

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-052-5CWM-7W-DC
 Manufacturer: METOLIGHT
 Buyer: 7709

Product Type: LED-Röhre-TRF
 Product Number: 1
 Submitted Unit: 105257

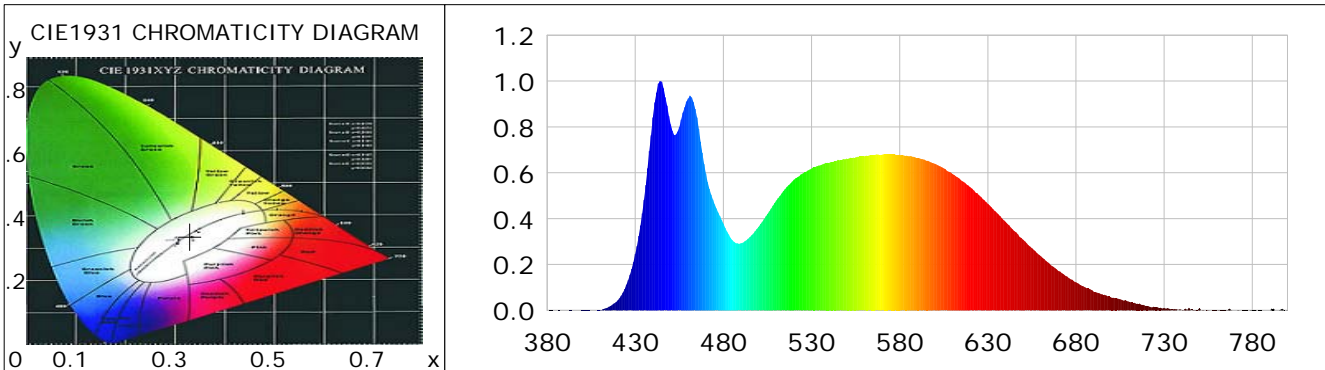
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3300$ $y=0.3371$ $u(u')=0.2067$ $v=0.3168$ $v'=0.4752$
 CCT: $T_c=5612K$ ($duv=-0.00092$) Color Ratio: $R=0.150$ $G=0.799$ $B=0.050$
 Peak Wavelength: 444.3nm Half Bandwidth: 37.9nm
 Dominant Wavelength: 507.6nm Color Purity: 0.010
 CRI: $R_a=84.1$, $avgR(1\sim14)=77.6$, $avgR(1\sim15)=77.8$ TM30: $R_f=83$, $R_g=96$
 GAI: $GAI_BB_8=95.0$, $GAI_BB_15=99.3$, $GAI_EES=88.1$

R1 =83	R2 =89	R3 =90	R4 =84	R5 =84	R6 =83	R7 =88	R8 =72
R9 =17	R10=71	R11=82	R12=64	R13=85	R14=94	R15=80	

Color Quality Scale: $Q_a=80.7$, $Q_f=80.4$, $Q_p=81.8$, $Q_g=93.4$

Q1 =86	Q2 =98	Q3 =76	Q4 =70	Q5 =77	Q6 =81	Q7 =86	Q8 =90
Q9 =95	Q10=84	Q11=79	Q12=79	Q13=81	Q14=73	Q15=78	



Photometric Parameters

Luminous Flux: 987.00 lm Efficiency: 133.02 lm/W Radiant Power: 3.126 W
 Total mains efficacy: 144.86 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 1740.47 Plm Pupil Lumens Per Watt: 234.57 Plm/W Pupil Factor (Kp): 1.763
 Circopic Flux: 3875.98 lm

Electric Parameters

Voltage: 230.00V Current: 0.0323A Power: 7.42W
 Power Factor: 0.7490 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: 45293 (2675) CCD Integration Time: 275.30 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0003	0.0063	525	0.5974	13.4692	670	0.1724	3.8870
385	0.0006	0.0135	530	0.6179	13.9320	675	0.1475	3.3266
390	0.0005	0.0120	535	0.6328	14.2670	680	0.1227	2.7674
395	0.0001	0.0026	540	0.6434	14.5073	685	0.1007	2.2709
400	0.0010	0.0214	545	0.6562	14.7956	690	0.0815	1.8380
405	0.0002	0.0056	550	0.6620	14.9269	695	0.0697	1.5718
410	0.0023	0.0529	555	0.6672	15.0439	700	0.0561	1.2655
415	0.0155	0.3501	560	0.6717	15.1455	705	0.0488	1.1009
420	0.0431	0.9716	565	0.6772	15.2687	710	0.0382	0.8619
425	0.1117	2.5188	570	0.6789	15.3071	715	0.0292	0.6594
430	0.2455	5.5357	575	0.6812	15.3586	720	0.0189	0.4264
435	0.4820	10.8684	580	0.6782	15.2908	725	0.0141	0.3188
440	0.8412	18.9670	585	0.6717	15.1445	730	0.0107	0.2407
445	0.9974	22.4894	590	0.6639	14.9686	735	0.0043	0.0964
450	0.8116	18.2998	595	0.6532	14.7278	740	0.0028	0.0622
455	0.7998	18.0335	600	0.6388	14.4029	745	0.0041	0.0917
460	0.9240	20.8327	605	0.6198	13.9758	750	0.0101	0.2285
465	0.8413	18.9684	610	0.5941	13.3950	755	0.0035	0.0782
470	0.5972	13.4646	615	0.5665	12.7725	760	0.0010	0.0226
475	0.4623	10.4244	620	0.5373	12.1149	765	0.0013	0.0282
480	0.3785	8.5352	625	0.5019	11.3166	770	0.0013	0.0302
485	0.3070	6.9225	630	0.4647	10.4772	775	0.0016	0.0360
490	0.2929	6.6045	635	0.4259	9.6017	780	0.0037	0.0830
495	0.3191	7.1956	640	0.3865	8.7141	785	0.0018	0.0402
500	0.3651	8.2310	645	0.3462	7.8056	790	0.0001	0.0025
505	0.4204	9.4784	650	0.3085	6.9559	795	0.0008	0.0177
510	0.4793	10.8058	655	0.2714	6.1200	800	0.0037	0.0823
515	0.5294	11.9367	660	0.2367	5.3363			
520	0.5697	12.8450	665	0.2038	4.5956			

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

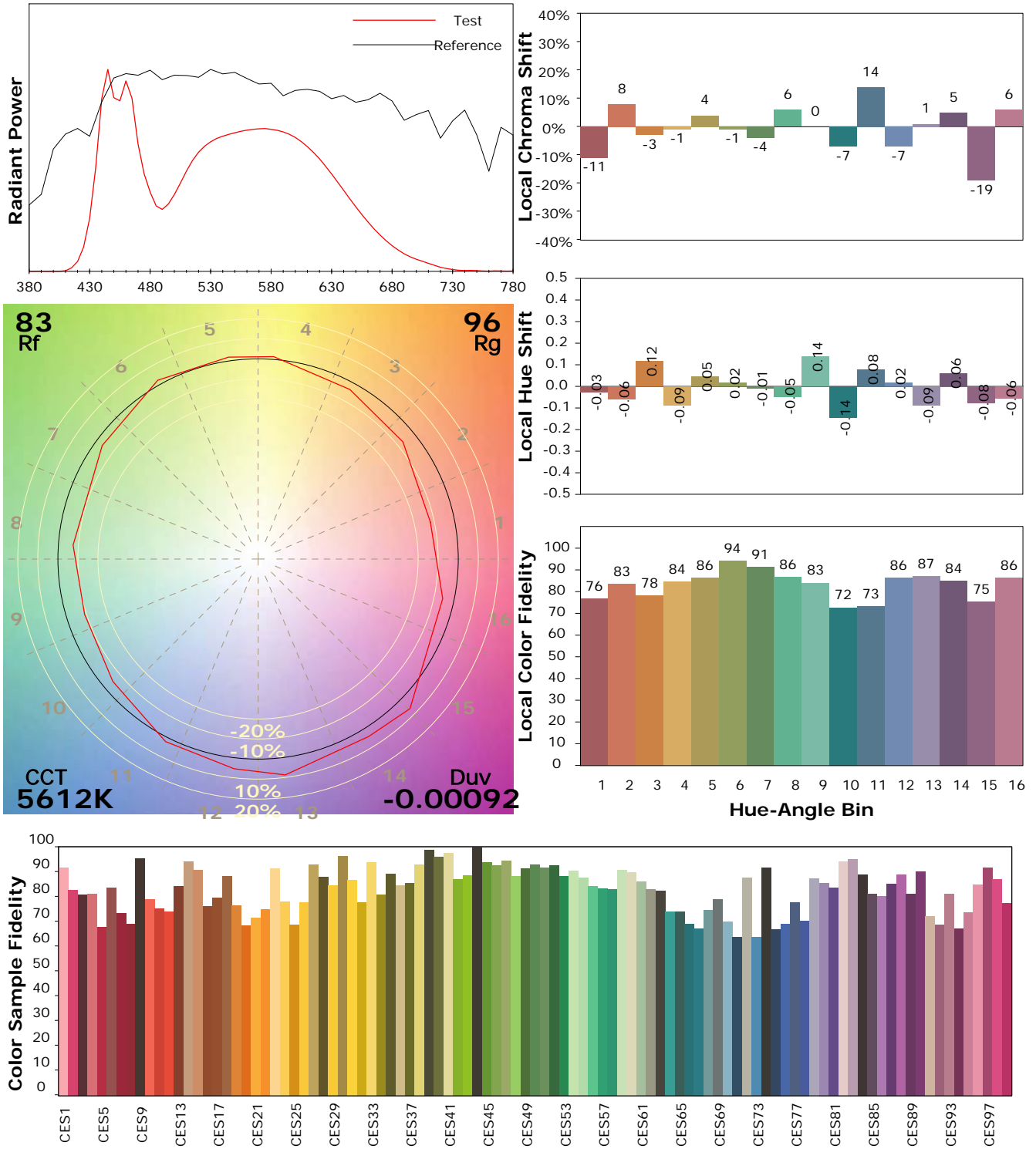
Test Device: Lisun LMS-9000B
 Test Time: 2021-08-18 09:36:16
 Inspector:

IES TM-30-18 Color Rendition Report

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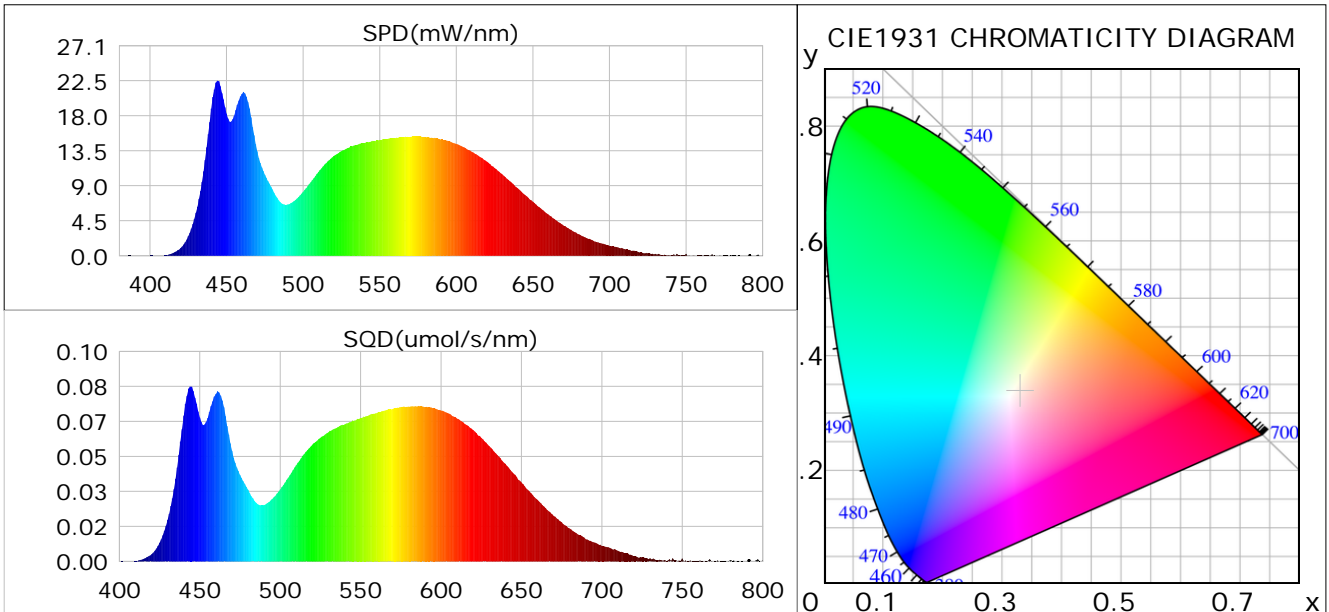
Condition: Tx:0.0°C, Ti:0.0°C, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
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 Inspector:

Plant optical param data

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 CCT: $T_c=5612K$ ($duv=-0.00092$) Color Ratio: $R=0.150$ $G=0.799$ $B=0.050$
 Peak Wavelength: 444.3nm Half Bandwidth: 37.9nm
 Dominant Wavelength: 507.6nm Color Purity: 0.010
 CRI: $R_a=84.1$



Plant Optical Param

$ \mu_v(lm): 987.00$	$Q_v(lm.s): 987.00$
$ \mu_e, \dot{E}(W/nm): 3.13$	$Q_e(J): 3.13$
$ \mu_e(W): 3.10$	$ \mu_{fr}(W): 0.03$
$ \dot{C}_e: 0.42$	$ \dot{C}_{fr}: 0.00$
$PPE(umol/s/w): 1.90$	$K_{fr}: 0.02$
$Erb_Ratio: 0.74$	$PPF(umol/s): 14.07$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 3.76$
$PPF(500-600)(umol/s): 6.46$	$PPF(600-700)(umol/s): 3.85$
$PPF_{fr}(700-800)(umol/s): 0.15$	$PPF.t(umol): 14.07$
$ \mu_{ch-A.t}(J): 0.27$	$ \mu_{ch-A}(W): 0.27$
$ \mu_{ch-B.t}(J): 0.18$	$ \mu_{ch-B}(W): 0.18$
$ \mu_b.t(J): 0.98$	$ \mu_b(W): 0.98$
$ \mu_y.t(J): 1.41$	$ \mu_y(W): 1.41$
$ \mu_r.t(J): 0.74$	$ \mu_r(W): 0.74$

Electric Parameters

Voltage: 230.00V	Current: 0.0323A	Power: 7.42W
Power Factor: 0.7490	Frequency: 49.99Hz	

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-08-18 09:36:16
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