

## Lightsource Test Report

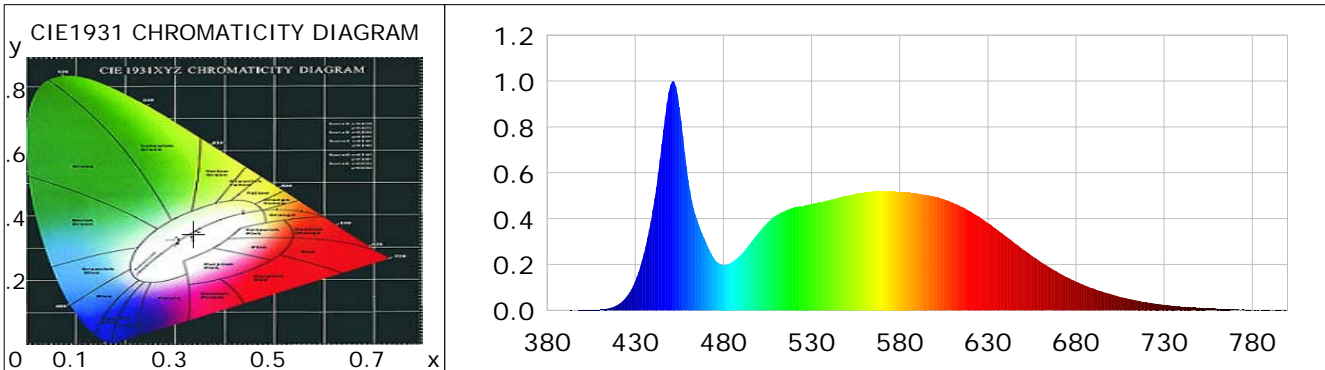
### Product Information

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

Product Type: LED-Strassenlampen  
 Product Number: 1  
 Submitted Unit: 101520

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3373$   $y=0.3451$   $u(u')=0.2086$   $v=0.3202$   $v'=0.4803$   
 CCT:  $T_c=5298K$  ( $duv=-0.00003$ ) Color Ratio:  $R=0.157$   $G=0.797$   $B=0.047$   
 Peak Wavelength: 451.4nm Half Bandwidth: 20.3nm  
 Dominant Wavelength: 566.1nm Color Purity: 0.048  
 CRI:  $R_a=85.2$ ,  $avgR(1\sim14)=79.1$ ,  $avgR(1\sim15)=79.3$  TM30:  $R_f=84$ ,  $R_g=98$   
 GAI:  $GAI\_BB\_8=96.6$ ,  $GAI\_BB\_15=101.4$ ,  $GAI\_EES=87.4$   
 R1 =85 R2 =89 R3 =91 R4 =86 R5 =85 R6 =84 R7 =88 R8 =74  
 R9 =24 R10=73 R11=86 R12=63 R13=86 R14=95 R15=81  
 Color Quality Scale:  $Q_a=82.8$ ,  $Q_f=82.3$ ,  $Q_p=84.4$ ,  $Q_g=95.2$   
 Q1 =87 Q2 =97 Q3 =76 Q4 =74 Q5 =82 Q6 =85 Q7 =88 Q8 =91  
 Q9 =96 Q10=86 Q11=82 Q12=82 Q13=83 Q14=76 Q15=80



### Photometric Parameters

Luminous Flux: 3967.9 lm Efficiency: 106.07 lm/W Radiant Power: 12.669 W  
 Total mains efficacy: 106.07 lm/W Energy Efficiency Class: F (EU 2019/2015)  
 Pupil Flux: 6873.99 Plm Pupil Lumens Per Watt: 183.75 Plm/W Pupil Factor (Kp): 1.732  
 Circopic Flux: 15044.47 lm

### Electric Parameters

Voltage: 231.10V Current: 0.1680A Power: 37.41W  
 Power Factor: 0.9580 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: 55424 (2001) CCD Integration Time: 90.28 ms

