

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG28-E40-24-360-NWM
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampen
 Product Number: 1
 Submitted Unit: 100283

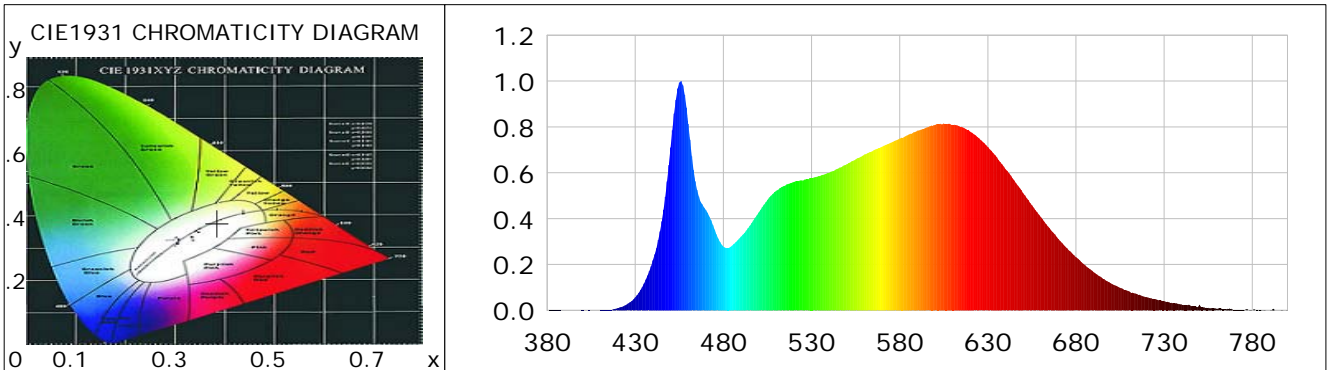
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3849$ $y=0.3787$ $u(u')=0.2272$ $v=0.3354$ $v'=0.5031$
 CCT: $T_c=3896K$ ($duv=-0.00036$) Color Ratio: $R=0.198$ $G=0.762$ $B=0.040$
 Peak Wavelength: 455.8nm Half Bandwidth: 18.8nm
 Dominant Wavelength: 579.6nm Color Purity: 0.292
 CRI: $R_a=89.3$, $avgR(1\sim14)=84.9$, $avgR(1\sim15)=84.9$ TM30: $R_f=87$, $R_g=96$
 GAI: $GAI_BB_8=94.8$, $GAI_BB_15=102.0$, $GAI_EES=73.1$

| | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|
| R1 =89 | R2 =95 | R3 =97 | R4 =88 | R5 =89 | R6 =93 | R7 =88 | R8 =75 |
| R9 =39 | R10=88 | R11=89 | R12=67 | R13=91 | R14=99 | R15=85 | |

Color Quality Scale: $Q_a=88.2$, $Q_f=88.3$, $Q_p=87.8$, $Q_g=94.6$

| | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Q1 =85 | Q2 =97 | Q3 =86 | Q4 =82 | Q5 =86 | Q6 =88 | Q7 =91 | Q8 =93 |
| Q9 =98 | Q10=95 | Q11=92 | Q12=91 | Q13=90 | Q14=82 | Q15=84 | |



Photometric Parameters

Luminous Flux: 2865.1 lm Efficiency: 129.41 lm/W Radiant Power: 8.959 W
 Total mains efficacy: 152.18 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 4426.86 Plm Pupil Lumens Per Watt: 199.95 Plm/W Pupil Factor (Kp): 1.545
 Circopic Flux: 9181.52 lm

Electric Parameters

Voltage: 230.10V Current: 0.1020A Power: 22.14W
 Power Factor: 0.9420 Frequency: 50.00Hz

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: 44418 (2569) CCD Integration Time: 131.96 ms

Condition: $T_x=22.1^{\circ}C$, $T_i=0.0^{\circ}C$, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-11 14:37:55
 Inspector:

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| WL(nm) | PL | PE(mW/nm) | WL(nm) | PL | PE(mW/nm) | WL(nm) | PL | PE(mW/nm) |
|--------|--------|-----------|--------|--------|-----------|--------|--------|-----------|
| 380 | 0.0001 | 0.0076 | 525 | 0.5659 | 34.2269 | 670 | 0.3119 | 18.8661 |
| 385 | 0.0012 | 0.0723 | 530 | 0.5773 | 34.9203 | 675 | 0.2705 | 16.3592 |
| 390 | 0.0002 | 0.0121 | 535 | 0.5869 | 35.4986 | 680 | 0.2324 | 14.0572 |
| 395 | 0.0005 | 0.0277 | 540 | 0.5997 | 36.2765 | 685 | 0.1979 | 11.9673 |
| 400 | 0.0008 | 0.0506 | 545 | 0.6180 | 37.3802 | 690 | 0.1667 | 10.0800 |
| 405 | 0.0002 | 0.0099 | 550 | 0.6372 | 38.5404 | 695 | 0.1394 | 8.4306 |
| 410 | 0.0009 | 0.0522 | 555 | 0.6581 | 39.8079 | 700 | 0.1167 | 7.0594 |
| 415 | 0.0028 | 0.1676 | 560 | 0.6792 | 41.0849 | 705 | 0.0980 | 5.9252 |
| 420 | 0.0096 | 0.5798 | 565 | 0.6968 | 42.1464 | 710 | 0.0831 | 5.0281 |
| 425 | 0.0251 | 1.5174 | 570 | 0.7139 | 43.1835 | 715 | 0.0697 | 4.2141 |
| 430 | 0.0568 | 3.4383 | 575 | 0.7311 | 44.2207 | 720 | 0.0579 | 3.5015 |
| 435 | 0.1166 | 7.0549 | 580 | 0.7496 | 45.3396 | 725 | 0.0493 | 2.9830 |
| 440 | 0.2178 | 13.1750 | 585 | 0.7662 | 46.3427 | 730 | 0.0403 | 2.4360 |
| 445 | 0.3885 | 23.5015 | 590 | 0.7839 | 47.4175 | 735 | 0.0308 | 1.8615 |
| 450 | 0.7100 | 42.9472 | 595 | 0.7967 | 48.1911 | 740 | 0.0252 | 1.5230 |
| 455 | 0.9935 | 60.0959 | 600 | 0.8086 | 48.9096 | 745 | 0.0201 | 1.2141 |
| 460 | 0.8137 | 49.2156 | 605 | 0.8147 | 49.2769 | 750 | 0.0242 | 1.4609 |
| 465 | 0.5252 | 31.7680 | 610 | 0.8090 | 48.9353 | 755 | 0.0108 | 0.6517 |
| 470 | 0.4377 | 26.4748 | 615 | 0.8001 | 48.3958 | 760 | 0.0067 | 0.4054 |
| 475 | 0.3519 | 21.2848 | 620 | 0.7791 | 47.1278 | 765 | 0.0048 | 0.2923 |
| 480 | 0.2782 | 16.8283 | 625 | 0.7502 | 45.3738 | 770 | 0.0030 | 0.1843 |
| 485 | 0.2822 | 17.0680 | 630 | 0.7125 | 43.0974 | 775 | 0.0023 | 0.1373 |
| 490 | 0.3214 | 19.4425 | 635 | 0.6686 | 40.4430 | 780 | 0.0014 | 0.0841 |
| 495 | 0.3689 | 22.3113 | 640 | 0.6154 | 37.2234 | 785 | 0.0022 | 0.1310 |
| 500 | 0.4270 | 25.8292 | 645 | 0.5664 | 34.2587 | 790 | 0.0009 | 0.0544 |
| 505 | 0.4818 | 29.1407 | 650 | 0.5110 | 30.9056 | 795 | 0.0002 | 0.0130 |
| 510 | 0.5217 | 31.5567 | 655 | 0.4585 | 27.7349 | 800 | 0.0038 | 0.2309 |
| 515 | 0.5438 | 32.8928 | 660 | 0.4076 | 24.6520 | | | |
| 520 | 0.5604 | 33.8992 | 665 | 0.3582 | 21.6675 | | | |

Condition: Tx:22.1'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

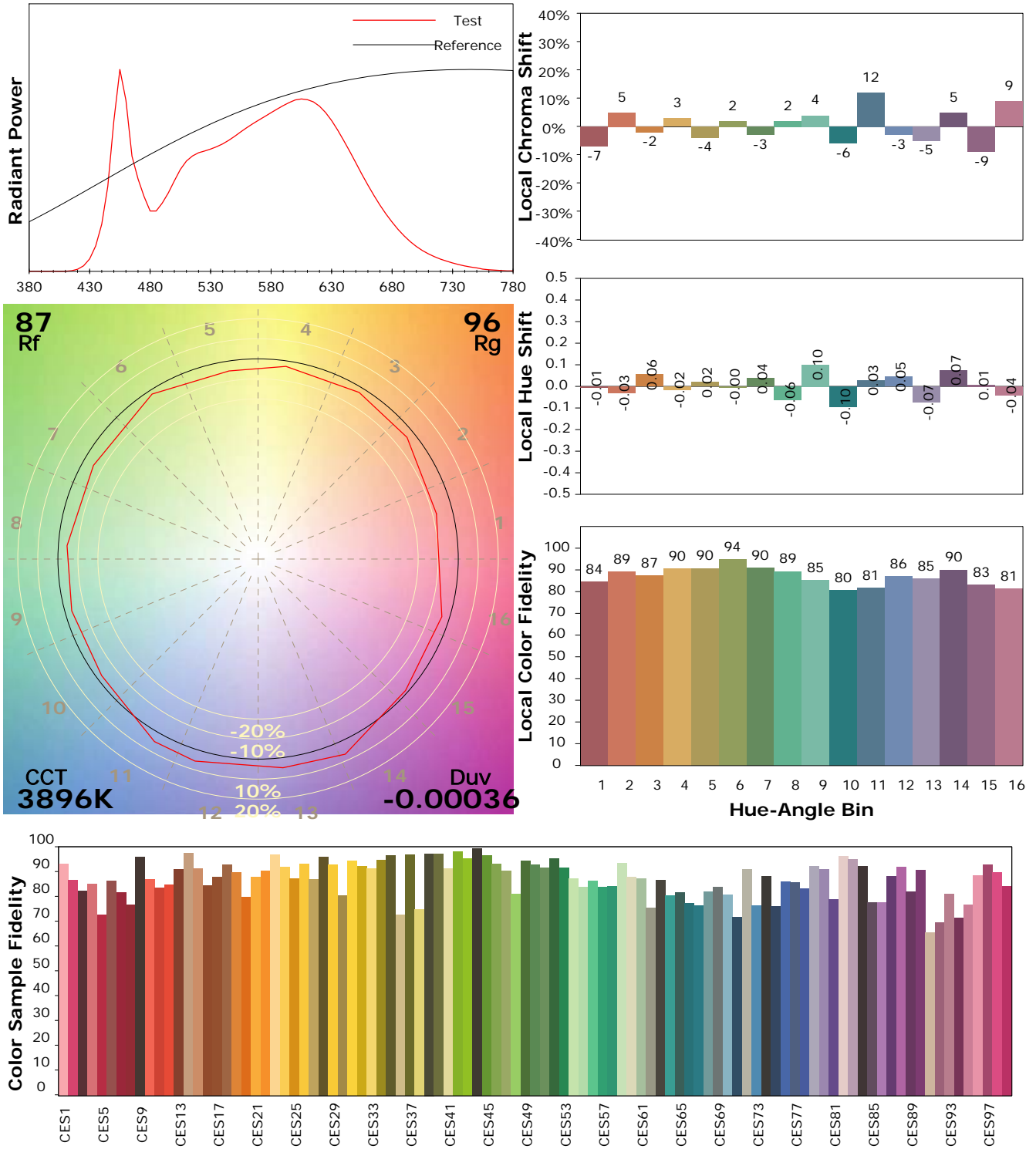
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 Inspector:

IES TM-30-18 Color Rendition Report

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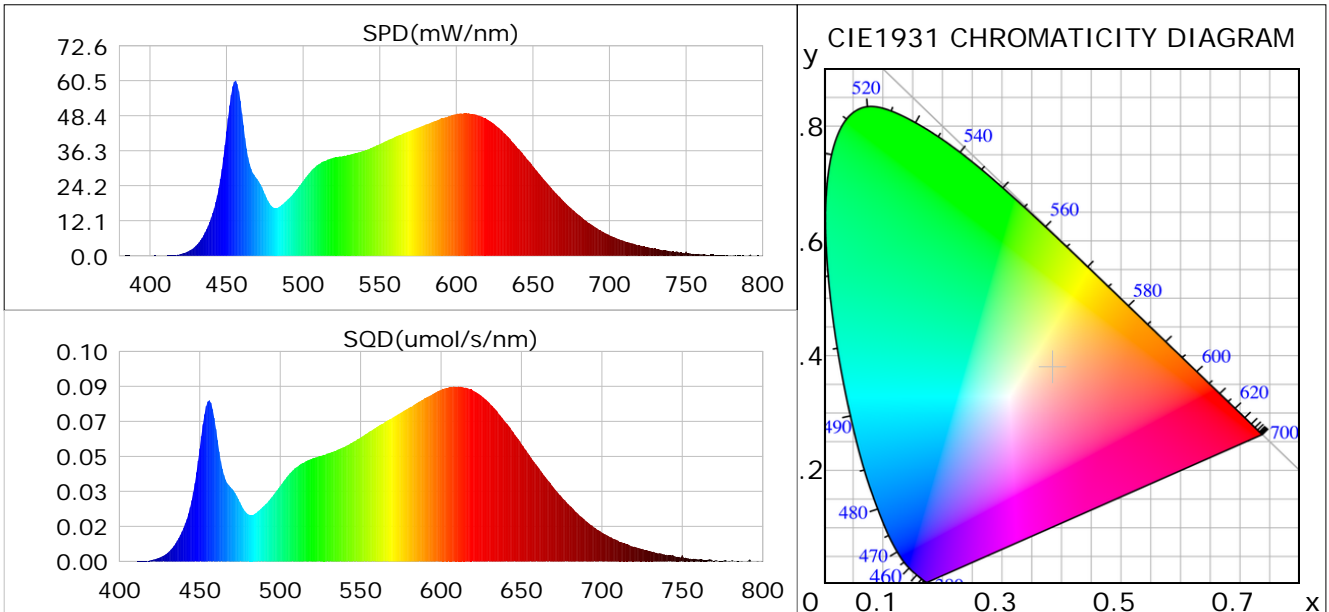
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Plant optical param data

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 CRI: $R_a=89.3$



Plant Optical Param

| | |
|-----------------------------------|-------------------------------|
| $ \mu_v(lm): 2865.10$ | $Q_v(lm.s): 2865.10$ |
| $ \mu_e, \dot{E}(W/nm): 8.96$ | $Q_e(J): 8.96$ |
| $ \mu_e(W): 8.79$ | $ \mu_{fr}(W): 0.18$ |
| $ \zeta_e: 0.40$ | $ \zeta_{fr}: 0.01$ |
| $PPE(umol/s/w): 1.87$ | $K_{fr}: 0.05$ |
| $Erb_Ratio: 1.62$ | $PPF(umol/s): 41.41$ |
| $PF_{uv}(360-400)(umol/s): 0.00$ | $PPF(400-500)(umol/s): 7.23$ |
| $PPF(500-600)(umol/s): 18.14$ | $PPF(600-700)(umol/s): 16.04$ |
| $PPF_{fr}(700-800)(umol/s): 1.05$ | $PPF.t(umol): 41.41$ |
| $ \mu_{ch-A.t}(J): 0.68$ | $ \mu_{ch-A}(W): 0.68$ |
| $ \mu_{ch-B.t}(J): 0.41$ | $ \mu_{ch-B}(W): 0.41$ |
| $ \mu_b.t(J): 1.86$ | $ \mu_b(W): 1.86$ |
| $ \mu_y.t(J): 3.94$ | $ \mu_y(W): 3.94$ |
| $ \mu_r.t(J): 3.06$ | $ \mu_r(W): 3.06$ |

Electric Parameters

| | | |
|----------------------|--------------------|---------------|
| Voltage: 230.10V | Current: 0.1020A | Power: 22.14W |
| Power Factor: 0.9420 | Frequency: 50.00Hz | |

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