

## Lightsource Test Report

### Product Information

Product Category: LED-Lampen  
 Product Spec: LED-SLG22-E27-20-360-DW  
 Manufacturer: METOLIGHT  
 Buyer: 3811

Product Type: LED-Strassenlampen  
 Product Number: 1  
 Submitted Unit: 104217

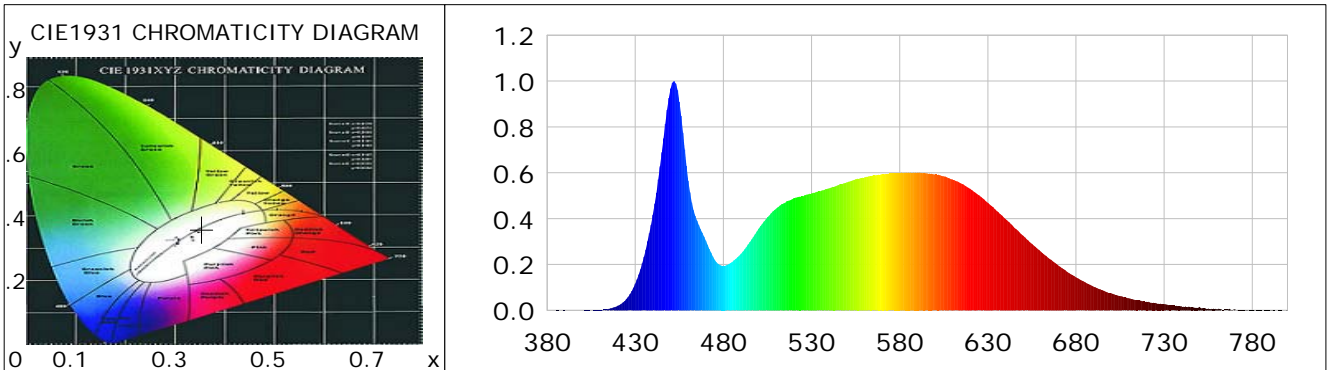
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3540$   $y=0.3588$   $u(u')=0.2146$   $v=0.3263$   $v'=0.4894$   
 CCT:  $T_c=4705K$  ( $duv=0.00013$ ) Color Ratio:  $R=0.168$   $G=0.791$   $B=0.041$   
 Peak Wavelength: 451.9nm Half Bandwidth: 19.6nm  
 Dominant Wavelength: 575.5nm Color Purity: 0.139  
 CRI:  $R_a=84.8$ ,  $avgR(1\sim14)=78.4$ ,  $avgR(1\sim15)=78.5$  TM30:  $R_f=84$ ,  $R_g=96$   
 GAI:  $GAI\_BB\_8=93.7$ ,  $GAI\_BB\_15=99.9$ ,  $GAI\_EES=82.6$   

R1 =84	R2 =89	R3 =92	R4 =85	R5 =84	R6 =84	R7 =89	R8 =72
R9 =23	R10=73	R11=84	R12=58	R13=85	R14=96	R15=80	

Color Quality Scale:  $Q_a=83.7$ ,  $Q_f=83.6$ ,  $Q_p=84.5$ ,  $Q_g=94.2$   

Q1 =86	Q2 =99	Q3 =78	Q4 =75	Q5 =82	Q6 =84	Q7 =87	Q8 =91
Q9 =97	Q10=88	Q11=85	Q12=85	Q13=85	Q14=77	Q15=80	



### Photometric Parameters

Luminous Flux: 2874.0 lm Efficiency: 132.63 lm/W Radiant Power: 8.936 W  
 Total mains efficacy: 132.63 lm/W Energy Efficiency Class: E (EU 2019/2015)  
 Pupil Flux: 4710.73 Plm Pupil Lumens Per Watt: 217.39 Plm/W Pupil Factor (Kp): 1.639  
 Circopic Flux: 9981.29 lm

### Electric Parameters

Voltage: 230.60V Current: 0.0970A Power: 21.67W  
 Power Factor: 0.9590 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: 53089 (2498) CCD Integration Time: 110.32 ms

Condition: Tx:20.8'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 13:35:03  
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.0548	525	0.4966	37.2303	670	0.1955	14.6578
385	0.0012	0.0878	530	0.5101	38.2439	675	0.1681	12.6063
390	0.0008	0.0635	535	0.5197	38.9591	680	0.1443	10.8180
395	0.0004	0.0294	540	0.5321	39.8950	685	0.1231	9.2323
400	0.0003	0.0259	545	0.5457	40.9147	690	0.1032	7.7368
405	0.0004	0.0275	550	0.5583	41.8549	695	0.0880	6.5939
410	0.0021	0.1538	555	0.5716	42.8525	700	0.0740	5.5484
415	0.0067	0.5047	560	0.5797	43.4610	705	0.0628	4.7083
420	0.0196	1.4683	565	0.5887	44.1355	710	0.0524	3.9268
425	0.0496	3.7196	570	0.5941	44.5405	715	0.0445	3.3398
430	0.1163	8.7207	575	0.5974	44.7874	720	0.0375	2.8096
435	0.2337	17.5237	580	0.5989	44.9016	725	0.0322	2.4144
440	0.4170	31.2662	585	0.6005	45.0217	730	0.0274	2.0558
445	0.6897	51.7055	590	0.6006	45.0300	735	0.0219	1.6407
450	0.9673	72.5191	595	0.5981	44.8370	740	0.0168	1.2580
455	0.9097	68.2042	600	0.5926	44.4250	745	0.0133	0.9983
460	0.5659	42.4293	605	0.5847	43.8382	750	0.0147	1.0991
465	0.3912	29.3270	610	0.5710	42.8098	755	0.0077	0.5788
470	0.3043	22.8111	615	0.5530	41.4573	760	0.0046	0.3418
475	0.2207	16.5471	620	0.5301	39.7422	765	0.0035	0.2645
480	0.1945	14.5838	625	0.5015	37.5983	770	0.0042	0.3141
485	0.2114	15.8526	630	0.4691	35.1689	775	0.0020	0.1476
490	0.2466	18.4907	635	0.4338	32.5207	780	0.0017	0.1299
495	0.2979	22.3323	640	0.3981	29.8437	785	0.0017	0.1309
500	0.3561	26.6984	645	0.3608	27.0467	790	0.0007	0.0541
505	0.4067	30.4912	650	0.3257	24.4184	795	0.0013	0.0946
510	0.4445	33.3247	655	0.2898	21.7260	800	0.0038	0.2843
515	0.4694	35.1946	660	0.2569	19.2581			
520	0.4894	36.6917	665	0.2242	16.8085			

Condition: Tx:20.8'C, Ti:0.0'C, R.H.:60%  
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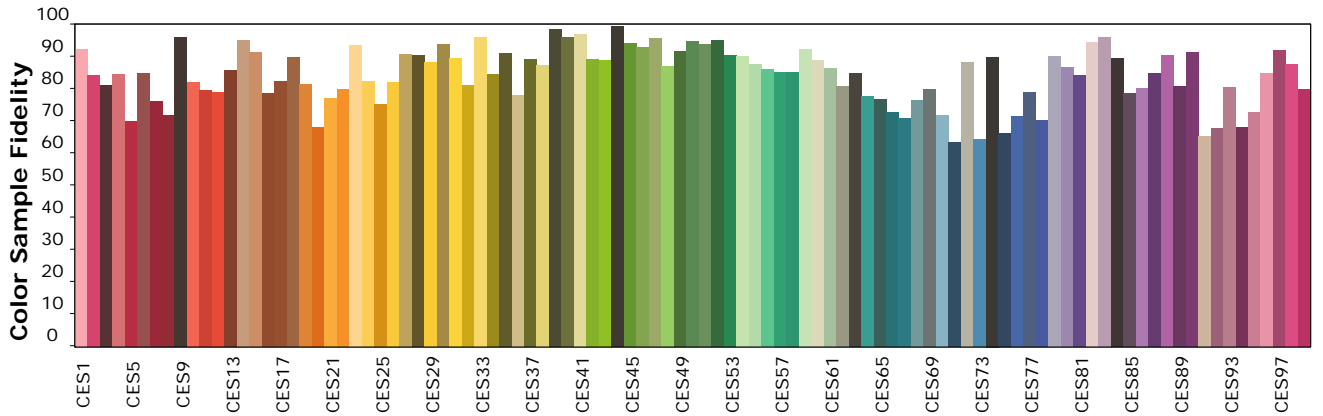
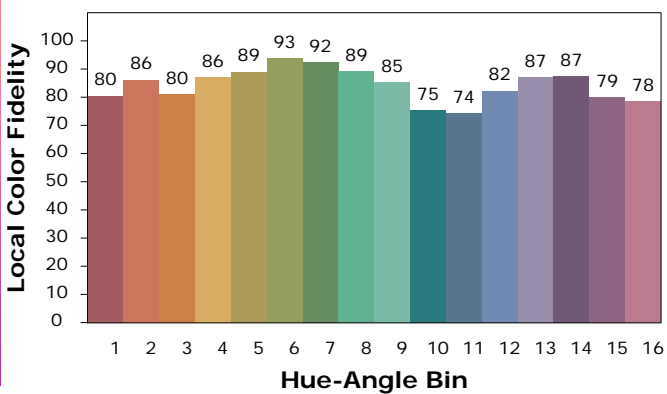
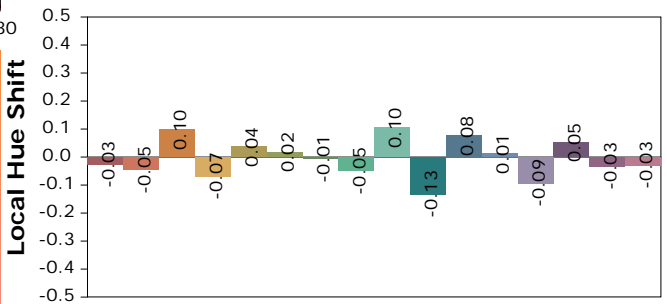
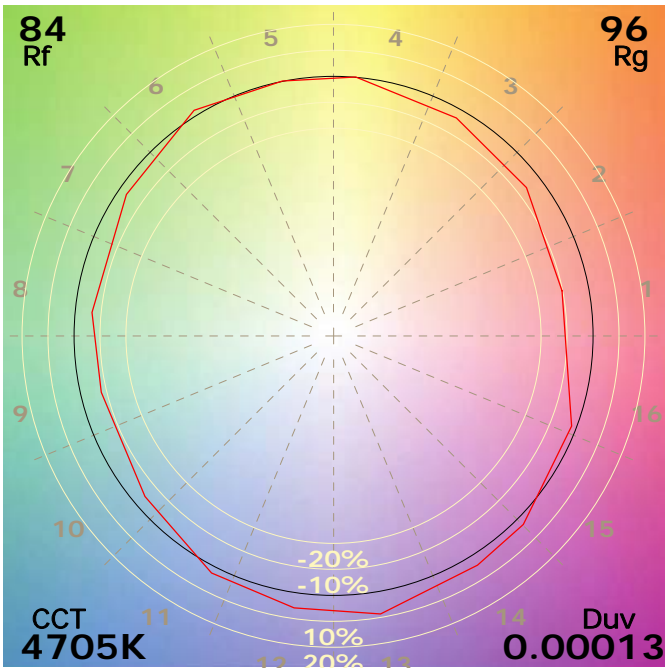
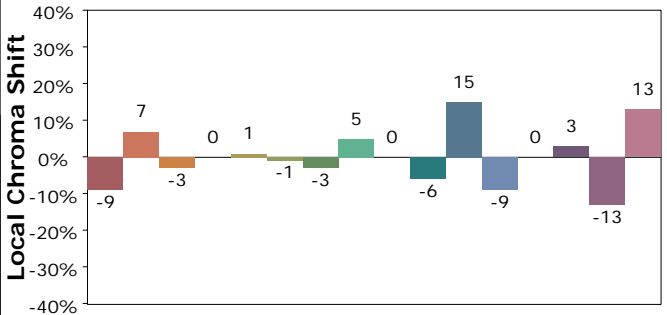
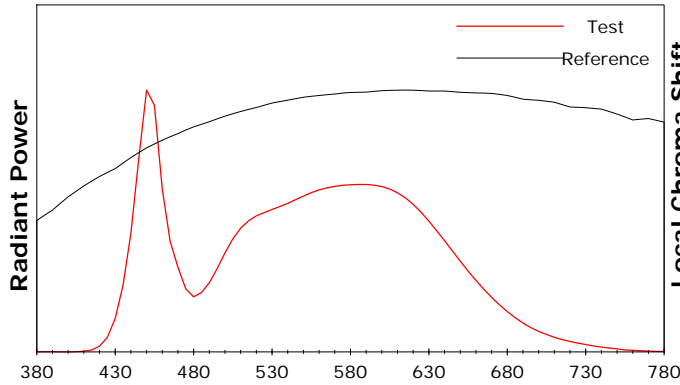
Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 13:35:03  
 Inspector:

## IES TM-30-18 Color Rendition Report

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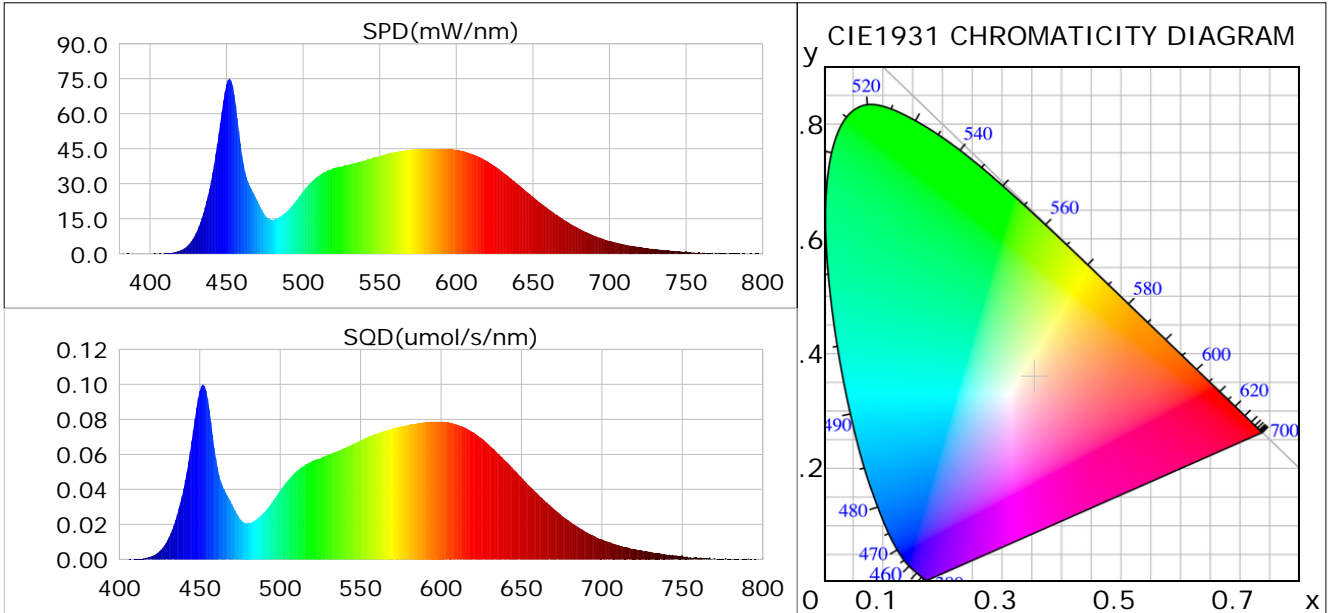
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 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 13:35:03  
 Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3540$   $y=0.3588$   $u(u')=0.2146$   $v=0.3263$   $v'=0.4894$   
 CCT:  $T_c=4705K$  ( $duv=0.00013$ ) Color Ratio:  $R=0.168$   $G=0.791$   $B=0.041$   
 Peak Wavelength: 451.9nm Half Bandwidth: 19.6nm  
 Dominant Wavelength: 575.5nm Color Purity: 0.139  
 CRI:  $R_a=84.8$



### Plant Optical Param

$ \mu_v(lm): 2874.00$	$Q_v(lm.s): 2874.00$
$ \mu_e, \dot{E}(W/nm): 8.94$	$Q_e(J): 8.94$
$ \mu_e(W): 8.80$	$ \mu_{fr}(W): 0.15$
$ \zeta_e: 0.41$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.87$	$K_{fr}: 0.04$
$Erb\_Ratio: 1.09$	$PPF(umol/s): 40.62$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 8.72$
$PPF(500-600)(umol/s): 18.75$	$PPF(600-700)(umol/s): 13.15$
$PPF_{fr}(700-800)(umol/s): 0.85$	$PPF.t(umol): 40.62$
$ \mu_{ch-A.t}(J): 0.73$	$ \mu_{ch-A}(W): 0.73$
$ \mu_{ch-B.t}(J): 0.44$	$ \mu_{ch-B}(W): 0.44$
$ \mu_b.t(J): 2.27$	$ \mu_b(W): 2.27$
$ \mu_y.t(J): 4.08$	$ \mu_y(W): 4.08$
$ \mu_r.t(J): 2.52$	$ \mu_r(W): 2.52$

### Electric Parameters

Voltage: 230.60V	Current: 0.0970A	Power: 21.67W
Power Factor: 0.9590	Frequency: 49.99Hz	

Condition:  $T_x: 20.8^\circ C$ ,  $T_i: 0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-11 13:35:03  
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