

Lightsource Test Report

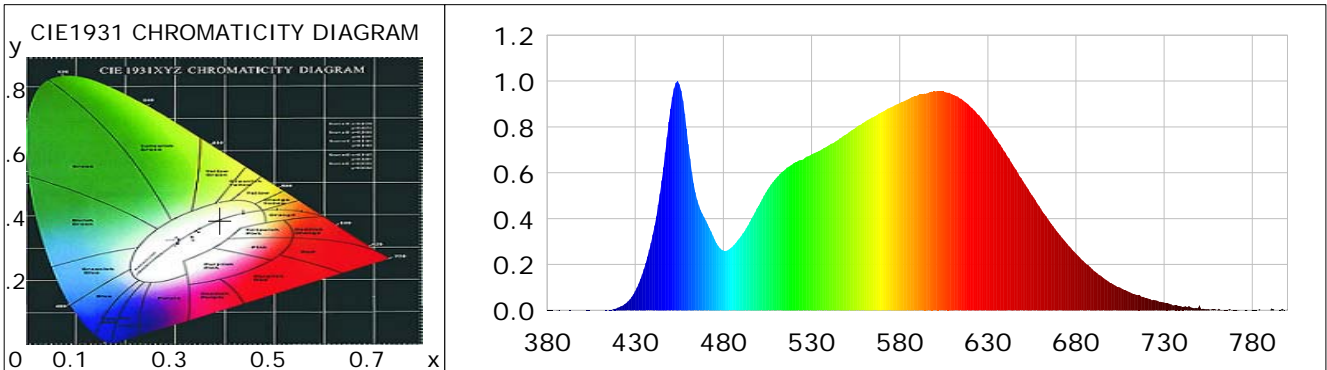
Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG22-E27-16-360-NW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampe
 Product Number: 1
 Submitted Unit: 104215

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: 2143.0 lm Efficiency: 131.23 lm/W Radiant Power: 6.449 W
 Total mains efficacy: 131.23 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 3164.89 Plm Pupil Lumens Per Watt: 193.81 Plm/W Pupil Factor (Kp): 1.477
 Circopic Flux: 6324.61 lm

Electric Parameters

Voltage: 230.80V Current: 0.0740A Power: 16.33W
 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	0.0350	525	0.6573	25.3187	670	0.3365	12.9618
385	0.0011	0.0424	530	0.6800	26.1957	675	0.2900	11.1721
390	0.0007	0.0269	535	0.6974	26.8662	680	0.2475	9.5332
395	0.0002	0.0094	540	0.7210	27.7748	685	0.2076	7.9982
400	0.0007	0.0257	545	0.7426	28.6072	690	0.1725	6.6461
405	0.0001	0.0032	550	0.7692	29.6307	695	0.1443	5.5584
410	0.0006	0.0224	555	0.7959	30.6588	700	0.1188	4.5772
415	0.0022	0.0843	560	0.8208	31.6173	705	0.0995	3.8323
420	0.0113	0.4339	565	0.8432	32.4796	710	0.0808	3.1106
425	0.0324	1.2466	570	0.8651	33.3257	715	0.0665	2.5623
430	0.0838	3.2279	575	0.8859	34.1241	720	0.0538	2.0719
435	0.1804	6.9475	580	0.9044	34.8382	725	0.0443	1.7047
440	0.3304	12.7277	585	0.9211	35.4826	730	0.0342	1.3180
445	0.5663	21.8133	590	0.9372	36.1035	735	0.0214	0.8232
450	0.8788	33.8509	595	0.9453	36.4131	740	0.0166	0.6413
455	0.9860	37.9822	600	0.9547	36.7740	745	0.0135	0.5194
460	0.7252	27.9365	605	0.9547	36.7740	750	0.0209	0.8069
465	0.4826	18.5892	610	0.9416	36.2721	755	0.0057	0.2203
470	0.3919	15.0960	615	0.9224	35.5316	760	0.0019	0.0716
475	0.3088	11.8934	620	0.8892	34.2537	765	0.0021	0.0803
480	0.2613	10.0645	625	0.8506	32.7657	770	0.0017	0.0657
485	0.2768	10.6640	630	0.8005	30.8366	775	0.0005	0.0202
490	0.3231	12.4448	635	0.7465	28.7546	780	0.0022	0.0831
495	0.3849	14.8269	640	0.6871	26.4675	785	0.0012	0.0447
500	0.4564	17.5823	645	0.6240	24.0352	790	0.0004	0.0169
505	0.5262	20.2687	650	0.5625	21.6685	795	0.0013	0.0483
510	0.5777	22.2551	655	0.5020	19.3372	800	0.0045	0.1729
515	0.6138	23.6426	660	0.4438	17.0963			
520	0.6425	24.7507	665	0.3878	14.9395			

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

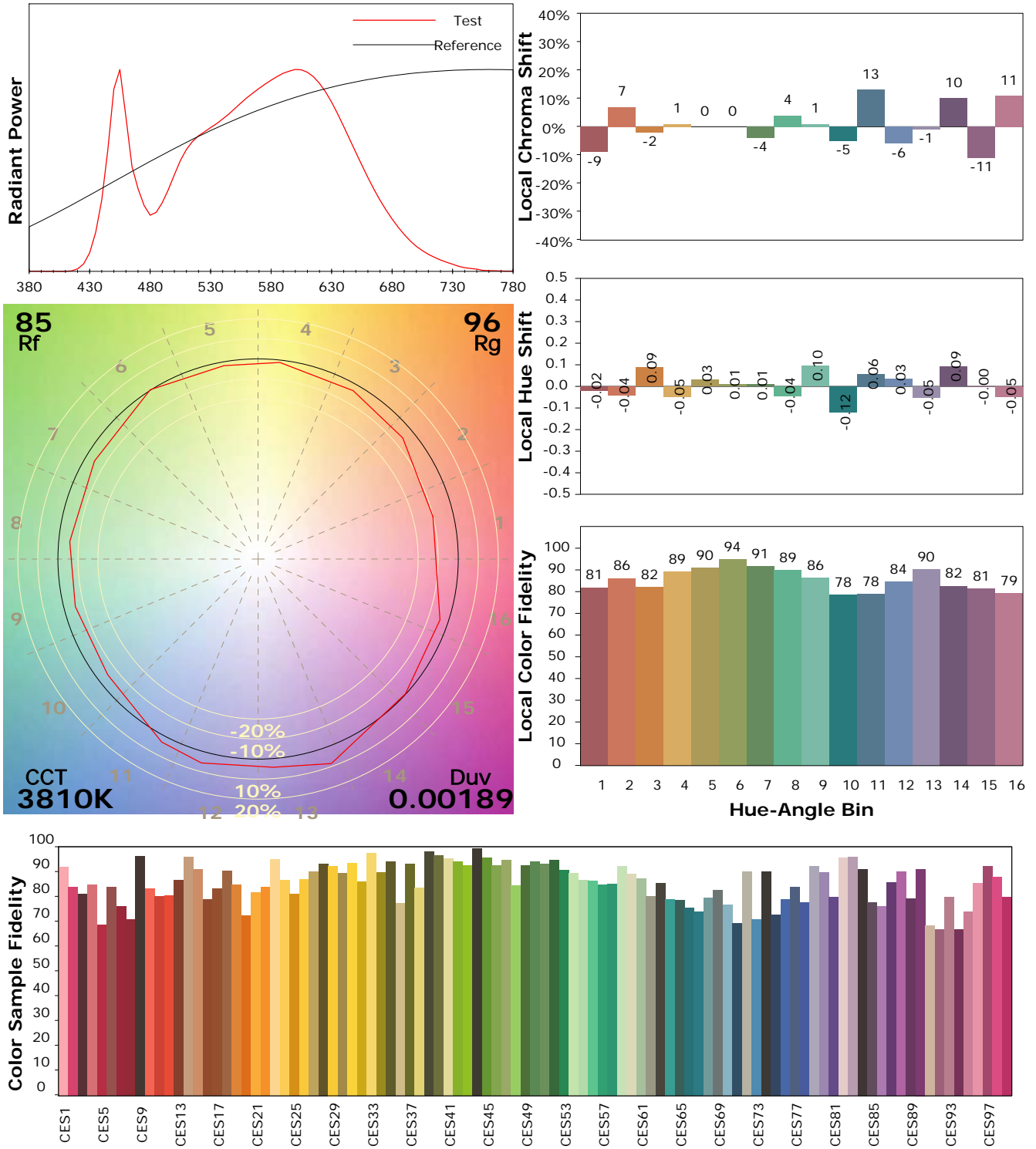
Test Device: Lisun LMS-9000B
 Test Time: 2021-02-11 12:24:57
 Inspector:

IES TM-30-18 Color Rendition Report

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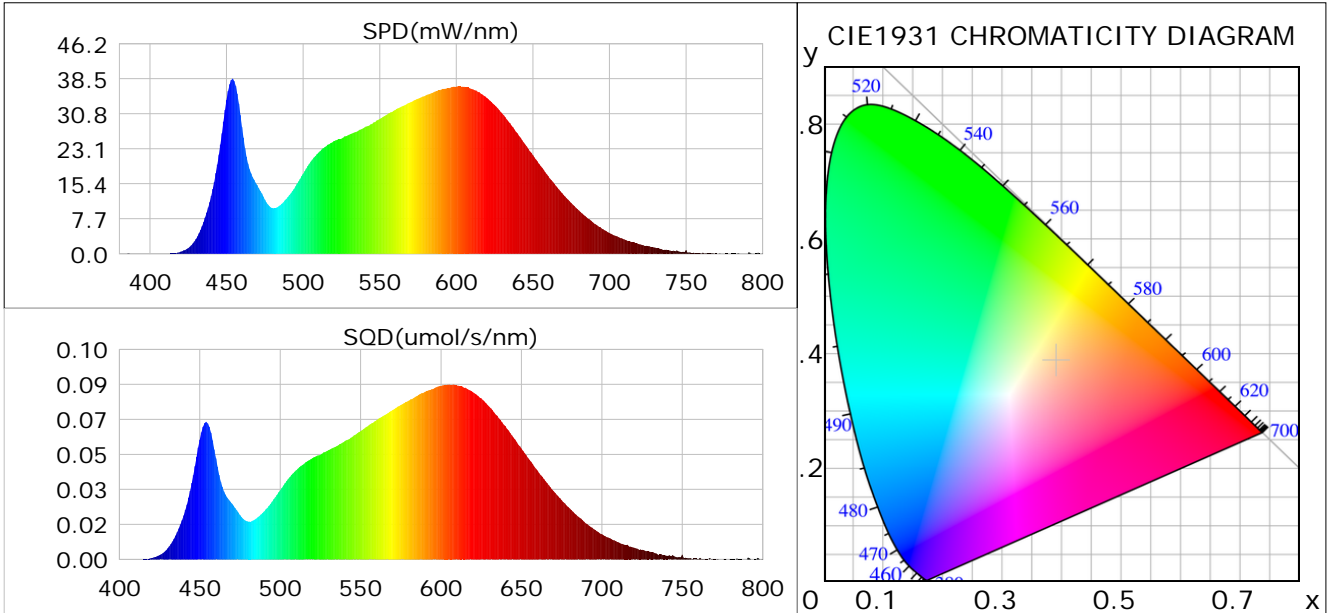
Condition: Tx: 23.0°C, Ti: 0.0°C, R.H.: 60%
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Test Device: Lisun LMS-9000B
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Plant optical param data

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 CRI: $R_a=85.3$



Plant Optical Param

$ \mu_v(lm)$: 2143.00	$Q_v(lm.s)$: 2143.00
$ \mu_e, \dot{E}(W/nm)$: 6.45	$Q_e(J)$: 6.45
$ \mu_e(W)$: 6.35	$ \mu_{fr}(W)$: 0.10
$ \zeta_e$: 0.39	$ \zeta_{fr}$: 0.01
PPE(umol/s/w): 1.84	Kfr: 0.04
Erb_Ratio: 1.72	PPF(umol/s): 29.97
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 4.84
PPF(500-600)(umol/s): 13.70	PPF(600-700)(umol/s): 11.43
PPfr(700-800)(umol/s): 0.59	PPF.t(umol): 29.97
$ \mu_{ch-A.t}(J)$: 0.50	$ \mu_{ch-A}(W)$: 0.50
$ \mu_{ch-B.t}(J)$: 0.29	$ \mu_{ch-B}(W)$: 0.29
$ \mu_b.t(J)$: 1.25	$ \mu_b(W)$: 1.25
$ \mu_y.t(J)$: 2.97	$ \mu_y(W)$: 2.97
$ \mu_r.t(J)$: 2.19	$ \mu_r(W)$: 2.19

Electric Parameters

Voltage: 230.80V	Current: 0.0740A	Power: 16.33W
Power Factor: 0.9450	Frequency: 49.99Hz	

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