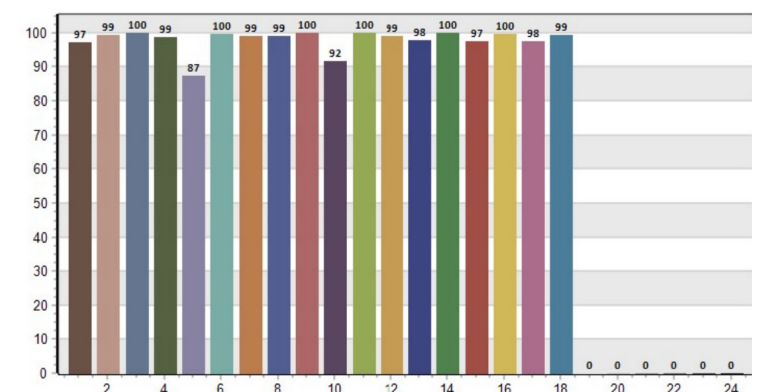
CRI-2



TM30: 94.37



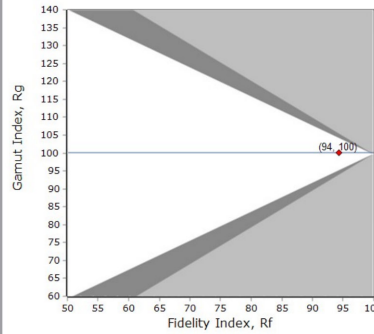
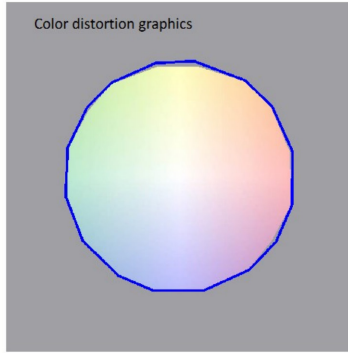
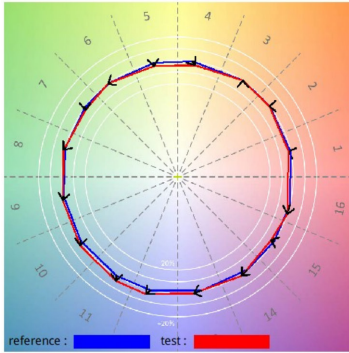
TLCI: 96.52



Risalto M VariWhite +, Fresnel, Maximum Zoom, 2.800K

Measurements taken at 4.3 meters

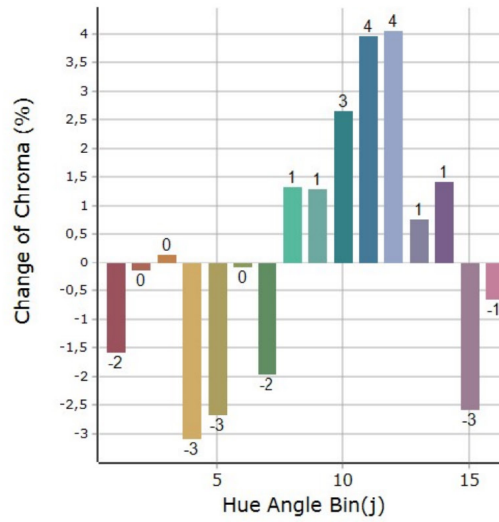
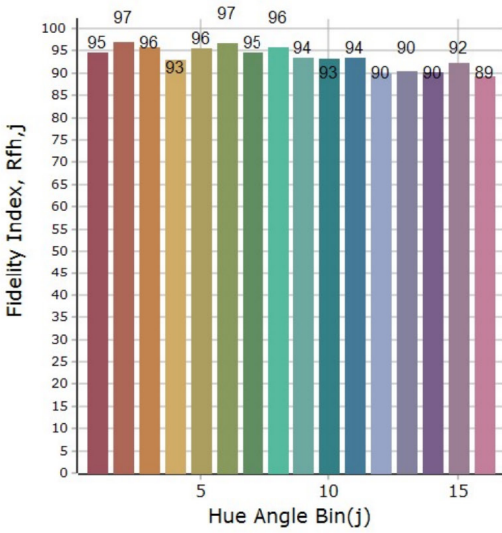
General Color Rendition



Rf 94,3
Fidelity index Rf

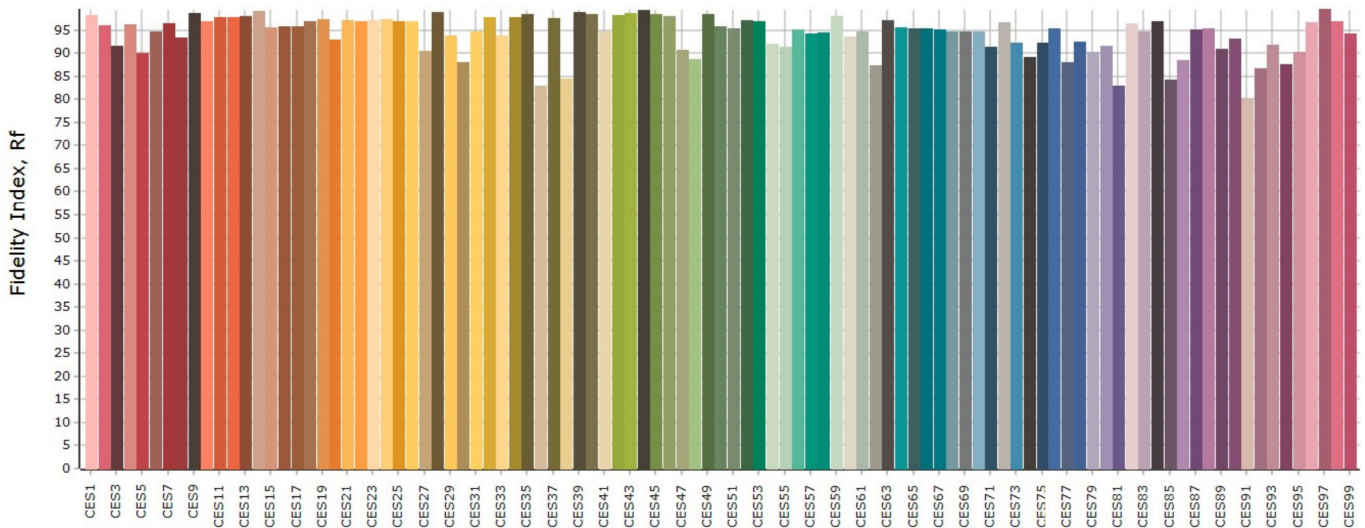
Rg 100,1
Gammut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 94,6 | -1,6% | 1,0% |
| 2 | 96,9 | -0,1% | 0,3% |
| 3 | 95,8 | 0,1% | -0,1% |
| 4 | 93,0 | -3,1% | -2,8% |
| 5 | 95,6 | -2,7% | 0,0% |
| 6 | 96,7 | -0,1% | 1,6% |
| 7 | 94,5 | -1,9% | 2,4% |
| 8 | 95,9 | 1,3% | 2,1% |
| 9 | 93,5 | 1,3% | 3,2% |
| 10 | 93,3 | 2,6% | 3,1% |
| 11 | 93,5 | 3,9% | 2,2% |
| 12 | 90,0 | 4,0% | -3,1% |
| 13 | 90,4 | 0,8% | -6,7% |
| 14 | 90,2 | 1,4% | -7,0% |
| 15 | 92,3 | -2,6% | -0,6% |
| 16 | 89,3 | -0,6% | -8,1% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Minimum Zoom, 3.200K

Measurements taken at 4.3 meters

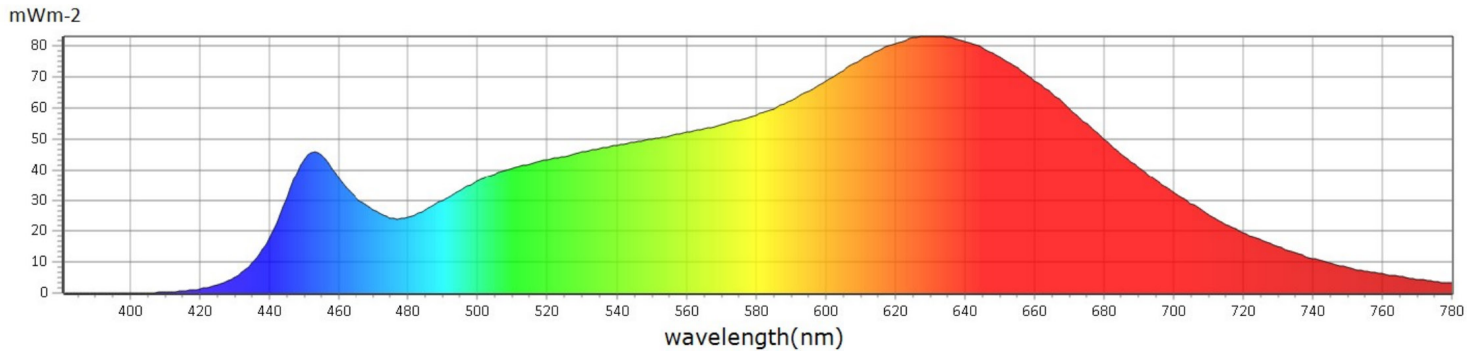
General

| | |
|-----------|--------|
| ● CCT | 3982 K |
| ● x | 0,4239 |
| ● y | 0,3913 |
| ● LambdaD | 584 nm |
| ● LambdaP | 631 nm |

Measurements

| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 3125 K | x10 : 0,4276 | delta-x : -0,0044 | LambdaD : 584 nm | PPFD : 67,57 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,57 | R3 : 99,0 | R10 : 94,5 |
| LUX : 3982 lx | y10 : 0,3916 | delta-y : -0,0097 | LambdaP : 631 nm | PFD : 73,95 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 14,88 | R4 : 96,8 | R11 : 93,4 |
| I-Time : 3200 us | u'10 : 0,2499 | delta-u' : 0,0013 | Purity : 44,52% | PFD-B : 8,096 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 96,4 | R5 : 96,2 | R12 : 87,4 |
| x : 0,4239 | v'10 : 0,5150 | delta-v' : -0,0046 | fc : 370,1 | PFD-G : 23,65 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 96,6 | R6 : 93,6 | R13 : 95,9 |
| y : 0,3913 | X : 4313,91 | Duv : -0,0033 | Rf : 95,1 | PFD-R : 35,83 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 97,7 | R7 : 96,7 | R14 : 98,9 |
| u' : 0,2476 | Y : 3982,03 | MEL : 2513 lx | Rg : 101,8 | PFD-UV : 0,0000 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 96,4 | R8 : 97,3 | R15 : 97,8 |
| v' : 0,5143 | Z : 1881,10 | LambdaPV : 83,13 | GAI : 66,7 | PFD-FR : 6,371 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 96,9 | R9 : 95,9 | |

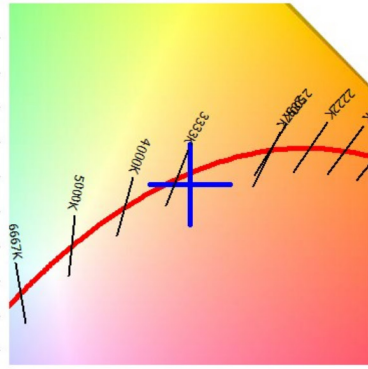
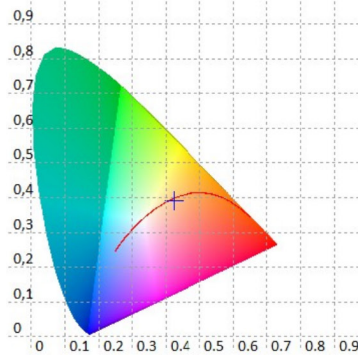
Spectrum



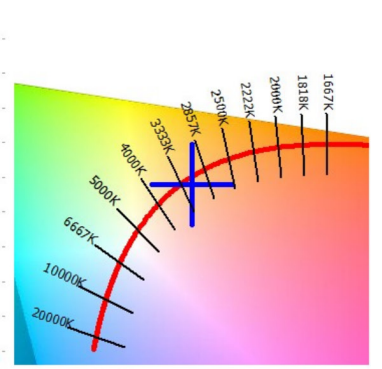
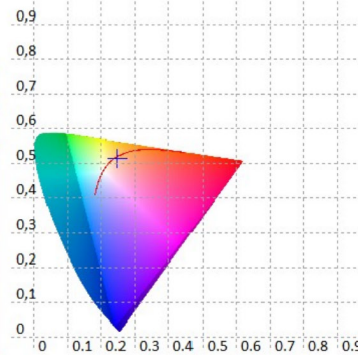
Risalto M VariWhite +, Fresnel, Minimum Zoom, 3.200K

Measurements taken at 4.3 meters

CIE 1931



CIE 1976



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,4 | 96,9 | 99,0 | 96,8 | 96,2 | 93,6 | 96,7 | 97,3 | 95,9 | 94,5 | 93,4 | 87,4 | 95,9 | 98,9 | 97,8 |

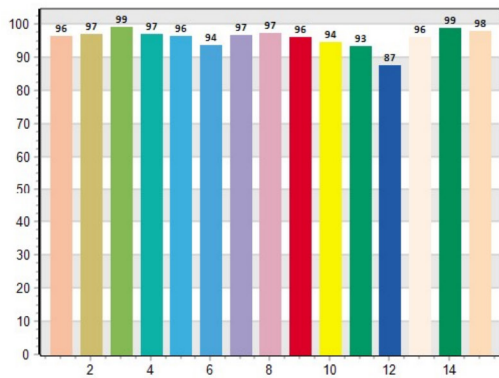
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,1 | 97,3 | 95,8 | 95,9 | 94,5 | 96,8 | 93,6 | 96,7 | 94,5 | 94,1 | 93,2 | 90,8 | 93,2 | 91,7 | 92,0 | 89,5 |

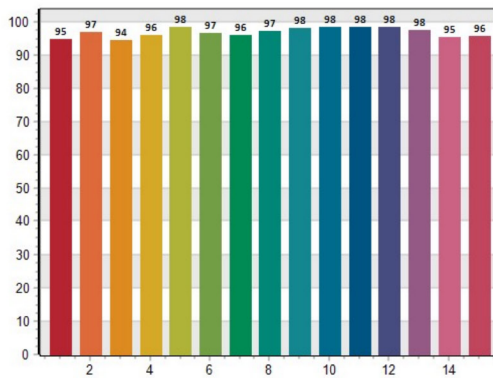
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,9 | 96,9 | 94,5 | 96,0 | 98,4 | 96,7 | 96,0 | 97,2 | 98,1 | 98,3 | 98,4 | 98,4 | 97,6 | 95,5 | 95,6 |

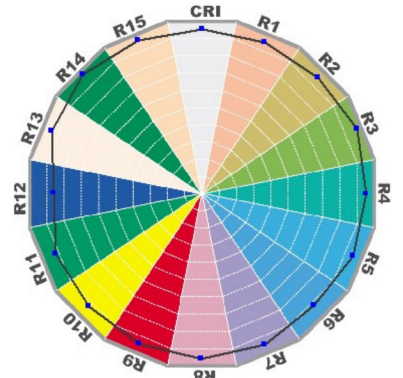
CRI: 96.62



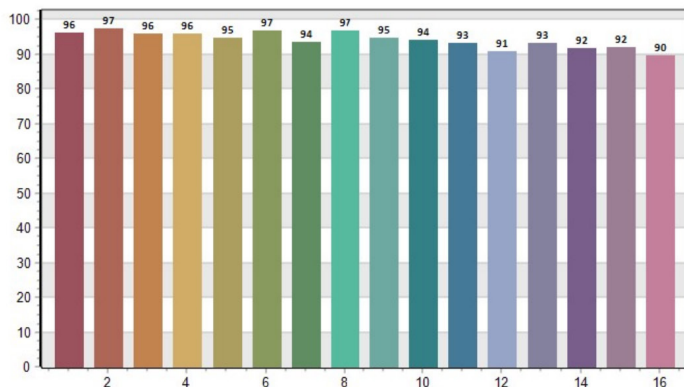
CQS: 96.39



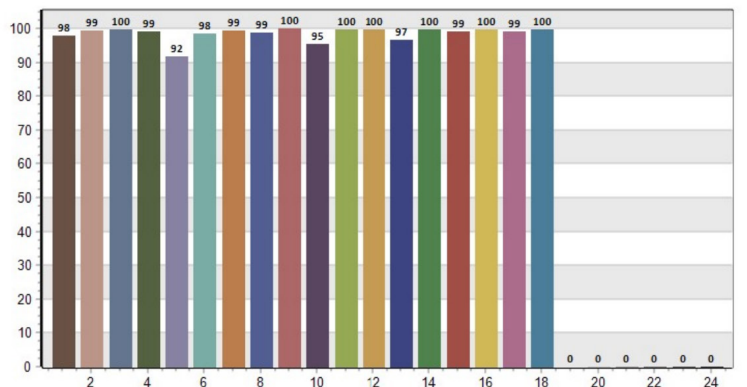
CRI-2



TM30: 95.06



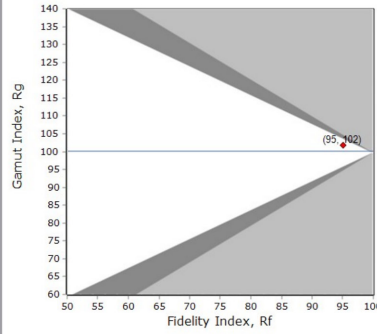
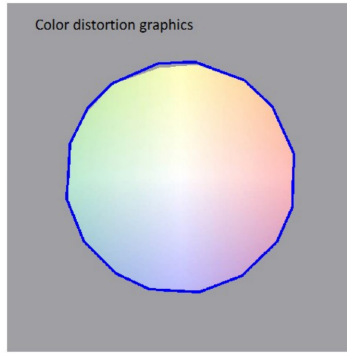
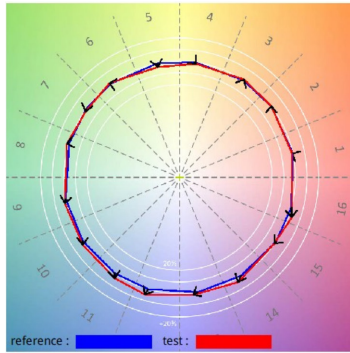
TLCI: 97.73



Risalto M VariWhite +, Fresnel, Minimum Zoom, 3.200K

Measurements taken at 4.3 meters

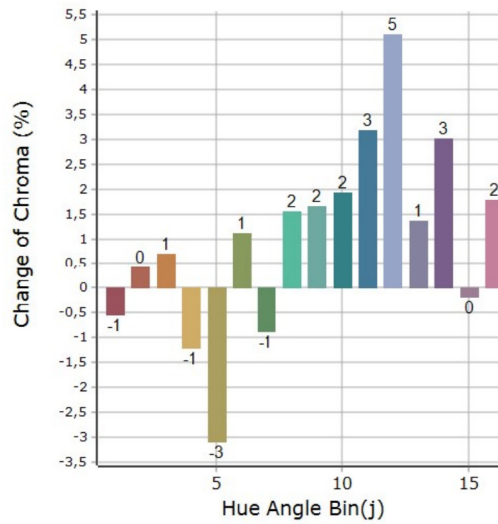
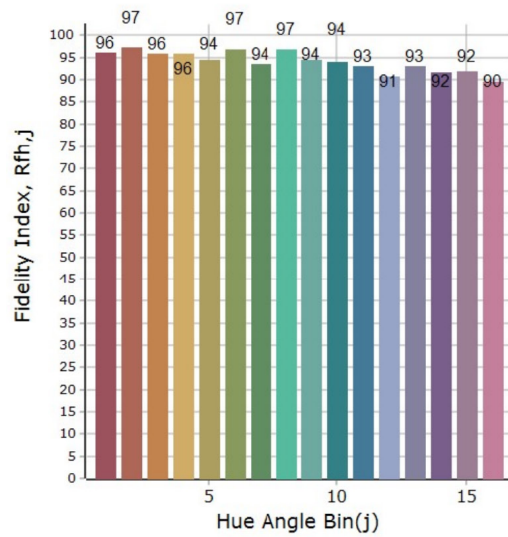
General Color Rendition



Rf 95,0
Fidelity index Rf

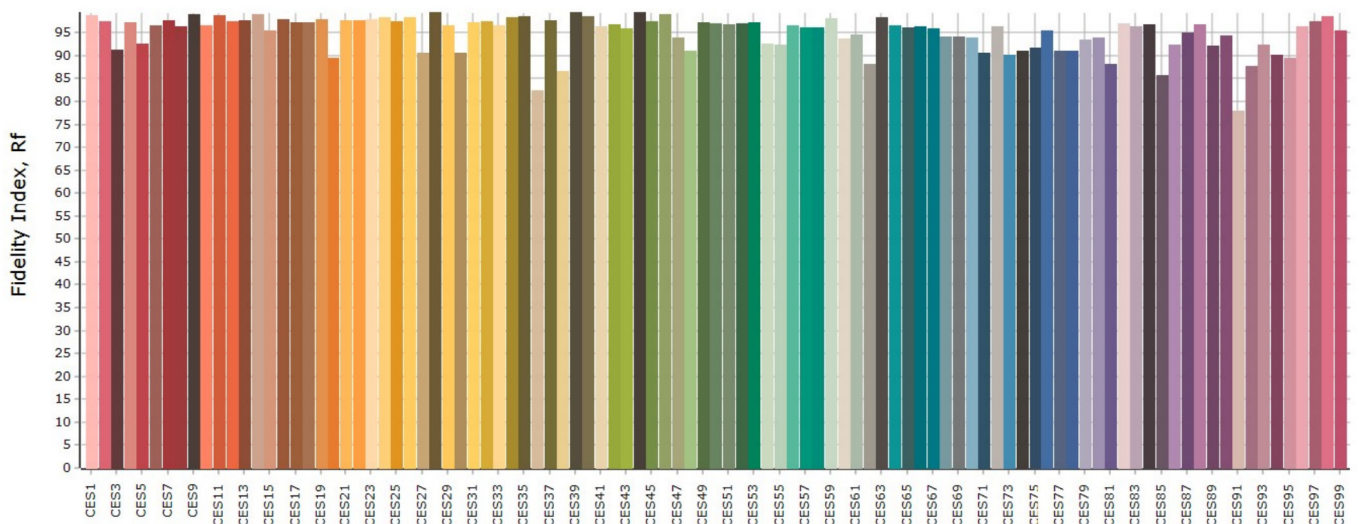
Rg 101,8
Gamut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 96,0 | -0,5% | 0,6% |
| 2 | 97,3 | 0,4% | 0,1% |
| 3 | 95,8 | 0,7% | 0,2% |
| 4 | 95,9 | -1,2% | -1,6% |
| 5 | 94,5 | -3,1% | 0,0% |
| 6 | 96,8 | 1,1% | 1,0% |
| 7 | 93,5 | -0,9% | 2,2% |
| 8 | 96,7 | 1,6% | 0,8% |
| 9 | 94,4 | 1,7% | 3,6% |
| 10 | 93,9 | 1,9% | 2,7% |
| 11 | 93,1 | 3,2% | 2,9% |
| 12 | 90,7 | 5,1% | -2,0% |
| 13 | 93,2 | 1,4% | -4,5% |
| 14 | 91,6 | 3,0% | -5,0% |
| 15 | 91,9 | -0,2% | -2,1% |
| 16 | 89,5 | 1,8% | -8,4% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Maximum Zoom, 3.200K

Measurements taken at 4.3 meters

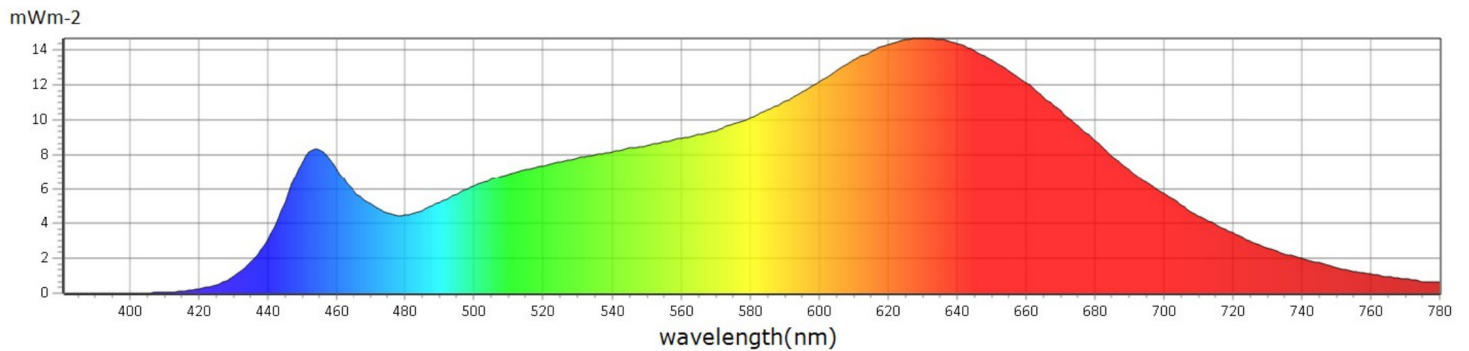
General

| | |
|-----------|--------|
| ● CCT | 3081 K |
| ● x | 0,4238 |
| ● y | 0,3861 |
| ● LambdaD | 585 nm |
| ● LambdaP | 628 nm |

Measurements

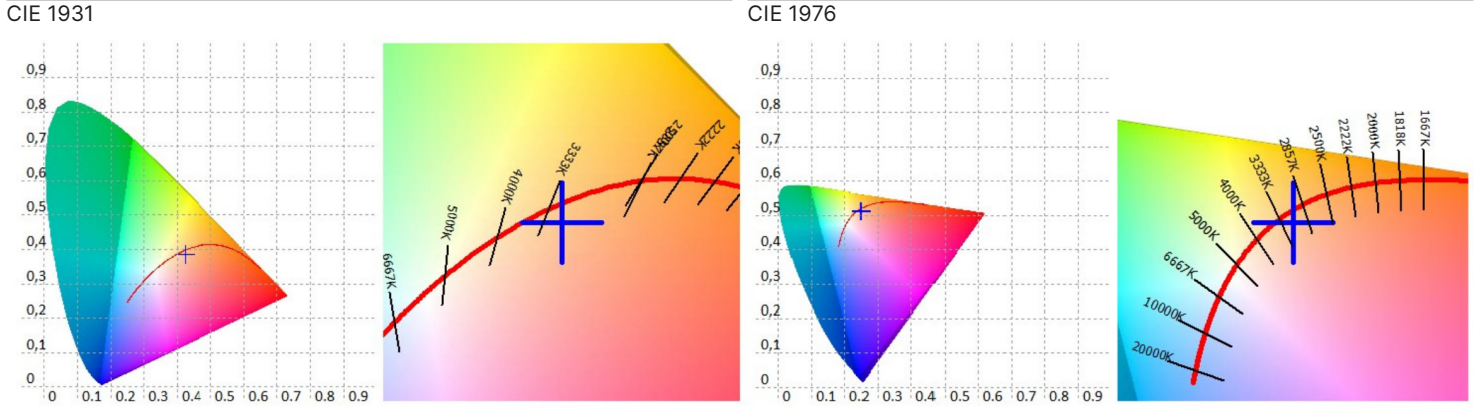
| | | | | | | | |
|-------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 3081 K | x10 : 0,4271 | delta-x : -0,0075 | LambdaD : 585 nm | PPFD : 11,86 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,58 | R3 : 97,5 | R10 : 91,4 |
| LUX : 692,3 lx | y10 : 0,3868 | delta-y : -0,0160 | LambdaP : 628 nm | PFD : 12,99 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 2,615 | R4 : 96,8 | R11 : 93,0 |
| I-Time : 18000 us | u'10 : 0,2517 | delta-u' : 0,0020 | Purity : 42,98% | PFD-B : 1,463 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 95,8 | R5 : 95,0 | R12 : 85,2 |
| x : 0,4238 | v'10 : 0,5129 | delta-v' : -0,0077 | fc : 64,34 | PFD-G : 4,083 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 95,4 | R6 : 91,3 | R13 : 94,6 |
| y : 0,3861 | X : 759,87 | Duv : -0,0055 | Rf : 94,7 | PFD-R : 6,316 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 97,3 | R7 : 95,3 | R14 : 99,0 |
| u' : 0,2498 | Y : 692,26 | MEL : 441,3 lx | Rg : 102,3 | PFD-UV : 0,0002 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 95,5 | R8 : 96,6 | R15 : 96,9 |
| v' : 0,5121 | Z : 340,87 | LambdaPV : 14,68 | GAI : 69,1 | PFD-FR : 1,125 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 95,4 | R9 : 95,9 | |

Spectrum



Risalto M VariWhite +, Fresnel, Maximum Zoom, 3.200K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,5 | 95,4 | 97,5 | 96,8 | 95,0 | 91,3 | 95,3 | 96,6 | 95,9 | 91,4 | 93,0 | 85,2 | 94,6 | 99,0 | 96,9 |

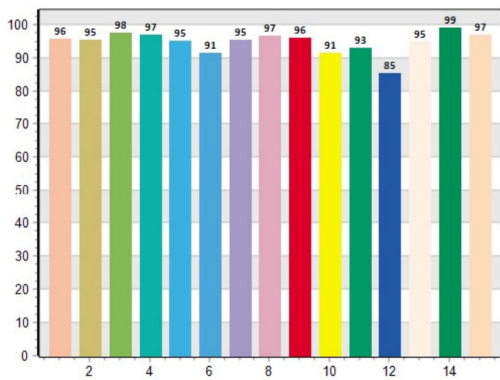
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,7 | 96,7 | 95,3 | 95,9 | 94,3 | 96,1 | 93,2 | 96,6 | 94,1 | 93,8 | 93,0 | 90,1 | 92,4 | 91,1 | 91,7 | 89,4 |

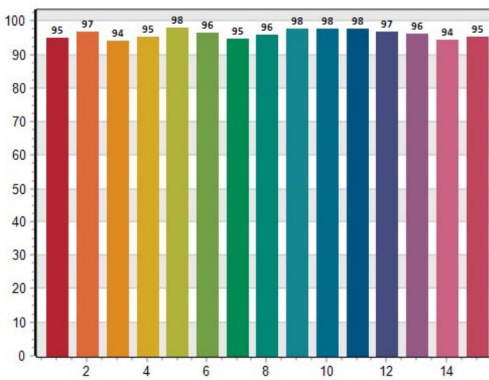
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,9 | 96,7 | 94,1 | 95,5 | 98,0 | 96,4 | 94,9 | 96,0 | 97,6 | 97,8 | 97,6 | 96,9 | 96,1 | 94,4 | 95,2 |

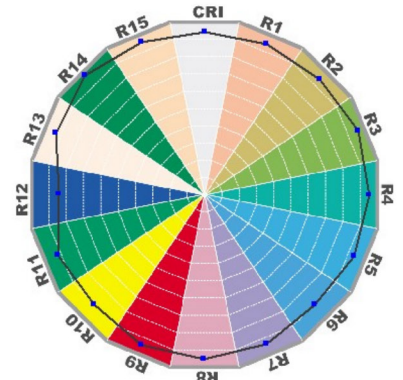
CRI: 95.42



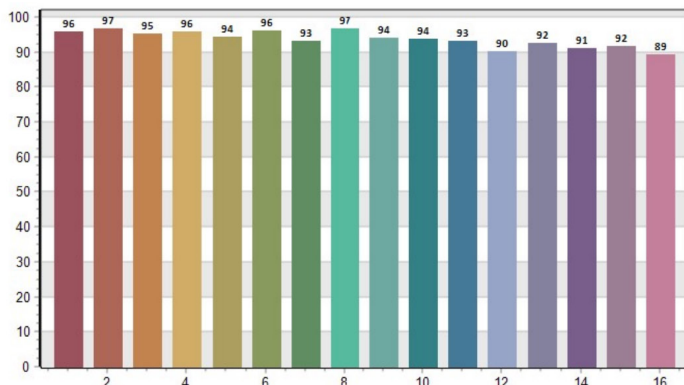
CQS: 95.84



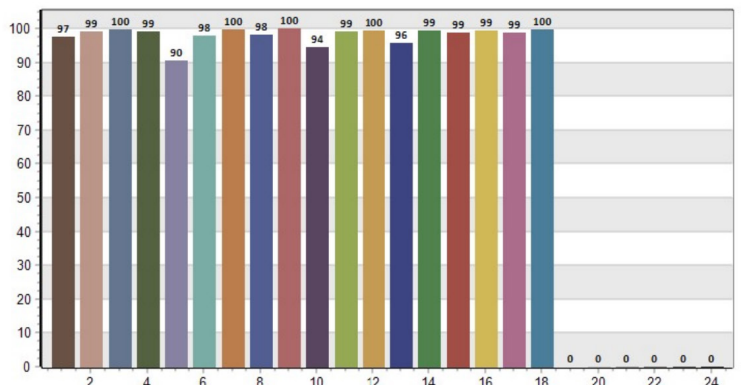
CRI-2



TM30: 94.74



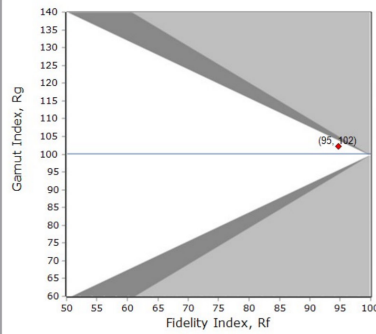
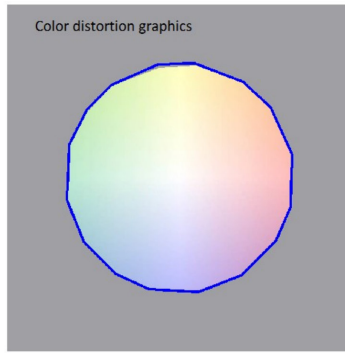
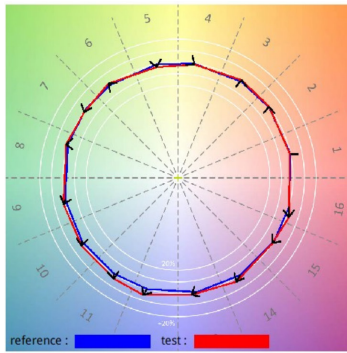
TLCI: 97.27



