

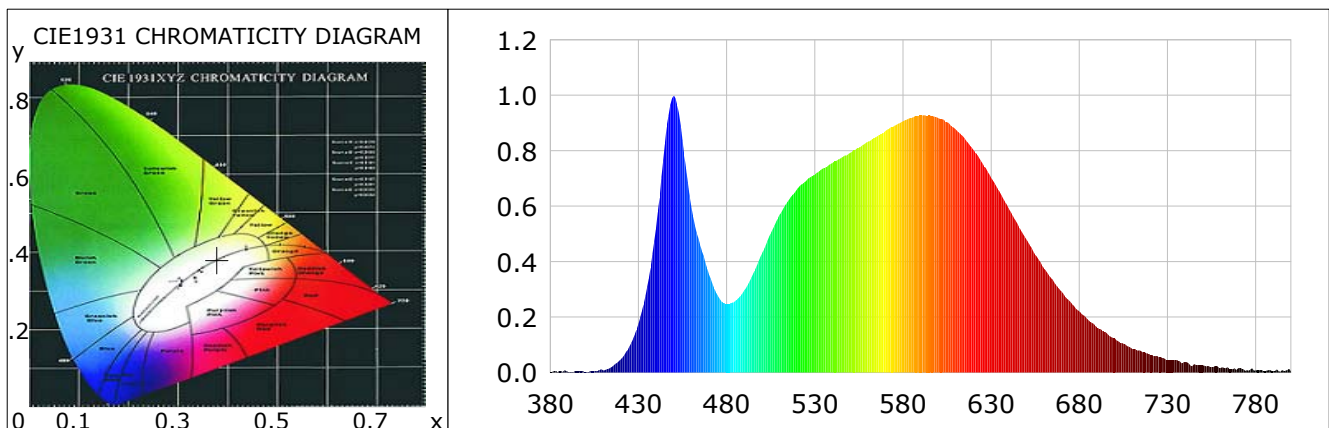
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 1

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3786$ $y=0.3819$ $u(u')=0.2219$ $v=0.3357$ $v'=0.5035$
 CCT: $T_c=4088K$ ($duv=0.00292$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.033$
 Peak Wavelength: 450.0nm Half Bandwidth: 23.6nm
 Dominant Wavelength: 577.2nm Color Purity: 0.282
 CRI: $R_a=81.6$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=81$ $R7=86$ $R8=64$
 $R9=5$ $R10=68$ $R11=79$ $R12=57$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.3$, $Q_f=82.5$, $Q_p=82.0$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=76$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=87$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1164.38 lm Efficiency: 110.47 lm/W Radiant Power: 3.491 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.80V Current: 0.0530A Power: 10.54W
 Power Factor: 0.9030 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer
 Stabilization Time: 30 Sec Photometric Condition: Sphere diameter: 1.50m, 4T
 Max of Signal: 44096 (4730) CCD Integration Time: 610.97 ms

Condition: $T_x=31.2^\circ C$, $T_i=0.0^\circ C$, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:41:55
 Inspector:

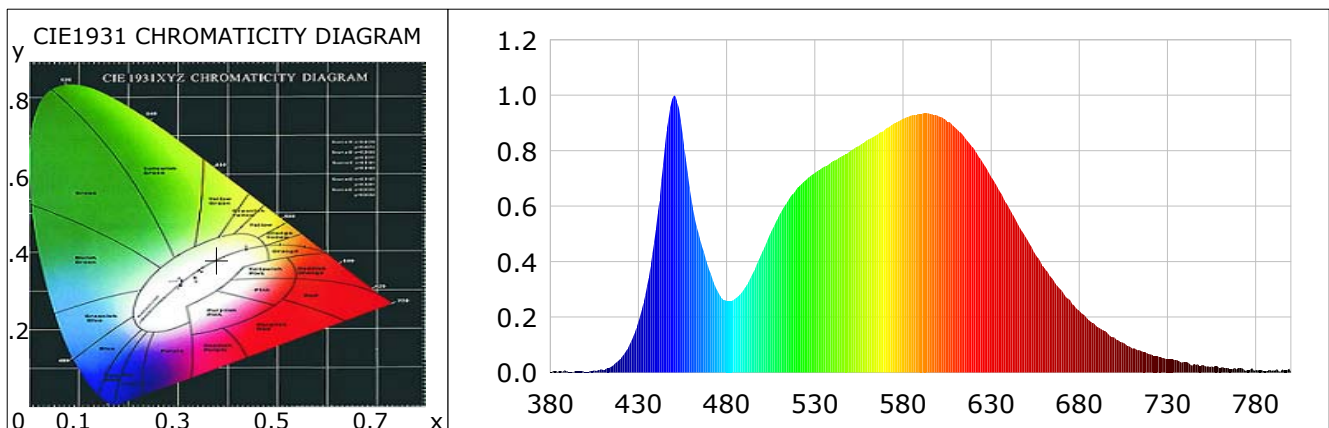
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 2

