

## Lightsource Test Report

### Product Infomation

Product Number: 50W-1MIN

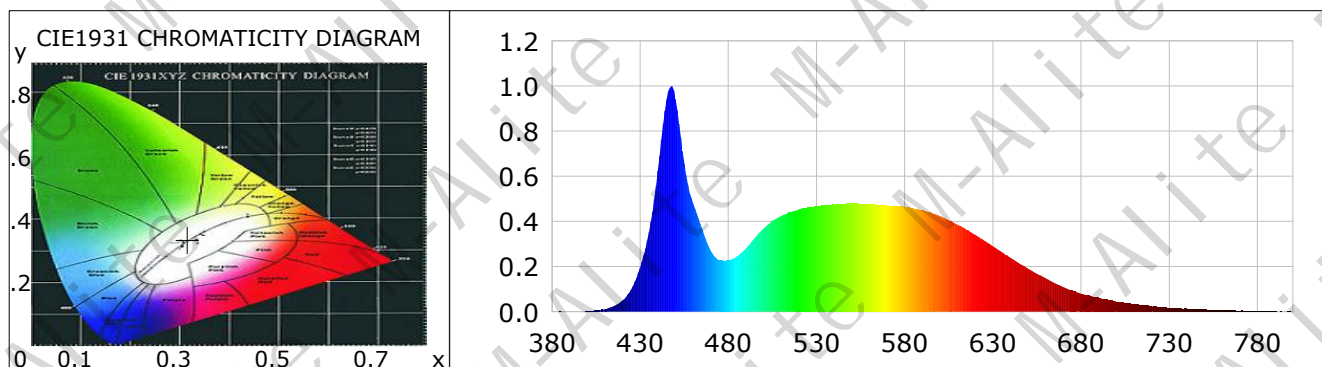
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3157$   $y=0.3355$   $u(u')=0.1975$   $v=0.3148$   $v'=0.4722$   
 CCT:  $T_c=6304K$  ( $duv=0.00503$ ) Color Ratio:  $R=0.135$   $G=0.812$   $B=0.053$   
 Peak Wavelength: 447.7nm Half Bandwidth: 21.2nm  
 Dominant Wavelength: 493.3nm Color Purity: 0.058  
 CRI:  $R_a=82.7$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=91.2$ ,  $GAI\_BB\_15=95.2$ ,  $GAI\_EES=88.1$

R1 =81	R2 =86	R3 =90	R4 =84	R5 =82	R6 =82	R7 =88	R8 =70
R9 =6	R10=67	R11=84	R12=63	R13=82	R14=95	R15=75	

Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=82.3$ ,  $Q_p=83.3$ ,  $Q_g=92.6$

Q1 =85	Q2 =97	Q3 =78	Q4 =76	Q5 =83	Q6 =85	Q7 =87	Q8 =91
Q9 =96	Q10=86	Q11=83	Q12=82	Q13=83	Q14=71	Q15=76	



### Photometric Parameters

Luminous Flux: 5386.9 lm Efficiency: 118.91 lm/W Radiant Power: 17.235 W  
 Total mains efficacy: 118.91 lm/W Energy Efficiency Class: E (EU 2019/2015)

### Electric Parameters

Voltage: 220.00V Current: 0.2225A Power: 45.30W  
 Power Factor: 0.9256 Frequency: 50.00Hz DF: 0.9995

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 47999 (2706) CCD Integration Time: 70.85 ms

Condition:  $T_x:26.6^{\circ}C$ ,  $T_i:24.5^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 10:47:39  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 50W-30MIN

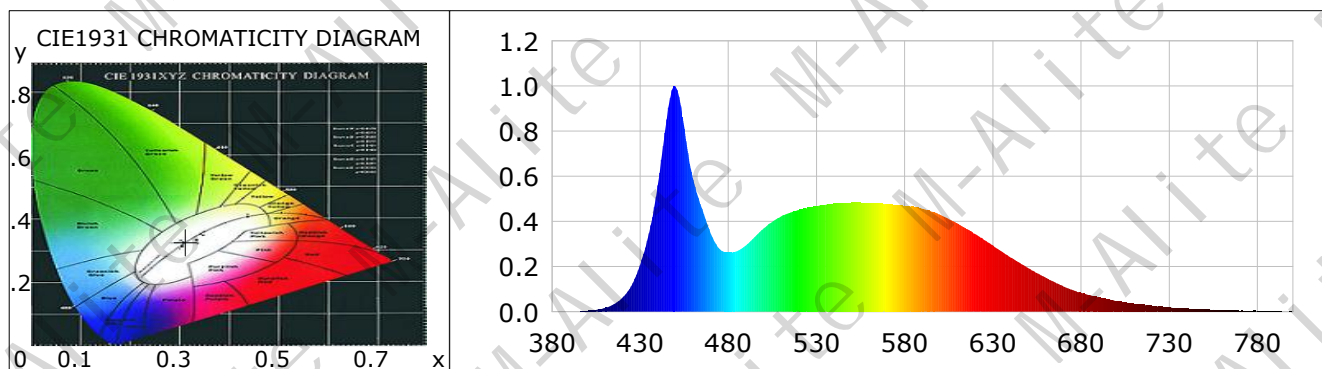
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3117$   $y=0.3285$   $u(u')=0.1973$   $v=0.3119$   $v'=0.4679$   
 CCT:  $T_c=6564K$  ( $duv=0.00342$ ) Color Ratio:  $R=0.135$   $G=0.808$   $B=0.057$   
 Peak Wavelength: 449.5nm Half Bandwidth: 24.4nm  
 Dominant Wavelength: 488.8nm Color Purity: 0.076  
 CRI:  $R_a=84.1$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=91.7$ ,  $GAI\_BB\_15=96.0$ ,  $GAI\_EES=89.7$   

R1 =82	R2 =88	R3 =91	R4 =85	R5 =84	R6 =83	R7 =89	R8 =72
R9 =11	R10=70	R11=84	R12=63	R13=84	R14=95	R15=78	

Color Quality Scale:  $Q_a=82.7$ ,  $Q_f=82.5$ ,  $Q_p=83.4$ ,  $Q_g=92.6$   

Q1 =86	Q2 =98	Q3 =79	Q4 =75	Q5 =81	Q6 =84	Q7 =88	Q8 =91
Q9 =96	Q10=86	Q11=83	Q12=82	Q13=83	Q14=72	Q15=77	



### Photometric Parameters

Luminous Flux: 4990.2 lm Efficiency: 110.06 lm/W Radiant Power: 16.278 W  
 Total mains efficacy: 110.06 lm/W Energy Efficiency Class: E (EU 2019/2015)

### Electric Parameters

Voltage: 220.01V Current: 0.2220A Power: 45.34W  
 Power Factor: 0.9285 Frequency: 50.00Hz DF: 0.9994

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 30 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 45450 (2736) CCD Integration Time: 70.85 ms

Condition:  $T_x:26.9^{\circ}C$ ,  $T_i:24.2^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 11:18:09  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 100W-1MIN

