

## Lightsource Test Report

### Product Information

Product Category: LED-Lampen  
 Product Spec: LED-SLG28-Plus-E27-45-360-XWM  
 Manufacturer: METOLIGHT  
 Buyer: 3811

Product Type: LED-streetbulb  
 Product Number: 1  
 Submitted Unit: 101724

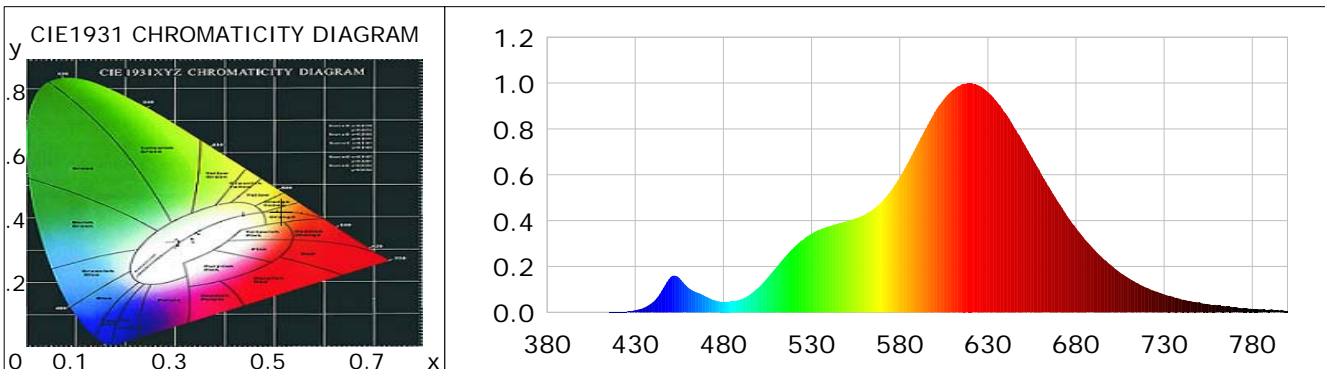
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.5150$   $y=0.4211$   $u(u')=0.2933$   $v=0.3598$   $v'=0.5396$   
 CCT:  $T_c=2151K$  ( $duv=0.00195$ ) Color Ratio:  $R=0.321$   $G=0.669$   $B=0.009$   
 Peak Wavelength: 620.1nm Half Bandwidth: 96.6nm  
 Dominant Wavelength: 587.1nm Color Purity: 0.810  
 CRI:  $R_a=87.5$ ,  $avgR(1\sim14)=83.3$ ,  $avgR(1\sim15)=82.9$  TM30:  $R_f=88$ ,  $R_g=98$   
 GAI:  $GAI\_BB\_8=84.2$ ,  $GAI\_BB\_15=93.5$ ,  $GAI\_EES=25.3$   

R1 =88	R2 =93	R3 =97	R4 =89	R5 =87	R6 =95	R7 =84	R8 =66
R9 =27	R10=83	R11=92	R12=78	R13=89	R14=96	R15=79	

Color Quality Scale:  $Q_a=79.9$ ,  $Q_f=88.2$ ,  $Q_p=86.3$ ,  $Q_g=84.3$   

Q1 =75	Q2 =87	Q3 =83	Q4 =83	Q5 =82	Q6 =80	Q7 =81	Q8 =84
Q9 =89	Q10=84	Q11=79	Q12=81	Q13=82	Q14=71	Q15=73	



### Photometric Parameters

Luminous Flux: 4268.3 lm Efficiency: 88.66 lm/W Radiant Power: 14.355 W  
 Total mains efficacy: 88.66 lm/W Energy Efficiency Class: F (EU 2019/2015)  
 Pupil Flux: 4009.78 Plm Pupil Lumens Per Watt: 83.29 Plm/W Pupil Factor (Kp): 0.939  
 Circopic Flux: 5946.94 lm

### Electric Parameters

Voltage: 230.80V Current: 0.2160A Power: 48.14W  
 Power Factor: 0.9650 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: 48616 (2315) CCD Integration Time: 115.94 ms