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3779$ $y=0.3809$ $u(u')=0.2218$ $v=0.3353$ $v'=0.5030$
 CCT: $T_c=4100K$ ($duv=0.00268$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.3nm Half Bandwidth: 24.5nm
 Dominant Wavelength: 577.3nm Color Purity: 0.277
 CRI: $R_a=81.7$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=5$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.5$, $Q_p=82.0$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=76$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1160.61 lm Efficiency: 108.37 lm/W Radiant Power: 3.489 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.90V Current: 0.0540A Power: 10.71W
 Power Factor: 0.9040 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer
 Stabilization Time: 30 Sec Photometric Condition: Sphere diameter: 1.50m, 4T
 Max of Signal: 44086 (4744) CCD Integration Time: 610.97 ms

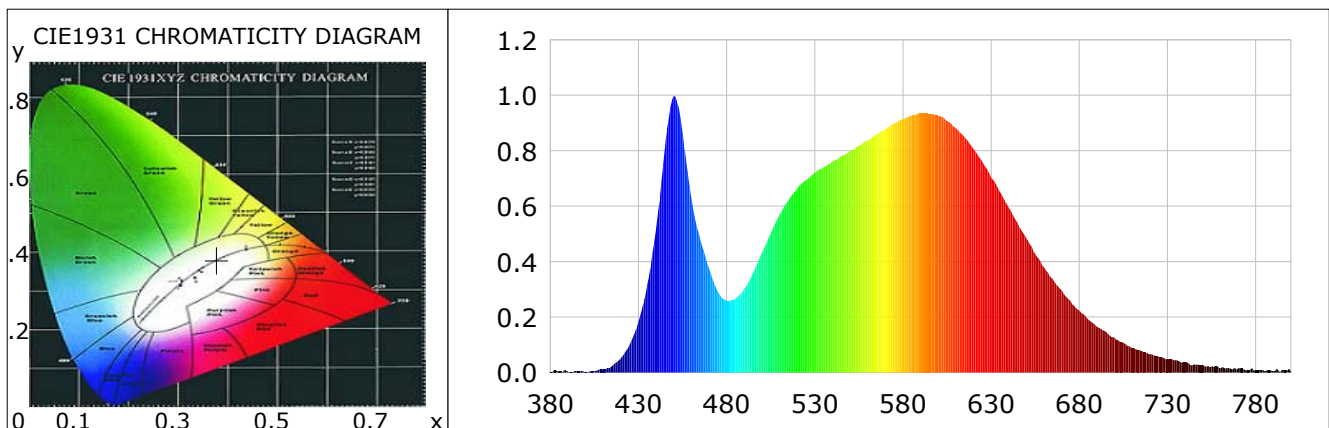
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 3

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3778$ $y=0.3808$ $u(u')=0.2218$ $v=0.3353$ $v'=0.5030$
 CCT: $T_c=4100K$ ($duv=0.00265$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.2nm Half Bandwidth: 24.6nm
 Dominant Wavelength: 577.3nm Color Purity: 0.277
 CRI: $R_a=81.7$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=5$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.4$, $Q_p=82.0$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=76$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1159.15 lm Efficiency: 108.33 lm/W Radiant Power: 3.485 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.80V Current: 0.0540A Power: 10.70W
 Power Factor: 0.9030 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 30 Sec
 Max of Signal: 44065 (4745)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.50m, 4T
 CCD Integration Time: 610.97 ms