Risalto M VariWhite +, Fresnel, Maximum Zoom, 3.200K

Measurements taken at 4.3 meters

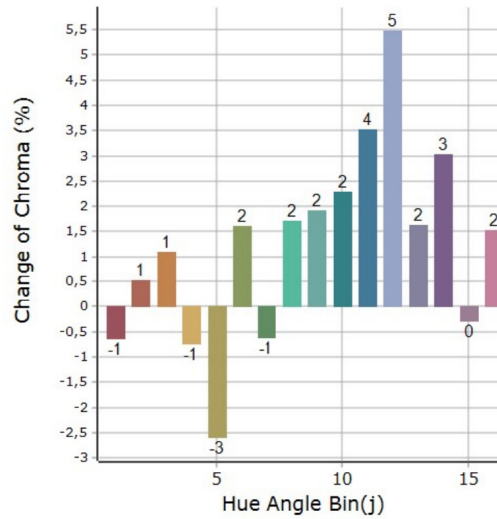
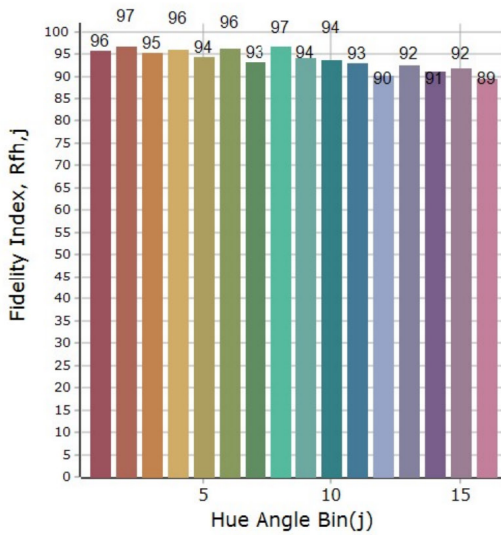
General Color Rendition



Rf 94,7
Fidelity index Rf

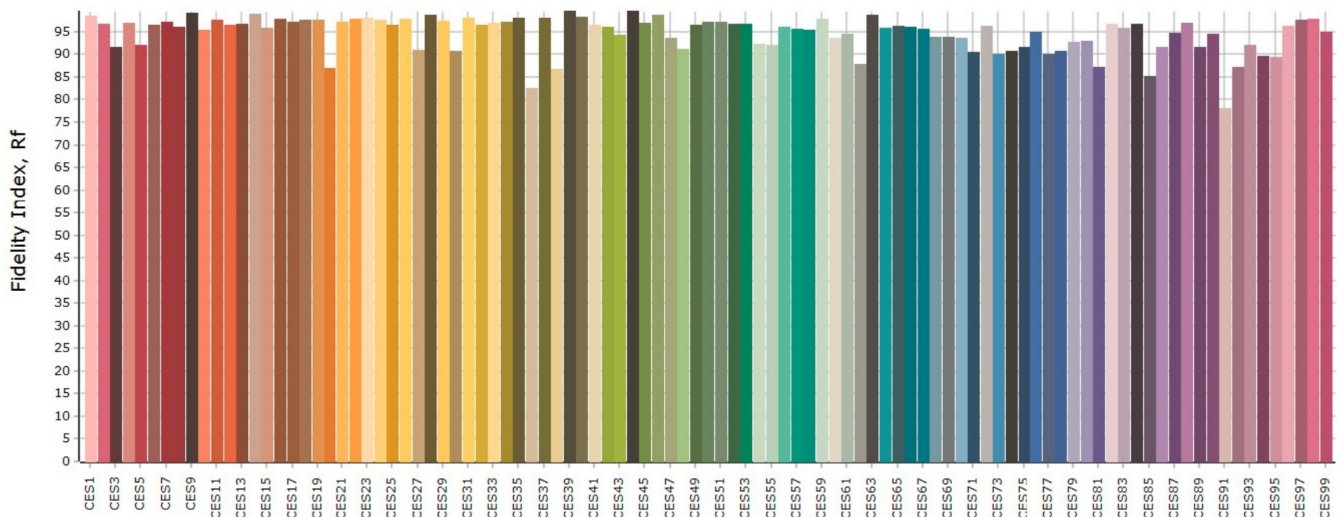
Rg 102,3
Gamut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Chroma | Hue |
|---------|------|--------|-------|
| 1 | 95,7 | -0,6% | 0,8% |
| 2 | 96,6 | 0,5% | 0,5% |
| 3 | 95,3 | 1,1% | 0,7% |
| 4 | 95,9 | -0,7% | -1,5% |
| 5 | 94,2 | -2,6% | -0,1% |
| 6 | 96,1 | 1,6% | 0,7% |
| 7 | 93,2 | -0,6% | 2,0% |
| 8 | 96,6 | 1,7% | 0,5% |
| 9 | 94,1 | 1,9% | 3,6% |
| 10 | 93,6 | 2,3% | 2,6% |
| 11 | 92,9 | 3,5% | 2,6% |
| 12 | 90,0 | 5,5% | -2,4% |
| 13 | 92,4 | 1,6% | -5,0% |
| 14 | 91,1 | 3,0% | -5,5% |
| 15 | 91,7 | -0,3% | -2,4% |
| 16 | 89,4 | 1,5% | -8,5% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Minimum Zoom, 4.000K

Measurements taken at 4.3 meters

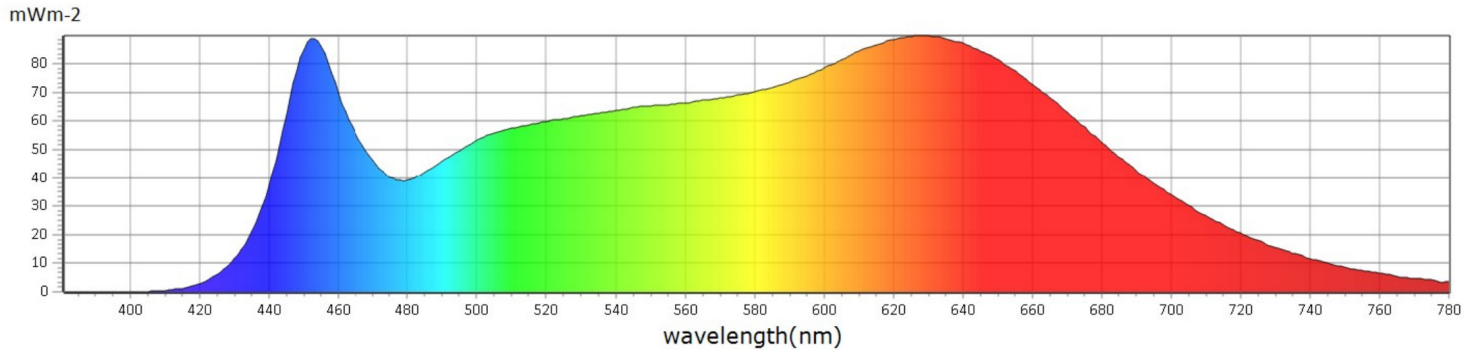
General

| | |
|-----------|--------|
| ● CCT | 3863 K |
| ● x | 0,3819 |
| ● y | 0,3646 |
| ● LambdaD | 584 nm |
| ● LambdaP | 627 nm |

Measurements

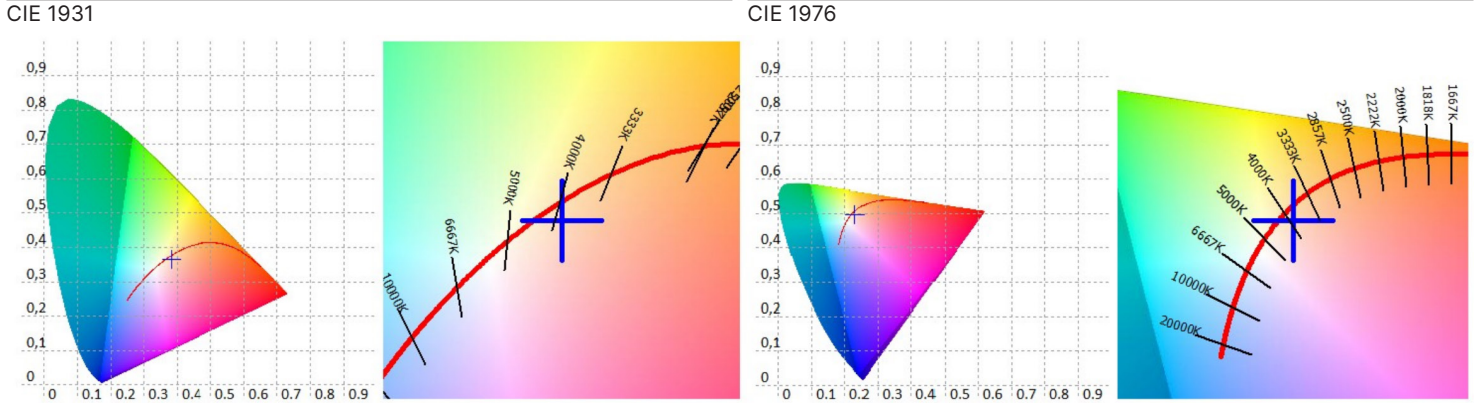
| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 3863 K | x10 : 0,3846 | delta-x : -0,0048 | LambdaD : 584 nm | PPFD : 83,09 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,86 | R3 : 98,8 | R10 : 93,0 |
| LUX : 4964 lx | y10 : 0,3662 | delta-y : -0,0160 | LambdaP : 627 nm | PFD : 89,75 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 18,50 | R4 : 96,3 | R11 : 93,2 |
| I-Time : 2400 us | u'10 : 0,2322 | delta-u' : 0,0034 | Purity : 23,91% | PFD-B : 14,36 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 96,9 | R5 : 95,2 | R12 : 83,7 |
| x : 0,3819 | v'10 : 0,4975 | delta-v' : -0,0079 | fc : 461,3 | PFD-G : 30,26 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 96,3 | R6 : 93,2 | R13 : 94,4 |
| y : 0,3646 | X : 5199,21 | Duv : -0,0062 | Rf : 94,3 | PFD-R : 38,47 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 97,9 | R7 : 97,7 | R14 : 98,6 |
| u' : 0,2310 | Y : 4963,99 | MEL : 3887 lx | Rg : 102,5 | PFD-UV : 0,0012 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 94,7 | R8 : 98,3 | R15 : 94,1 |
| v' : 0,4963 | Z : 3451,67 | LambdaPV : 89,86 | GAI : 85,3 | PFD-FR : 6,664 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 96,0 | R9 : 93,3 | |

Spectrum



Risalto M VariWhite +, Fresnel, Minimum Zoom, 4.000K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,7 | 96,0 | 98,8 | 96,3 | 95,2 | 93,2 | 97,7 | 98,3 | 93,3 | 93,0 | 93,2 | 83,7 | 94,4 | 98,6 | 94,1 |

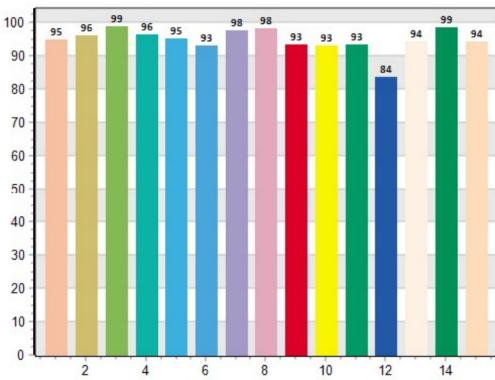
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,4 | 96,0 | 96,1 | 95,3 | 94,0 | 96,4 | 95,3 | 93,6 | 92,2 | 93,6 | 89,5 | 91,0 | 95,3 | 90,9 | 91,6 | 90,0 |

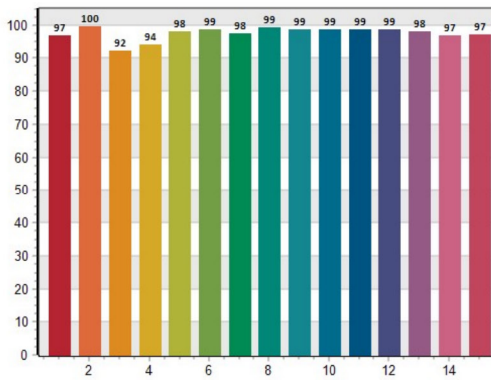
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,9 | 99,6 | 92,4 | 94,0 | 98,1 | 98,7 | 97,6 | 99,2 | 98,7 | 98,5 | 98,6 | 98,6 | 98,1 | 96,7 | 97,1 |

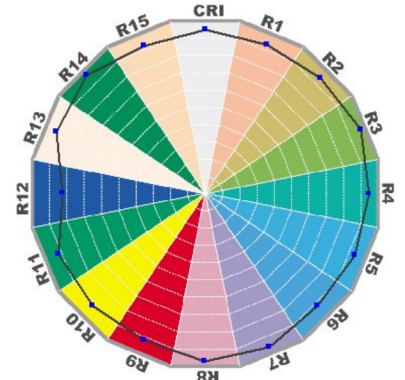
CRI: 96.25



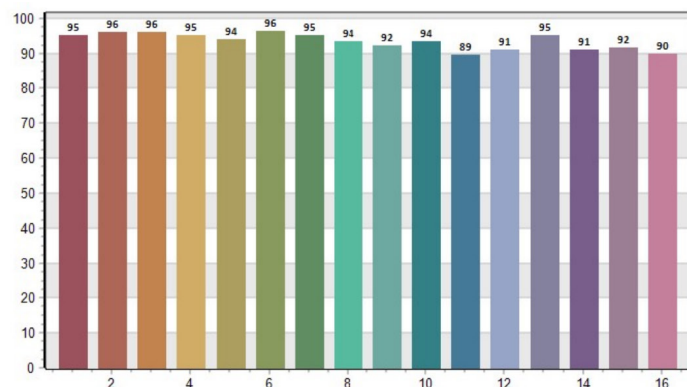
CQS: 96.88



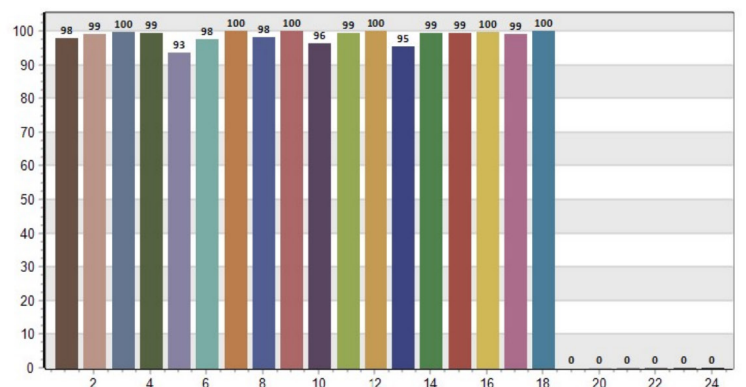
CRI-2



TM30: 94.34



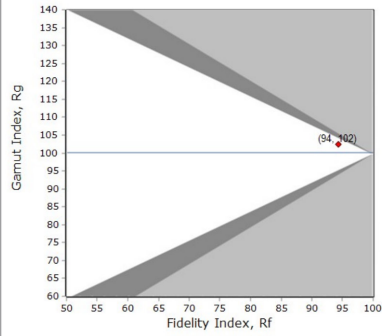
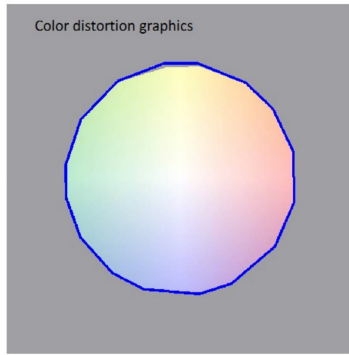
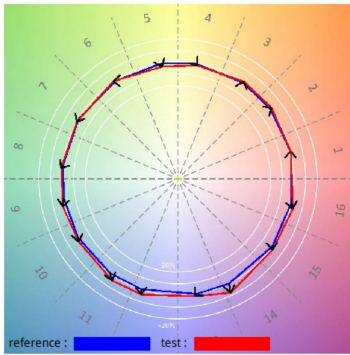
TLCI: 97.87