Condition: Tx:19.6'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-02-12 10:29:49  
 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	0.0454	525	0.3153	36.8913	670	0.4800	56.1604
385	0.0002	0.0292	530	0.3432	40.1590	675	0.4198	49.1196
390	0.0005	0.0528	535	0.3612	42.2645	680	0.3684	43.1107
395	0.0002	0.0201	540	0.3753	43.9175	685	0.3178	37.1839
400	0.0005	0.0554	545	0.3871	45.2894	690	0.2761	32.3023
405	0.0003	0.0406	550	0.3969	46.4427	695	0.2373	27.7611
410	0.0006	0.0646	555	0.4100	47.9757	700	0.2047	23.9576
415	0.0009	0.1051	560	0.4252	49.7574	705	0.1734	20.2840
420	0.0015	0.1771	565	0.4500	52.6595	710	0.1485	17.3786
425	0.0034	0.3927	570	0.4837	56.5923	715	0.1272	14.8792
430	0.0091	1.0636	575	0.5303	62.0485	720	0.1072	12.5487
435	0.0208	2.4321	580	0.5895	68.9726	725	0.0919	10.7546
440	0.0443	5.1820	585	0.6574	76.9263	730	0.0783	9.1650
445	0.0948	11.0973	590	0.7312	85.5556	735	0.0682	7.9848
450	0.1529	17.8915	595	0.8047	94.1596	740	0.0562	6.5746
455	0.1495	17.4902	600	0.8742	102.2930	745	0.0490	5.7312
460	0.1079	12.6228	605	0.9291	108.7190	750	0.0450	5.2697
465	0.0871	10.1973	610	0.9685	113.3247	755	0.0358	4.1920
470	0.0696	8.1389	615	0.9935	116.2493	760	0.0302	3.5326
475	0.0524	6.1340	620	1.0000	117.0101	765	0.0258	3.0238
480	0.0462	5.4025	625	0.9886	115.6737	770	0.0214	2.5064
485	0.0479	5.6002	630	0.9603	112.3600	775	0.0193	2.2614
490	0.0568	6.6457	635	0.9199	107.6404	780	0.0155	1.8094
495	0.0771	9.0266	640	0.8684	101.6117	785	0.0144	1.6860
500	0.1089	12.7369	645	0.8059	94.2984	790	0.0120	1.3996
505	0.1510	17.6663	650	0.7419	86.8137	795	0.0078	0.9096
510	0.1964	22.9849	655	0.6763	79.1370	800	0.0070	0.8160
515	0.2417	28.2806	660	0.6080	71.1434			
520	0.2834	33.1575	665	0.5438	63.6278			

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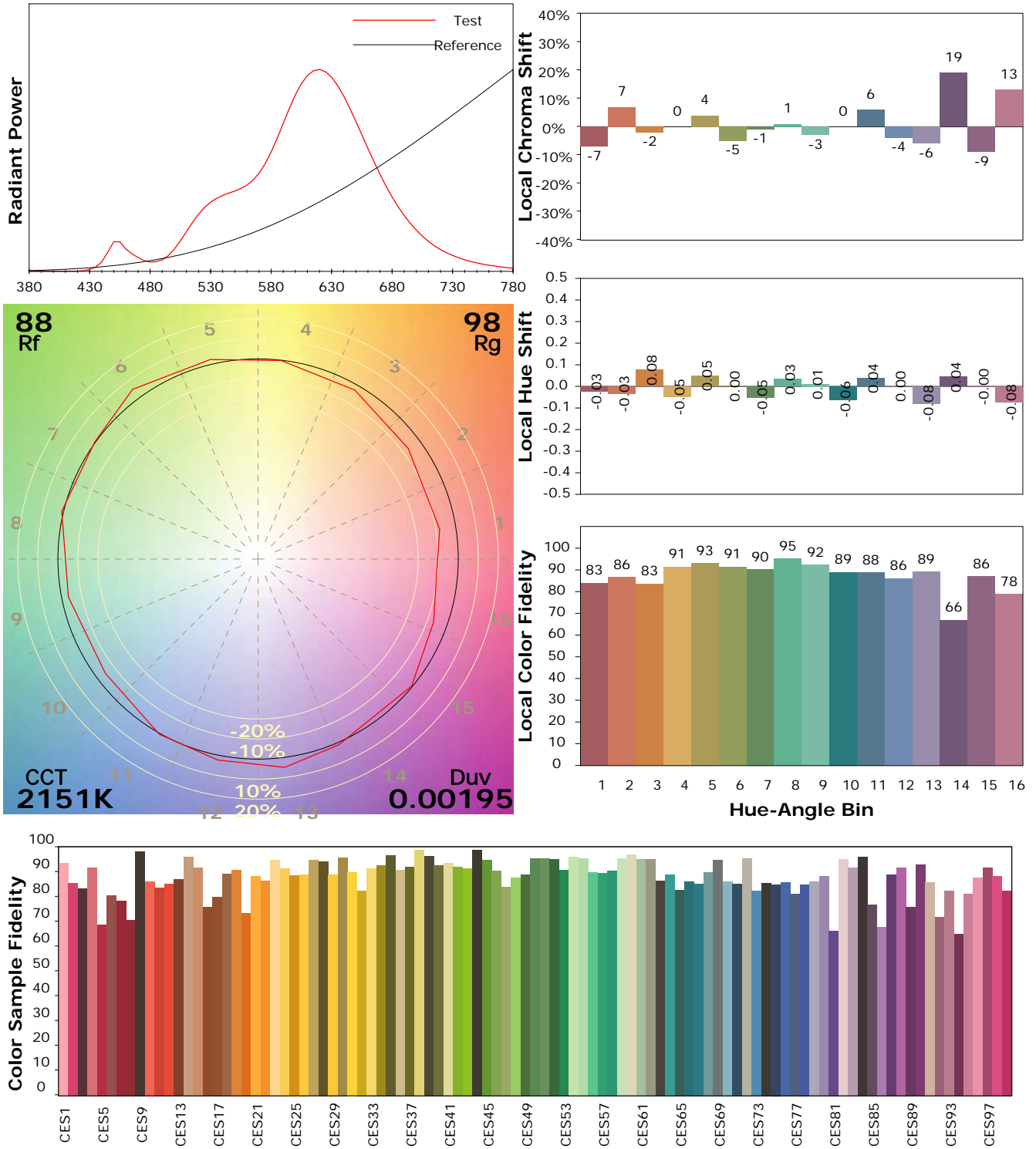
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## IES TM-30-18 Color Rendition Report

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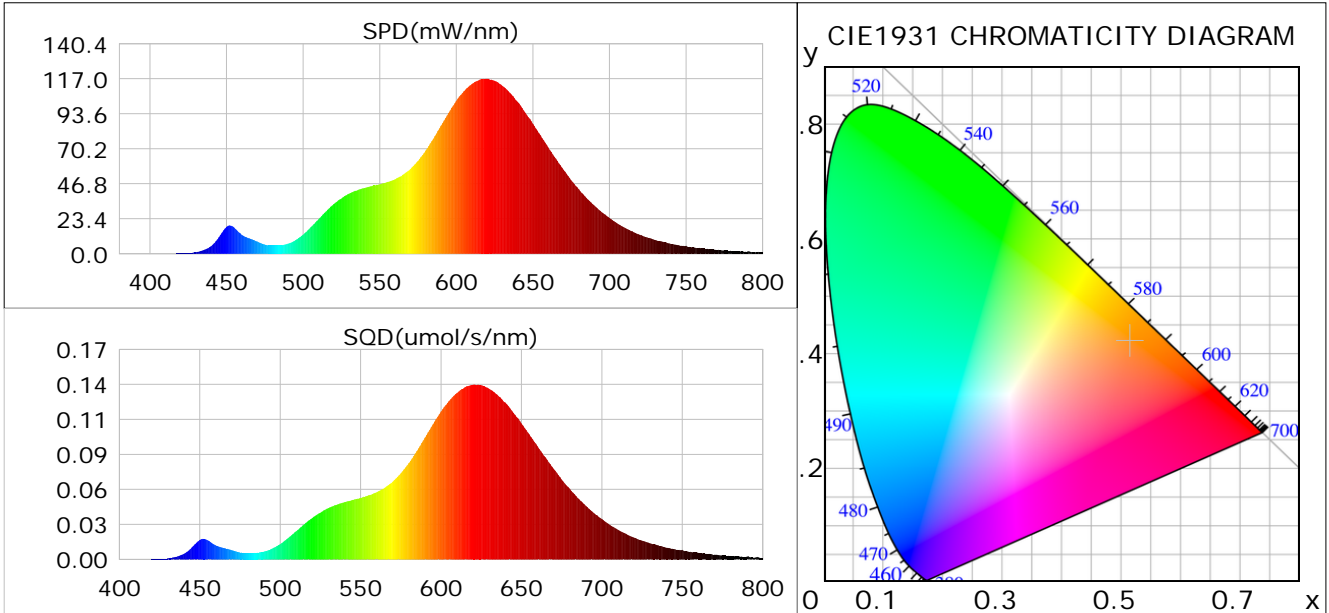
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 Test Lab:  
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Test Device: Lisun LMS-9000B  
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## Plant optical param data

### CIE Colorimetric Parameters

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 Peak Wavelength: 620.1nm Half Bandwidth: 96.6nm  
 Dominant Wavelength: 587.1nm Color Purity: 0.810  
 CRI:  $R_a=87.5$



### Plant Optical Param

$ \mu_v(lm)$ : 4268.30	$Q_v(lm.s)$ : 4268.30
$ \mu_e, \dot{E}(W/nm)$ : 14.35	$Q_e(J)$ : 14.35
$ \mu_e(W)$ : 13.67	$ \mu_{fr}(W)$ : 0.73
$ \zeta_e$ : 0.28	$ \zeta_{fr}$ : 0.02
PPE(umol/s/w): 1.43	Kfr: 0.09
Erb_Ratio: 12.53	PPF(umol/s): 68.87
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 2.47
PPF(500-600)(umol/s): 23.94	PPF(600-700)(umol/s): 42.47
PPfr(700-800)(umol/s): 4.30	PPF.t(umol): 68.87
$ \mu_{ch-A.t}(J)$ : 1.19	$ \mu_{ch-A}(W)$ : 1.19
$ \mu_{ch-B.t}(J)$ : 0.46	$ \mu_{ch-B}(W)$ : 0.46
$ \mu_b.t(J)$ : 0.63	$ \mu_b(W)$ : 0.63
$ \mu_y.t(J)$ : 5.10	$ \mu_y(W)$ : 5.10
$ \mu_r.t(J)$ : 8.05	$ \mu_r(W)$ : 8.05

### Electric Parameters

Voltage: 230.80V	Current: 0.2160A	Power: 48.14W
Power Factor: 0.9650	Frequency: 49.99Hz	

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