Condition: $T_x=31.3^{\circ}C$, $T_i=0.0^{\circ}C$, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:47:33
 Inspector:

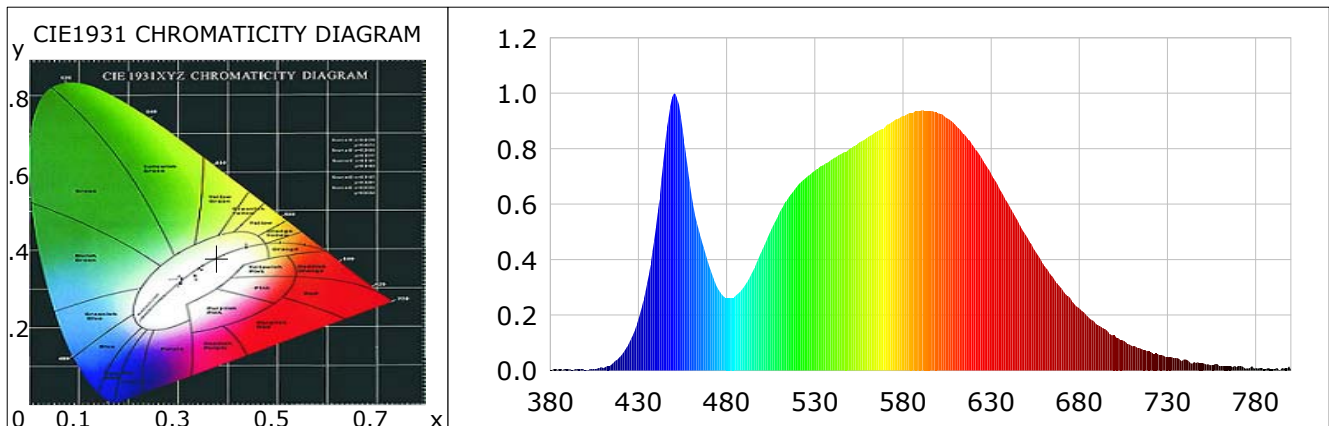
Lightsource Test Report

Product Information

Product Category: RFE-0410A-4000K-3LING Product Number: 4

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3777$ $y=0.3805$ $u(u')=0.2218$ $v=0.3352$ $v'(v')=0.5028$
 CCT: $T_c=4103K$ ($duv=0.00257$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.3nm Half Bandwidth: 24.9nm
 Dominant Wavelength: 577.3nm Color Purity: 0.276
 CRI: $R_a=81.7$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=6$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.4$, $Q_p=81.9$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=75$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1158.22 lm Efficiency: 107.34 lm/W Radiant Power: 3.484 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.90V Current: 0.0540A Power: 10.79W
 Power Factor: 0.9050 Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm
 Stabilization Time: 30 Sec
 Max of Signal: 44019 (4754)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.50m, 4T
 CCD Integration Time: 610.97 ms

Condition: $T_x=31.4^\circ C$, $T_i=0.0^\circ C$, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:50:00
 Inspector:

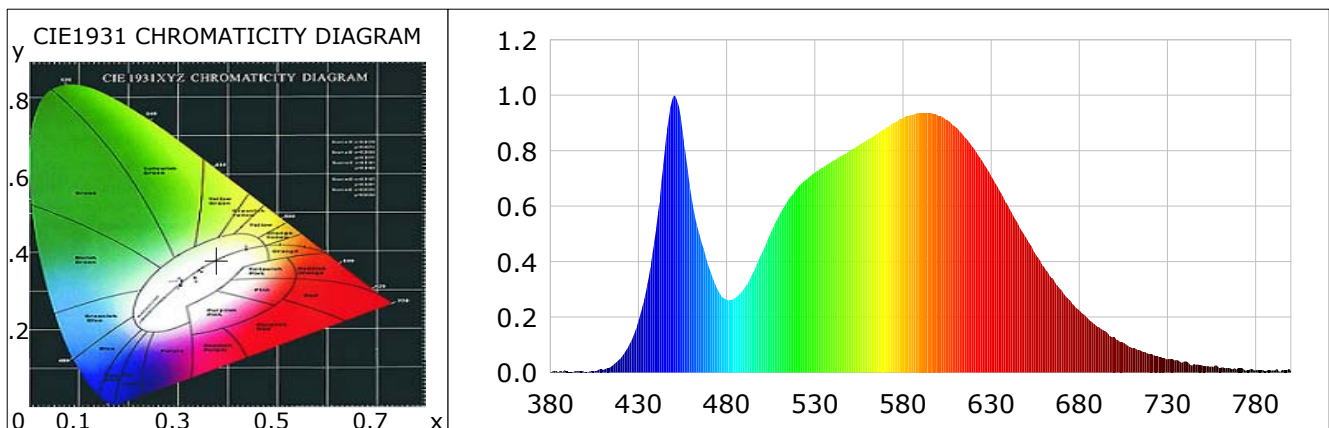
Lightsource Test Report

Product Information

Product Category: RFE-0410A-4000K-3LING Product Number: 5

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3777$ $y=0.3805$ $u(u')=0.2218$ $v=0.3352$ $v'(v')=0.5028$
 CCT: $T_c=4103K$ ($duv=0.00257$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.3nm Half Bandwidth: 24.8nm
 Dominant Wavelength: 577.3nm Color Purity: 0.275
 CRI: $R_a=81.7$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=5$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.4$, $Q_p=81.9$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=75$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1154.72 lm Efficiency: 107.32 lm/W Radiant Power: 3.474 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.90V Current: 0.0540A Power: 10.76W
 Power Factor: 0.9050 Frequency: 49.99Hz

Test Information

Scan Range: 380~800:1nm
 Stabilization Time: 30 Sec
 Max of Signal: 43900 (4754)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.50m, 4T
 CCD Integration Time: 610.97 ms

Condition: $T_x=31.4^\circ C$, $T_i=0.0^\circ C$, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:50:43
 Inspector:

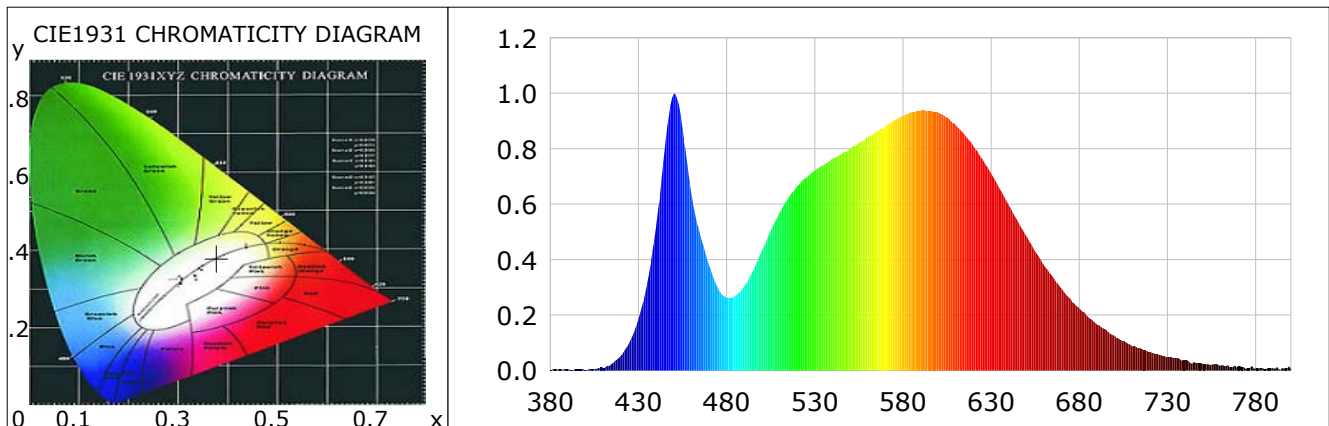
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 6

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3776$ $y=0.3804$ $u(u')=0.2218$ $v=0.3352$ $v'(v')=0.5028$
 CCT: $T_c=4103K$ ($duv=0.00253$) Color Ratio: R=0.177 G=0.789 B=0.034
 Peak Wavelength: 450.3nm Half Bandwidth: 24.9nm
 Dominant Wavelength: 577.3nm Color Purity: 0.275
 CRI: Ra= 81.8 TM30: Rf= 81, Rg= 95
 R1 =79 R2 =86 R3 =92 R4 =81 R5 =79 R6 =82 R7 =86 R8 =64
 R9 =6 R10=68 R11=79 R12=58 R13=81 R14=95 R15=73
 Color Quality Scale: Qa= 82.2, Qf= 82.4, Qp= 82.0, Qg= 92.3
 Q1 =82 Q2 =98 Q3 =78 Q4 =75 Q5 =81 Q6 =82 Q7 =84 Q8 =89
 Q9 =97 Q10=88 Q11=85 Q12=84 Q13=84 Q14=72 Q15=76



Photometric Parameters

Luminous Flux: 1155.93 lm Efficiency: 107.13 lm/W Radiant Power: 3.479 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.90V Current: 0.0540A Power: 10.79W
 Power Factor: 0.9050 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer
 Stabilization Time: 30 Sec Photometric Condition: Sphere diameter: 1.50m, 4T
 Max of Signal: 43963 (4757) CCD Integration Time: 610.97 ms

Condition: Tx:31.4'C, Ti:0.0'C, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:51:25
 Inspector:

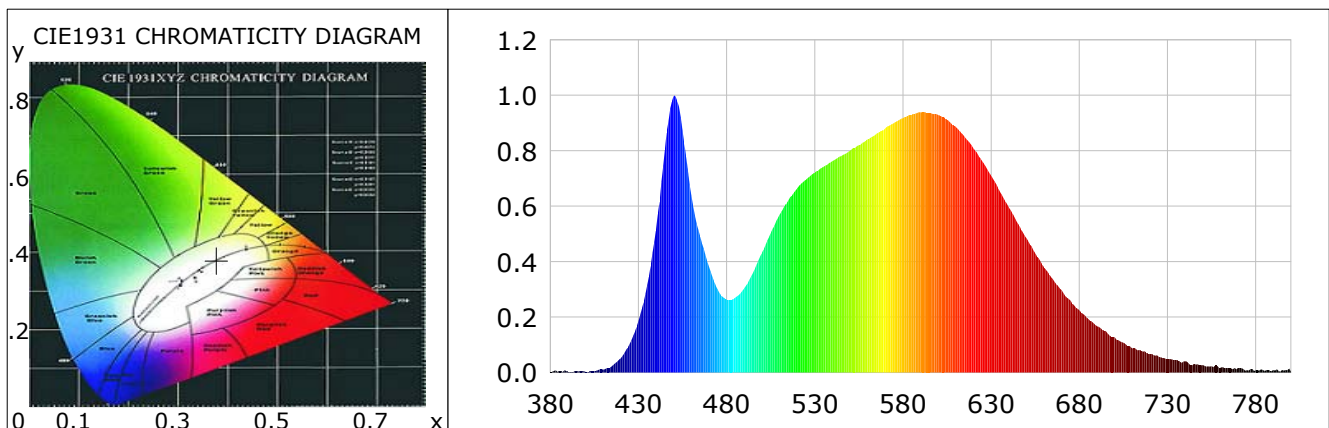
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 7

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3776$ $y=0.3804$ $u(u')=0.2218$ $v=0.3352$ $v'=0.5028$
 CCT: $T_c=4104K$ ($duv=0.00253$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.3nm Half Bandwidth: 24.9nm
 Dominant Wavelength: 577.3nm Color Purity: 0.275
 CRI: $R_a=81.8$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=6$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.4$, $Q_p=82.0$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=75$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1154.41 lm Efficiency: 107.19 lm/W Radiant Power: 3.475 W
 EEI: 0.12 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.70V Current: 0.0540A Power: 10.77W
 Power Factor: 0.9050 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 30 Sec
 Max of Signal: 43805 (4758)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.50m, 4T
 CCD Integration Time: 610.97 ms

Condition: $T_x:31.4^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab: LH-SYS
 Operator: LYF

Test Device: Inventfine CMS-2
 Test Time: 2002-01-01 04:52:05
 Inspector:

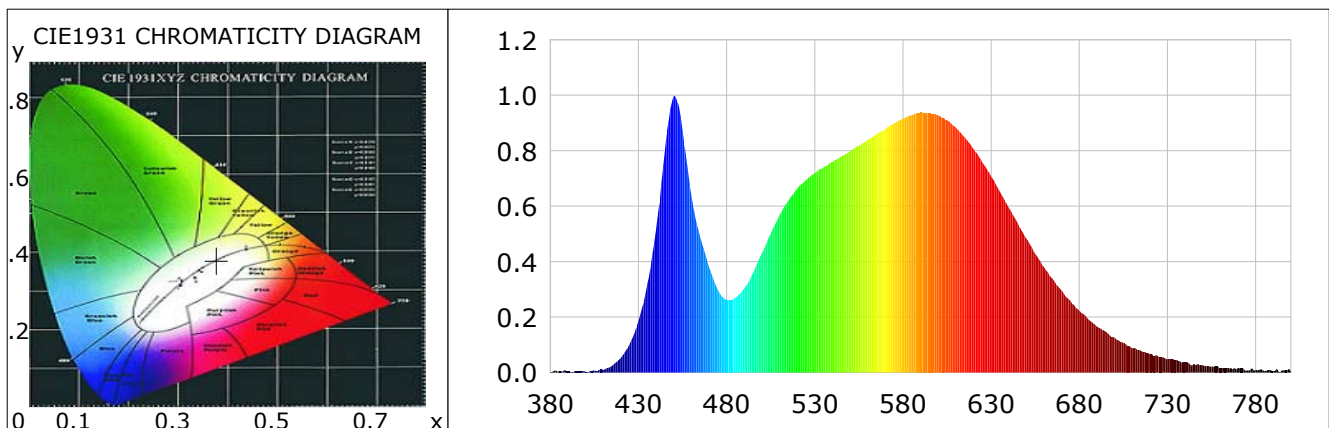
Lightsource Test Report

Product Infomation

Product Category: RFE-0410A-4000K-3LING Product Number: 8

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3776$ $y=0.3803$ $u(u')=0.2218$ $v=0.3351$ $v'(v')=0.5027$
 CCT: $T_c=4105K$ ($duv=0.00251$) Color Ratio: $R=0.177$ $G=0.789$ $B=0.034$
 Peak Wavelength: 450.3nm Half Bandwidth: 24.9nm
 Dominant Wavelength: 577.3nm Color Purity: 0.275
 CRI: $R_a=81.8$ TM30: $R_f=81$, $R_g=95$
 $R1=79$ $R2=86$ $R3=92$ $R4=81$ $R5=79$ $R6=82$ $R7=86$ $R8=64$
 $R9=6$ $R10=68$ $R11=79$ $R12=58$ $R13=81$ $R14=95$ $R15=73$
 Color Quality Scale: $Q_a=82.2$, $Q_f=82.4$, $Q_p=81.9$, $Q_g=92.3$
 $Q1=82$ $Q2=98$ $Q3=78$ $Q4=75$ $Q5=81$ $Q6=82$ $Q7=84$ $Q8=89$
 $Q9=97$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=72$ $Q15=76$



Photometric Parameters

Luminous Flux: 1153.55 lm Efficiency: 106.71 lm/W Radiant Power: 3.472 W
 EEI: 0.13 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 219.80V Current: 0.0540A Power: 10.81W
 Power Factor: 0.9040 Frequency: 49.99Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 30 Sec
 Max of Signal: 43855 (4761)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.50m, 4T
 CCD Integration Time: 610.97 ms