Risalto M VariWhite +, Fresnel, Minimum Zoom, 4.000K

Measurements taken at 4.3 meters

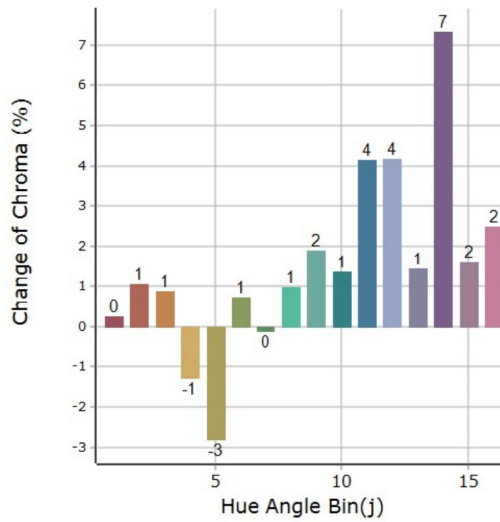
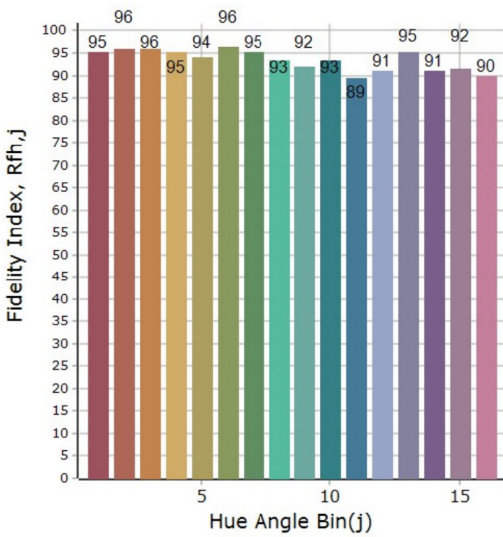
General Color Rendition



Rf 94,3
Fidelity index Rf

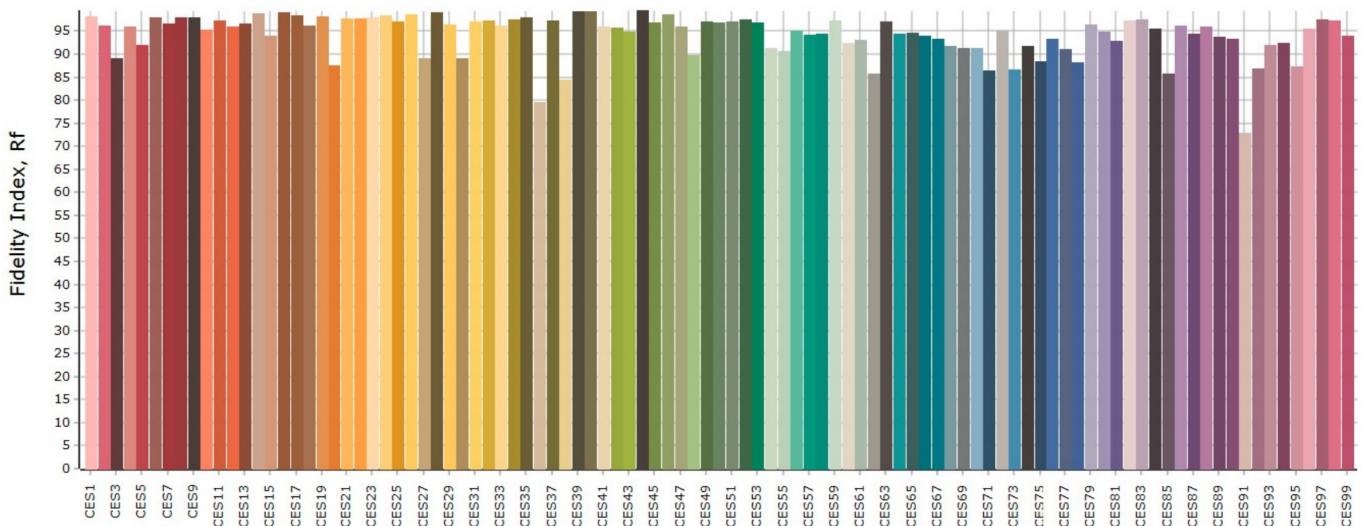
Rg 102,4
Gammut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 95,3 | 0,2% | 0,5% |
| 2 | 95,9 | 1,0% | 0,1% |
| 3 | 96,0 | 0,9% | 0,4% |
| 4 | 95,2 | -1,3% | -1,3% |
| 5 | 94,0 | -2,8% | -0,6% |
| 6 | 96,4 | 0,7% | 1,1% |
| 7 | 95,2 | -0,1% | 2,1% |
| 8 | 93,4 | 1,0% | 2,6% |
| 9 | 92,0 | 1,9% | 6,8% |
| 10 | 93,5 | 1,4% | 3,4% |
| 11 | 89,4 | 4,2% | 5,1% |
| 12 | 90,9 | 4,2% | 0,8% |
| 13 | 95,3 | 1,4% | -2,4% |
| 14 | 90,9 | 7,3% | -3,1% |
| 15 | 91,5 | 1,6% | -1,8% |
| 16 | 90,0 | 2,5% | -5,2% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Maximum Zoom, 4.000K

Measurements taken at 4.3 meters

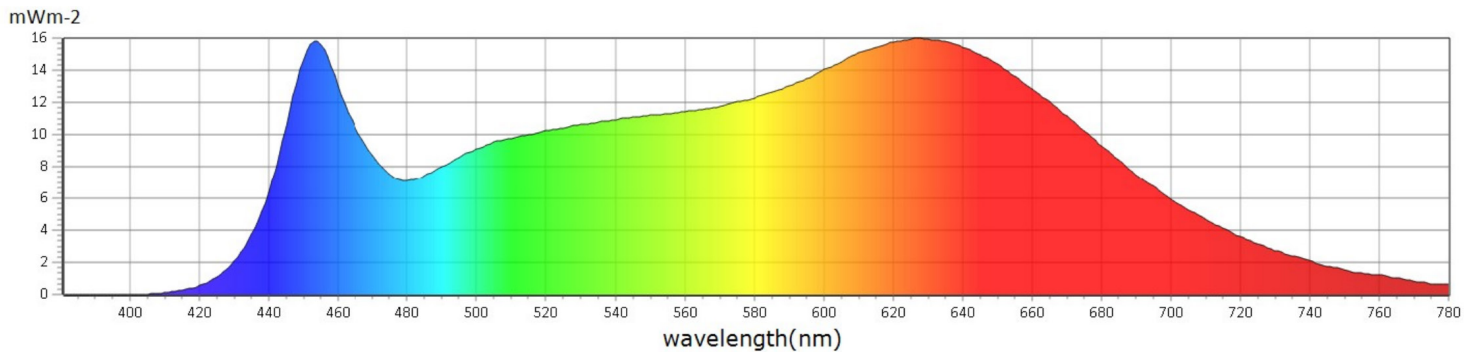
General

| | |
|-----------|--------|
| ● CCT | 6069 K |
| ● x | 0,3212 |
| ● y | 0,3250 |
| ● LambdaD | 482 mm |
| ● LambdaP | 451 mm |

Measurements

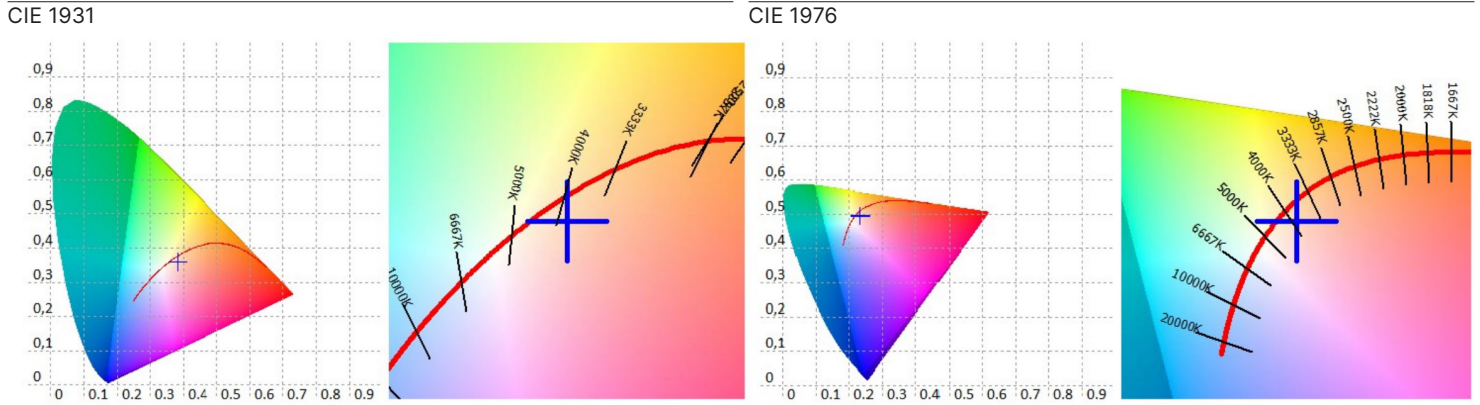
| | | | | | | | |
|-------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 3809 K | x10 : 0,3850 | delta-x : -0,0067 | LambdaD : 585 nm | PPFD : 14,62 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 1,86 | R3 : 98,1 | R10 : 89,7 |
| LUX : 864,8 lx | y10 : 0,3625 | delta-y : -0,0216 | LambdaP : 626 nm | PFD : 15,80 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 3,256 | R4 : 95,7 | R11 : 92,5 |
| I-Time : 12000 us | u'10 : 0,2340 | delta-u' : 0,0045 | Purity : 23,08% | PFD-B : 2,565 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 96,6 | R5 : 93,6 | R12 : 82,6 |
| x : 0,3826 | v'10 : 0,4958 | delta-v' : -0,0107 | fc : 80,37 | PFD-G : 5,236 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 95,1 | R6 : 91,0 | R13 : 92,7 |
| y : 0,3605 | X : 917,74 | Duv : -0,0084 | Rf : 94,0 | PFD-R : 6,818 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 97,7 | R7 : 96,6 | R14 : 98,7 |
| u' : 0,2332 | Y : 864,78 | MEL : 682,2 lx | Rg : 102,7 | PFD-UV : 0,0003 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 93,3 | R8 : 97,8 | R15 : 92,5 |
| v' : 0,4945 | Z : 616,34 | LambdaPV : 16,00 | GAI : 87,1 | PFD-FR : 1,179 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 94,3 | R9 : 91,3 | |

Spectrum



Risalto M VariWhite +, Fresnel, Maximum Zoom, 4.000K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,3 | 94,3 | 98,1 | 95,7 | 93,6 | 91,0 | 96,6 | 97,8 | 91,3 | 89,7 | 92,5 | 82,6 | 92,7 | 98,7 | 92,5 |

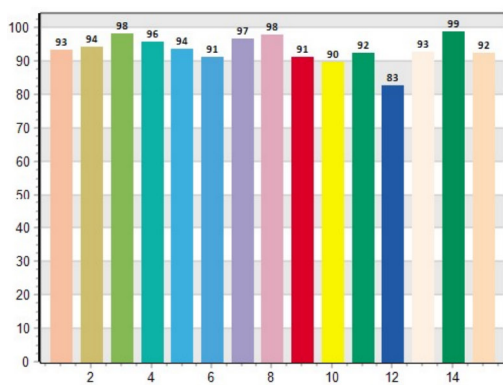
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,9 | 95,2 | 95,5 | 95,0 | 93,9 | 96,1 | 94,9 | 92,7 | 91,5 | 93,3 | 89,5 | 90,7 | 94,8 | 92,1 | 91,4 | 89,8 |

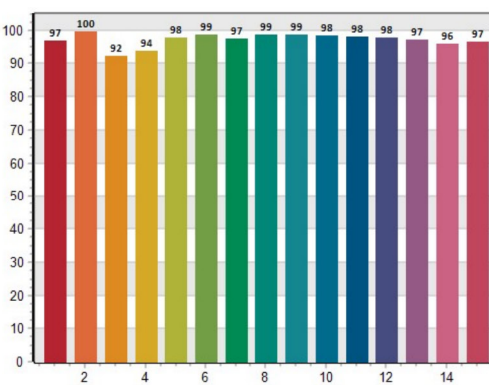
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,9 | 99,6 | 92,2 | 93,8 | 97,8 | 98,7 | 97,4 | 98,8 | 98,7 | 98,4 | 98,1 | 97,7 | 97,1 | 95,9 | 96,6 |

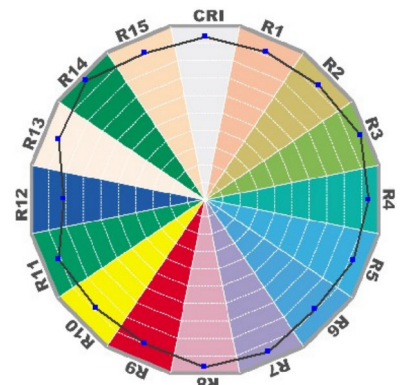
CRI: 95.05



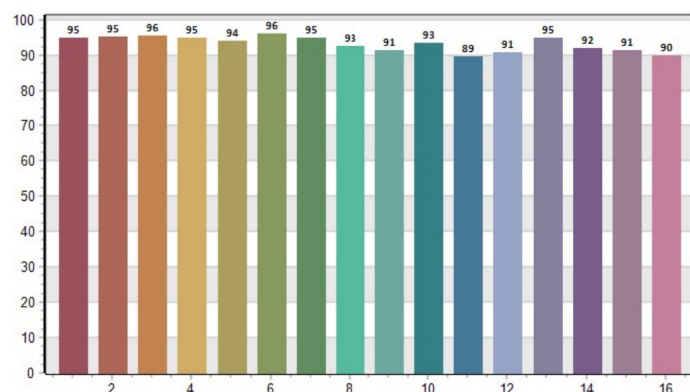
CQS: 96.60



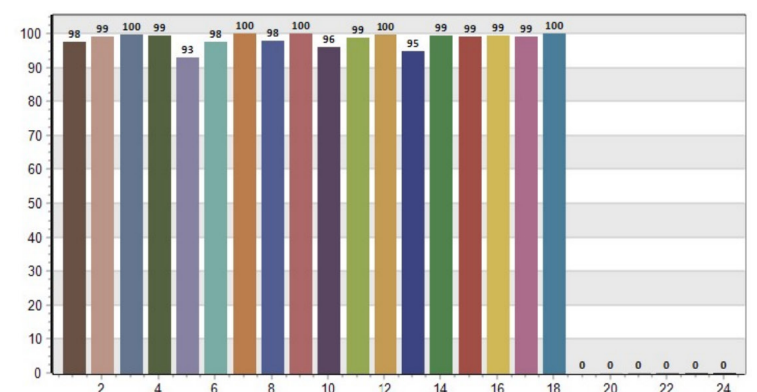
CRI-2



TM30: 94.03



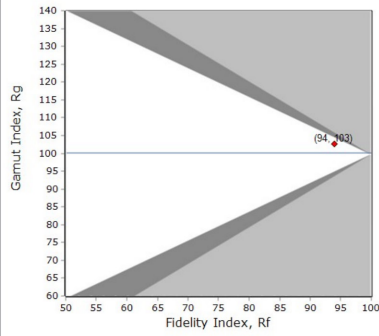
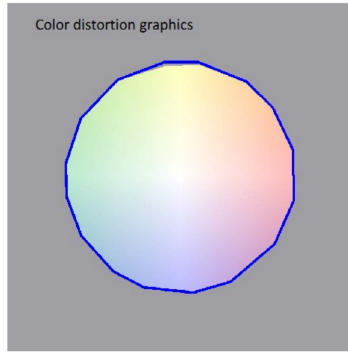
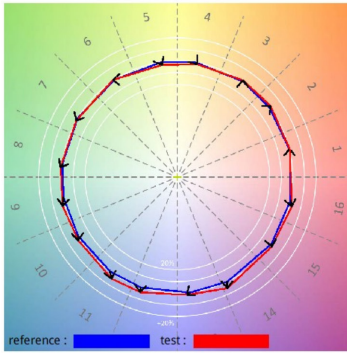
TLCI: 97.67



Risalto M VariWhite +, Fresnel, Maximum Zoom, 4.000K

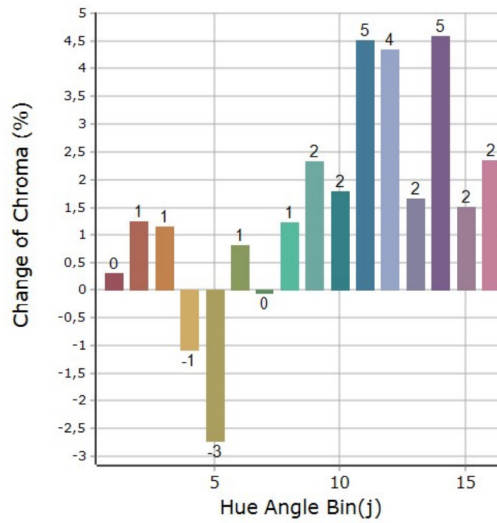
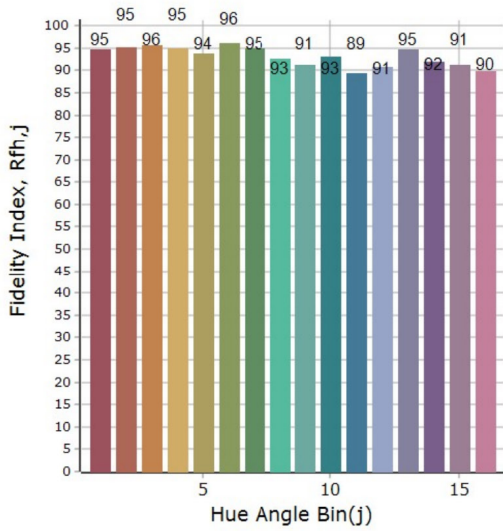
Measurements taken at 4.3 meters

General Color Rendition



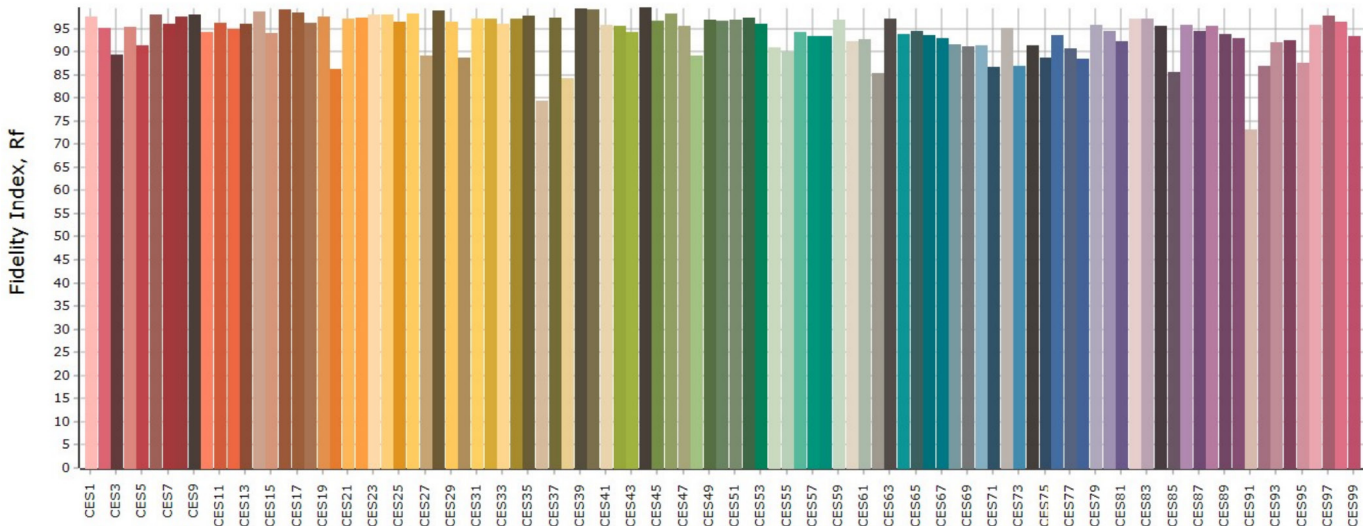
| |
|-------------------------------------|
| Rf 94,0 Fidelity index Rf |
| Rg 102,6 Gamut index Rg |

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 94,8 | 0,3% | 0,8% |
| 2 | 95,1 | 1,2% | 0,4% |
| 3 | 95,5 | 1,2% | 0,5% |
| 4 | 94,9 | -1,1% | -1,4% |
| 5 | 93,8 | -2,7% | -0,8% |
| 6 | 96,1 | 0,8% | 1,1% |
| 7 | 94,9 | 0,0% | 2,2% |
| 8 | 92,6 | 1,2% | 2,9% |
| 9 | 91,3 | 2,3% | 7,2% |
| 10 | 93,2 | 1,8% | 3,4% |
| 11 | 89,4 | 4,5% | 4,8% |
| 12 | 90,7 | 4,3% | 0,4% |
| 13 | 94,7 | 1,7% | -2,9% |
| 14 | 92,0 | 4,6% | -3,0% |
| 15 | 91,3 | 1,5% | -1,7% |
| 16 | 89,8 | 2,4% | -4,9% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Minimum Zoom, 5.600K

Measurements taken at 4.3 meters

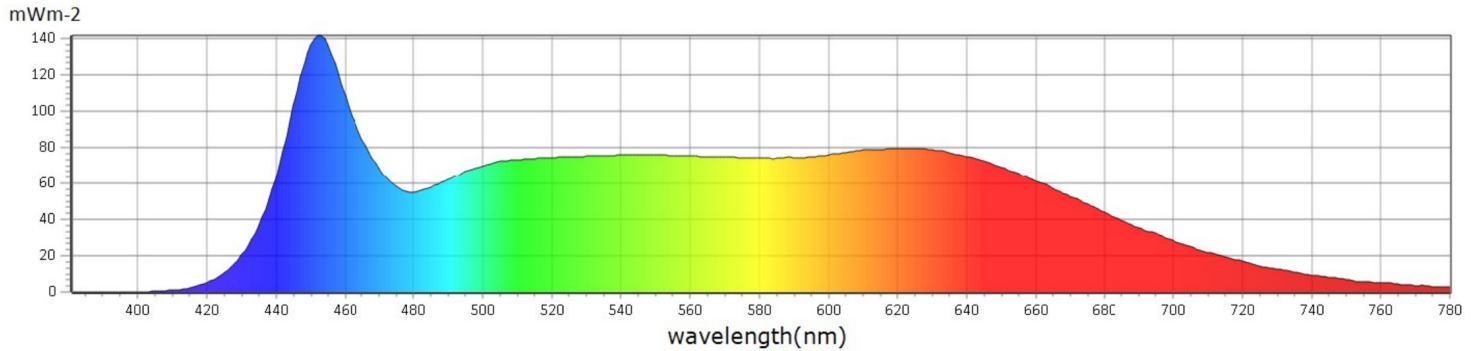
General

| | |
|-----------|--------|
| ● CCT | 5362 K |
| ● x | 0,3354 |
| ● y | 0,3357 |
| ● LambdaD | 576 nm |
| ● LambdaP | 451 nm |

Measurements

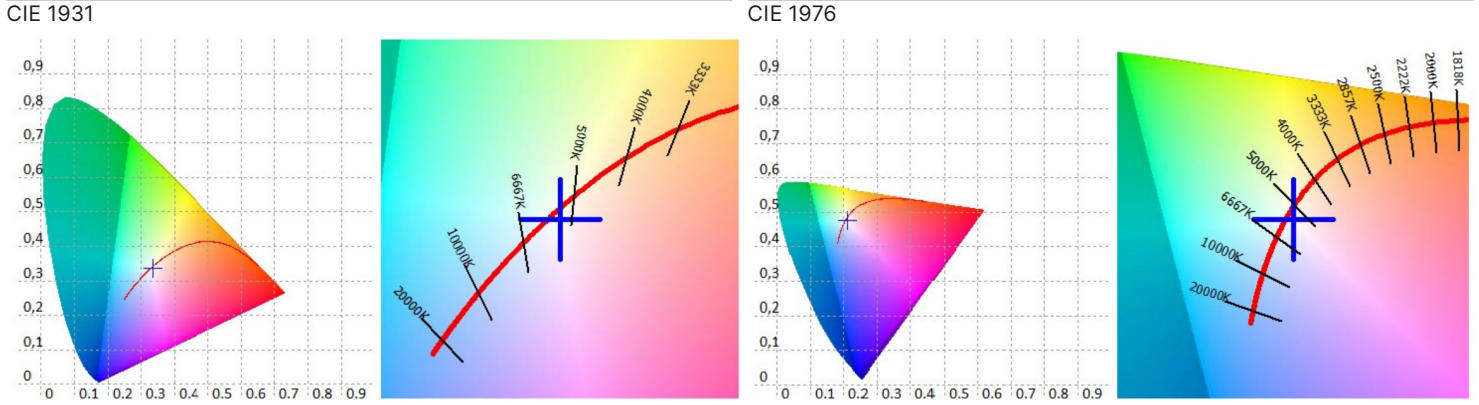
| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 5362 K | x10 : 0,3378 | delta-x : -0,0003 | LambdaD : 576 nm | PPFD : 89,47 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 2,23 | R3 : 97,4 | R10 : 95,9 |
| LUX : 5445 lx | y10 : 0,3390 | delta-y : -0,0082 | LambdaP : 451 nm | PFD : 94,88 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 20,20 | R4 : 96,7 | R11 : 94,1 |
| I-Time : 1400 us | u'10 : 0,2114 | delta-u' : 0,0030 | Purity : 1,33% | PFD-B : 21,72 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 95,2 | R5 : 96,3 | R12 : 81,8 |
| x : 0,3354 | v'10 : 0,4773 | delta-v' : -0,0042 | fc : 506,0 | PFD-G : 34,32 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 96,7 | R6 : 93,9 | R13 : 95,5 |
| y : 0,3357 | X : 5440,04 | Duv : -0,0041 | Rf : 93,8 | PFD-R : 33,43 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 98,4 | R7 : 98,1 | R14 : 98,1 |
| u' : 0,2110 | Y : 5445,07 | MEL : 5325 lx | Rg : 102,3 | PFD-UV : 0,0024 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 95,5 | R8 : 98,7 | R15 : 94,6 |
| v' : 0,4752 | Z : 5335,12 | LambdaPV : 141,6 | GAI : 97,6 | PFD-FR : 5,416 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 97,1 | R9 : 93,8 | |

Spectrum



Risalto M VariWhite +, Fresnel, Minimum Zoom, 5.600K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,5 | 97,1 | 97,4 | 96,7 | 96,3 | 93,9 | 98,1 | 98,7 | 93,8 | 95,9 | 94,1 | 81,8 | 95,5 | 98,1 | 94,6 |

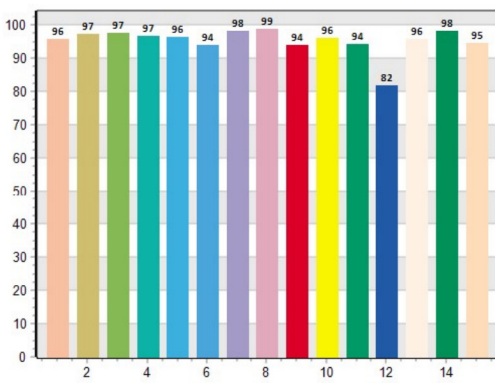
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,3 | 95,7 | 94,6 | 94,8 | 94,0 | 96,3 | 95,6 | 93,1 | 92,1 | 89,6 | 86,4 | 95,0 | 94,2 | 94,1 | 86,4 | 94,4 |

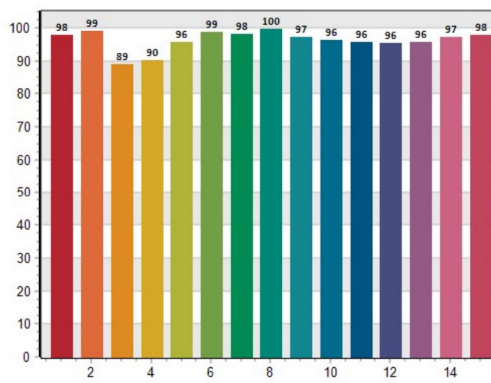
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,8 | 99,1 | 89,0 | 90,0 | 95,8 | 98,7 | 98,0 | 99,6 | 97,1 | 96,3 | 95,7 | 95,5 | 95,7 | 97,3 | 97,8 |

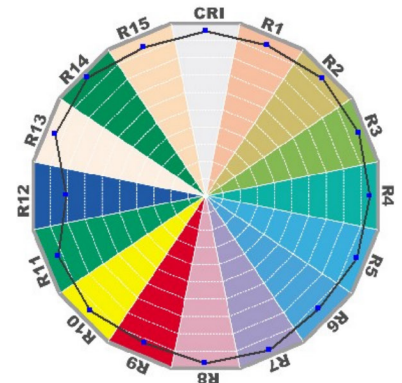
CRI: 96.71



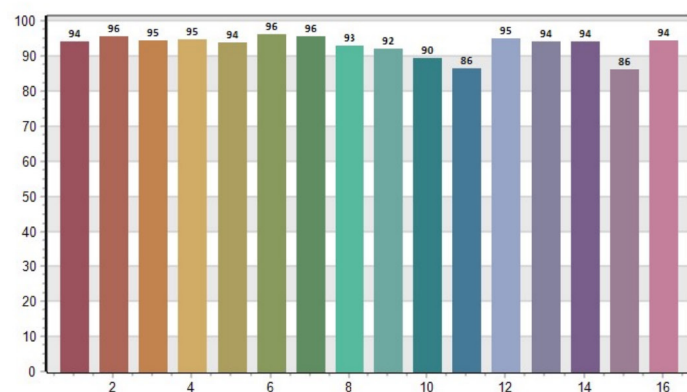
CQS: 95.23



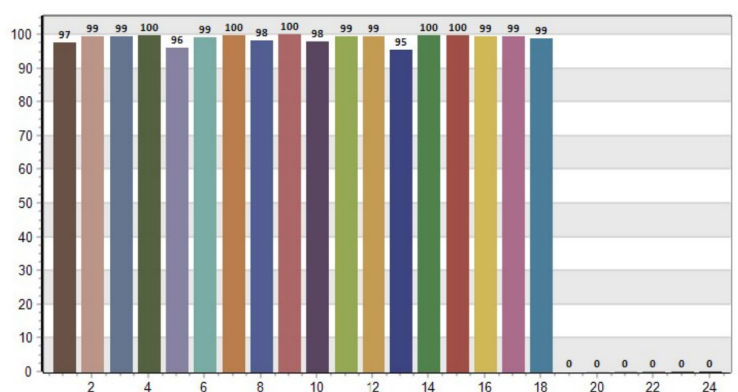
CRI-2



TM30: 93.81



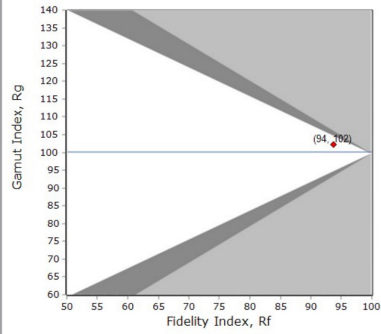
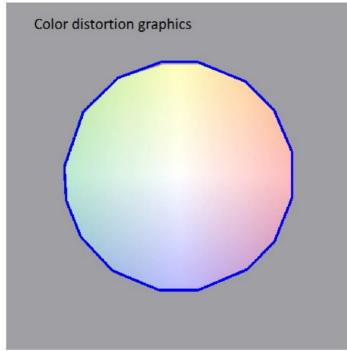
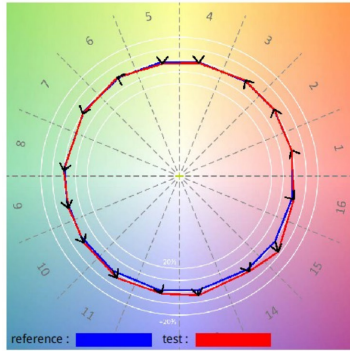
TLCI: 98.39



Risalto M VariWhite +, Fresnel, Minimum Zoom, 5.600K

Measurements taken at 4.3 meters

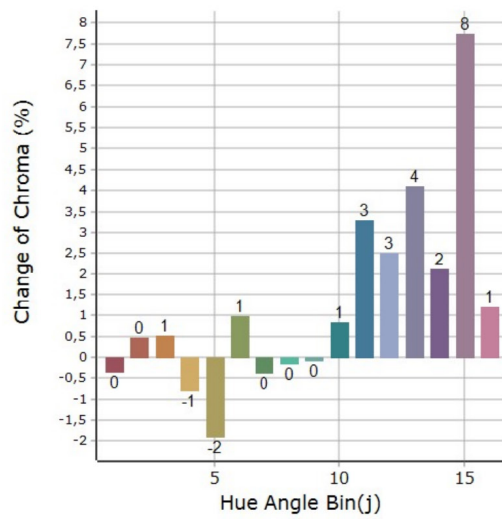
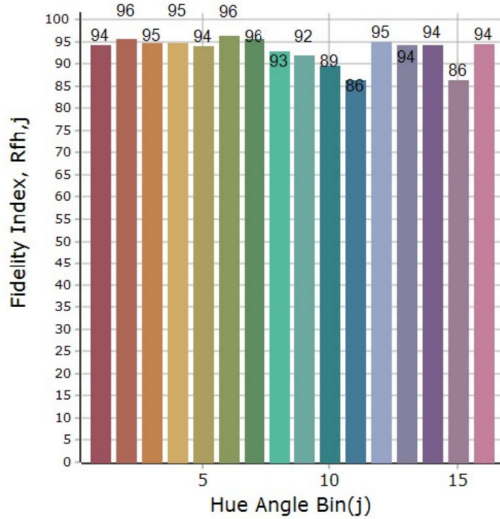
General Color Rendition



Rf 93,8
Fidelity index Rf

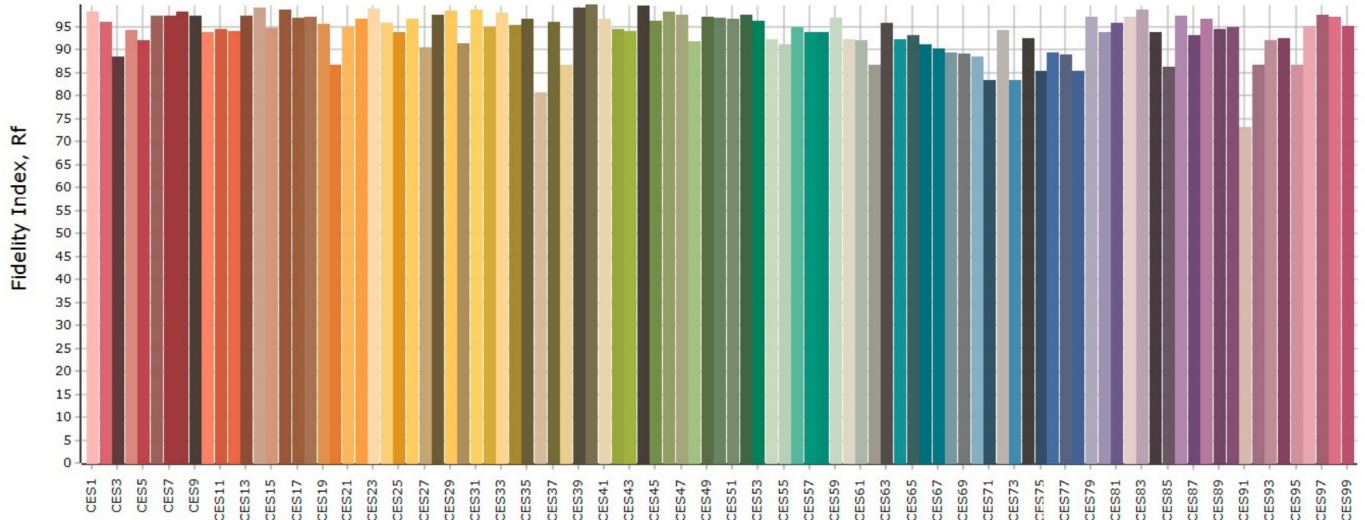
Rg 102,3
Gamut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 94,2 | -0,3% | 0,6% |
| 2 | 95,6 | 0,5% | 1,3% |
| 3 | 94,6 | 0,5% | 1,2% |
| 4 | 94,8 | -0,8% | 0,1% |
| 5 | 93,9 | -1,9% | 0,3% |
| 6 | 96,3 | 1,0% | 1,0% |
| 7 | 95,6 | -0,4% | 1,8% |
| 8 | 92,9 | -0,1% | 3,2% |
| 9 | 92,0 | -0,1% | 6,4% |
| 10 | 89,5 | 0,8% | 5,9% |
| 11 | 86,4 | 3,3% | 6,9% |
| 12 | 95,0 | 2,5% | 1,5% |
| 13 | 94,2 | 4,1% | -0,1% |
| 14 | 94,1 | 2,1% | 0,1% |
| 15 | 86,3 | 7,7% | -6,3% |
| 16 | 94,4 | 1,2% | -1,2% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Maximum Zoom, 5.600K

Measurements taken at 4.3 meters

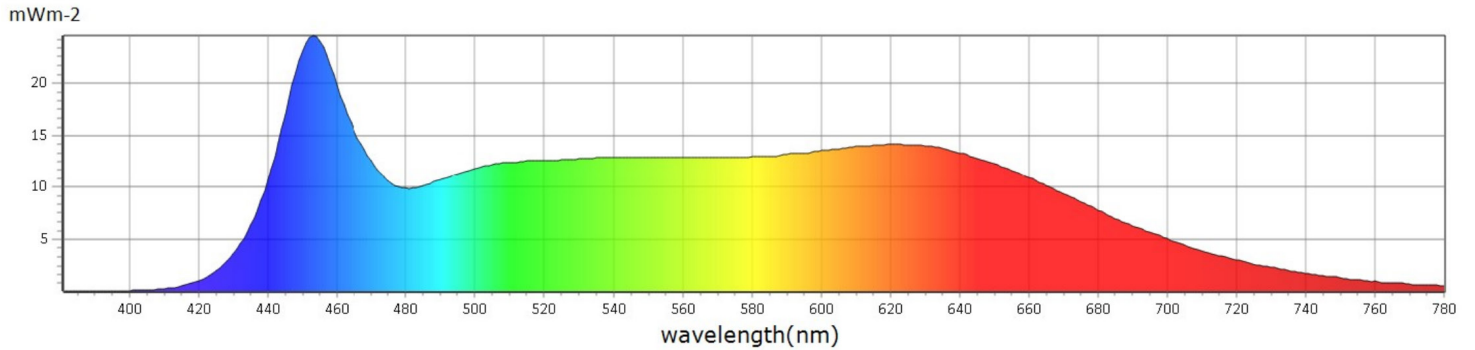
General

| | |
|-----------|--------|
| ● CCT | 5273 K |
| ● x | 0,3372 |
| ● y | 0,3328 |
| ● LambdaD | 639 nm |
| ● LambdaP | 452 nm |

Measurements

| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 5273 K | x10 : 0,3394 | delta-x : -0,0006 | LambdaD : 639 nm | PPFD : 15,65 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 2,22 | R3 : 98,0 | R10 : 92,8 |
| LUX : 942,6 lx | y10 : 0,3365 | delta-y : -0,0129 | LambdaP : 452 nm | PFD : 16,62 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 3,533 | R4 : 95,8 | R11 : 92,9 |
| I-Time : 8400 us | u'10 : 0,2135 | delta-u' : 0,0047 | Purity : 1,02% | PFD-B : 3,810 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 94,9 | R5 : 94,4 | R12 : 82,1 |
| x : 0,3372 | v'10 : 0,4762 | delta-v' : -0,0067 | fc : 87,60 | PFD-G : 5,903 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 95,6 | R6 : 92,4 | R13 : 93,4 |
| y : 0,3328 | X : 955,16 | Duv : -0,0065 | Rf : 93,5 | PFD-R : 5,932 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 98,3 | R7 : 97,7 | R14 : 98,2 |
| u' : 0,2135 | Y : 942,60 | MEL : 923,8 lx | Rg : 102,7 | PFD-UV : 0,0010 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 93,6 | R8 : 97,5 | R15 : 92,2 |
| v' : 0,4740 | Z : 934,45 | LambdaPV : 24,56 | GAI : 99,0 | PFD-FR : 0,9687 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 95,4 | R9 : 89,6 | |

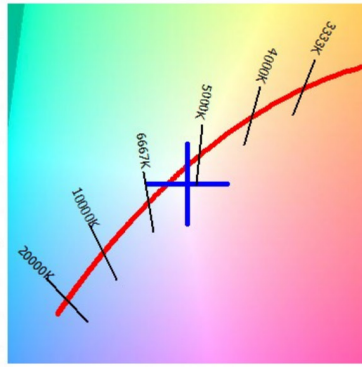
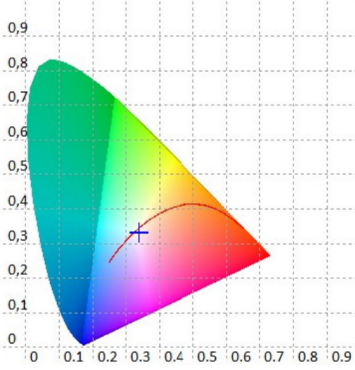
Spectrum



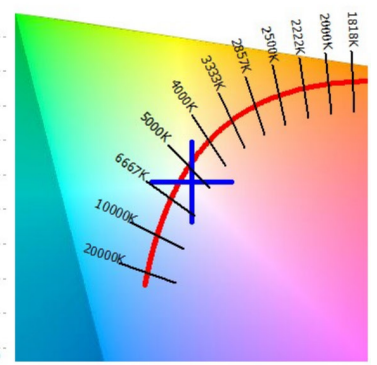
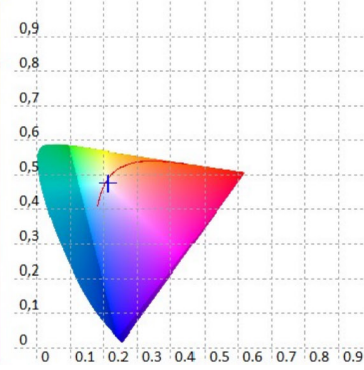
Risalto M VariWhite +, Fresnel, Maximum Zoom, 5.600K

Measurements taken at 4.3 meters

CIE 1931



CIE 1976



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,6 | 95,4 | 98,0 | 95,8 | 94,4 | 92,4 | 97,7 | 97,5 | 89,6 | 92,8 | 92,9 | 82,1 | 93,4 | 98,2 | 92,2 |

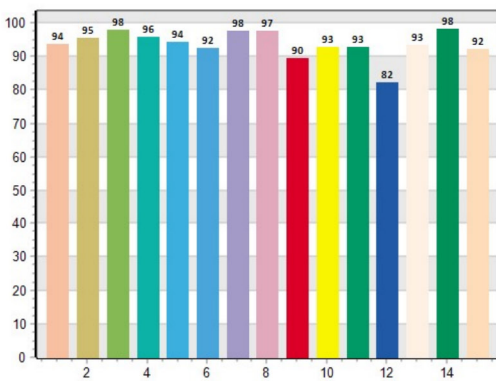
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,6 | 94,4 | 94,2 | 94,7 | 93,9 | 96,0 | 95,0 | 91,7 | 91,5 | 89,4 | 86,7 | 95,0 | 94,2 | 94,0 | 86,4 | 93,8 |

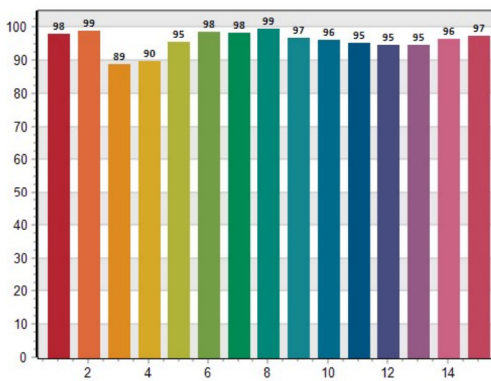
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,8 | 99,0 | 88,9 | 89,8 | 95,4 | 98,5 | 98,2 | 99,5 | 96,8 | 96,2 | 95,3 | 94,7 | 94,6 | 96,5 | 97,3 |

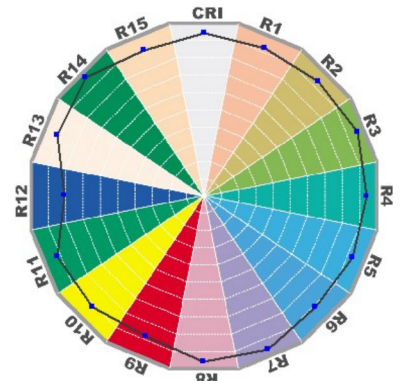
CRI: 95.59



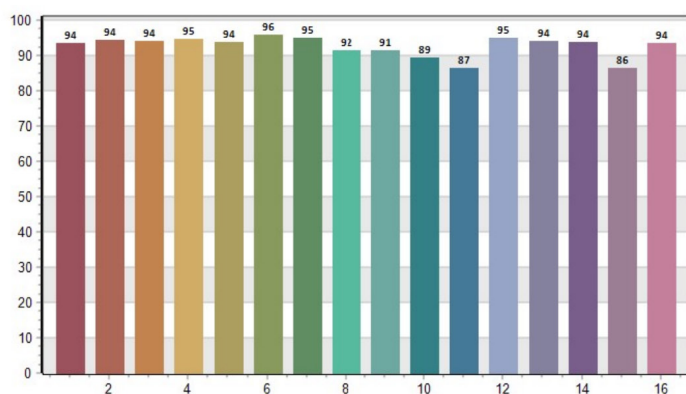
CQS: 94.95



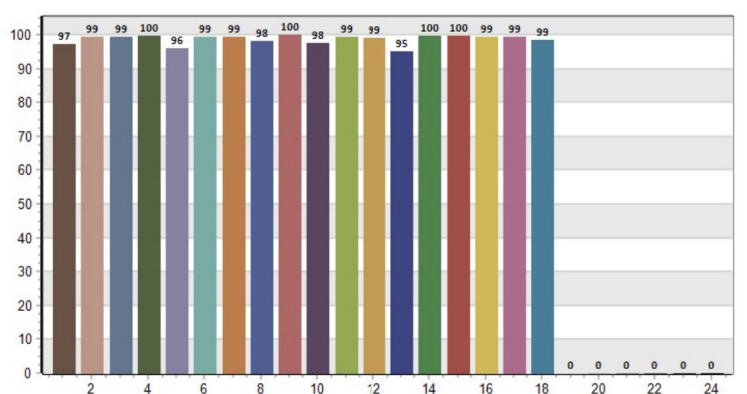
CRI-2



TM30: 93.48



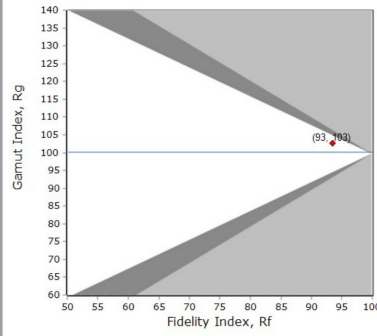
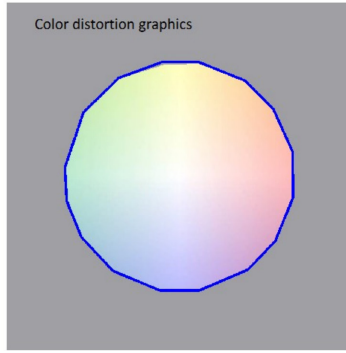
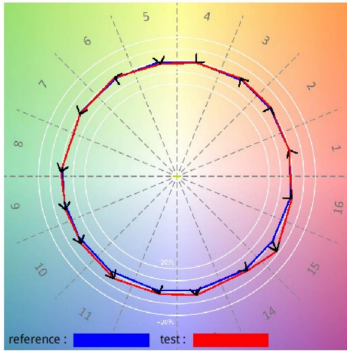
TLCI: 98.28



Risalto M VariWhite +, Fresnel, Maximum Zoom, 5.600K

Measurements taken at 4.3 meters

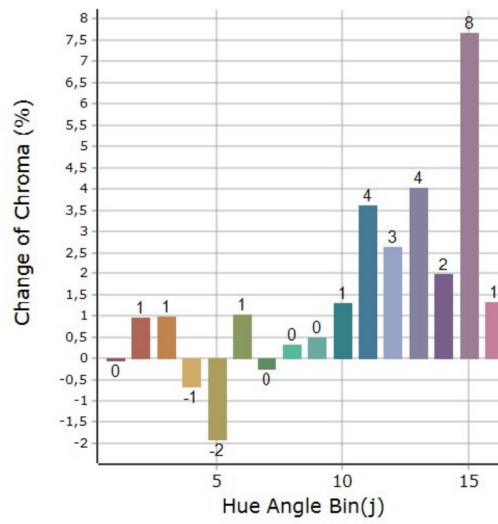
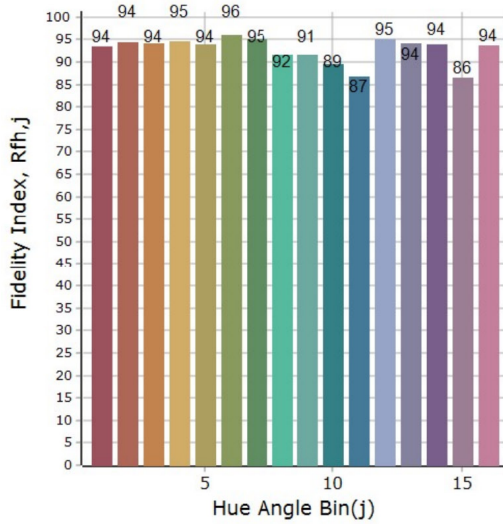
General Color Rendition



Rf 93,5
Fidelity index Rf

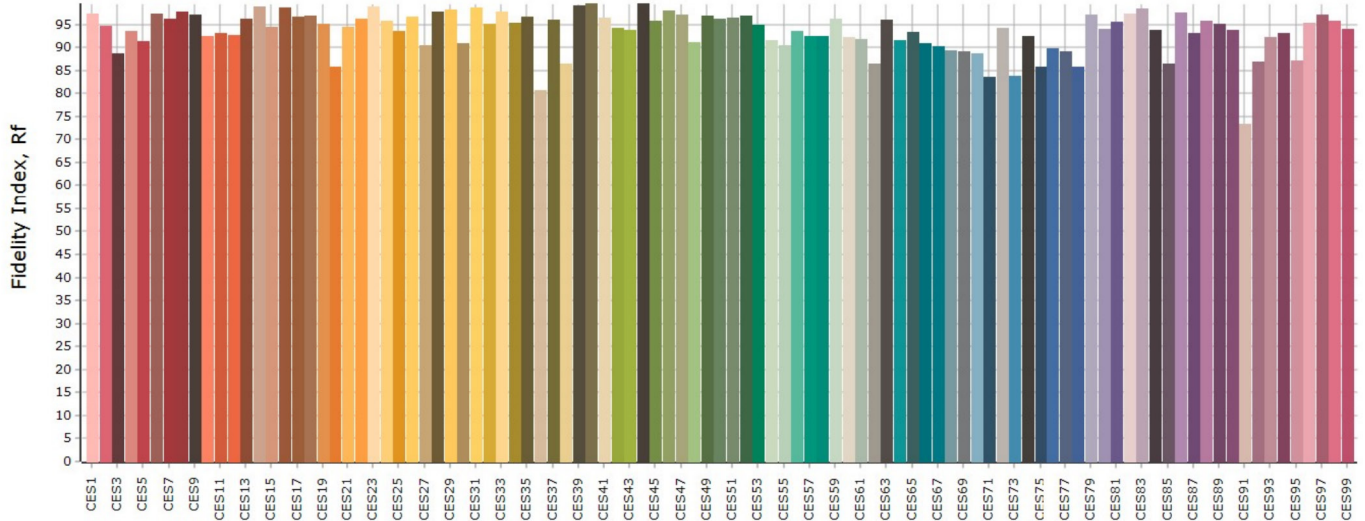
Rg 102,7
Gamut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 93,6 | 0,0% | 1,0% |
| 2 | 94,4 | 0,9% | 0,9% |
| 3 | 94,2 | 1,0% | 1,6% |
| 4 | 94,7 | -0,7% | -0,1% |
| 5 | 93,9 | -1,9% | 0,2% |
| 6 | 96,0 | 1,0% | 1,2% |
| 7 | 95,0 | -0,2% | 2,1% |
| 8 | 91,7 | 0,3% | 3,7% |
| 9 | 91,5 | 0,5% | 6,7% |
| 10 | 89,4 | 1,3% | 5,9% |
| 11 | 86,7 | 3,6% | 6,5% |
| 12 | 95,0 | 2,6% | 1,2% |
| 13 | 94,2 | 4,0% | -0,1% |
| 14 | 94,0 | 2,0% | 0,5% |
| 15 | 86,4 | 7,7% | -5,8% |
| 16 | 93,8 | 1,3% | -0,5% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Minimum Zoom, 6.500K

Measurements taken at 4.3 meters

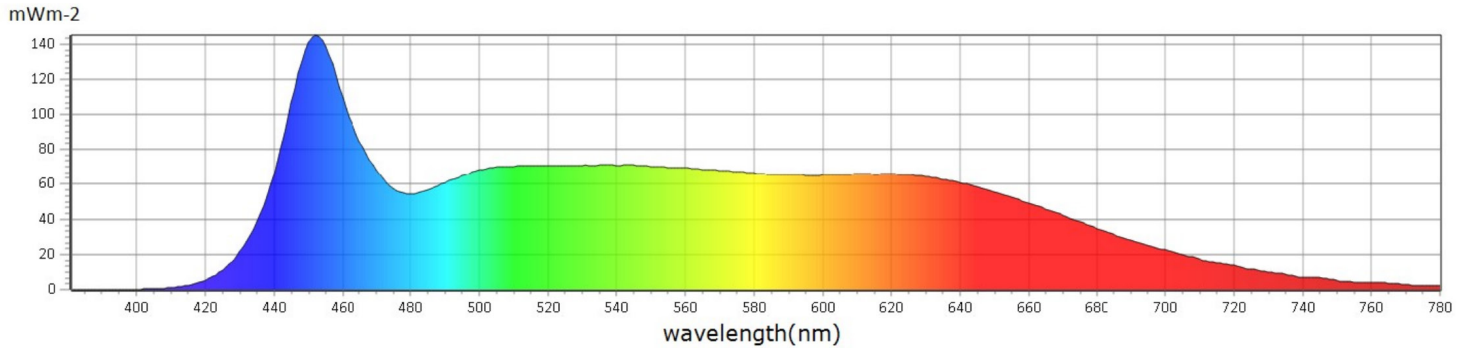
General

| | |
|-----------|--------|
| ● CCT | 6197 K |
| ● x | 0,3188 |
| ● y | 0,3255 |
| ● LambdaD | 484 nm |
| ● LambdaP | 451 nm |

Measurements

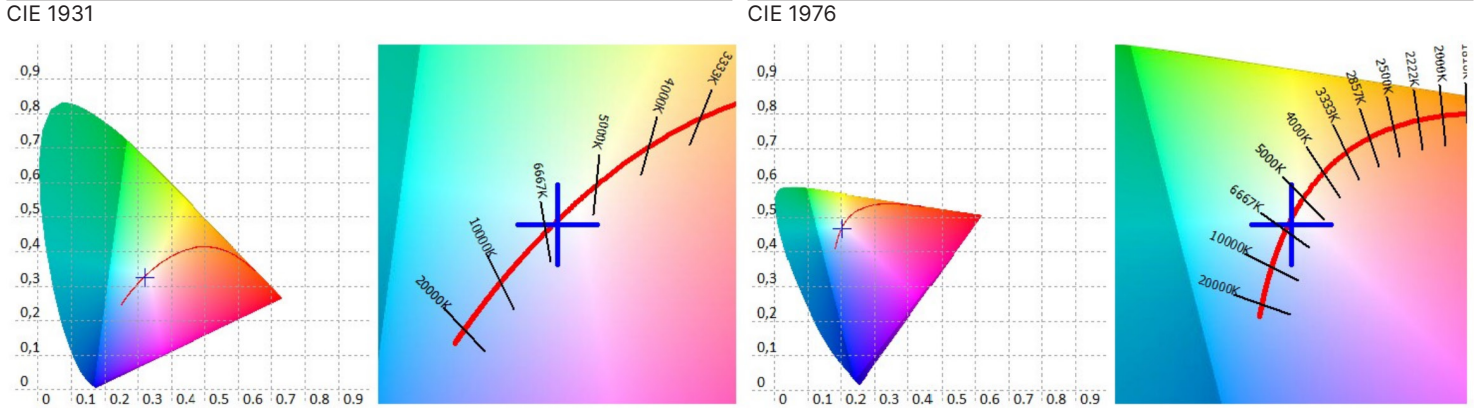
| | | | | | | | |
|------------------|---------------|--------------------|------------------|---|-------------|-----------|------------|
| CCT : 6197 K | x10 : 0,3213 | delta-x : 0,0002 | LambdaD : 484 nm | PPFD : 80,85 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | S/P : 2,37 | R3 : 97,0 | R10 : 97,5 |
| LUX : 4959 lx | y10 : 0,3295 | delta-y : -0,0030 | LambdaP : 451 nm | PFD : 85,13 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | IRR : 18,37 | R4 : 98,8 | R11 : 96,5 |
| I-Time : 1400 us | u'10 : 0,2036 | delta-u' : 0,0013 | Purity : 5,53% | PFD-B : 21,95 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | CQS : 94,8 | R5 : 97,2 | R12 : 77,9 |
| x : 0,3188 | v'10 : 0,4699 | delta-v' : -0,0016 | fc : 460,9 | PFD-G : 31,69 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | CRI : 97,4 | R6 : 94,0 | R13 : 97,7 |
| y : 0,3255 | X : 4857,01 | Duv : -0,0017 | Rf : 93,2 | PFD-R : 27,21 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | TLCI : 98,3 | R7 : 98,1 | R14 : 98,1 |
| u' : 0,2034 | Y : 4959,00 | MEL : 5233 lx | Rg : 101,0 | PFD-UV : 0,0031 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | R1 : 97,2 | R8 : 98,7 | R15 : 96,4 |
| v' : 0,4673 | Z : 5420,69 | LambdaPV : 145,1 | GAI : 99,3 | PFD-FR : 4,278 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ | R2 : 98,4 | R9 : 97,0 | |

Spectrum



Risalto M VariWhite +, Fresnel, Minimum Zoom, 6.500K

Measurements taken at 4.3 meters



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,2 | 98,4 | 97,0 | 98,8 | 97,2 | 94,0 | 98,1 | 98,7 | 97,0 | 97,5 | 96,5 | 77,9 | 97,7 | 98,1 | 96,4 |

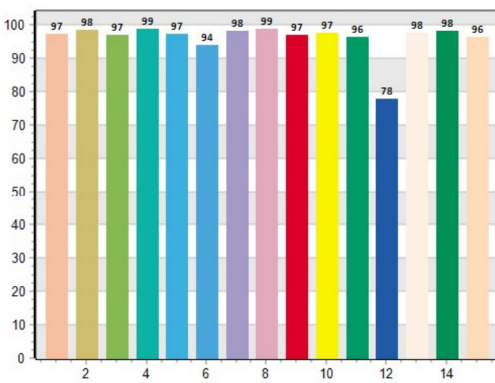
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,7 | 96,1 | 94,7 | 94,9 | 91,2 | 96,4 | 97,0 | 92,3 | 90,7 | 85,8 | 85,6 | 95,0 | 93,6 | 94,4 | 84,5 | 96,6 |

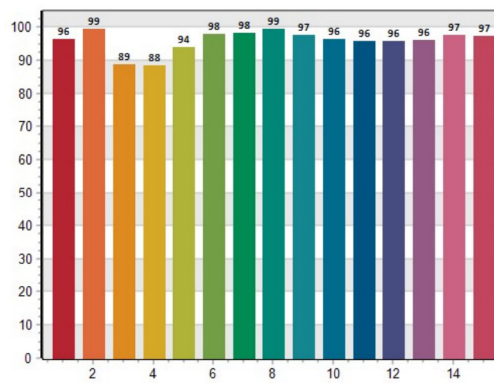
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,2 | 99,4 | 88,8 | 88,4 | 93,9 | 97,7 | 98,1 | 99,3 | 97,4 | 96,4 | 95,6 | 95,7 | 96,1 | 97,5 | 97,2 |

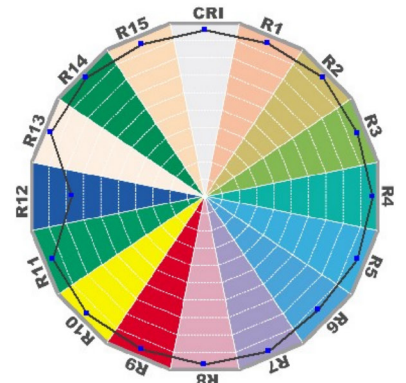
CRI: 97.44



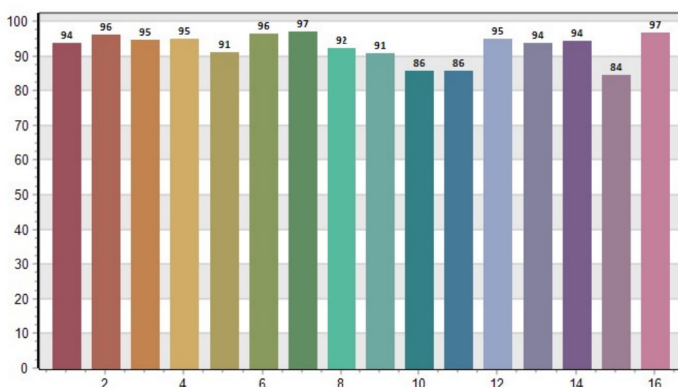
CQS: 94.79



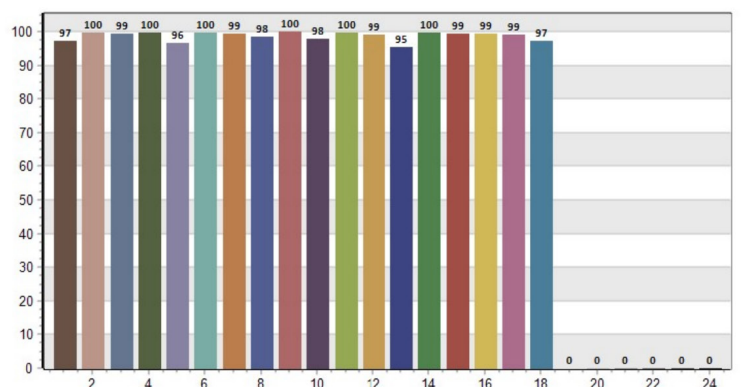
CRI-2



TM30: 93.20



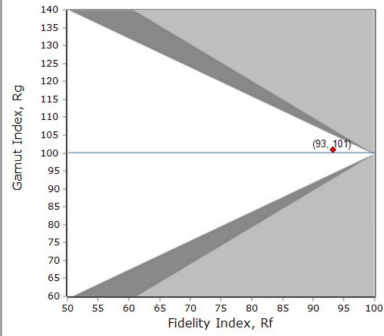
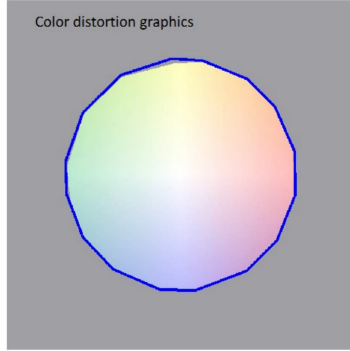
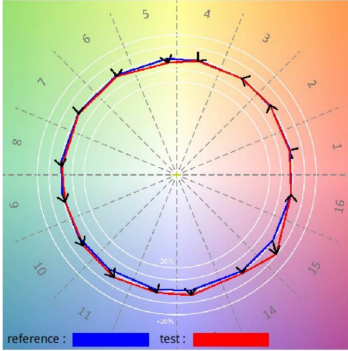
TLCI: 98.27



Risalto M VariWhite +, Fresnel, Minimum Zoom, 6.500K

Measurements taken at 4.3 meters

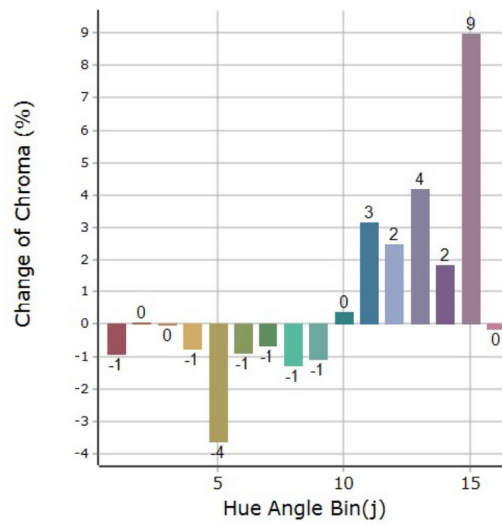
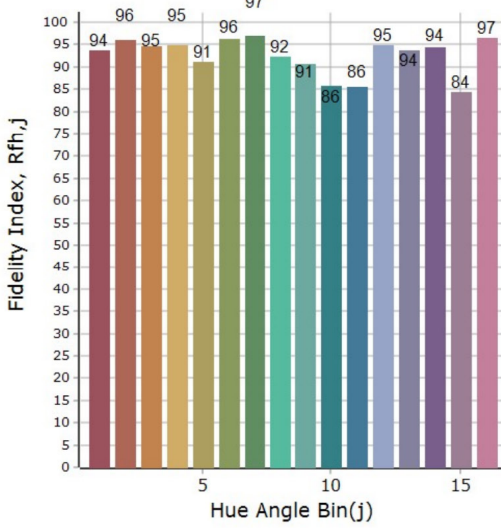
General Color Rendition



Rf 93,2
Fidelity index Rf

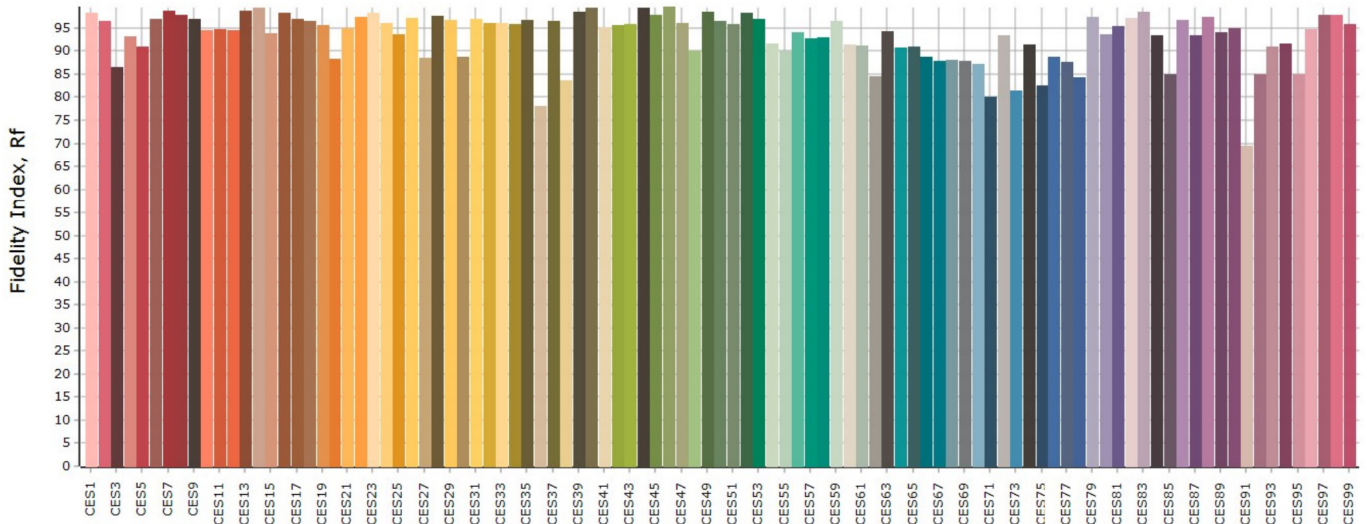
Rg 101,0
Gamut index Rg

Color Rendition by Hue



| | | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| Hue Bin | Rf | Chroma | Hue |
| 1 | 93,7 | -0,9% | 0,5% |
| 2 | 96,0 | 0,0% | 1,3% |
| 3 | 94,7 | 0,0% | 1,0% |
| 4 | 94,9 | -0,8% | 0,4% |
| 5 | 91,2 | -3,6% | -0,5% |
| 6 | 96,4 | -0,9% | 0,7% |
| 7 | 97,0 | -0,7% | 1,1% |
| 8 | 92,3 | -1,3% | 3,6% |
| 9 | 90,7 | -1,1% | 7,2% |
| 10 | 85,8 | 0,4% | 8,1% |
| 11 | 85,6 | 3,2% | 7,6% |
| 12 | 95,0 | 2,5% | 1,6% |
| 13 | 93,6 | 4,2% | -0,4% |
| 14 | 94,4 | 1,8% | -0,7% |
| 15 | 84,5 | 9,0% | -8,2% |
| 16 | 96,6 | -0,2% | 0,0% |

Color Fidelity by Sample



Risalto M VariWhite +, Fresnel, Maximum Zoom, 6.500K

Measurements taken at 4.3 meters

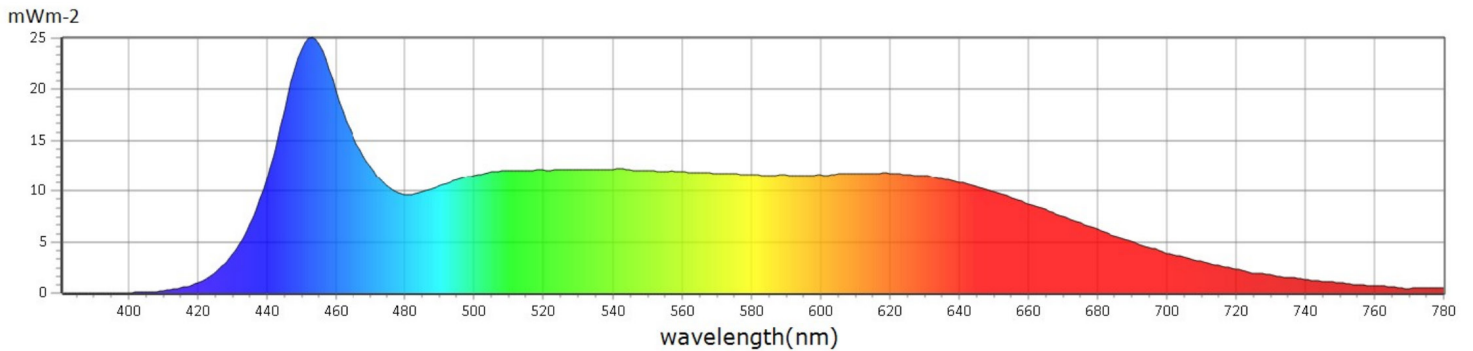
General

| | |
|-----------|--------|
| ● CCT | 6112 K |
| ● x | 0,3205 |
| ● y | 0,3232 |
| ● LambdaD | 481 nm |
| ● LambdaP | 452 nm |

Measurements

| | | | | | | | |
|------------------|---------------|--------------------|------------------|--|-------------|-----------|------------|
| CCT : 6112 K | x10 : 0,3228 | delta-x : 0,0005 | LambdaD : 481 nm | PPFD : 14,15 $\mu\text{molm}^{-2}\text{s}^{-1}$ | S/P : 2,37 | R3 : 97,5 | R10 : 96,0 |
| LUX : 860,1 lx | y10 : 0,3275 | delta-y : -0,0067 | LambdaP : 452 nm | PFD : 14,91 $\mu\text{molm}^{-2}\text{s}^{-1}$ | IRR : 3,213 | R4 : 97,6 | R11 : 95,2 |
| I-Time : 8400 us | u'10 : 0,2055 | delta-u' : 0,0030 | Purity : 5,26% | PFD-B : 3,843 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CQS : 94,7 | R5 : 96,0 | R12 : 78,7 |
| x : 0,3205 | v'10 : 0,4690 | delta-v' : -0,0035 | fc : 79,94 | PFD-G : 5,464 $\mu\text{molm}^{-2}\text{s}^{-1}$ | CRI : 96,7 | R6 : 93,4 | R13 : 95,5 |
| y : 0,3232 | X : 853,02 | Duv : -0,0038 | Rf : 93,0 | PFD-R : 4,843 $\mu\text{molm}^{-2}\text{s}^{-1}$ | TLCI : 98,2 | R7 : 98,0 | R14 : 98,1 |
| u' : 0,2056 | Y : 860,11 | MEL : 908,8 lx | Rg : 101,5 | PFD-UV : 0,0003 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R1 : 95,4 | R8 : 98,5 | R15 : 94,3 |
| v' : 0,4664 | Z : 948,04 | LambdaPV : 25,07 | GAI : 100,6 | PFD-FR : 0,7591 $\mu\text{molm}^{-2}\text{s}^{-1}$ | R2 : 97,1 | R9 : 93,7 | |

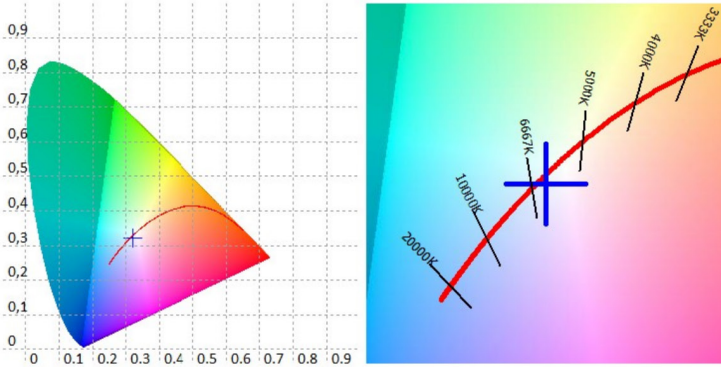
Spectrum



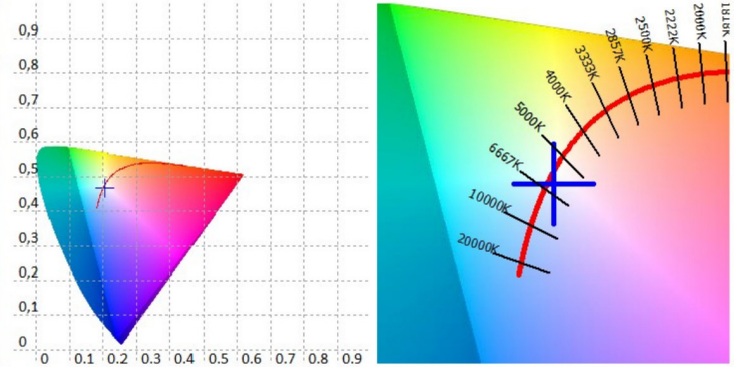
Risalto M VariWhite +, Fresnel, Maximum Zoom, 6.500K

Measurements taken at 4.3 meters

CIE 1931



CIE 1976



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

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,4 | 97,1 | 97,5 | 97,6 | 96,0 | 93,4 | 98,0 | 98,5 | 93,7 | 96,0 | 95,2 | 78,7 | 95,5 | 98,1 | 94,3 |

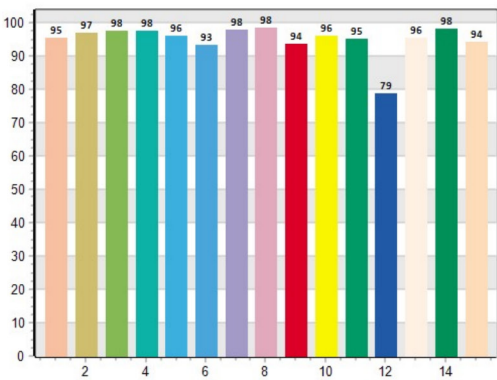
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,3 | 95,1 | 94,5 | 94,9 | 91,0 | 96,1 | 96,5 | 91,2 | 90,2 | 87,3 | 85,0 | 95,0 | 93,7 | 94,3 | 84,7 | 95,9 |

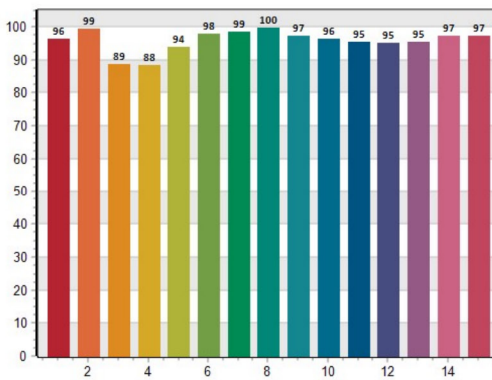
CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,4 | 99,4 | 88,8 | 88,3 | 93,9 | 98,0 | 98,5 | 99,7 | 97,1 | 96,4 | 95,5 | 95,2 | 95,3 | 97,2 | 97,1 |

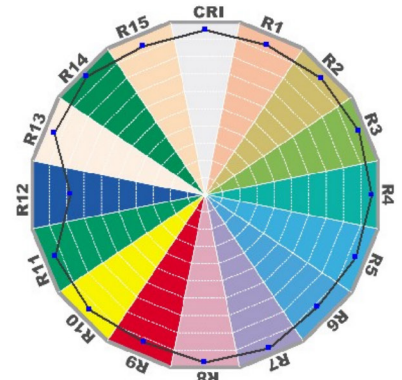
CRI: 96.67



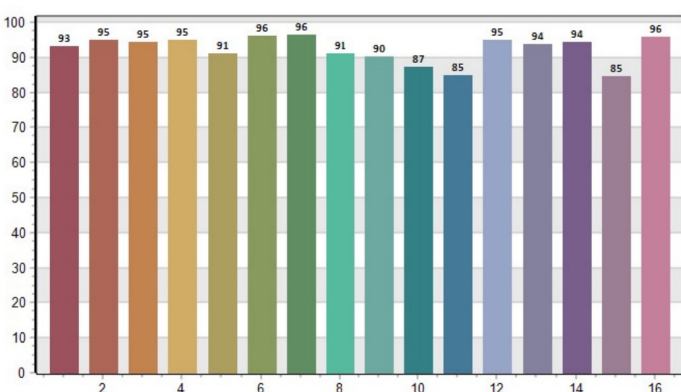
CQS: 94.70



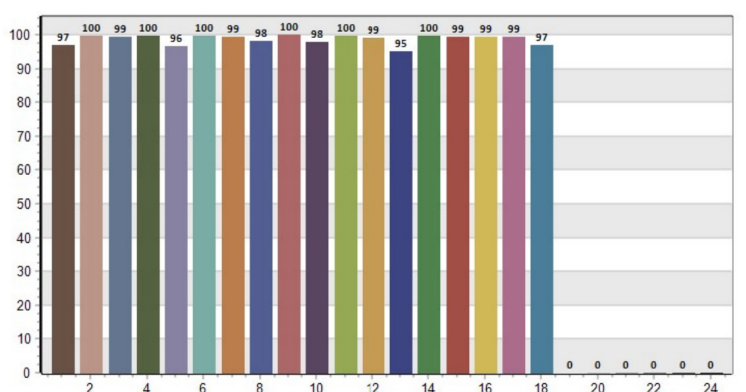
CRI-2



TM30: 92.98



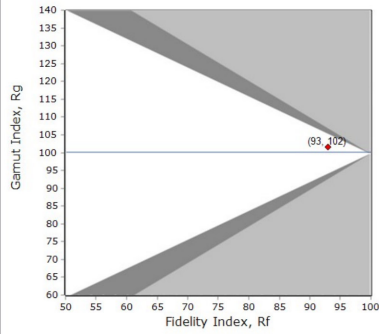
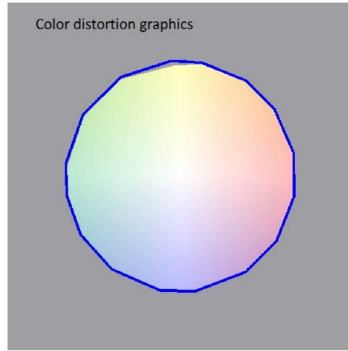
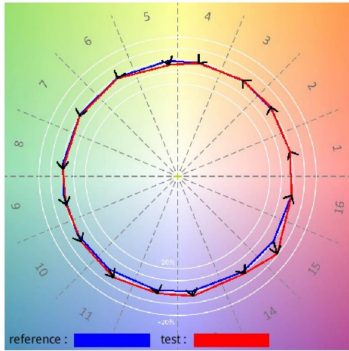
TLCI: 98.23



Risalto M VariWhite +, Fresnel, Maximum Zoom, 6.500K

Measurements taken at 4.3 meters

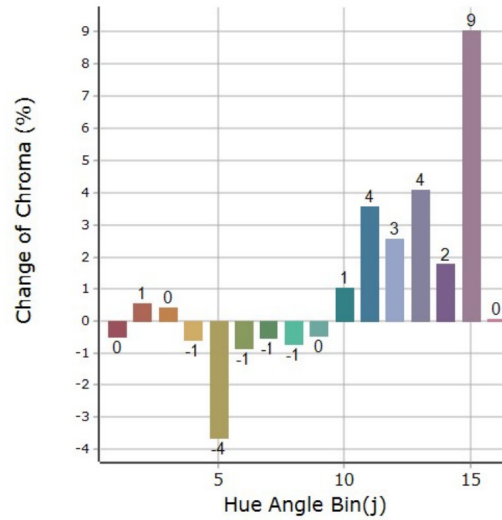
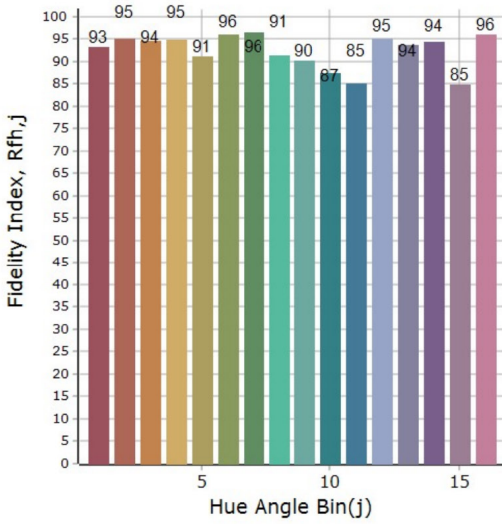
General Color Rendition



Rf 93,0
Fidelity index Rf

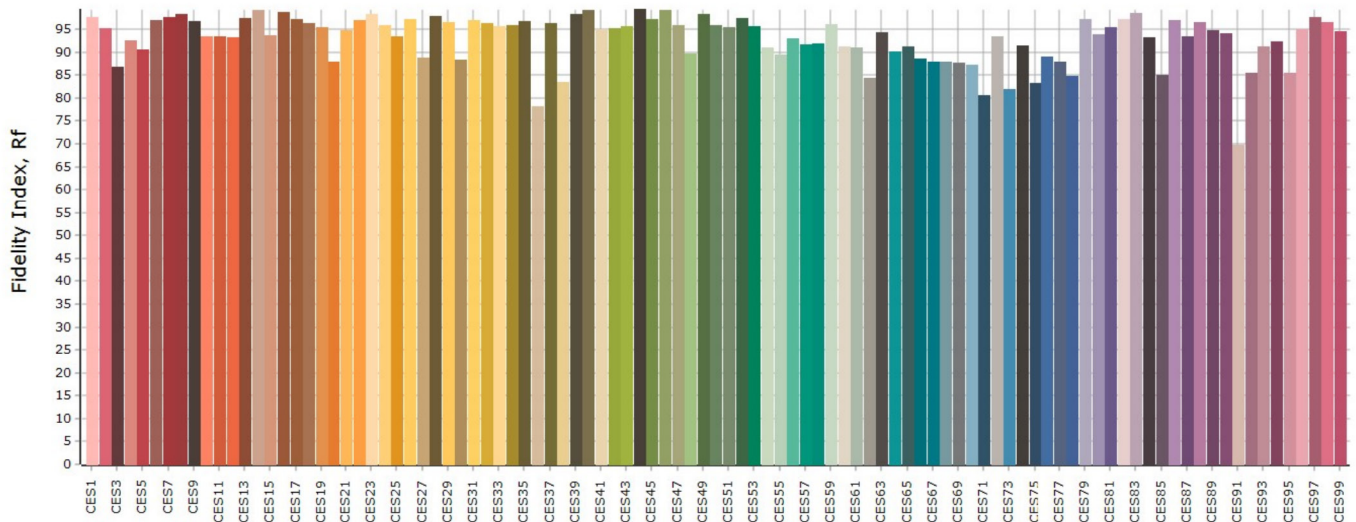
Rg 101,6
Gammut index Rg

Color Rendition by Hue



| Hue Bin | Rf | Graphic shifts (%) | |
|---------|------|--------------------|-------|
| | | Chroma | Hue |
| 1 | 93,3 | -0,5% | 0,9% |
| 2 | 95,1 | 0,5% | 1,5% |
| 3 | 94,5 | 0,4% | 0,8% |
| 4 | 94,9 | -0,6% | 0,3% |
| 5 | 91,1 | -3,6% | -0,6% |
| 6 | 96,1 | -0,9% | 1,0% |
| 7 | 96,4 | -0,5% | 1,4% |
| 8 | 91,3 | -0,7% | 4,2% |
| 9 | 90,2 | -0,5% | 7,5% |
| 10 | 87,4 | 1,0% | 7,2% |
| 11 | 85,0 | 3,6% | 7,6% |
| 12 | 94,9 | 2,6% | 1,4% |
| 13 | 93,7 | 4,1% | -0,3% |
| 14 | 94,3 | 1,8% | -0,1% |
| 15 | 84,8 | 9,0% | -7,3% |
| 16 | 95,9 | 0,1% | 0,6% |

Color Fidelity by Sample



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