

## Lightsource Test Report

### Product Information

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

Product Type: LED-Strassenlampen  
 Product Number: 1  
 Submitted Unit: 101706

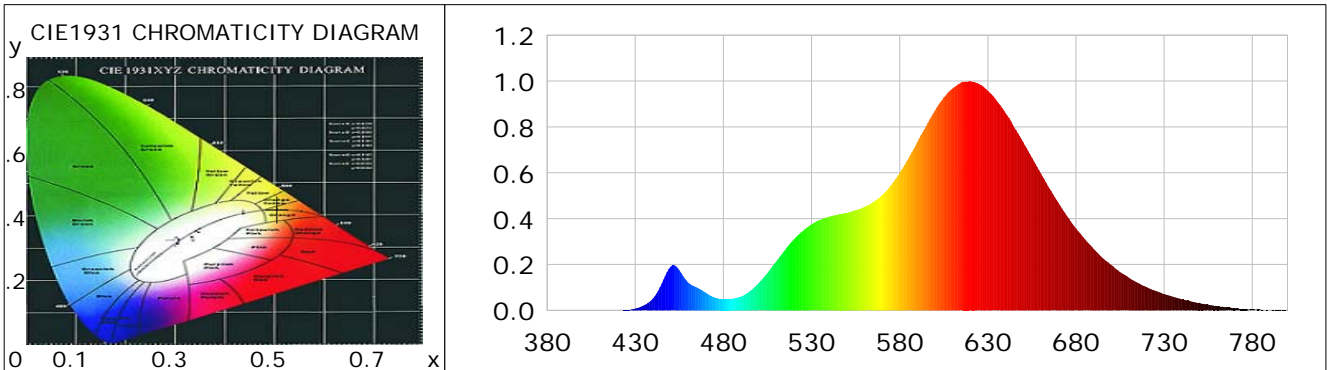
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.5063$   $y=0.4223$   $u(u')=0.2871$   $v=0.3591$   $v'=0.5387$   
 CCT:  $T_c=2241K$  ( $duv=0.00221$ ) Color Ratio:  $R=0.311$   $G=0.679$   $B=0.010$   
 Peak Wavelength: 620.0nm Half Bandwidth: 97.8nm  
 Dominant Wavelength: 586.3nm Color Purity: 0.788  
 CRI:  $R_a=88.1$ ,  $avgR(1\sim14)=83.7$ ,  $avgR(1\sim15)=83.4$  TM30:  $R_f=88$ ,  $R_g=99$   
 GAI:  $GAI\_BB\_8=84.9$ ,  $GAI\_BB\_15=94.1$ ,  $GAI\_EES=28.2$   

R1 =89	R2 =93	R3 =95	R4 =91	R5 =88	R6 =94	R7 =86	R8 =68
R9 =31	R10=82	R11=93	R12=75	R13=90	R14=95	R15=80	

Color Quality Scale:  $Q_a=81.9$ ,  $Q_f=88.6$ ,  $Q_p=87.0$ ,  $Q_g=86.9$   

Q1 =77	Q2 =89	Q3 =84	Q4 =84	Q5 =84	Q6 =81	Q7 =82	Q8 =86
Q9 =91	Q10=86	Q11=81	Q12=84	Q13=85	Q14=74	Q15=76	



### Photometric Parameters

Luminous Flux: 3986.8 lm	Efficiency: 107.40 lm/W	Radiant Power: 13.139 W
Total mains efficacy: 107.40 lm/W	Energy Efficiency Class: F (EU 2019/2015)	
Pupil Flux: 3888.52 Plm	Pupil Lumens Per Watt: 104.76 Plm/W	Pupil Factor (Kp): 0.975
Cirtpopic Flux: 5888.46 lm		

### Electric Parameters

Voltage: 230.80V	Current: 0.9560A	Power: 37.12W
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: 46275 (1941)	CCD Integration Time: 195.83 ms

Condition: Tx:12.5'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 09:26:26  
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0550	525	0.3451	36.5487	670	0.4699	49.7693
385	0.0003	0.0355	530	0.3749	39.7083	675	0.4102	43.4509
390	0.0004	0.0379	535	0.3948	41.8148	680	0.3576	37.8742
395	0.0000	0.0032	540	0.4077	43.1830	685	0.3106	32.8939
400	0.0004	0.0450	545	0.4177	44.2452	690	0.2680	28.3914
405	0.0001	0.0075	550	0.4255	45.0648	695	0.2287	24.2252
410	0.0003	0.0295	555	0.4371	46.2926	700	0.1978	20.9552
415	0.0005	0.0542	560	0.4513	47.7972	705	0.1666	17.6507
420	0.0004	0.0440	565	0.4724	50.0369	710	0.1422	15.0664
425	0.0014	0.1498	570	0.5029	53.2724	715	0.1201	12.7212
430	0.0079	0.8351	575	0.5454	57.7736	720	0.1018	10.7782
435	0.0222	2.3481	580	0.5991	63.4531	725	0.0856	9.0656
440	0.0516	5.4642	585	0.6625	70.1702	730	0.0719	7.6131
445	0.1169	12.3859	590	0.7339	77.7360	735	0.0598	6.3324
450	0.1903	20.1525	595	0.8042	85.1774	740	0.0479	5.0775
455	0.1746	18.4921	600	0.8707	92.2276	745	0.0397	4.2069
460	0.1212	12.8345	605	0.9288	98.3814	750	0.0335	3.5463
465	0.0991	10.5010	610	0.9673	102.4596	755	0.0255	2.7023
470	0.0769	8.1501	615	0.9944	105.3302	760	0.0183	1.9366
475	0.0561	5.9393	620	1.0000	105.9206	765	0.0134	1.4185
480	0.0494	5.2317	625	0.9867	104.5120	770	0.0098	1.0431
485	0.0509	5.3905	630	0.9574	101.4118	775	0.0066	0.6975
490	0.0602	6.3735	635	0.9144	96.8550	780	0.0046	0.4903
495	0.0831	8.8020	640	0.8601	91.1041	785	0.0034	0.3576
500	0.1189	12.5903	645	0.7979	84.5141	790	0.0003	0.0369
505	0.1633	17.3016	650	0.7341	77.7518	795	0.0020	0.2096
510	0.2142	22.6860	655	0.6658	70.5261	800	0.0029	0.3019
515	0.2635	27.9129	660	0.5985	63.3951			
520	0.3098	32.8172	665	0.5308	56.2216			

Condition: Tx: 12.5°C, Ti: 0.0°C, R.H.: 60%  
 Test Lab:  
 Operator: CRE

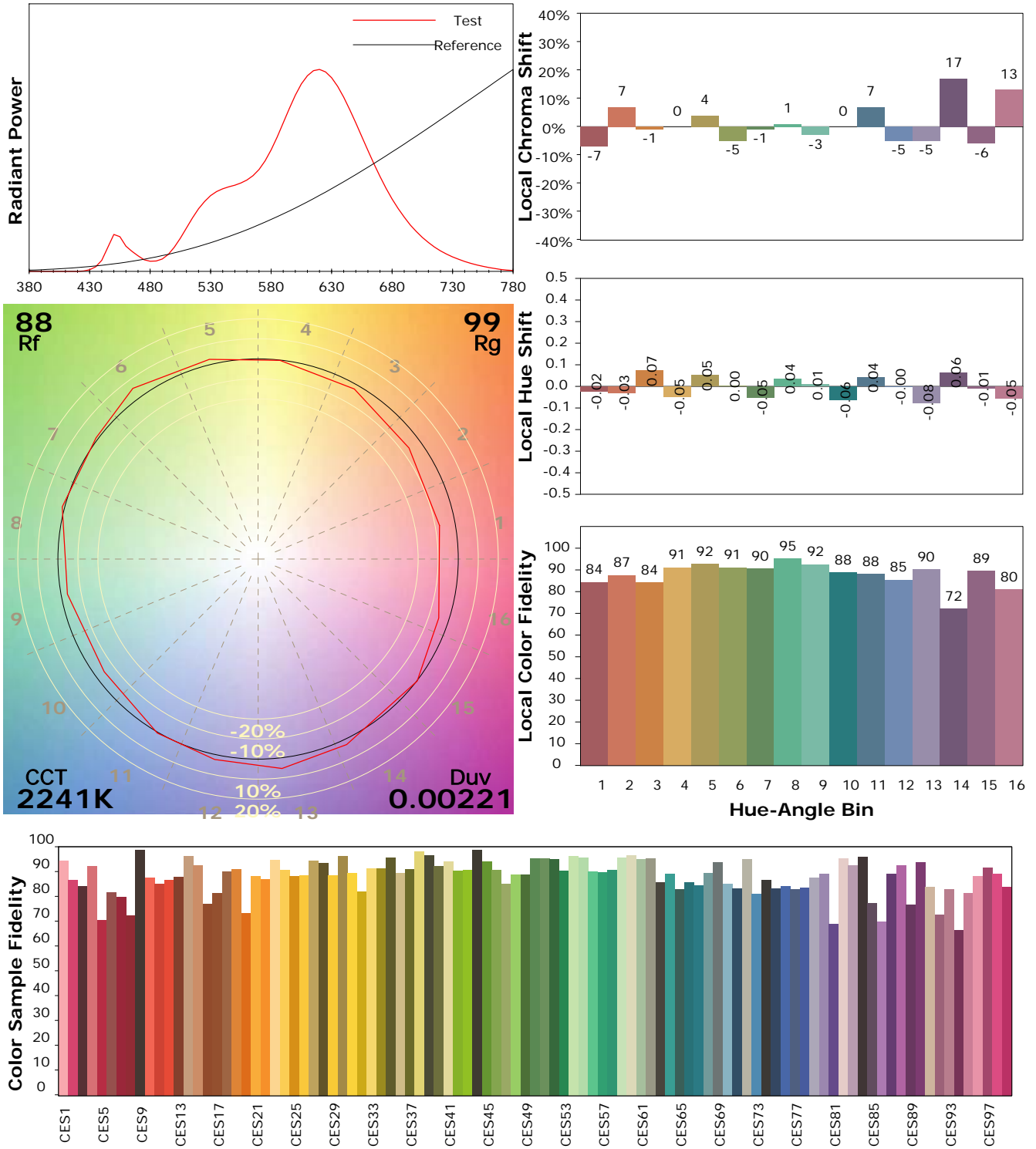
Test Device: Lisun LMS-9000B  
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## IES TM-30-18 Color Rendition Report

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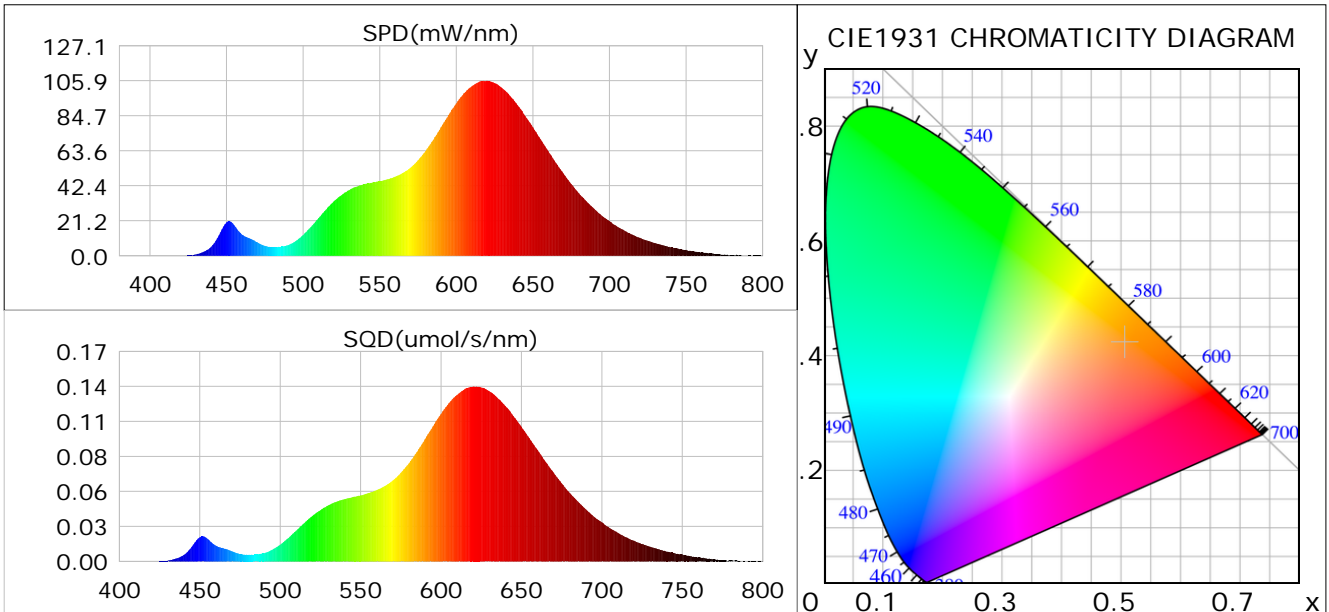
Condition: Tx: 12.5°C, Ti: 0.0°C, R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 09:26:26  
 Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.5063$   $y=0.4223$   $u(u')=0.2871$   $v=0.3591$   $v'=0.5387$   
 CCT:  $T_c=2241K$  ( $duv=0.00221$ ) Color Ratio:  $R=0.311$   $G=0.679$   $B=0.010$   
 Peak Wavelength: 620.0nm Half Bandwidth: 97.8nm  
 Dominant Wavelength: 586.3nm Color Purity: 0.788  
 CRI:  $R_a=88.1$



### Plant Optical Param

$ \mu_v(lm): 3986.80$	$Q_v(lm.s): 3986.80$
$ \mu_e, \dot{E}(W/nm): 13.14$	$Q_e(J): 13.14$
$ \mu_e(W): 12.60$	$ \mu_{fr}(W): 0.57$
$ \zeta_e: 0.34$	$ \zeta_{fr}: 0.02$
$PPE(umol/s/w): 1.70$	$K_{fr}: 0.09$
$Erb\_Ratio: 10.92$	$PPF(umol/s): 63.22$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.53$
$PPF(500-600)(umol/s): 22.62$	$PPF(600-700)(umol/s): 38.07$
$PPF_{fr}(700-800)(umol/s): 3.30$	$PPF.t(umol): 63.22$
$ \mu_{ch-A.t}(J): 1.08$	$ \mu_{ch-A}(W): 1.08$
$ \mu_{ch-B.t}(J): 0.43$	$ \mu_{ch-B}(W): 0.43$
$ \mu_b.t(J): 0.65$	$ \mu_b(W): 0.65$
$ \mu_y.t(J): 4.83$	$ \mu_y(W): 4.83$
$ \mu_r.t(J): 7.22$	$ \mu_r(W): 7.22$

### Electric Parameters

Voltage: 230.80V	Current: 0.9560A	Power: 37.12W
Power Factor: 0.9560	Frequency: 49.99Hz	

Condition:  $T_x: 12.5^\circ C$ ,  $T_i: 0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
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