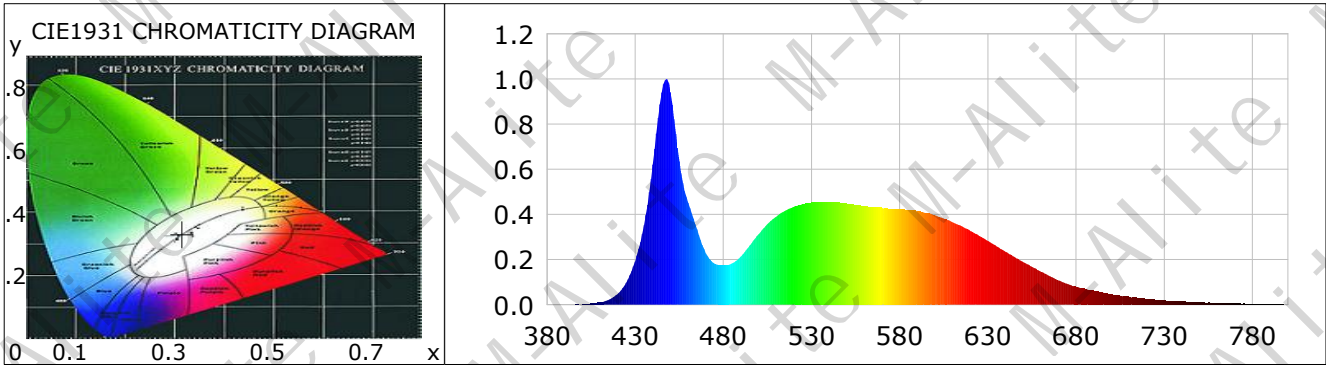
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3155$   $y=0.3312$   $u(u')=0.1990$   $v=0.3133$   $v'=0.4699$   
 CCT:  $T_c=6338K$  ( $duv=0.00292$ ) Color Ratio:  $R=0.138$   $G=0.813$   $B=0.049$   
 Peak Wavelength: 447.7nm Half Bandwidth: 20.1nm  
 Dominant Wavelength: 490.2nm Color Purity: 0.061  
 CRI:  $R_a=83.0$  TM30:  $R_f=83$ ,  $R_g=98$   
 GAI:  $GAI\_BB\_8=94.3$ ,  $GAI\_BB\_15=98.3$ ,  $GAI\_EES=91.3$

R1 =83	R2 =85	R3 =86	R4 =85	R5 =84	R6 =80	R7 =88	R8 =74
R9 =16	R10=64	R11=85	R12=60	R13=83	R14=92	R15=79	

Color Quality Scale:  $Q_a=82.4$ ,  $Q_f=81.6$ ,  $Q_p=84.6$ ,  $Q_g=94.9$

Q1 =87	Q2 =96	Q3 =75	Q4 =74	Q5 =83	Q6 =85	Q7 =87	Q8 =92
Q9 =94	Q10=83	Q11=81	Q12=82	Q13=83	Q14=74	Q15=79	



### Photometric Parameters

Luminous Flux: 8922.3 lm Efficiency: 99.86 lm/W Radiant Power: 28.822 W  
 Total mains efficacy: 99.86 lm/W Energy Efficiency Class: F (EU 2019/2015)

### Electric Parameters

Voltage: 219.87V Current: 0.4406A Power: 89.35W  
 Power Factor: 0.9223 Frequency: 50.00Hz DF: 0.9992

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4T  
 Max of Signal: 47096 (2822) CCD Integration Time: 39.10 ms

Condition:  $T_x:28.4^{\circ}C$ ,  $T_i:26.1^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-24 17:03:18  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 100W-30MIN

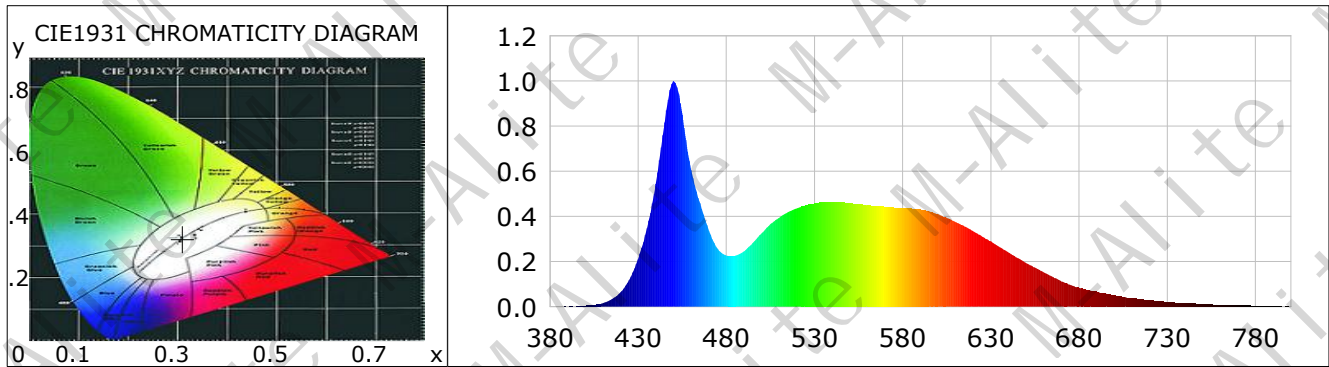
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3100$   $y=0.3222$   $u(u')=0.1985$   $v=0.3095$   $v'=0.4643$   
 CCT:  $T_c=6718K$  ( $duv=0.00110$ ) Color Ratio:  $R=0.138$   $G=0.807$   $B=0.055$   
 Peak Wavelength: 450.1nm Half Bandwidth: 24.4nm  
 Dominant Wavelength: 485.4nm Color Purity: 0.088  
 CRI:  $R_a=85.2$  TM30:  $R_f=84$ ,  $R_g=98$   
 GAI:  $GAI\_BB\_8=94.5$ ,  $GAI\_BB\_15=98.6$ ,  $GAI\_EES=93.1$

R1 =85	R2 =88	R3 =88	R4 =87	R5 =85	R6 =83	R7 =89	R8 =76
R9 =23	R10=70	R11=87	R12=62	R13=86	R14=94	R15=82	

Color Quality Scale:  $Q_a=83.0$ ,  $Q_f=82.3$ ,  $Q_p=84.8$ ,  $Q_g=94.5$

Q1 =88	Q2 =97	Q3 =77	Q4 =73	Q5 =81	Q6 =85	Q7 =89	Q8 =92
Q9 =94	Q10=85	Q11=82	Q12=82	Q13=84	Q14=75	Q15=80	



### Photometric Parameters

Luminous Flux: 7901.5 lm Efficiency: 88.37 lm/W Radiant Power: 26.209 W  
 Total mains efficacy: 88.37 lm/W Energy Efficiency Class: F (EU 2019/2015)

### Electric Parameters

Voltage: 219.94V Current: 0.4384A Power: 89.41W  
 Power Factor: 0.9272 Frequency: 50.00Hz DF: 0.9994

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 30 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 46470 (2872) CCD Integration Time: 42.85 ms

Condition:  $T_x:29.3^\circ C$ ,  $T_i:27.5^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-24 18:02:22  
 Inspector:



## Lightsource Test Report

### Product Infomation

Product Number: 150W-1MIN

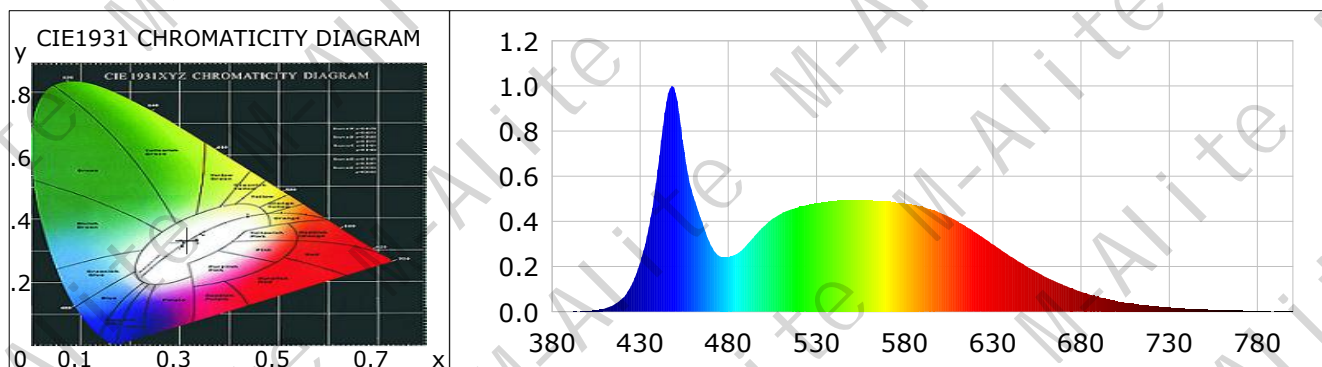
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3152$   $y=0.3340$   $u(u')=0.1977$   $v=0.3142$   $v'=0.4713$   
 CCT:  $T_c=6340K$  ( $duv=0.00451$ ) Color Ratio:  $R=0.135$   $G=0.811$   $B=0.054$   
 Peak Wavelength: 448.2nm Half Bandwidth: 22.9nm  
 Dominant Wavelength: 492.2nm Color Purity: 0.061  
 CRI:  $R_a=83.0$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=91.4$ ,  $GAI\_BB\_15=95.4$ ,  $GAI\_EES=88.5$   

