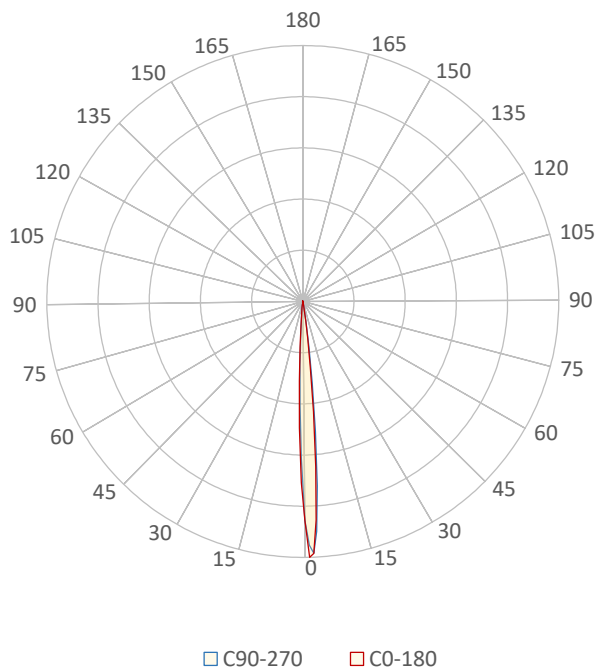


General Description

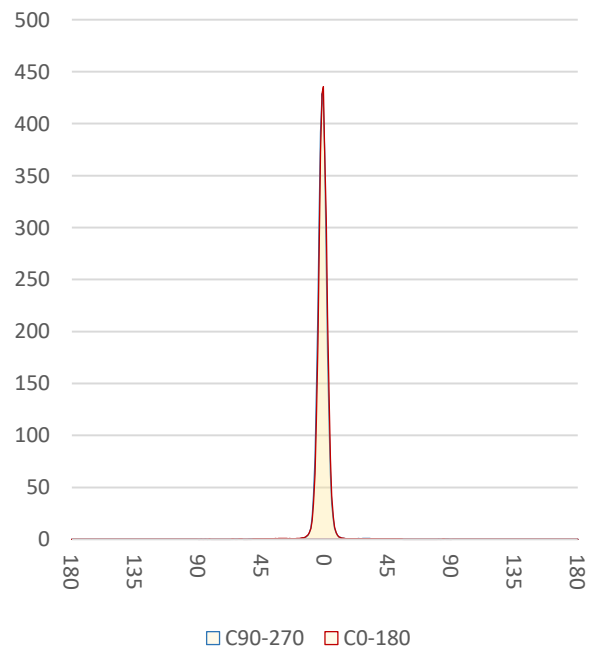
| | |
|-------------------|---------------------|
| Item number | FM-X-X-3095-Z |
| Date and time | 16-10-2020 13:55:44 |
| CCT (Kelvin) | 3064 K |
| Beam angle | 6,6° |
| Luminous flux | 9,49 lm |
| Efficiency | 9 lm/watt |
| Weighted energy | 1,1 kWh/1000h |
| Power factor | 1,0 |
| CRI (RA) | 93,0 |
| Fidelity index Rf | Rf 89,3 |
| Gammut index Rg | Rg 105,2 |
| Peak | 440 cd |



Polar diagram



Cartesian diagram



LM-79

Test Report

LM79-FOCUS-MICRO-3000K-CRI95-SPOT

| Beam details | 1m | 2m | 3m | 4m | 5m | | | | | | | | | | | | | | | | | | | |
|------------------------------------|----------|---------|---------|---------|------------------------|--------|--------|--------|--------|--------------------------|--------|--------|--------|--------|-------------------------------------|--------|--------|--------|--------|------------------------------------|--|--|--|--|
| Lux* | 372 lx | 93 lx | 41 lx | 23 lx | 15 lx | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| *measured at center of beam | | | | | | | | | | | | | | | | | | | | | | | | |
| Footcandles* | 34,6 fcd | 8,6 fcd | 3,8 fcd | 2,2 fcd | 1,4 fcd | | | | | | | | | | | | | | | | | | | |
| Beam width (meter) | 0,1 m | 0,2 m | 0,3 m | 0,5 m | 0,6 m | | | | | | | | | | | | | | | | | | | |
| Beam width (Feet) | 0,4 ft | 0,8 ft | 1,1 ft | 1,5 ft | 1,9 ft | | | | | | | | | | | | | | | | | | | |
| Beam intensities | | | | | | | | | | | | | | | | | | | | | | | | |
| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m | | | | | |
| 372lx | 93lx | 41lx | 23lx | 15lx | 10lx | 8lx | 6lx | 5lx | 4lx | 3lx | 3lx | 2lx | 2lx | 2lx | 1lx | 1lx | 1lx | 1lx | 1lx | | | | | |
| 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 | | | | | |
| 34,6fcd | 8,6fcd | 3,8fcd | 2,2fcd | 1,4fcd | 1fcd | 0,7fcd | 0,5fcd | 0,4fcd | 0,3fcd | 0,3fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd | | | | | |
| 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° | | | | | |
| 372 | 436 | 430 | 373 | 282 | 188 | 113 | 63 | 34 | 18 | 10 | 6 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | | | | | |
| 100% | 117% | 115% | 100% | 76% | 51% | 30% | 17% | 9% | 5% | 3% | 2% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | | | | | |
| 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° | | | | | |
| 372 | 415 | 429 | 392 | 315 | 222 | 139 | 79 | 42 | 21 | 11 | 6 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 100% | 111% | 115% | 105% | 84% | 60% | 37% | 21% | 11% | 6% | 3% | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | | | | | |
| 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° | | | | | |
| 372 | 309 | 215 | 135 | 78 | 42 | 22 | 12 | 6 | 4 | 3 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | |
| 100% | 83% | 58% | 36% | 21% | 11% | 6% | 3% | 2% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | | | | | |
| 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° | | | | | |
| 372 | 266 | 178 | 109 | 62 | 34 | 19 | 10 | 6 | 4 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | | | | | |
| 100% | 71% | 48% | 29% | 17% | 9% | 5% | 3% | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | | | | | |
| Beam angle 50% | | | | | Field angle 10% | | | | | Cutoff angle 2,5% | | | | | Intensity ratio in 120° cone | | | | | Intensity ratio in 90° cone | | | | |
| 6,6° | | | | | 12,5° | | | | | 17° | | | | | 97,6% | | | | | 95,9% | | | | |



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 info@cls-led.com
 www.cls-led.com

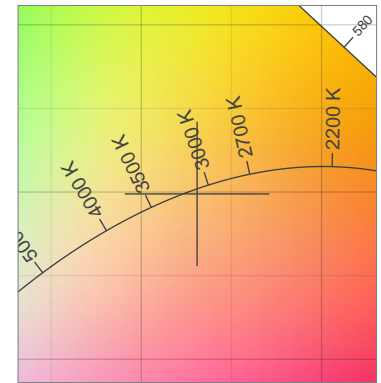
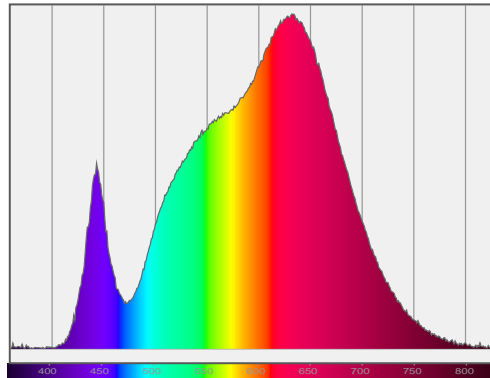
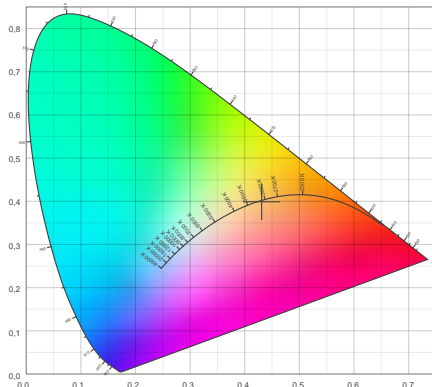
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LM-79

Test Report

LM79-FOCUS-MICRO-3000K-CRI95-SPOT

Color details



CIE 1931

x: 0,431



Spectra

CIE 1931 ZOOM

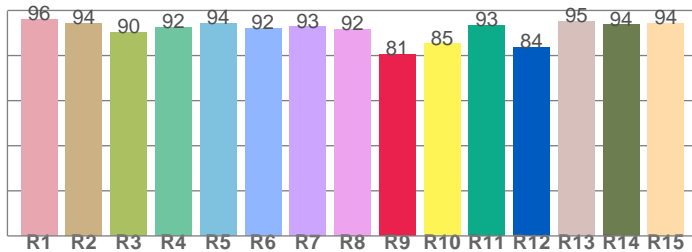
3064 K

y: 0,399

$\Delta uv: -0,0013$

CRI: 93,0 (R1-R8)

