

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-I-20-NWM
 Manufacturer: METOLIGHT
 Buyer: 4778

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 101260

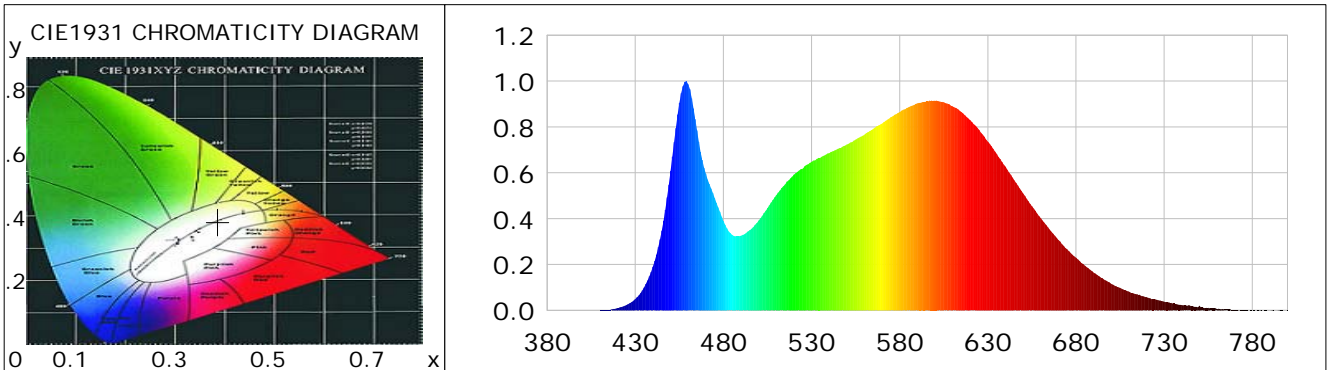
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3861$ $y=0.3828$ $u(u')=0.2264$ $v=0.3367$ $v'=0.5051$
 CCT: $T_c=3894K$ ($duv=0.00117$) Color Ratio: $R=0.191$ $G=0.769$ $B=0.041$
 Peak Wavelength: 458.7nm Half Bandwidth: 26.4nm
 Dominant Wavelength: 578.9nm Color Purity: 0.308
 CRI: $R_a=85.1$, $avgR(1\sim14)=79.4$, $avgR(1\sim15)=79.4$ TM30: $R_f=83$, $R_g=92$
 GAI: $GAI_BB_8=89.2$, $GAI_BB_15=97.8$, $GAI_EES=68.8$

R1 =85	R2 =94	R3 =96	R4 =81	R5 =83	R6 =90	R7 =85	R8 =67
R9 =20	R10=83	R11=80	R12=62	R13=88	R14=99	R15=79	

Color Quality Scale: $Q_a=84.0$, $Q_f=84.4$, $Q_p=82.4$, $Q_g=91.0$

Q1 =81	Q2 =96	Q3 =84	Q4 =76	Q5 =79	Q6 =80	Q7 =85	Q8 =90
Q9 =98	Q10=93	Q11=89	Q12=88	Q13=87	Q14=77	Q15=79	



Photometric Parameters

Luminous Flux: 1922.9 lm	Efficiency: 99.94 lm/W	Radiant Power: 5.842 W
Total mains efficacy: 117.53 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 2927.73 Plm	Pupil Lumens Per Watt: 152.17 Plm/W	Pupil Factor (Kp): 1.523
Cirtopic Flux: 6052.42 lm		

Electric Parameters

Voltage: 230.80V	Current: 0.0880A	Power: 19.24W
Power Factor: 0.9440	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: 52730 (2238)	CCD Integration Time: 197.52 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-26 11:22:53
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0165	525	0.6180	22.5653	670	0.3078	11.2367
385	0.0005	0.0181	530	0.6478	23.6501	675	0.2666	9.7341
390	0.0001	0.0046	535	0.6656	24.3008	680	0.2301	8.3996
395	0.0002	0.0081	540	0.6860	25.0449	685	0.1952	7.1264
400	0.0004	0.0157	545	0.7050	25.7410	690	0.1646	6.0091
405	0.0002	0.0088	550	0.7235	26.4174	695	0.1400	5.1100
410	0.0010	0.0363	555	0.7446	27.1844	700	0.1158	4.2298
415	0.0033	0.1210	560	0.7664	27.9823	705	0.0980	3.5790
420	0.0102	0.3723	565	0.7918	28.9083	710	0.0817	2.9826
425	0.0235	0.8592	570	0.8151	29.7584	715	0.0697	2.5456
430	0.0492	1.7977	575	0.8426	30.7655	720	0.0579	2.1126
435	0.0994	3.6290	580	0.8651	31.5842	725	0.0475	1.7358
440	0.1902	6.9431	585	0.8852	32.3196	730	0.0384	1.4008
445	0.3480	12.7045	590	0.9031	32.9749	735	0.0296	1.0824
450	0.6083	22.2087	595	0.9111	33.2654	740	0.0232	0.8485
455	0.9052	33.0483	600	0.9149	33.4049	745	0.0192	0.6993
460	0.9859	35.9944	605	0.9079	33.1498	750	0.0196	0.7148
465	0.7853	28.6704	610	0.8897	32.4851	755	0.0106	0.3888
470	0.5963	21.7715	615	0.8650	31.5803	760	0.0058	0.2119
475	0.4907	17.9153	620	0.8295	30.2859	765	0.0046	0.1693
480	0.3900	14.2401	625	0.7873	28.7453	770	0.0033	0.1213
485	0.3292	12.0187	630	0.7352	26.8430	775	0.0020	0.0718
490	0.3254	11.8792	635	0.6822	24.9096	780	0.0007	0.0254
495	0.3502	12.7878	640	0.6266	22.8764	785	0.0017	0.0606
500	0.3917	14.3010	645	0.5674	20.7181	790	0.0001	0.0037
505	0.4465	16.3014	650	0.5101	18.6243	795	0.0030	0.1095
510	0.5027	18.3529	655	0.4538	16.5681	800	0.0017	0.0616
515	0.5494	20.0587	660	0.4023	14.6895			
520	0.5922	21.6213	665	0.3531	12.8919			

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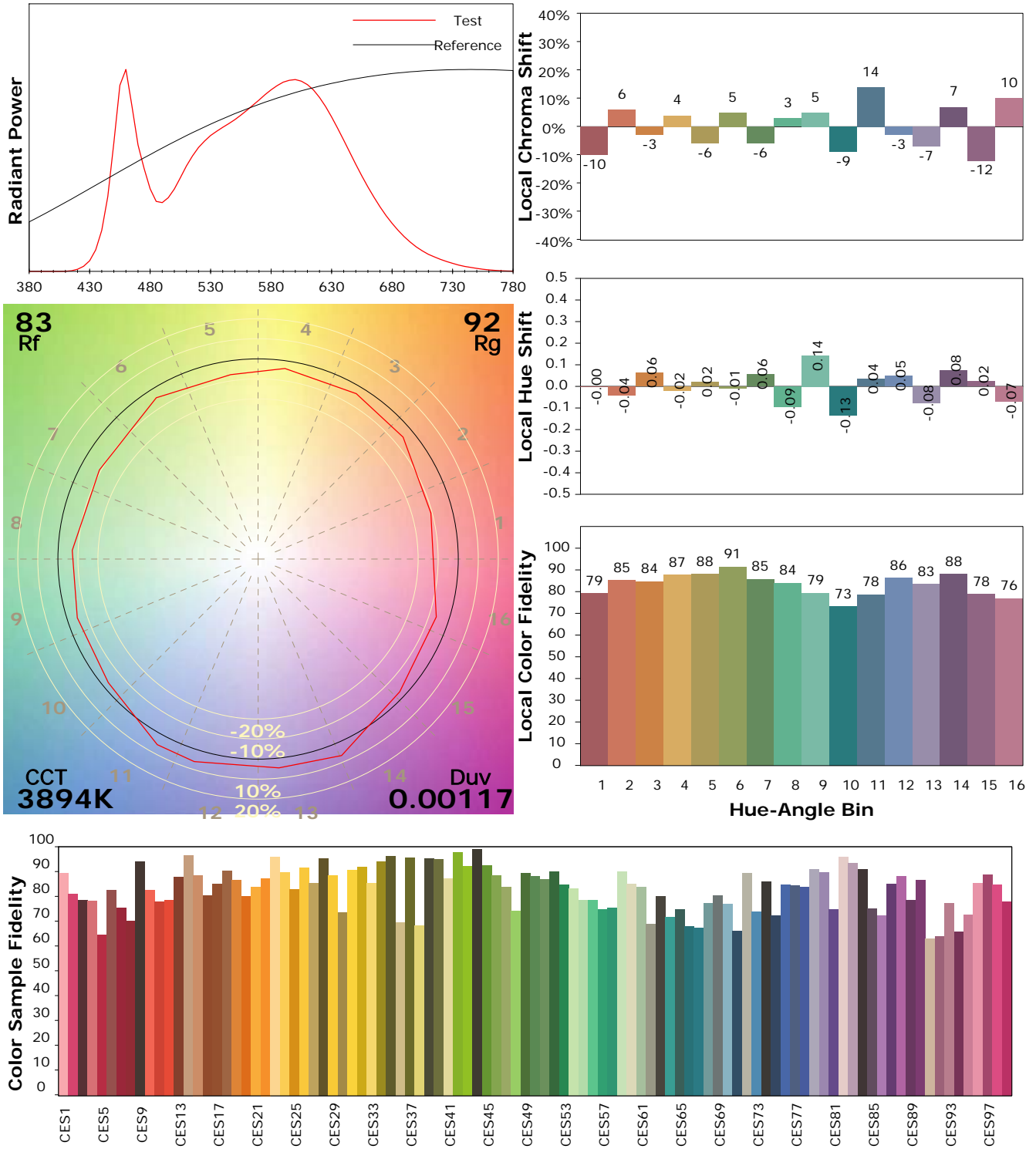
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IES TM-30-18 Color Rendition Report

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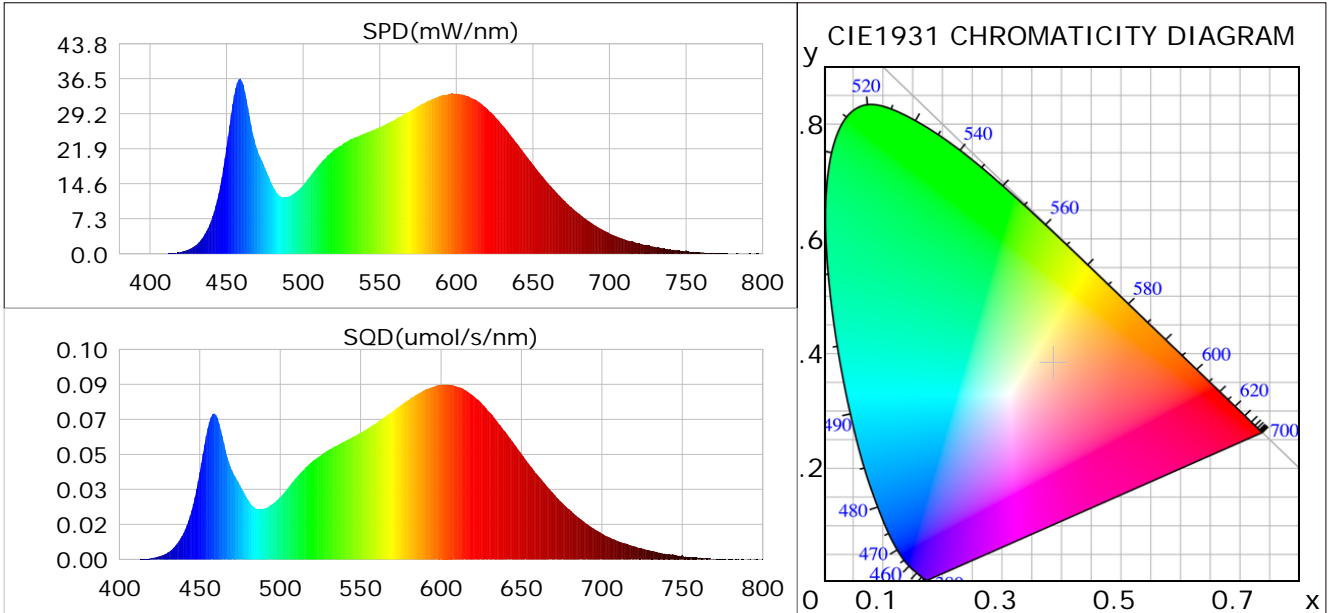
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Plant optical param data

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 CRI: $R_a=85.1$



Plant Optical Param

$ \mu_v(lm): 1922.90$	$Q_v(lm.s): 1922.90$
$ \mu_e, \dot{E}(W/nm): 5.84$	$Q_e(J): 5.84$
$ \mu_e(W): 5.74$	$ \mu_{fr}(W): 0.11$
$ \zeta_e: 0.30$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.40$	$K_{fr}: 0.03$
$Erb_Ratio: 1.54$	$PPF(umol/s): 27.02$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 4.78$
$PPF(500-600)(umol/s): 12.20$	$PPF(600-700)(umol/s): 10.04$
$PPF_{fr}(700-800)(umol/s): 0.61$	$PPF.t(umol): 27.02$
$ \mu_{ch-A.t}(J): 0.43$	$ \mu_{ch-A}(W): 0.43$
$ \mu_{ch-B.t}(J): 0.28$	$ \mu_{ch-B}(W): 0.28$
$ \mu_b.t(J): 1.23$	$ \mu_b(W): 1.23$
$ \mu_y.t(J): 2.64$	$ \mu_y(W): 2.64$
$ \mu_r.t(J): 1.92$	$ \mu_r(W): 1.92$

Electric Parameters

Voltage: 230.80V	Current: 0.0880A	Power: 19.24W
Power Factor: 0.9440	Frequency: 49.99Hz	

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