R1 =81	R2 =86	R3 =90	R4 =84	R5 =83	R6 =82	R7 =88	R8 =70
R9 =7	R10=67	R11=84	R12=63	R13=82	R14=95	R15=76	

Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=82.3$ ,  $Q_p=83.3$ ,  $Q_g=92.6$   

Q1 =85	Q2 =97	Q3 =79	Q4 =76	Q5 =82	Q6 =85	Q7 =87	Q8 =91
Q9 =96	Q10=86	Q11=83	Q12=82	Q13=82	Q14=71	Q15=76	



### Photometric Parameters

Luminous Flux: 15829 lm Efficiency: 115.58 lm/W Radiant Power: 50.918 W  
 Total mains efficacy: 115.58 lm/W Energy Efficiency Class: E (EU 2019/2015)

### Electric Parameters

Voltage: 219.74V Current: 0.6728A Power: 136.96W  
 Power Factor: 0.9264 Frequency: 50.00Hz DF: 0.9990

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 55304 (2649) CCD Integration Time: 28.46 ms

Condition:  $T_x:25.9^\circ C$ ,  $T_i:23.7^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 10:13:00  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 150W-30MIN

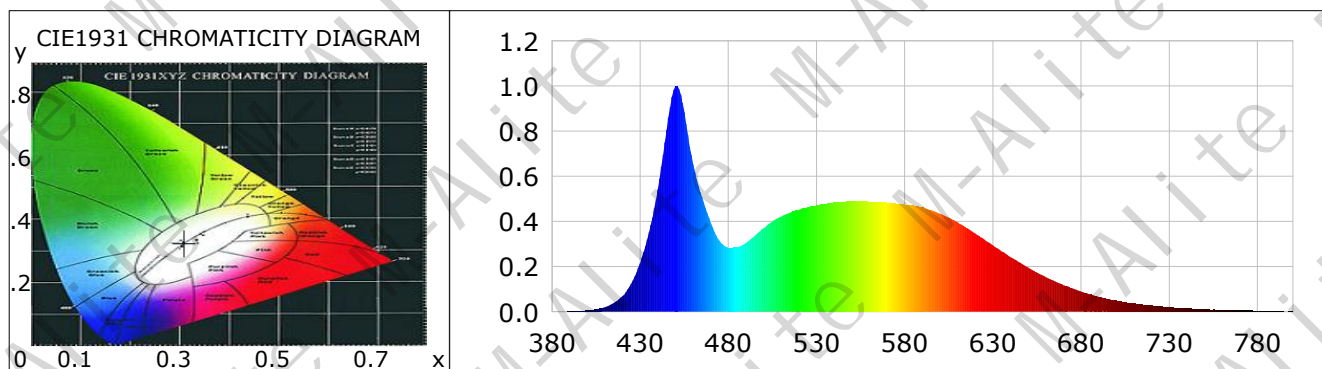
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3097$   $y=0.3251$   $u(u')=0.1972$   $v=0.3105$   $v'=0.4658$   
 CCT:  $T_c=6706K$  ( $duv=0.00273$ ) Color Ratio:  $R=0.135$   $G=0.806$   $B=0.059$   
 Peak Wavelength: 450.6nm Half Bandwidth: 26.4nm  
 Dominant Wavelength: 487.2nm Color Purity: 0.086  
 CRI:  $R_a=84.7$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=91.9$ ,  $GAI\_BB\_15=96.1$ ,  $GAI\_EES=90.4$