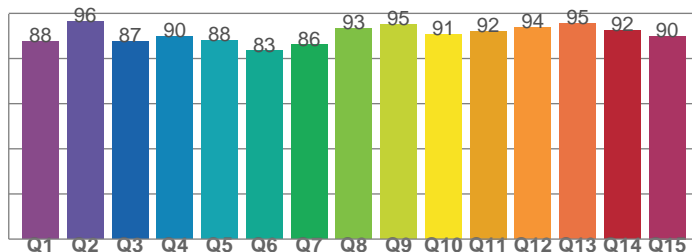
CRI values, R1-R8 are used to calculate final CRI value



| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 |
|------|------|------|------|------|------|------|------|
| 96,1 | 94,2 | 90,2 | 92,3 | 94,4 | 92,2 | 92,7 | 91,7 |
| R9 | R10 | R11 | R12 | R13 | R14 | R15 | |
| 80,6 | 85,2 | 93,2 | 83,5 | 95,3 | 93,6 | 94,1 | |

CQS: 89,9

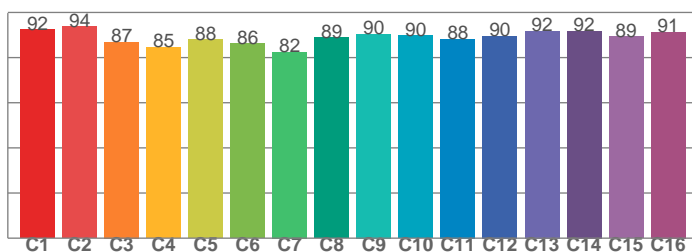
CQS values



| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 |
|------|------|------|------|------|------|------|------|
| 87,6 | 96,4 | 87,4 | 89,6 | 87,9 | 83,4 | 86,1 | 93,5 |
| Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | |
| 95,1 | 90,6 | 92,2 | 93,8 | 95,4 | 92,4 | 90,0 | |

TM30: 89,3

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



| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 |
|------|------|------|------|------|------|------|------|
| 92,4 | 93,8 | 86,8 | 84,6 | 88,0 | 86,3 | 82,4 | 88,8 |
| C9 | C10 | C11 | C12 | C13 | C14 | C15 | |
| 90,4 | 89,9 | 88,3 | 89,6 | 91,8 | 91,7 | 89,3 | |

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 |
| 3064 K | 93,0 | 80,6 | 89,3 | 105,2 | 89,9 | 0,431 | 0,399 | 0,249 | 0,346 | -0,0013 |



CLS LED BV
 info@cls-led.com
 www.cls-led.com

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Test Report

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TM30 details

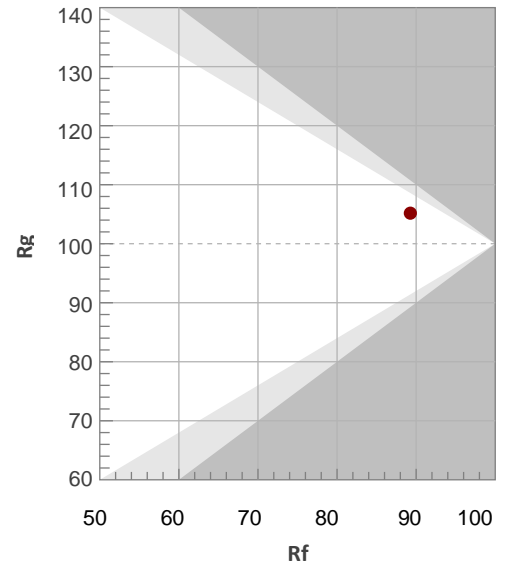
Rf 89,3

Fidelity index Rf

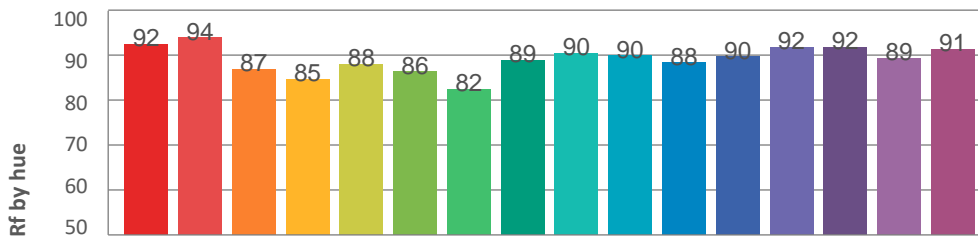
Rg 105,2

Gamut index Rg

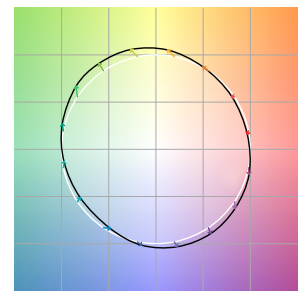
| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 92 | -2% | -3% |
| 2 | 94 | -2% | 2% |
| 3 | 87 | 0% | 7% |
| 4 | 85 | 6% | 8% |
| 5 | 88 | 9% | 6% |
| 6 | 86 | 9% | 0% |
| 7 | 82 | 7% | -9% |
| 8 | 89 | 3% | -7% |
| 9 | 90 | -2% | -6% |
| 10 | 90 | -5% | -2% |
| 11 | 88 | -3% | 6% |
| 12 | 90 | 3% | 5% |
| 13 | 92 | 6% | 2% |
| 14 | 92 | 7% | -1% |
| 15 | 89 | 4% | -5% |
| 16 | 91 | 2% | -7% |



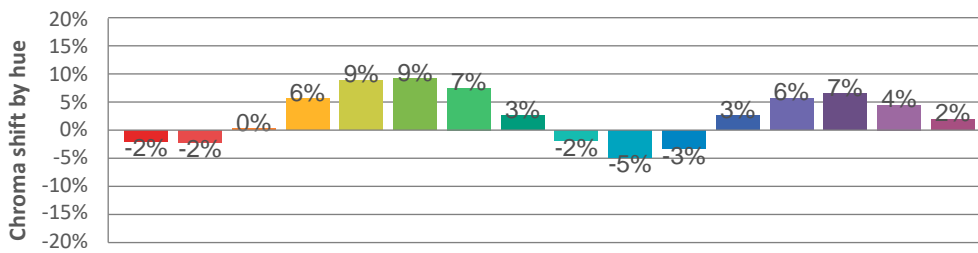
Hue binH



Color vector graphics



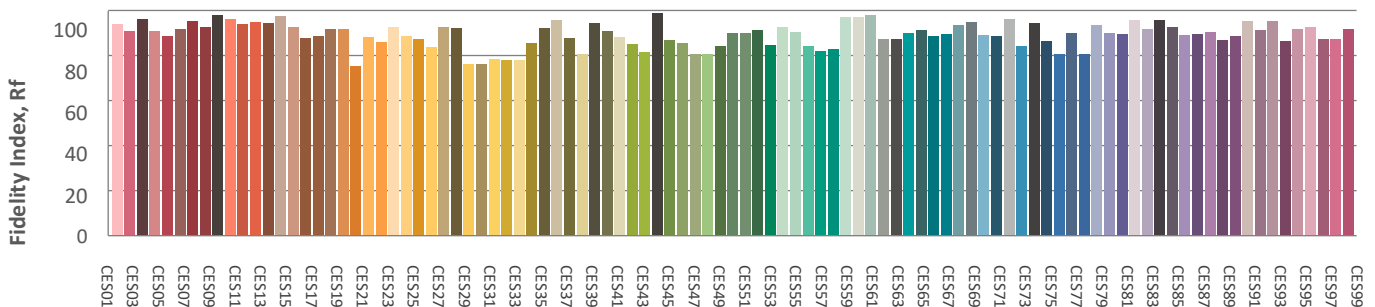
Hue bin



Color distortion graphics



Color Evaluation Sample



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info@cls-led.com
www.cls-led.com

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Test Report

LM79-FOCUS-MICRO-3000K-CRI95-SPOT

Glare Evaluation According to UGR

| | | | | | | | | | | |
|---|--|-----|-----|-----|-----|---|-----|-----|-----|-----|
| 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 | | | | | |
| Standard table | n/a | | | | n/a | | | | | |
| Correction summand | n/a | | | | n/a | | | | | |
| Corrected glare indices referring to 9,49lm total luminous flux | | | | | | | | | | |



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 info@cls-led.com
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