

Lightsource Test Report

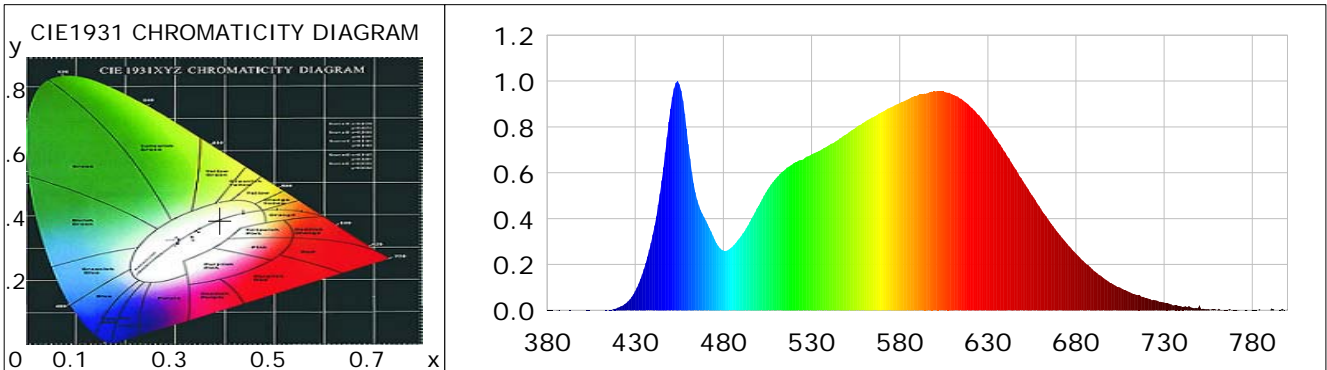
Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG28-E27-15-360-NW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampe
 Product Number: 1
 Submitted Unit: 100268

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3908$ $y=0.3871$ $u(u')=0.2277$ $v=0.3384$ $v'=0.5076$
 CCT: $T_c=3810K$ ($duv=0.00189$) Color Ratio: $R=0.193$ $G=0.773$ $B=0.035$
 Peak Wavelength: 453.9nm Half Bandwidth: 20.7nm
 Dominant Wavelength: 578.9nm Color Purity: 0.335
 CRI: $R_a=85.3$, $avgR(1\sim14)=79.4$, $avgR(1\sim15)=79.3$ TM30: $R_f=85$, $R_g=96$
 GAI: $GAI_BB_8=90.8$, $GAI_BB_15=98.2$, $GAI_EES=68.7$
 R1 =84 R2 =91 R3 =96 R4 =84 R5 =84 R6 =87 R7 =88 R8 =69
 R9 =22 R10=78 R11=84 R12=62 R13=86 R14=98 R15=78
 Color Quality Scale: $Q_a=85.4$, $Q_f=85.6$, $Q_p=84.7$, $Q_g=93.2$
 Q1 =84 Q2 =98 Q3 =82 Q4 =79 Q5 =84 Q6 =85 Q7 =87 Q8 =91
 Q9 =98 Q10=91 Q11=89 Q12=88 Q13=87 Q14=77 Q15=80



Photometric Parameters

Luminous Flux: 1843.0 lm Efficiency: 128.61 lm/W Radiant Power: 5.546 W
 Total mains efficacy: 151.25 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 2721.83 Plm Pupil Lumens Per Watt: 189.94 Plm/W Pupil Factor (Kp): 1.477
 Circopic Flux: 5439.22 lm

Electric Parameters

Voltage: 230.80V Current: 0.0620A Power: 14.33W
 Power Factor: 0.9450 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: 50630 (2729) CCD Integration Time: 219.48 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0009	0.0301	525	0.6573	21.7743	670	0.3365	11.1473
385	0.0011	0.0365	530	0.6800	22.5285	675	0.2900	9.6081
390	0.0007	0.0231	535	0.6974	23.1052	680	0.2475	8.1986
395	0.0002	0.0081	540	0.7210	23.8866	685	0.2076	6.8785
400	0.0007	0.0221	545	0.7426	24.6025	690	0.1725	5.7157
405	0.0001	0.0028	550	0.7692	25.4827	695	0.1443	4.7803
410	0.0006	0.0193	555	0.7959	26.3669	700	0.1188	3.9365
415	0.0022	0.0725	560	0.8208	27.1912	705	0.0995	3.2958
420	0.0113	0.3731	565	0.8432	27.9327	710	0.0808	2.6752
425	0.0324	1.0721	570	0.8651	28.6604	715	0.0665	2.2036
430	0.0838	2.7761	575	0.8859	29.3470	720	0.0538	1.7819
435	0.1804	5.9749	580	0.9044	29.9612	725	0.0443	1.4661
440	0.3304	10.9459	585	0.9211	30.5154	730	0.0342	1.1335
445	0.5663	18.7596	590	0.9372	31.0493	735	0.0214	0.7080
450	0.8788	29.1121	595	0.9453	31.3156	740	0.0166	0.5515
455	0.9860	32.6650	600	0.9547	31.6260	745	0.0135	0.4467
460	0.7252	24.0257	605	0.9547	31.6260	750	0.0209	0.6940
465	0.4826	15.9869	610	0.9416	31.1943	755	0.0057	0.1895
470	0.3919	12.9827	615	0.9224	30.5575	760	0.0019	0.0616
475	0.3088	10.2284	620	0.8892	29.4585	765	0.0021	0.0690
480	0.2613	8.6556	625	0.8506	28.1788	770	0.0017	0.0565
485	0.2768	9.1711	630	0.8005	26.5197	775	0.0005	0.0174
490	0.3231	10.7026	635	0.7465	24.7292	780	0.0022	0.0714
495	0.3849	12.7513	640	0.6871	22.7623	785	0.0012	0.0384
500	0.4564	15.1210	645	0.6240	20.6705	790	0.0004	0.0146
505	0.5262	17.4313	650	0.5625	18.6351	795	0.0013	0.0415
510	0.5777	19.1396	655	0.5020	16.6302	800	0.0045	0.1487
515	0.6138	20.3328	660	0.4438	14.7029			
520	0.6425	21.2858	665	0.3878	12.8481			

Condition: Tx:23.0'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

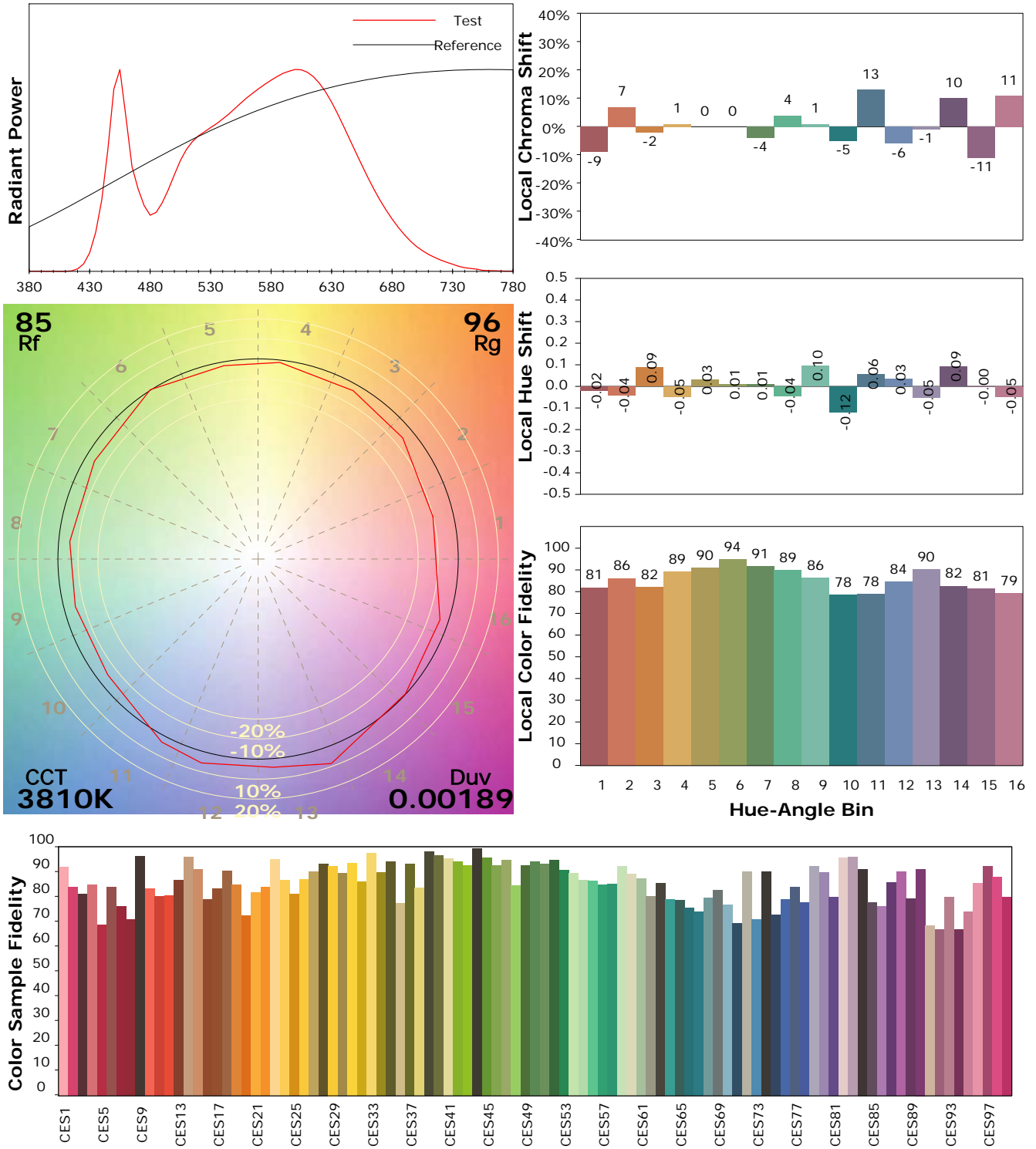
Test Device: Lisun LMS-9000B
 Test Time: 2021-02-11 12:24:57
 Inspector:

I ES TM-30-18 Color Rendition Report

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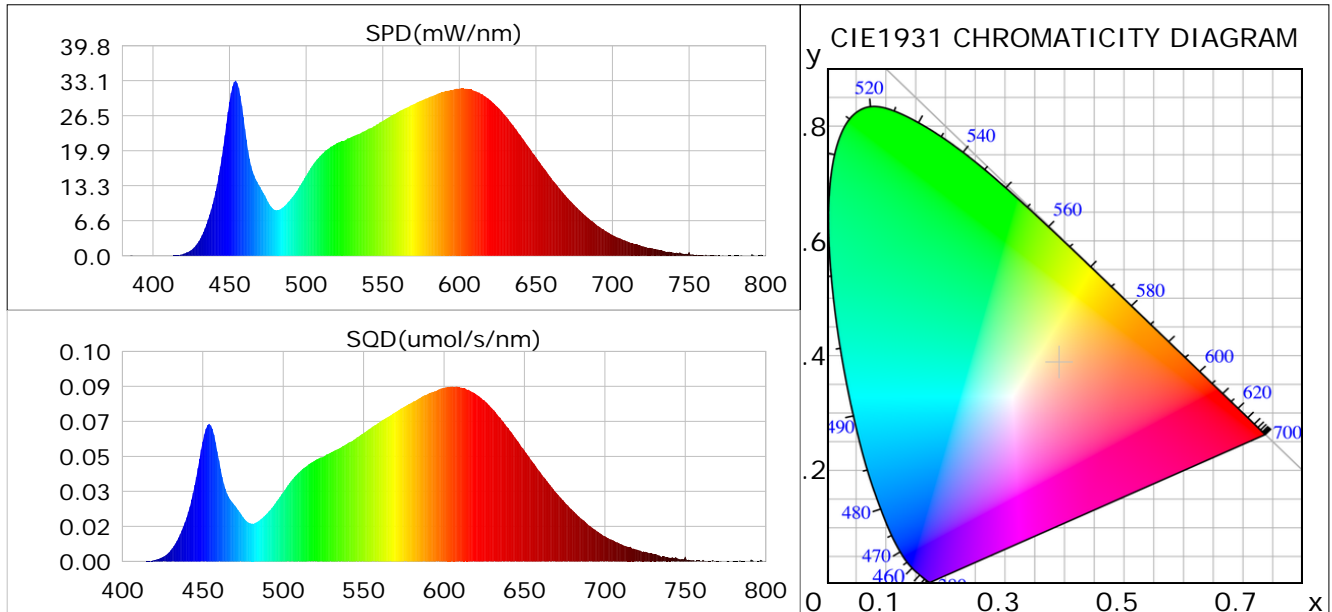
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Plant optical param data

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 Dominant Wavelength: 578.9nm Color Purity: 0.335
 CRI: $R_a=85.3$



Plant Optical Param

$ \mu_v(lm)$: 1843.00	$Q_v(lm.s)$: 1843.00
$ \mu_e, \dot{E}(W/nm)$: 5.55	$Q_e(J)$: 5.55
$ \mu_e(W)$: 5.46	$ \mu_{fr}(W)$: 0.09
$ \zeta_e$: 0.38	$ \zeta_{fr}$: 0.01
PPE(umol/s/w): 1.80	Kfr: 0.04
Erb_Ratio: 1.72	PPF(umol/s): 25.77
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 4.17
PPF(500-600)(umol/s): 11.78	PPF(600-700)(umol/s): 9.83
PPfr(700-800)(umol/s): 0.51	PPF.t(umol): 25.77
$ \mu_{ch-A.t}(J)$: 0.43	$ \mu_{ch-A}(W)$: 0.43
$ \mu_{ch-B.t}(J)$: 0.25	$ \mu_{ch-B}(W)$: 0.25
$ \mu_b.t(J)$: 1.08	$ \mu_b(W)$: 1.08
$ \mu_y.t(J)$: 2.55	$ \mu_y(W)$: 2.55
$ \mu_r.t(J)$: 1.88	$ \mu_r(W)$: 1.88

Electric Parameters

Voltage: 230.80V	Current: 0.0620A	Power: 14.33W
Power Factor: 0.9450	Frequency: 49.99Hz	

Condition: $T_x:23.0^\circ C$, $T_i:0.0^\circ C$, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
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