

## Lightsource Test Report

### Product Information

Product Category: LED-Lampen  
 Product Spec: LED-SLG28-E27-36-360  
 Manufacturer: METOLIGHT  
 Buyer: 3811

Product Type: LED-Strassenlampen  
 Product Number: 1  
 Submitted Unit: 100253

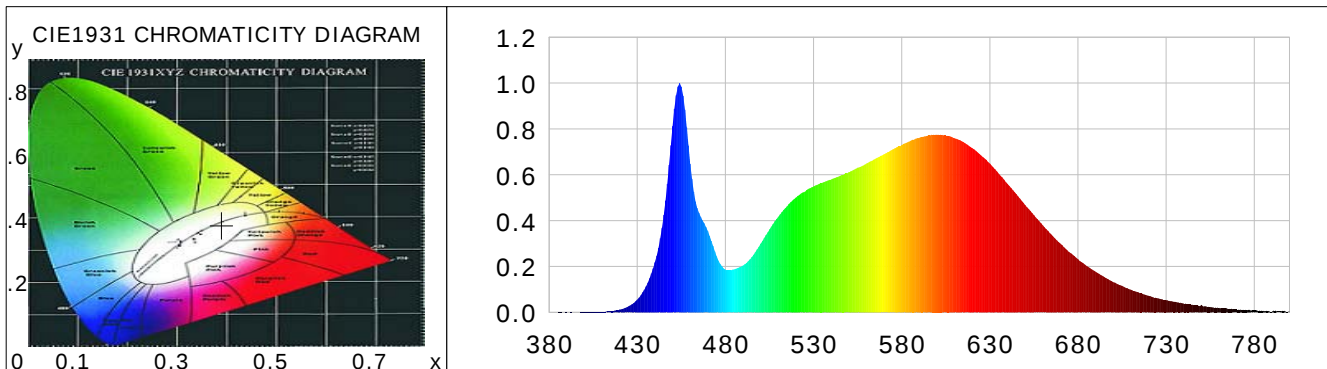
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3900$   $y=0.3789$   $u(u')=0.2306$   $v=0.3360$   $v'=0.5039$   
 CCT:  $T_c=3764K$  ( $duv=-0.00167$ ) Color Ratio:  $R=0.196$   $G=0.771$   $B=0.033$   
 Peak Wavelength: 454.0nm Half Bandwidth: 16.4nm  
 Dominant Wavelength: 580.8nm Color Purity: 0.308  
 CRI:  $R_a=85.0$ ,  $avgR(1\sim14)=79.0$ ,  $avgR(1\sim15)=79.1$  TM30:  $R_f=84$ ,  $R_g=97$   
 GAI:  $GAI\_BB\_8=96.9$ ,  $GAI\_BB\_15=104.8$ ,  $GAI\_EES=72.5$   

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| R1 =85 | R2 =91 | R3 =94 | R4 =84 | R5 =84 | R6 =86 | R7 =87 | R8 =70 |
| R9 =25 | R10=77 | R11=82 | R12=59 | R13=86 | R14=97 | R15=80 |        |

Color Quality Scale:  $Q_a=83.6$ ,  $Q_f=83.3$ ,  $Q_p=84.6$ ,  $Q_g=95.0$   

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Q1 =85 | Q2 =98 | Q3 =78 | Q4 =74 | Q5 =81 | Q6 =84 | Q7 =86 | Q8 =89 |
| Q9 =97 | Q10=88 | Q11=85 | Q12=85 | Q13=85 | Q14=78 | Q15=80 |        |



### Photometric Parameters

|                                   |                                           |                          |
|-----------------------------------|-------------------------------------------|--------------------------|
| Luminous Flux: 4692.1 lm          | Efficiency: 127.47 lm/W                   | Radiant Power: 14.581 W  |
| Total mains efficacy: 149.90 lm/W | Energy Efficiency Class: D (EU 2019/2015) |                          |
| Pupil Flux: 6853.83 Plm           | Pupil Lumens Per Watt: 186.19 Plm/W       | Pupil Factor (Kp): 1.461 |
| Cirtpic Flux: 13698.39 lm         |                                           |                          |

### Electric Parameters

|                      |                    |               |
|----------------------|--------------------|---------------|
| Voltage: 231.00V     | Current: 0.1650A   | Power: 36.81W |
| Power Factor: 0.9610 | Frequency: 49.99Hz |               |

### Test Information

|                                       |                                                    |
|---------------------------------------|----------------------------------------------------|
| Scan Range: 380~800:1nm               | Photometric Method: sphere-spectroradiometer       |
| Stabilization Time: 0 ms ALC.: 1.0000 | Photometric Condition: Sphere diameter: 2.00m, 4PI |
| Max of Signal: 46427 (2546)           | CCD Integration Time: 58.09 ms                     |

Condition: Tx:22.5'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 15:01:36  
 Inspector:

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| WL(nm) | PL     | PE(mW/nm) | WL(nm) | PL     | PE(mW/nm) | WL(nm) | PL     | PE(mW/nm) |
|--------|--------|-----------|--------|--------|-----------|--------|--------|-----------|
| 380    | 0.0006 | 0.0677    | 525    | 0.5260 | 55.6503   | 670    | 0.3004 | 31.7826   |
| 385    | 0.0007 | 0.0775    | 530    | 0.5489 | 58.0733   | 675    | 0.2632 | 27.8440   |
| 390    | 0.0008 | 0.0869    | 535    | 0.5649 | 59.7734   | 680    | 0.2319 | 24.5360   |
| 395    | 0.0005 | 0.0579    | 540    | 0.5799 | 61.3506   | 685    | 0.2015 | 21.3164   |
| 400    | 0.0010 | 0.1071    | 545    | 0.5948 | 62.9333   | 690    | 0.1768 | 18.7029   |
| 405    | 0.0013 | 0.1364    | 550    | 0.6115 | 64.6943   | 695    | 0.1531 | 16.2014   |
| 410    | 0.0027 | 0.2883    | 555    | 0.6306 | 66.7195   | 700    | 0.1314 | 13.9069   |
| 415    | 0.0052 | 0.5485    | 560    | 0.6489 | 68.6590   | 705    | 0.1152 | 12.1880   |
| 420    | 0.0119 | 1.2615    | 565    | 0.6699 | 70.8768   | 710    | 0.0985 | 10.4230   |
| 425    | 0.0259 | 2.7423    | 570    | 0.6899 | 72.9902   | 715    | 0.0841 | 8.9025    |
| 430    | 0.0554 | 5.8608    | 575    | 0.7111 | 75.2417   | 720    | 0.0722 | 7.6382    |
| 435    | 0.1132 | 11.9795   | 580    | 0.7296 | 77.1979   | 725    | 0.0615 | 6.5039    |
| 440    | 0.2184 | 23.1027   | 585    | 0.7480 | 79.1400   | 730    | 0.0533 | 5.6415    |
| 445    | 0.4252 | 44.9832   | 590    | 0.7615 | 80.5662   | 735    | 0.0465 | 4.9149    |
| 450    | 0.8119 | 85.9036   | 595    | 0.7714 | 81.6174   | 740    | 0.0384 | 4.0597    |
| 455    | 0.9844 | 104.1531  | 600    | 0.7752 | 82.0197   | 745    | 0.0335 | 3.5442    |
| 460    | 0.6481 | 68.5694   | 605    | 0.7715 | 81.6220   | 750    | 0.0325 | 3.4423    |
| 465    | 0.4339 | 45.9120   | 610    | 0.7591 | 80.3199   | 755    | 0.0237 | 2.5030    |
| 470    | 0.3549 | 37.5451   | 615    | 0.7431 | 78.6253   | 760    | 0.0190 | 2.0098    |
| 475    | 0.2446 | 25.8832   | 620    | 0.7168 | 75.8408   | 765    | 0.0153 | 1.6142    |
| 480    | 0.1871 | 19.7923   | 625    | 0.6845 | 72.4223   | 770    | 0.0123 | 1.2999    |
| 485    | 0.1875 | 19.8420   | 630    | 0.6488 | 68.6433   | 775    | 0.0110 | 1.1627    |
| 490    | 0.2044 | 21.6217   | 635    | 0.6048 | 63.9848   | 780    | 0.0086 | 0.9085    |
| 495    | 0.2412 | 25.5146   | 640    | 0.5605 | 59.2986   | 785    | 0.0064 | 0.6735    |
| 500    | 0.2995 | 31.6860   | 645    | 0.5159 | 54.5828   | 790    | 0.0036 | 0.3842    |
| 505    | 0.3622 | 38.3226   | 650    | 0.4684 | 49.5559   | 795    | 0.0047 | 0.4951    |
| 510    | 0.4174 | 44.1608   | 655    | 0.4241 | 44.8659   | 800    | 0.0043 | 0.4503    |
| 515    | 0.4631 | 48.9957   | 660    | 0.3803 | 40.2418   |        |        |           |
| 520    | 0.5012 | 53.0290   | 665    | 0.3386 | 35.8255   |        |        |           |

Condition: Tx:22.5'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

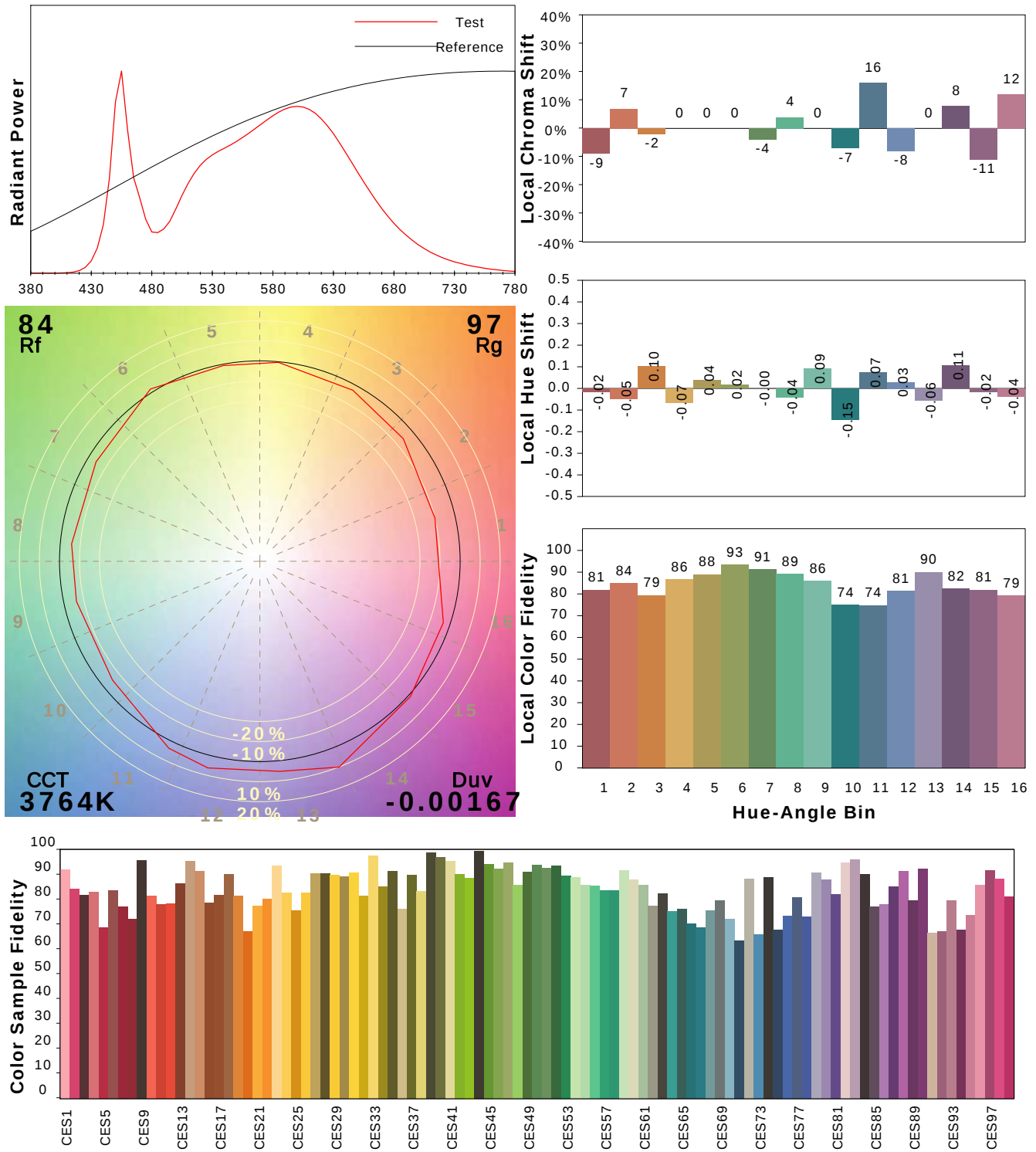
Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 15:01:36  
 Inspector:

## IES TM-30-18 Color Rendition Report

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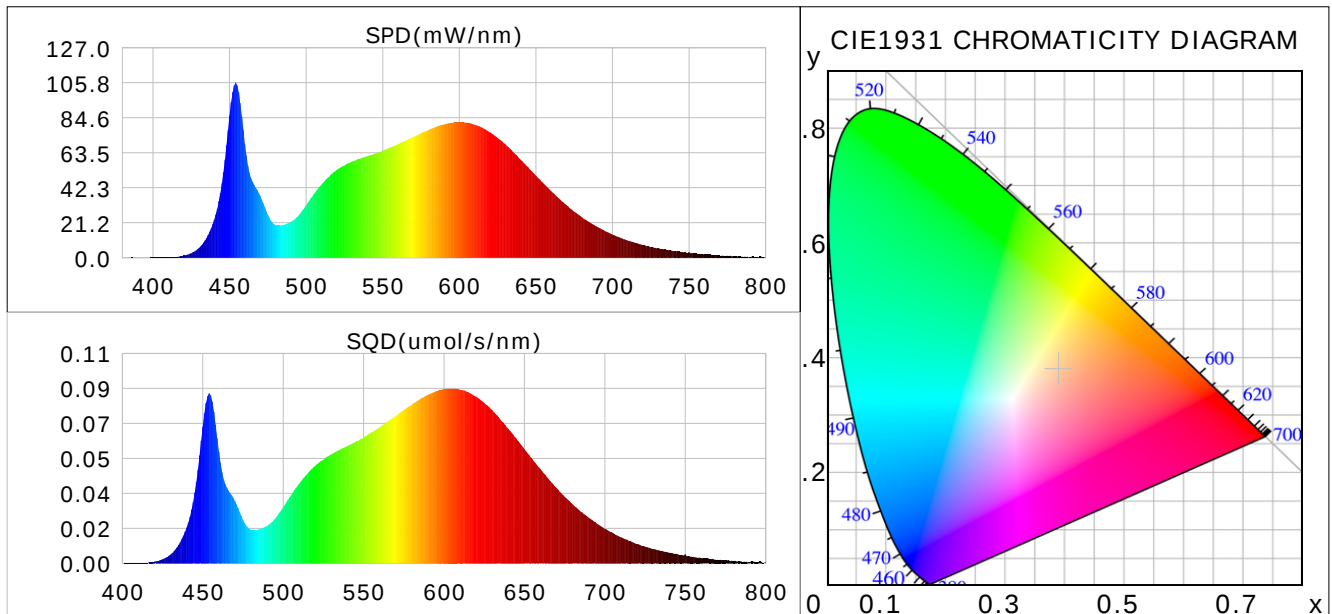
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 Operator: CRE

Test Device: Lisun LMS-9000B  
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## Plant optical param data

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 Peak Wavelength: 454.0nm Half Bandwidth: 16.4nm  
 Dominant Wavelength: 580.8nm Color Purity: 0.308  
 CRI: Ra= 85.0



### Plant Optical Param

|                                            |                                         |
|--------------------------------------------|-----------------------------------------|
| $\mu_v(\text{lm})$ : 4692.10               | $Q_v(\text{lm.s})$ : 4692.10            |
| $\mu_e, \dot{E}(\text{W/nm})$ : 14.58      | $Q_e(\text{J})$ : 14.58                 |
| $\mu_e(\text{W})$ : 14.17                  | $\mu_{fr}(\text{W})$ : 0.43             |
| $\zeta_e$ : 0.39                           | $\zeta_{fr}$ : 0.01                     |
| $PPE(\mu\text{mol/s/w})$ : 1.82            | $K_{fr}$ : 0.07                         |
| $E_{rb\_Ratio}$ : 1.75                     | $PPF(\mu\text{mol/s})$ : 67.01          |
| $PF_{uv}(360-400)(\mu\text{mol/s})$ : 0.01 | $PPF(400-500)(\mu\text{mol/s})$ : 10.88 |
| $PPF(500-600)(\mu\text{mol/s})$ : 29.82    | $PPF(600-700)(\mu\text{mol/s})$ : 26.31 |
| $PF_{fr}(700-800)(\mu\text{mol/s})$ : 2.54 | $PPF.t(\mu\text{mol})$ : 67.01          |
| $\mu_{ch-A.t}(\text{J})$ : 1.12            | $\mu_{ch-A}(\text{W})$ : 1.12           |
| $\mu_{ch-B.t}(\text{J})$ : 0.66            | $\mu_{ch-B}(\text{W})$ : 0.66           |
| $\mu_b.t(\text{J})$ : 2.82                 | $\mu_b(\text{W})$ : 2.82                |
| $\mu_y.t(\text{J})$ : 6.45                 | $\mu_y(\text{W})$ : 6.45                |
| $\mu_r.t(\text{J})$ : 5.02                 | $\mu_r(\text{W})$ : 5.02                |

### Electric Parameters

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