

## Lightsource Test Report

### Product Information

Product Category: LED-Lampen  
 Product Spec: LED-SLG28-PLUS-E27-36-360-NWM  
 Manufacturer: METOLIGHT  
 Buyer: 3811  
 Product Type: LED-Strassenlampen  
 Product Number: 12  
 Submitted Unit: 101677

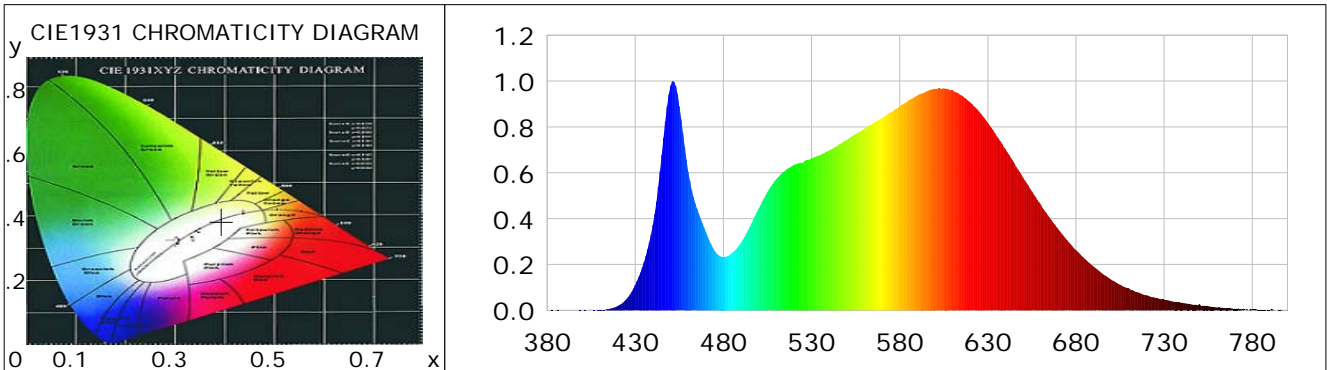
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3937$   $y=0.3838$   $u(u')=0.2310$   $v=0.3377$   $v'=0.5066$   
 CCT:  $T_c=3712K$  ( $duv=-0.00037$ ) Color Ratio:  $R=0.200$   $G=0.768$   $B=0.033$   
 Peak Wavelength: 451.3nm Half Bandwidth: 20.4nm  
 Dominant Wavelength: 580.3nm Color Purity: 0.334  
 CRI:  $R_a = 86.3$ ,  $avgR(1\sim14) = 80.9$ ,  $avgR(1\sim15) = 80.8$  TM30:  $R_f = 86$ ,  $R_g = 97$   
 GAI:  $GAI\_BB\_8=95.8$ ,  $GAI\_BB\_15=102.3$ ,  $GAI\_EES=70.8$   

R1 =86	R2 =91	R3 =95	R4 =86	R5 =86	R6 =88	R7 =88	R8 =70
R9 =26	R10=79	R11=86	R12=66	R13=87	R14=97	R15=80	

Color Quality Scale:  $Q_a = 85.9$ ,  $Q_f = 85.8$ ,  $Q_p = 86.5$ ,  $Q_g = 95.3$   

Q1 =85	Q2 =98	Q3 =82	Q4 =80	Q5 =86	Q6 =87	Q7 =88	Q8 =91
Q9 =98	Q10=90	Q11=88	Q12=87	Q13=87	Q14=78	Q15=80	



### Photometric Parameters

Luminous Flux: 3728.4 lm Efficiency: 102.12 lm/W Radiant Power: 11.423 W  
 Total mains efficacy: 102.12 lm/W Energy Efficiency Class: F (EU 2019/2015)  
 Pupil Flux: 5436.31 Plm Pupil Lumens Per Watt: 148.90 Plm/W Pupil Factor (Kp): 1.458  
 Circopic Flux: 10777.92 lm

### Electric Parameters

Voltage: 230.90V Current: 0.1650A Power: 36.51W  
 Power Factor: 0.9560 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: 48867 (2518) CCD Integration Time: 109.63 ms

Condition: Tx:21.9'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 11:21:11  
 Inspector:

## Lightsource Test Report

### Product Information

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

Product Type: LED-Strassenlampen  
 Product Number: 12  
 Submitted Unit: 101677

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0082	525	0.6435	43.8023	670	0.3533	24.0444
385	0.0003	0.0205	530	0.6627	45.1073	675	0.3061	20.8327
390	0.0004	0.0294	535	0.6775	46.1142	680	0.2628	17.8880
395	0.0002	0.0143	540	0.6973	47.4598	685	0.2246	15.2872
400	0.0004	0.0289	545	0.7190	48.9410	690	0.1906	12.9747
405	0.0002	0.0134	550	0.7433	50.5912	695	0.1596	10.8646
410	0.0015	0.1028	555	0.7698	52.3994	700	0.1339	9.1161
415	0.0068	0.4615	560	0.7928	53.9621	705	0.1123	7.6428
420	0.0192	1.3068	565	0.8167	55.5883	710	0.0952	6.4797
425	0.0493	3.3562	570	0.8385	57.0738	715	0.0786	5.3467
430	0.1115	7.5904	575	0.8641	58.8178	720	0.0657	4.4739
435	0.2107	14.3433	580	0.8887	60.4887	725	0.0553	3.7669
440	0.3734	25.4160	585	0.9154	62.3030	730	0.0470	3.1994
445	0.6794	46.2443	590	0.9371	63.7859	735	0.0386	2.6275
450	0.9801	66.7073	595	0.9547	64.9787	740	0.0341	2.3238
455	0.8903	60.5997	600	0.9646	65.6575	745	0.0272	1.8518
460	0.6044	41.1364	605	0.9689	65.9447	750	0.0278	1.8929
465	0.4446	30.2641	610	0.9585	65.2377	755	0.0188	1.2766
470	0.3427	23.3228	615	0.9378	63.8323	760	0.0123	0.8390
475	0.2598	17.6843	620	0.9070	61.7367	765	0.0093	0.6333
480	0.2325	15.8263	625	0.8667	58.9910	770	0.0077	0.5211
485	0.2502	17.0291	630	0.8162	55.5573	775	0.0046	0.3122
490	0.2942	20.0265	635	0.7600	51.7314	780	0.0040	0.2694
495	0.3643	24.7932	640	0.7025	47.8141	785	0.0029	0.1962
500	0.4438	30.2051	645	0.6420	43.6942	790	0.0011	0.0775
505	0.5171	35.1949	650	0.5776	39.3150	795	0.0020	0.1346
510	0.5721	38.9370	655	0.5189	35.3167	800	0.0034	0.2309
515	0.6082	41.3984	660	0.4616	31.4161			
520	0.6340	43.1510	665	0.4043	27.5164			

Condition: Tx:21.9'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

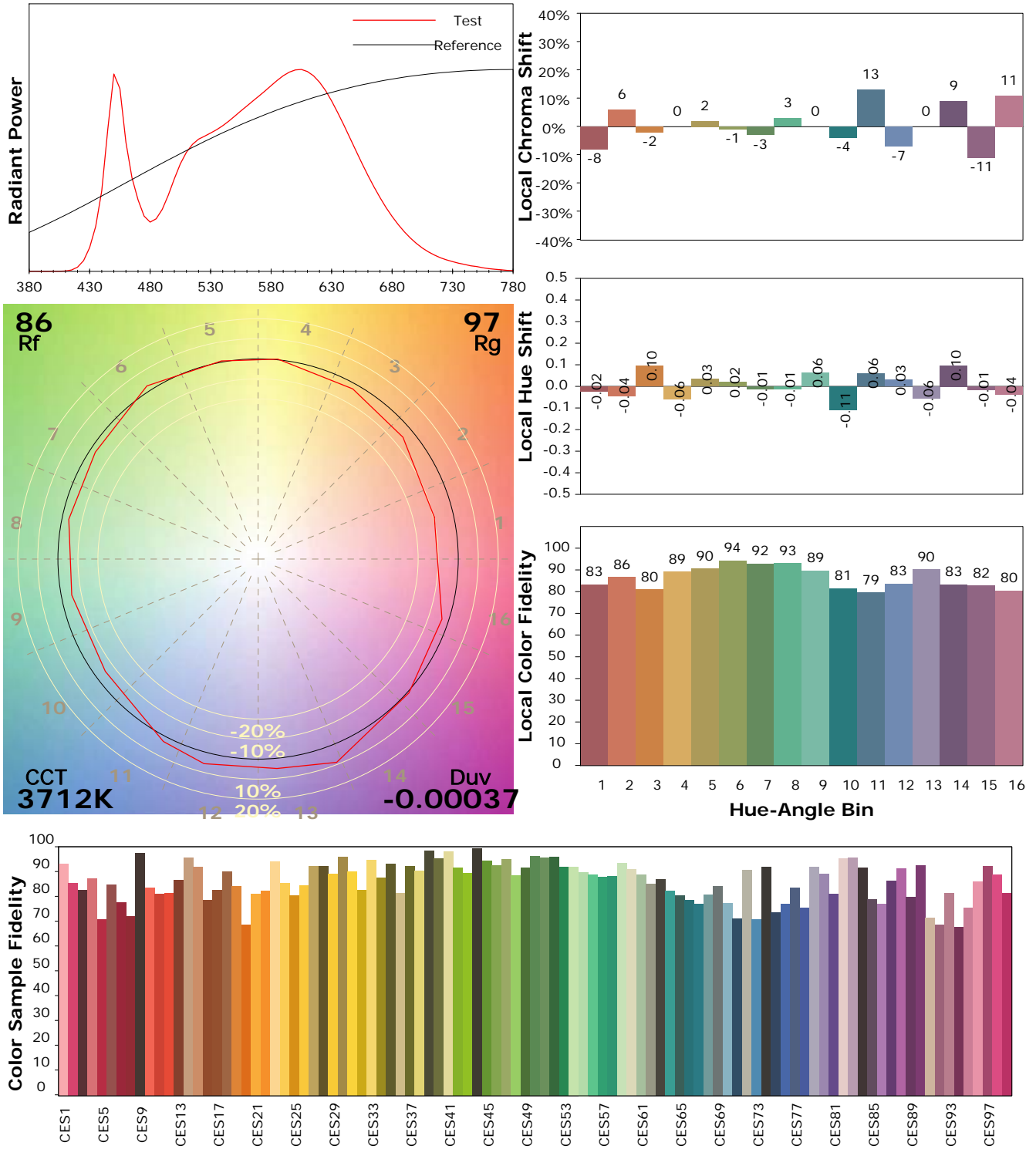
Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 11:21:11  
 Inspector:

## IES TM-30-18 Color Rendition Report

### Product Information

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

Product Type: LED-Strassenlampen  
 Product Number: 12  
 Submitted Unit: 101677



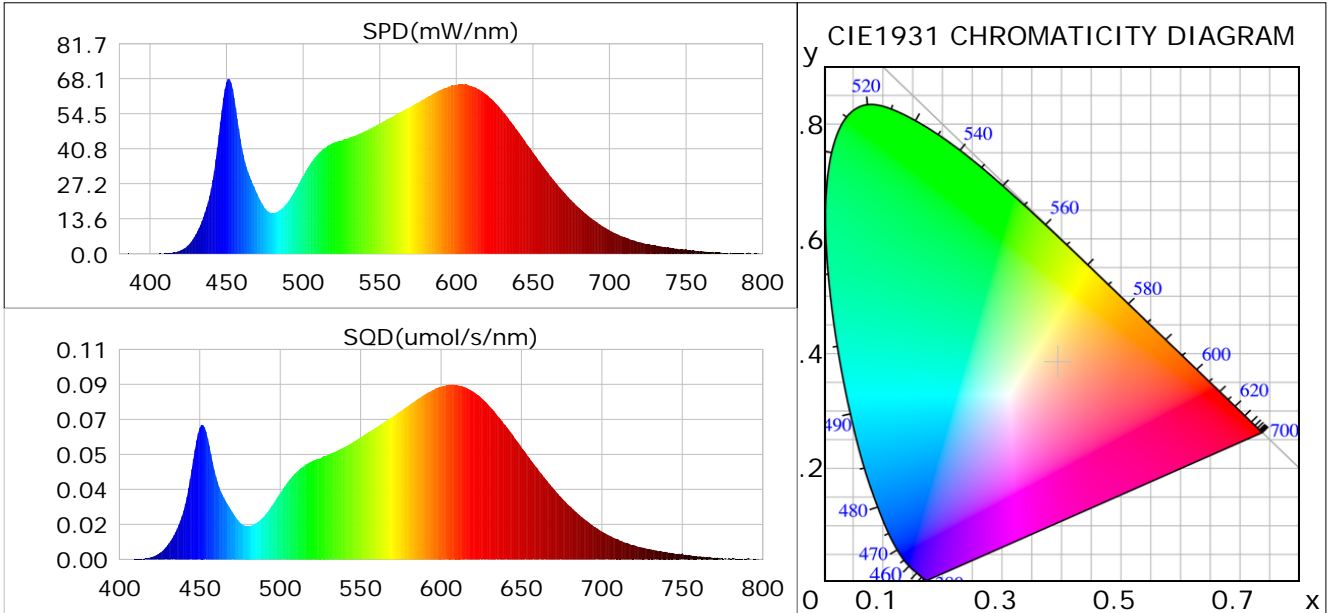
Condition: Tx:21.9°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 11:21:11  
 Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3937$   $y=0.3838$   $u(u')=0.2310$   $v=0.3377$   $v'=0.5066$   
 CCT:  $T_c=3712K$  ( $duv=-0.00037$ ) Color Ratio:  $R=0.200$   $G=0.768$   $B=0.033$   
 Peak Wavelength: 451.3nm Half Bandwidth: 20.4nm  
 Dominant Wavelength: 580.3nm Color Purity: 0.334  
 CRI:  $R_a=86.3$



### Plant Optical Param

$ \mu_v(lm): 3728.43$	$Q_v(lm.s): 3728.43$
$ \mu_e, \dot{E}(W/nm): 11.42$	$Q_e(J): 11.42$
$ \mu_e(W): 11.19$	$ \mu_{fr}(W): 0.24$
$ \zeta_e: 0.31$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.45$	$K_{fr}: 0.04$
$Erb\_Ratio: 1.80$	$PPF(umol/s): 52.90$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 8.37$
$PPF(500-600)(umol/s): 23.74$	$PPF(600-700)(umol/s): 20.79$
$PPF_{fr}(700-800)(umol/s): 1.42$	$PPF.t(umol): 52.90$
$ \mu_{ch-A.t}(J): 0.90$	$ \mu_{ch-A}(W): 0.90$
$ \mu_{ch-B.t}(J): 0.50$	$ \mu_{ch-B}(W): 0.50$
$ \mu_b.t(J): 2.17$	$ \mu_b(W): 2.17$
$ \mu_y.t(J): 5.14$	$ \mu_y(W): 5.14$
$ \mu_r.t(J): 3.97$	$ \mu_r(W): 3.97$

### Electric Parameters

Voltage: 230.90V	Current: 0.1650A	Power: 36.51W
Power Factor: 0.9560	Frequency: 49.99Hz	

Condition:  $T_x: 21.9^\circ C$ ,  $T_i: 0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 11:21:11  
 Inspector: