

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-G24-09W-NWM-TRF
 Manufacturer: METOLIGHT
 Buyer: 6852

Product Type: LED-PL-Röhren-G24
 Product Number: 1
 Submitted Unit: 104969

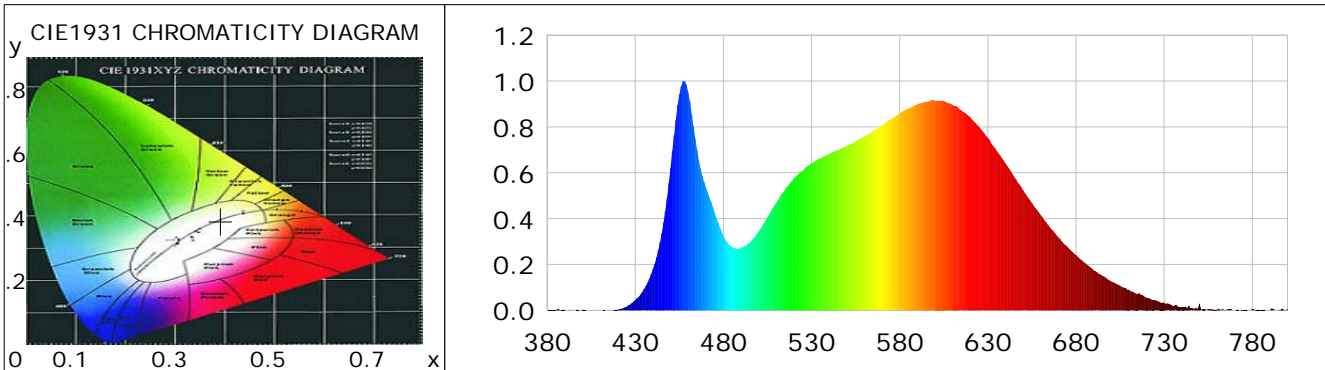
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3921$ $y=0.3848$ $u(u')=0.2295$ $v=0.3379$ $v'=0.5068$
 CCT: $T_c=3760K$ ($duv=0.00050$) Color Ratio: $R=0.195$ $G=0.768$ $B=0.037$
 Peak Wavelength: 457.6nm Half Bandwidth: 23.5nm
 Dominant Wavelength: 579.7nm Color Purity: 0.331
 CRI: $R_a=84.8$, $avgR(1\sim14)=78.7$, $avgR(1\sim15)=78.7$ TM30: $R_f=83$, $R_g=93$
 GAI: $GAI_BB_8=91.0$, $GAI_BB_15=99.9$, $GAI_EES=68.0$

R1 =84	R2 =93	R3 =96	R4 =81	R5 =83	R6 =89	R7 =85	R8 =67
R9 =20	R10=80	R11=79	R12=59	R13=87	R14=98	R15=79	

Color Quality Scale: $Q_a=83.6$, $Q_f=83.9$, $Q_p=82.7$, $Q_g=91.9$

Q1 =82	Q2 =96	Q3 =82	Q4 =75	Q5 =79	Q6 =81	Q7 =86	Q8 =89
Q9 =98	Q10=91	Q11=88	Q12=87	Q13=86	Q14=77	Q15=79	



Photometric Parameters

Luminous Flux: 1011.3 lm Efficiency: 118.14 lm/W Radiant Power: 3.061 W
 Total mains efficacy: 138.94 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 1492.77 Plm Pupil Lumens Per Watt: 174.39 Plm/W Pupil Factor (Kp): 1.476
 Circopic Flux: 3023.89 lm

Electric Parameters

Voltage: 230.80V Current: 0.0440A Power: 8.56W
 Power Factor: 0.8280 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: 46646 (2678) CCD Integration Time: 362.68 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-03-03 15:21:45
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0011	0.0216	525	0.6076	11.8115	670	0.3184	6.1902
385	0.0013	0.0244	530	0.6418	12.4775	675	0.2786	5.4165
390	0.0011	0.0219	535	0.6627	12.8828	680	0.2412	4.6887
395	0.0001	0.0022	540	0.6819	13.2579	685	0.2070	4.0243
400	0.0011	0.0208	545	0.6981	13.5710	690	0.1748	3.3978
405	0.0002	0.0032	550	0.7157	13.9135	695	0.1508	2.9311
410	0.0005	0.0105	555	0.7382	14.3512	700	0.1260	2.4504
415	0.0008	0.0156	560	0.7574	14.7245	705	0.1073	2.0857
420	0.0036	0.0709	565	0.7848	15.2575	710	0.0907	1.7632
425	0.0159	0.3099	570	0.8066	15.6809	715	0.0733	1.4242
430	0.0447	0.8690	575	0.8334	16.2029	720	0.0548	1.0661
435	0.0931	1.8091	580	0.8601	16.7213	725	0.0443	0.8622
440	0.1787	3.4745	585	0.8799	17.1062	730	0.0339	0.6586
445	0.3369	6.5505	590	0.8991	17.4801	735	0.0193	0.3745
450	0.6210	12.0740	595	0.9106	17.7037	740	0.0136	0.2650
455	0.9405	18.2850	600	0.9146	17.7807	745	0.0090	0.1757
460	0.9508	18.4841	605	0.9133	17.7554	750	0.0293	0.5690
465	0.6994	13.5974	610	0.8958	17.4152	755	0.0049	0.0956
470	0.5366	10.4331	615	0.8727	16.9661	760	0.0030	0.0584
475	0.4263	8.2886	620	0.8431	16.3900	765	0.0020	0.0389
480	0.3246	6.3105	625	0.7997	15.5478	770	0.0006	0.0115
485	0.2753	5.3531	630	0.7518	14.6167	775	0.0028	0.0548
490	0.2735	5.3164	635	0.6953	13.5181	780	0.0047	0.0916
495	0.2962	5.7594	640	0.6404	12.4511	785	0.0015	0.0284
500	0.3439	6.6867	645	0.5820	11.3144	790	0.0000	0.0002
505	0.4066	7.9052	650	0.5242	10.1904	795	0.0026	0.0511
510	0.4697	9.1324	655	0.4679	9.0969	800	0.0088	0.1716
515	0.5257	10.2208	660	0.4156	8.0790			
520	0.5746	11.1712	665	0.3643	7.0821			

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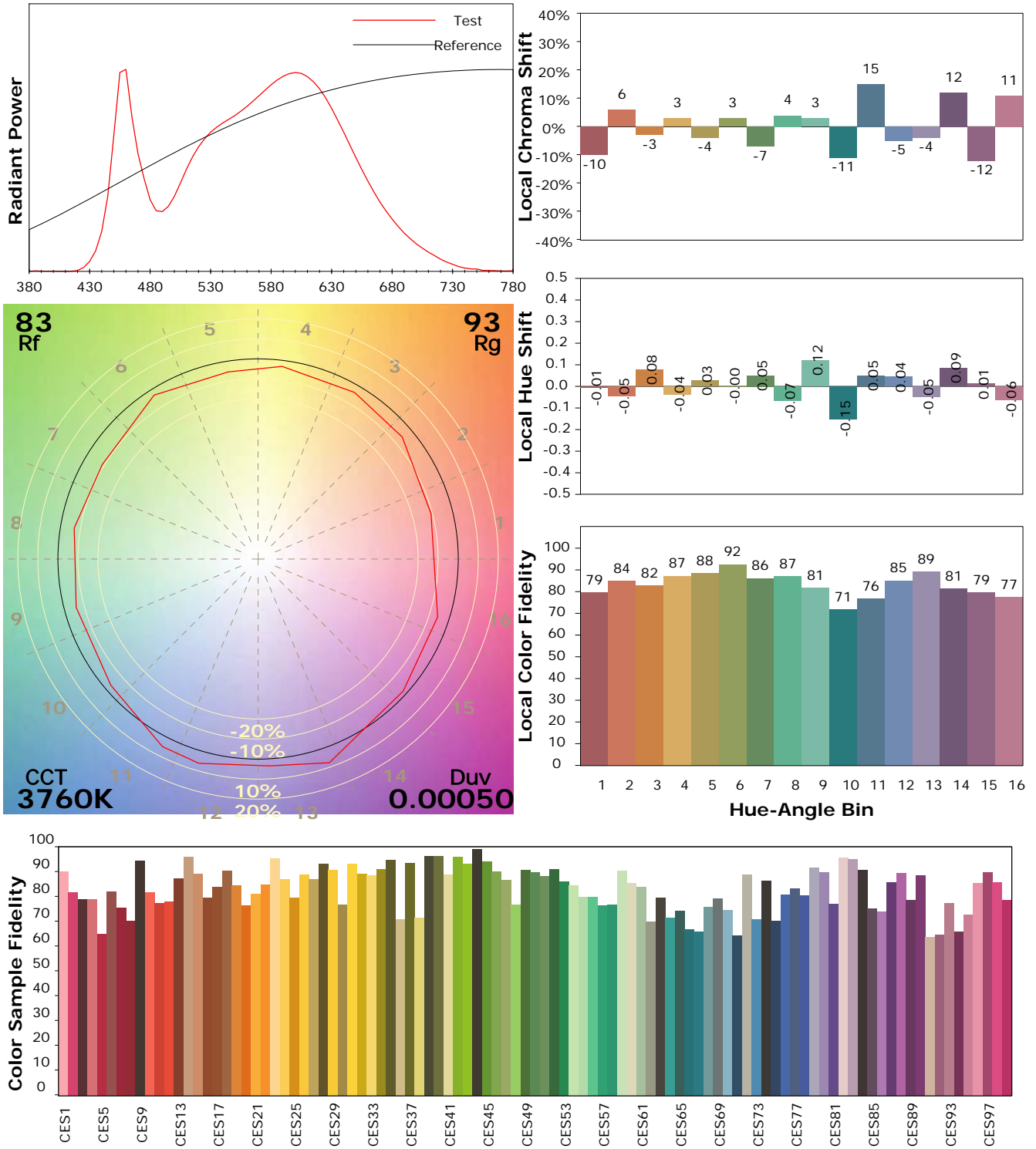
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IES TM-30-18 Color Rendition Report

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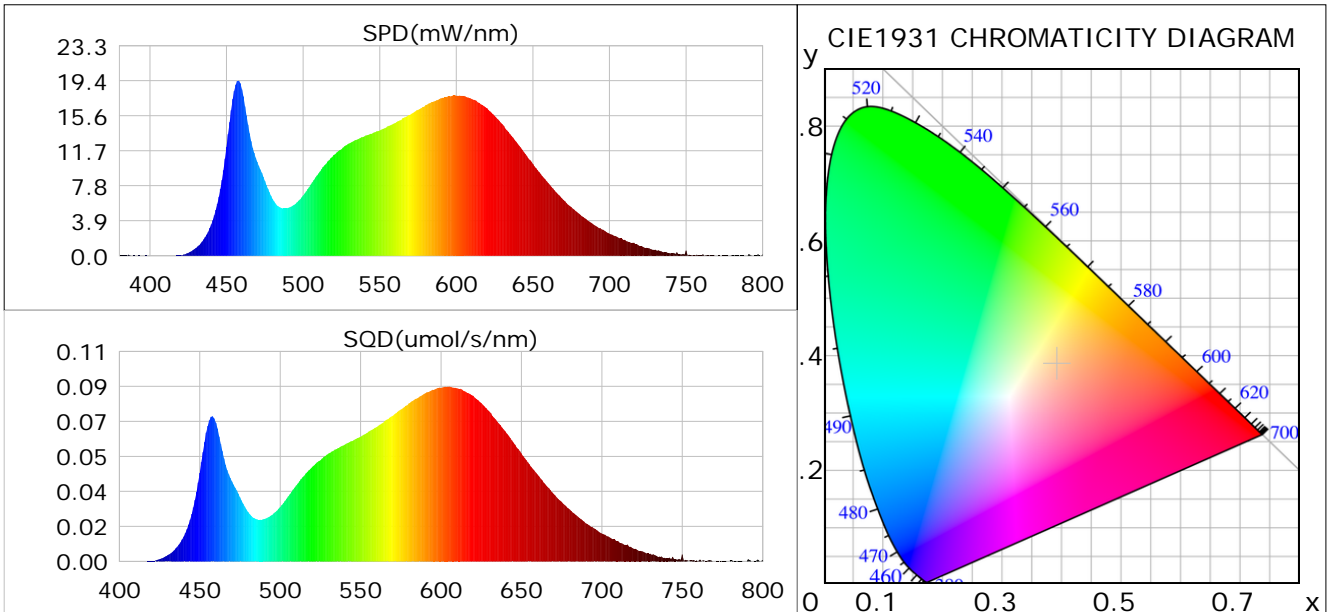
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 Operator: CRE

Test Device: Lisun LMS-9000B
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 Inspector:

Plant optical param data

CIE Colorimetric Parameters

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 Dominant Wavelength: 579.7nm Color Purity: 0.331
 CRI: $R_a=84.8$



Plant Optical Param

$ \mu_v(lm): 1011.30$	$Q_v(lm.s): 1011.30$
$ \mu_e, \dot{E}(W/nm): 3.06$	$Q_e(J): 3.06$
$ \mu_e(W): 3.01$	$ \mu_{fr}(W): 0.05$
$ \zeta_e: 0.35$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.66$	$K_{fr}: 0.04$
$Erb_Ratio: 1.70$	$PPF(umol/s): 14.22$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.35$
$PPF(500-600)(umol/s): 6.40$	$PPF(600-700)(umol/s): 5.47$
$PPF_r(700-800)(umol/s): 0.32$	$PPF.t(umol): 14.22$
$ \mu_{ch-A.t}(J): 0.23$	$ \mu_{ch-A}(W): 0.23$
$ \mu_{ch-B.t}(J): 0.14$	$ \mu_{ch-B}(W): 0.14$
$ \mu_b.t(J): 0.61$	$ \mu_b(W): 0.61$
$ \mu_y.t(J): 1.38$	$ \mu_y(W): 1.38$
$ \mu_r.t(J): 1.05$	$ \mu_r(W): 1.05$

Electric Parameters

Voltage: 230.80V	Current: 0.0440A	Power: 8.56W
Power Factor: 0.8280	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
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