Condition: Tx:14.2'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 09:45:16  
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0476	525	0.4527	53.1865	670	0.1650	19.3833
385	0.0007	0.0862	530	0.4641	54.5269	675	0.1440	16.9172
390	0.0006	0.0705	535	0.4703	55.2587	680	0.1263	14.8400
395	0.0005	0.0550	540	0.4803	56.4348	685	0.1085	12.7535
400	0.0013	0.1575	545	0.4904	57.6231	690	0.0953	11.1953
405	0.0019	0.2187	550	0.5002	58.7658	695	0.0816	9.5902
410	0.0035	0.4112	555	0.5088	59.7838	700	0.0701	8.2326
415	0.0091	1.0713	560	0.5149	60.5000	705	0.0586	6.8829
420	0.0242	2.8379	565	0.5195	61.0307	710	0.0498	5.8523
425	0.0588	6.9135	570	0.5193	61.0076	715	0.0416	4.8869
430	0.1274	14.9645	575	0.5196	61.0497	720	0.0354	4.1535
435	0.2481	29.1489	580	0.5165	60.6899	725	0.0293	3.4367
440	0.4387	51.5483	585	0.5143	60.4211	730	0.0246	2.8951
445	0.7249	85.1677	590	0.5098	59.9002	735	0.0197	2.3091
450	0.9832	115.5208	595	0.5038	59.1970	740	0.0162	1.9072
455	0.8870	104.2180	600	0.4963	58.3100	745	0.0141	1.6552
460	0.5703	67.0025	605	0.4854	57.0354	750	0.0125	1.4702
465	0.3959	46.5130	610	0.4698	55.2012	755	0.0088	1.0311
470	0.2991	35.1369	615	0.4521	53.1118	760	0.0070	0.8195
475	0.2232	26.2196	620	0.4322	50.7806	765	0.0055	0.6493
480	0.1978	23.2445	625	0.4088	48.0269	770	0.0040	0.4700
485	0.2113	24.8249	630	0.3808	44.7445	775	0.0042	0.4935
490	0.2428	28.5284	635	0.3531	41.4850	780	0.0010	0.1174
495	0.2897	34.0374	640	0.3238	38.0432	785	0.0013	0.1574
500	0.3390	39.8235	645	0.2944	34.5837	790	0.0009	0.1015
505	0.3829	44.9838	650	0.2657	31.2175	795	0.0011	0.1279
510	0.4145	48.6977	655	0.2380	27.9590	800	0.0037	0.4327
515	0.4333	50.9074	660	0.2115	24.8507			
520	0.4490	52.7498	665	0.1876	22.0362			

Condition: Tx: 14.2'C, Ti: 0.0'C, R.H.: 60%  
 Test Lab:  
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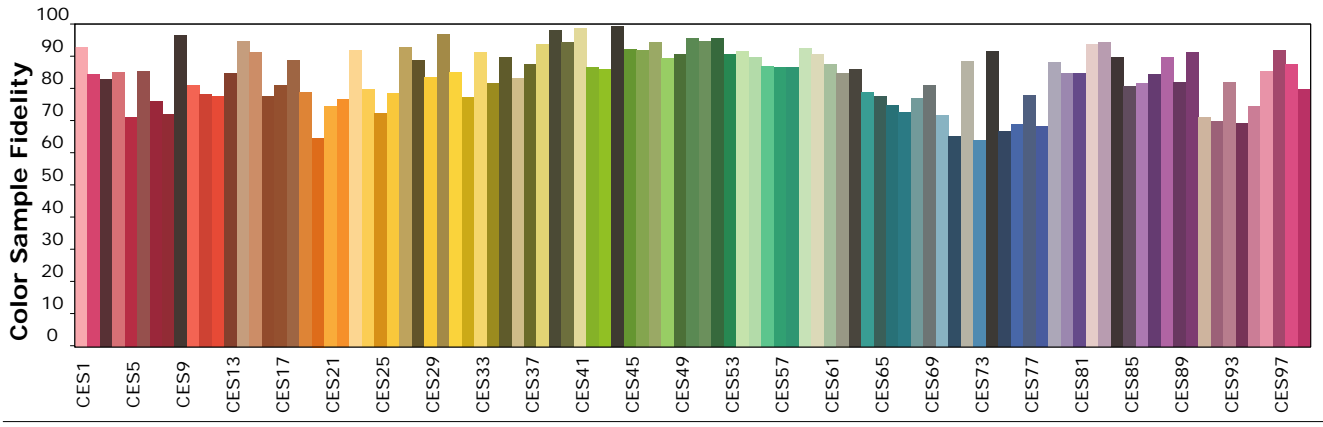
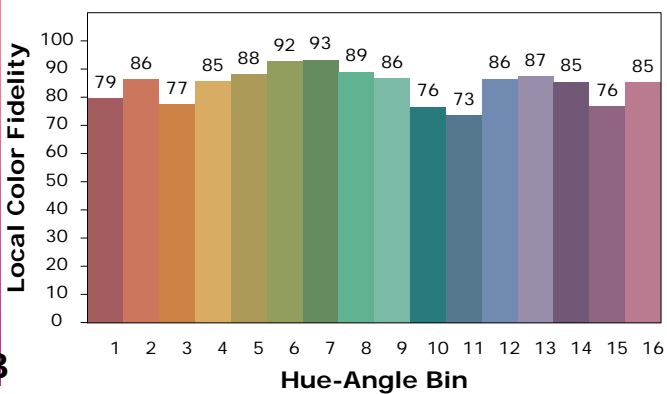
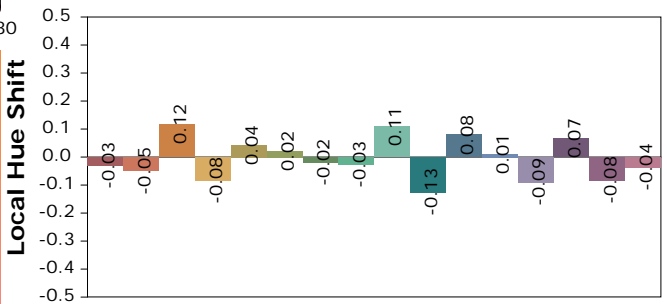
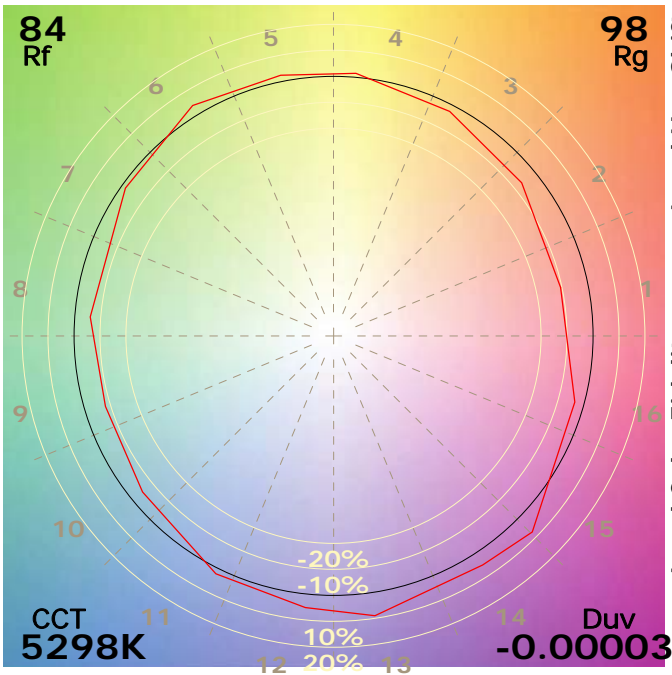
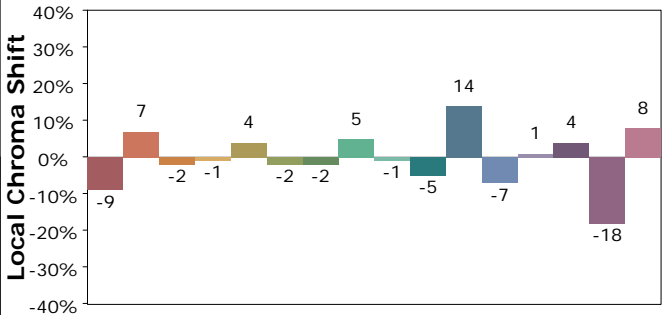
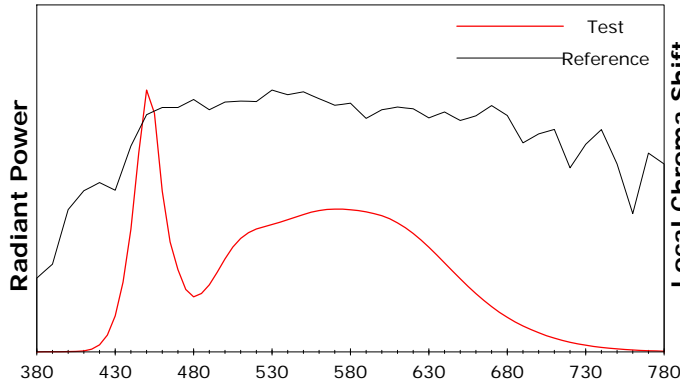
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 Inspector:

## IES TM-30-18 Color Rendition Report

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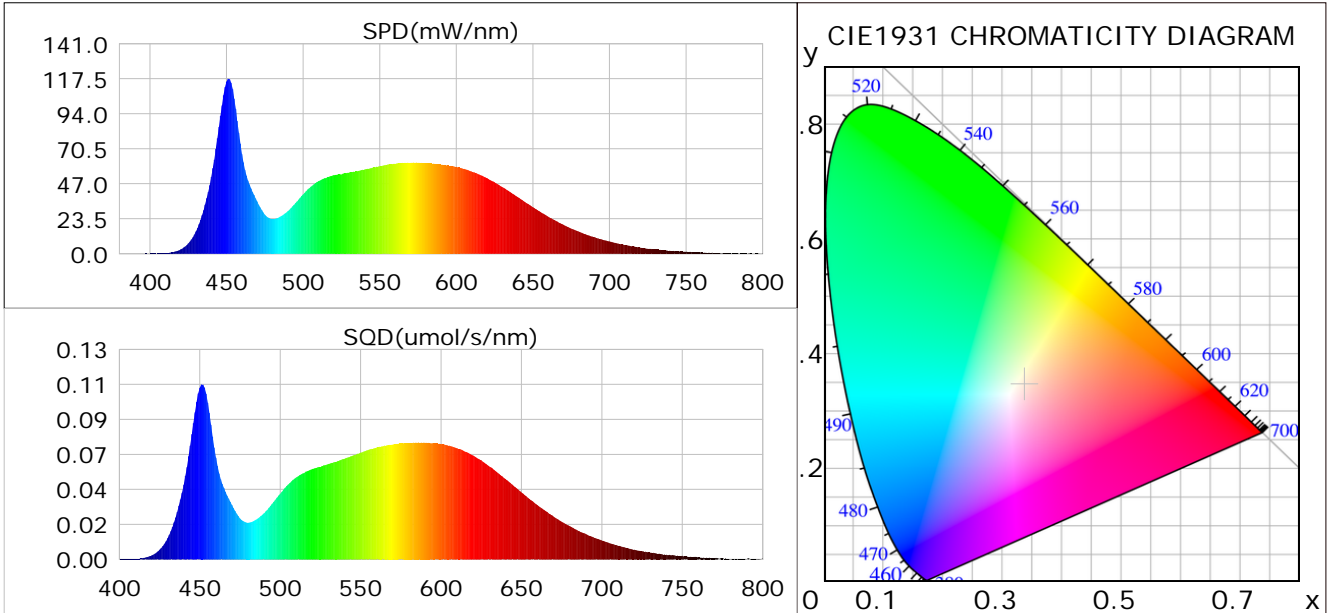
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 Test Lab:  
 Operator: CRE

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

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 Peak Wavelength: 451.4nm Half Bandwidth: 20.3nm  
 Dominant Wavelength: 566.1nm Color Purity: 0.048  
 CRI:  $R_a=85.2$



### Plant Optical Param

$ \mu_v(lm): 3967.90$	$Q_v(lm.s): 3967.90$
$ \mu_e, \dot{E}(W/nm): 12.67$	$Q_e(J): 12.67$
$ \mu_e(W): 12.46$	$ \mu_{fr}(W): 0.22$
$ \zeta_e: 0.33$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.52$	$K_{fr}: 0.03$
$Erb\_Ratio: 0.89$	$PPF(umol/s): 56.97$
$PF_{uv}(360-400)(umol/s): 0.01$	$PPF(400-500)(umol/s): 13.83$
$PPF(500-600)(umol/s): 26.07$	$PPF(600-700)(umol/s): 17.06$
$PPF_r(700-800)(umol/s): 1.31$	$PPF.t(umol): 56.97$
$ \mu_{ch-A.t}(J): 1.06$	$ \mu_{ch-A}(W): 1.06$
$ \mu_{ch-B.t}(J): 0.66$	$ \mu_{ch-B}(W): 0.66$
$ \mu_b.t(J): 3.60$	$ \mu_b(W): 3.60$
$ \mu_y.t(J): 5.68$	$ \mu_y(W): 5.68$
$ \mu_r.t(J): 3.27$	$ \mu_r(W): 3.27$

### Electric Parameters

Voltage: 231.10V	Current: 0.1680A	Power: 37.41W
Power Factor: 0.9580	Frequency: 49.99Hz	

Condition:  $T_x: 14.2^\circ C$ ,  $T_i: 0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
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