R1 =83	R2 =89	R3 =91	R4 =85	R5 =84	R6 =84	R7 =89	R8 =72
R9 =14	R10=72	R11=84	R12=63	R13=85	R14=95	R15=79	

Color Quality Scale:  $Q_a=82.8$ ,  $Q_f=82.6$ ,  $Q_p=83.3$ ,  $Q_g=92.5$

Q1 =86	Q2 =98	Q3 =79	Q4 =74	Q5 =81	Q6 =84	Q7 =88	Q8 =91
Q9 =96	Q10=87	Q11=83	Q12=82	Q13=83	Q14=73	Q15=78	



### Photometric Parameters

Luminous Flux: 12794 lm Efficiency: 101.16 lm/W Radiant Power: 42.175 W  
 Total mains efficacy: 101.16 lm/W Energy Efficiency Class: F (EU 2019/2015)

### Electric Parameters

Voltage: 219.80V Current: 0.6205A Power: 126.48W  
 Power Factor: 0.9273 Frequency: 50.00Hz DF: 0.9988

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 30 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 47460 (2662) CCD Integration Time: 28.46 ms

Condition:  $T_x:26.4^{\circ}C$ ,  $T_i:24.8^{\circ}C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 10:43:10  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 200W-1MIN

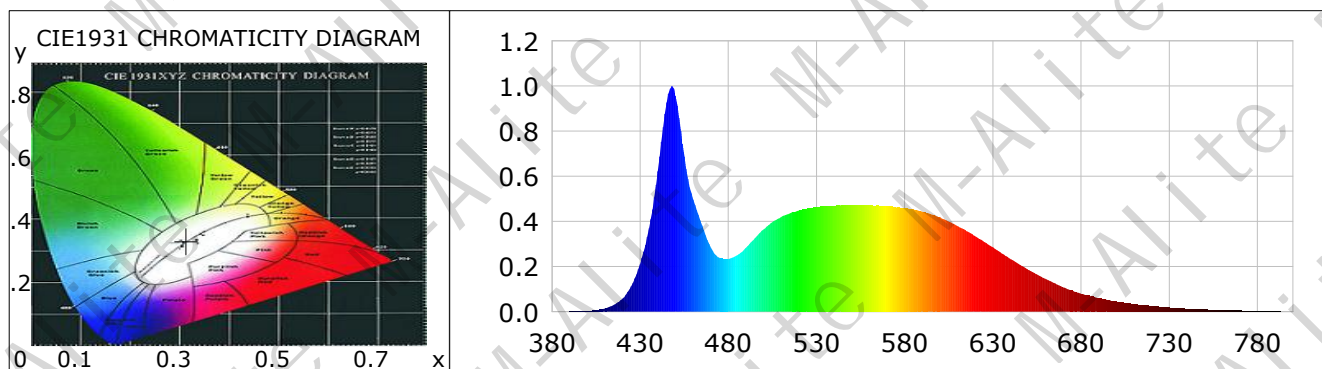
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3130$   $y=0.3314$   $u(u')=0.1971$   $v=0.3131$   $v'=0.4696$   
 CCT:  $T_c=6474K$  ( $duv=0.00426$ ) Color Ratio:  $R=0.134$   $G=0.812$   $B=0.054$   
 Peak Wavelength: 448.0nm Half Bandwidth: 22.1nm  
 Dominant Wavelength: 490.5nm Color Purity: 0.070  
 CRI:  $R_a=83.1$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=91.6$ ,  $GAI\_BB\_15=95.6$ ,  $GAI\_EES=89.2$

R1 =81	R2 =86	R3 =90	R4 =84	R5 =83	R6 =82	R7 =88	R8 =71
R9 =7	R10=67	R11=84	R12=63	R13=82	R14=94	R15=76	

Color Quality Scale:  $Q_a=82.5$ ,  $Q_f=82.3$ ,  $Q_p=83.4$ ,  $Q_g=92.8$

Q1 =86	Q2 =97	Q3 =78	Q4 =76	Q5 =82	Q6 =85	Q7 =87	Q8 =91
Q9 =96	Q10=85	Q11=82	Q12=82	Q13=82	Q14=71	Q15=77	



### Photometric Parameters

Luminous Flux: 19577 lm Efficiency: 107.29 lm/W Radiant Power: 63.278 W  
 Total mains efficacy: 107.29 lm/W Energy Efficiency Class: F (EU 2019/2015)

### Electric Parameters

Voltage: 219.47V Current: 0.8991A Power: 182.47W  
 Power Factor: 0.9248 Frequency: 50.00Hz DF: 0.9987

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 49218 (2439) CCD Integration Time: 19.73 ms

Condition:  $T_x:22.4^\circ C$ ,  $T_i:23.1^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 08:31:11  
 Inspector:

## Lightsource Test Report

### Product Infomation

Product Number: 200W-30MIN

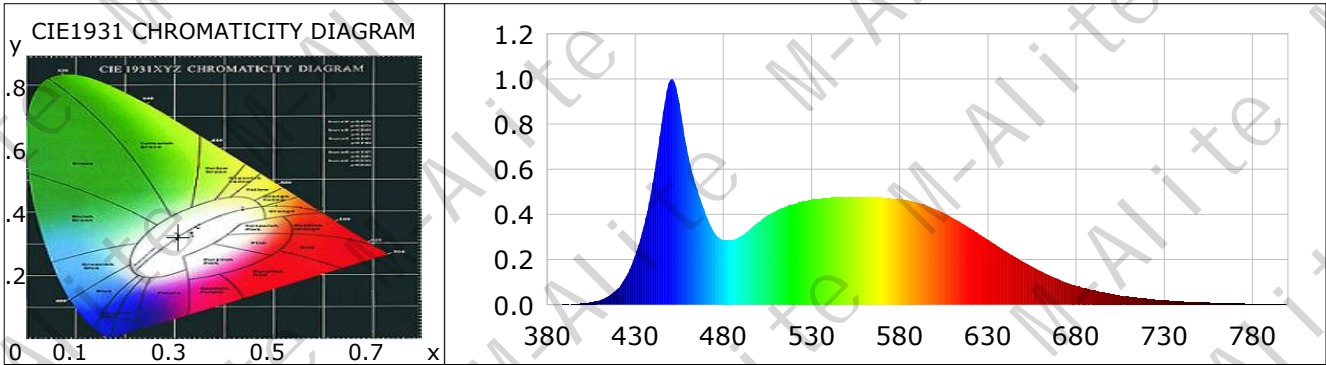
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3076$   $y=0.3224$   $u(u')=0.1967$   $v=0.3093$   $v'=0.4640$   
 CCT:  $T_c=6856K$  ( $duv=0.00243$ ) Color Ratio:  $R=0.134$   $G=0.806$   $B=0.061$   
 Peak Wavelength: 450.7nm Half Bandwidth: 26.5nm  
 Dominant Wavelength: 486.1nm Color Purity: 0.095  
 CRI:  $R_a=85.0$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=92.0$ ,  $GAI\_BB\_15=96.2$ ,  $GAI\_EES=91.0$   

R1 =84	R2 =89	R3 =91	R4 =85	R5 =84	R6 =84	R7 =89	R8 =73
R9 =15	R10=73	R11=85	R12=64	R13=85	R14=96	R15=80	

Color Quality Scale:  $Q_a=82.8$ ,  $Q_f=82.7$ ,  $Q_p=83.5$ ,  $Q_g=92.5$   

Q1 =86	Q2 =98	Q3 =79	Q4 =74	Q5 =81	Q6 =84	Q7 =88	Q8 =91
Q9 =96	Q10=87	Q11=83	Q12=82	Q13=83	Q14=73	Q15=78	



### Photometric Parameters

Luminous Flux: 16313 lm Efficiency: 99.09 lm/W Radiant Power: 54.064 W  
 Total mains efficacy: 99.09 lm/W Energy Efficiency Class: F (EU 2019/2015)

### Electric Parameters

Voltage: 219.74V Current: 0.8100A Power: 164.64W  
 Power Factor: 0.9250 Frequency: 50.00Hz DF: 0.9984

### Test Infomation

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 30 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4 $\pi$   
 Max of Signal: 49766 (2510) CCD Integration Time: 22.90 ms

Condition:  $T_x:24.1^\circ C$ ,  $T_i:25.0^\circ C$ , R.H.:60%  
 Test Lab:  
 Operator:

Test Device: Inventfine CMS-2S (Plus)  
 Test Time: 2022-04-18 09:02:26  
 Inspector: