

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-E27-G55-5W-WWM-dim
 Manufacturer: METOLIGHT
 Buyer: 3127

Product Type: LED-Lampen-E27
 Product Number: 1
 Submitted Unit: 103321

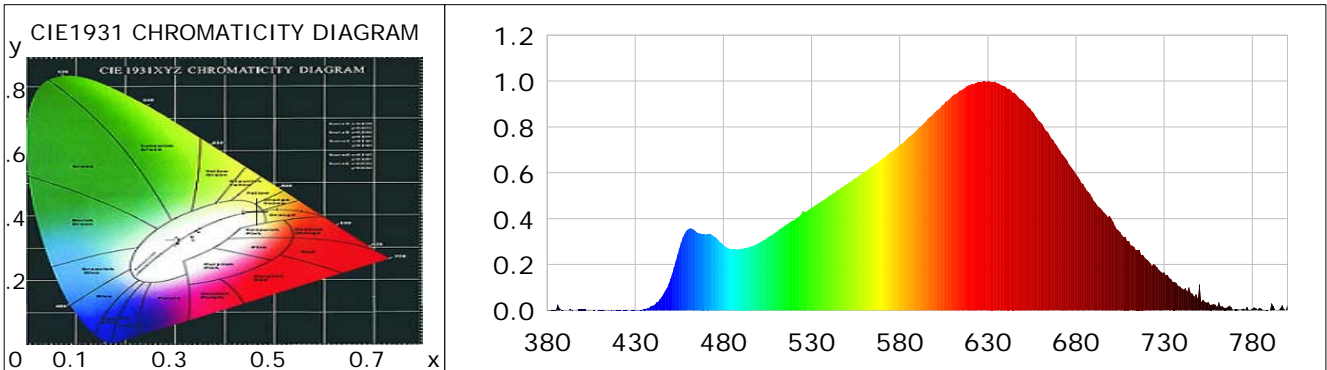
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4654$ $y=0.4162$ $u(u')=0.2636$ $v=0.3535$ $v'=0.5303$
 CCT: $T_c=2667K$ ($duv=0.00160$) Color Ratio: $R=0.268$ $G=0.703$ $B=0.029$
 Peak Wavelength: 630.2nm Half Bandwidth: 148.5nm
 Dominant Wavelength: 583.9nm Color Purity: 0.646
 CRI: $R_a=93.3$, $avgR(1\sim14)=91.4$, $avgR(1\sim15)=91.3$ TM30: $R_f=87$, $R_g=93$
 GAI: $GAI_BB_8=87.7$, $GAI_BB_15=97.4$, $GAI_EES=41.7$

| | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|
| R1 =95 | R2 =99 | R3 =97 | R4 =91 | R5 =94 | R6 =98 | R7 =90 | R8 =84 |
| R9 =68 | R10=97 | R11=92 | R12=82 | R13=96 | R14=99 | R15=91 | |

Color Quality Scale: $Q_a=88.6$, $Q_f=90.9$, $Q_p=90.5$, $Q_g=90.3$

| | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Q1 =83 | Q2 =89 | Q3 =94 | Q4 =88 | Q5 =85 | Q6 =84 | Q7 =88 | Q8 =90 |
| Q9 =90 | Q10=89 | Q11=94 | Q12=94 | Q13=94 | Q14=89 | Q15=88 | |



Photometric Parameters

Luminous Flux: 422.33 lm Efficiency: 84.81 lm/W Radiant Power: 1.528 W
 Total mains efficacy: 84.81 lm/W Energy Efficiency Class: G (EU 2019/2015)
 Pupil Flux: 519.75 Plm Pupil Lumens Per Watt: 104.37 Plm/W Pupil Factor (Kp): 1.231
 Circopic Flux: 950.19 lm

Electric Parameters

Voltage: 231.00V Current: 0.0260A Power: 4.98W
 Power Factor: 0.8060 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: 33152 (3233) CCD Integration Time: 1000.00 ms

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| WL(nm) | PL | PE(mW/nm) | WL(nm) | PL | PE(mW/nm) | WL(nm) | PL | PE(mW/nm) |
|--------|--------|-----------|--------|--------|-----------|--------|--------|-----------|
| 380 | 0.0013 | 0.0124 | 525 | 0.4328 | 4.0727 | 670 | 0.7071 | 6.6532 |
| 385 | 0.0028 | 0.0265 | 530 | 0.4464 | 4.2001 | 675 | 0.6535 | 6.1489 |
| 390 | 0.0012 | 0.0110 | 535 | 0.4726 | 4.4467 | 680 | 0.5948 | 5.5964 |
| 395 | 0.0003 | 0.0031 | 540 | 0.4999 | 4.7039 | 685 | 0.5364 | 5.0469 |
| 400 | 0.0021 | 0.0198 | 545 | 0.5257 | 4.9464 | 690 | 0.4777 | 4.4948 |
| 405 | 0.0003 | 0.0027 | 550 | 0.5506 | 5.1811 | 695 | 0.4335 | 4.0792 |
| 410 | 0.0013 | 0.0122 | 555 | 0.5764 | 5.4235 | 700 | 0.4014 | 3.7764 |
| 415 | 0.0025 | 0.0231 | 560 | 0.6039 | 5.6818 | 705 | 0.3414 | 3.2121 |
| 420 | 0.0027 | 0.0256 | 565 | 0.6315 | 5.9421 | 710 | 0.3021 | 2.8430 |
| 425 | 0.0012 | 0.0113 | 570 | 0.6603 | 6.2132 | 715 | 0.2625 | 2.4699 |
| 430 | 0.0020 | 0.0192 | 575 | 0.6912 | 6.5038 | 720 | 0.2222 | 2.0903 |
| 435 | 0.0075 | 0.0702 | 580 | 0.7212 | 6.7855 | 725 | 0.1962 | 1.8457 |
| 440 | 0.0209 | 0.1969 | 585 | 0.7554 | 7.1080 | 730 | 0.1656 | 1.5585 |
| 445 | 0.0590 | 0.5551 | 590 | 0.7877 | 7.4113 | 735 | 0.1233 | 1.1601 |
| 450 | 0.1377 | 1.2958 | 595 | 0.8248 | 7.7609 | 740 | 0.0958 | 0.9018 |
| 455 | 0.2703 | 2.5430 | 600 | 0.8637 | 8.1268 | 745 | 0.0763 | 0.7176 |
| 460 | 0.3534 | 3.3256 | 605 | 0.8981 | 8.4499 | 750 | 0.1137 | 1.0701 |
| 465 | 0.3399 | 3.1986 | 610 | 0.9356 | 8.8027 | 755 | 0.0364 | 0.3420 |
| 470 | 0.3315 | 3.1196 | 615 | 0.9599 | 9.0318 | 760 | 0.0153 | 0.1438 |
| 475 | 0.3208 | 3.0182 | 620 | 0.9833 | 9.2521 | 765 | 0.0107 | 0.1009 |
| 480 | 0.2848 | 2.6794 | 625 | 0.9944 | 9.3564 | 770 | 0.0054 | 0.0509 |
| 485 | 0.2659 | 2.5017 | 630 | 1.0000 | 9.4091 | 775 | 0.0084 | 0.0787 |
| 490 | 0.2674 | 2.5164 | 635 | 0.9917 | 9.3308 | 780 | 0.0066 | 0.0617 |
| 495 | 0.2768 | 2.6041 | 640 | 0.9748 | 9.1717 | 785 | 0.0082 | 0.0772 |
| 500 | 0.2936 | 2.7627 | 645 | 0.9497 | 8.9354 | 790 | 0.0000 | 0.0002 |
| 505 | 0.3174 | 2.9864 | 650 | 0.9136 | 8.5959 | 795 | 0.0026 | 0.0247 |
| 510 | 0.3416 | 3.2144 | 655 | 0.8681 | 8.1684 | 800 | 0.0244 | 0.2298 |
| 515 | 0.3704 | 3.4856 | 660 | 0.8191 | 7.7074 | | | |
| 520 | 0.3926 | 3.6941 | 665 | 0.7637 | 7.1860 | | | |

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

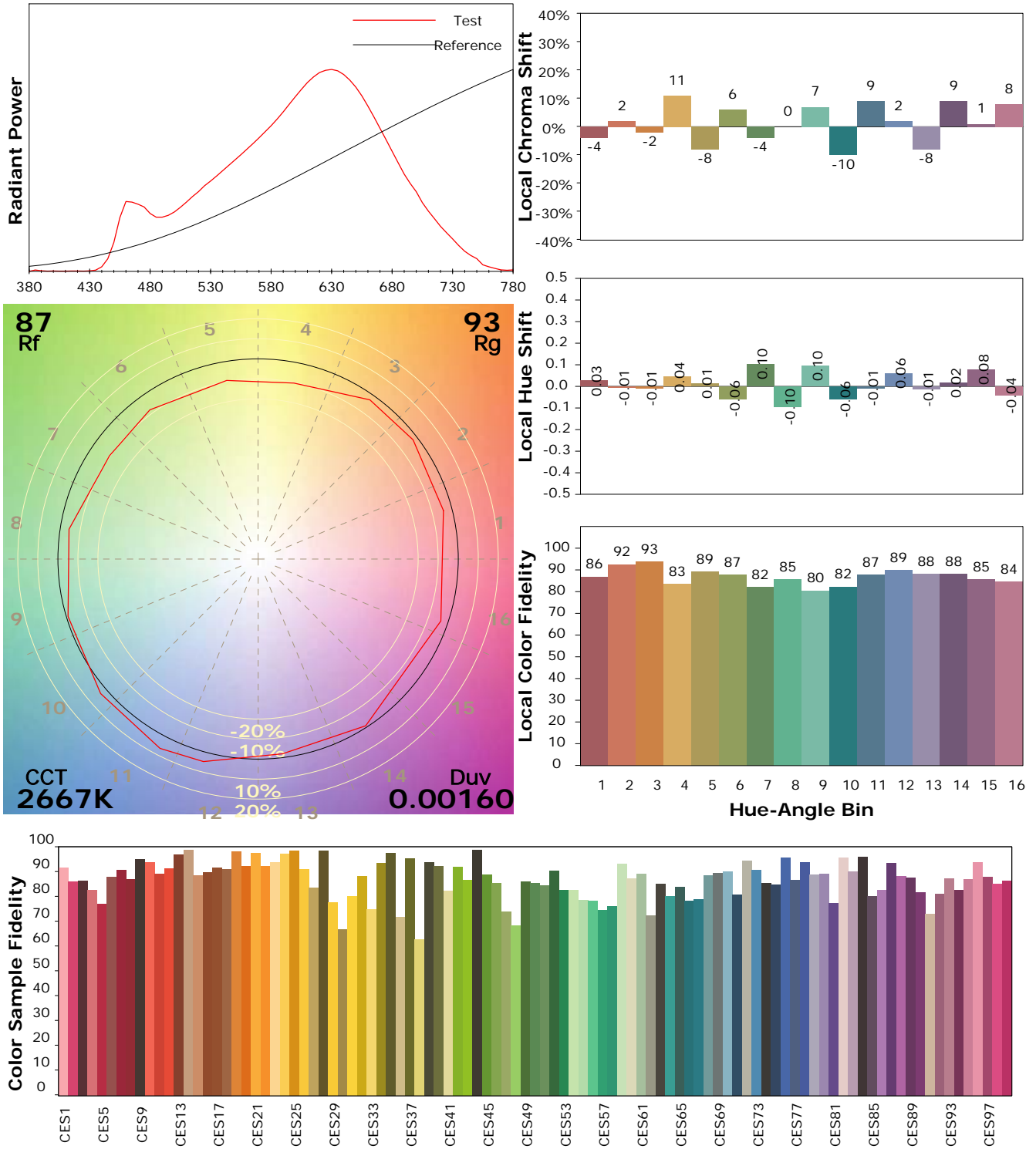
Test Device: Lisun LMS-9000B
 Test Time: 2021-04-28 14:13:40
 Inspector:

IES TM-30-18 Color Rendition Report

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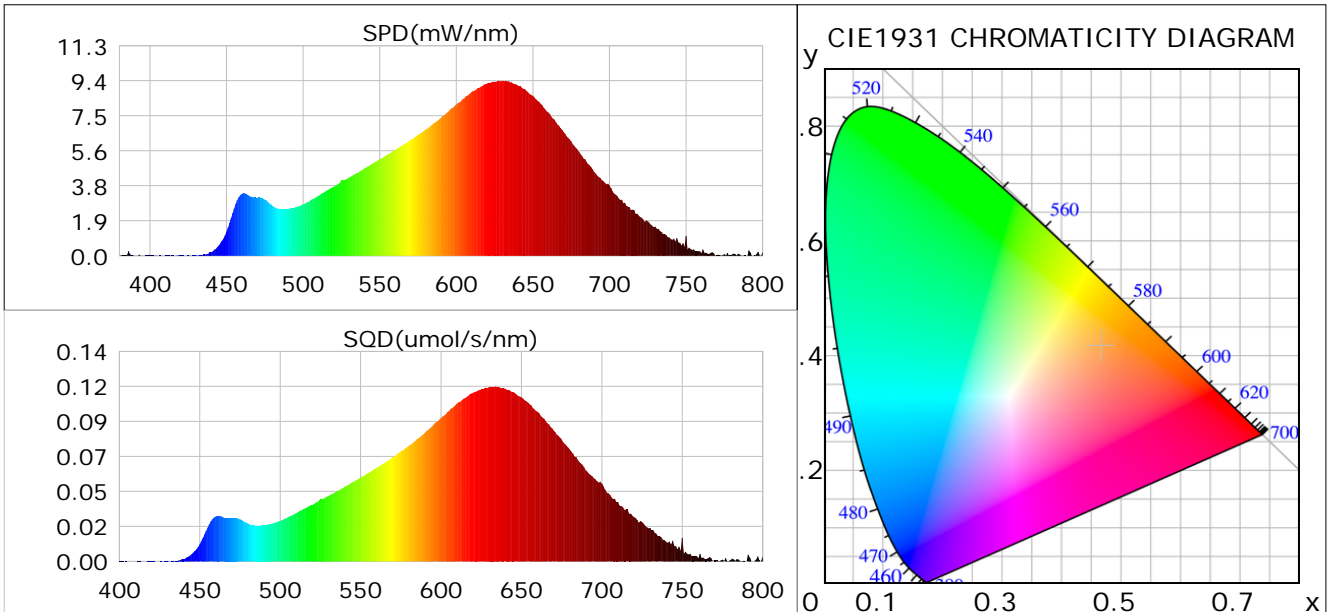
Condition: Tx:0.0°C, Ti:0.0°C, R.H.: 60%
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 Operator: CRE

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

CIE Colorimetric Parameters

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 Dominant Wavelength: 583.9nm Color Purity: 0.646
 CRI: $R_a=93.3$



Plant Optical Param

| | |
|----------------------------------|------------------------------|
| $ \mu_v(lm): 422.33$ | $Q_v(lm.s): 422.33$ |
| $ \mu_e, \dot{E}(W/nm): 1.53$ | $Q_e(J): 1.53$ |
| $ \mu_e(W): 1.43$ | $ \mu_{fr}(W): 0.10$ |
| $ \zeta_e: 0.29$ | $ \zeta_{fr}: 0.02$ |
| $PPE(umol/s/w): 1.43$ | $K_{fr}: 0.12$ |
| $Erb_Ratio: 5.13$ | $PPF(umol/s): 7.11$ |
| $PF_{uv}(360-400)(umol/s): 0.00$ | $PPF(400-500)(umol/s): 0.58$ |
| $PPF(500-600)(umol/s): 2.47$ | $PPF(600-700)(umol/s): 4.06$ |
| $PPF_r(700-800)(umol/s): 0.60$ | $PPF.t(umol): 7.11$ |
| $ \mu_{ch-A.t}(J): 0.12$ | $ \mu_{ch-A}(W): 0.12$ |
| $ \mu_{ch-B.t}(J): 0.05$ | $ \mu_{ch-B}(W): 0.05$ |
| $ \mu_b.t(J): 0.15$ | $ \mu_b(W): 0.15$ |
| $ \mu_y.t(J): 0.53$ | $ \mu_y(W): 0.53$ |
| $ \mu_r.t(J): 0.76$ | $ \mu_r(W): 0.76$ |

Electric Parameters

| | | |
|----------------------|--------------------|--------------|
| Voltage: 231.00V | Current: 0.0260A | Power: 4.98W |
| Power Factor: 0.8060 | Frequency: 49.99Hz | |

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-04-28 14:13:40
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