

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre-SCE
 Product Spec: LEDtube-090-8NWM-12W-SCE-RM-175 Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 102586
 Buyer: 6961

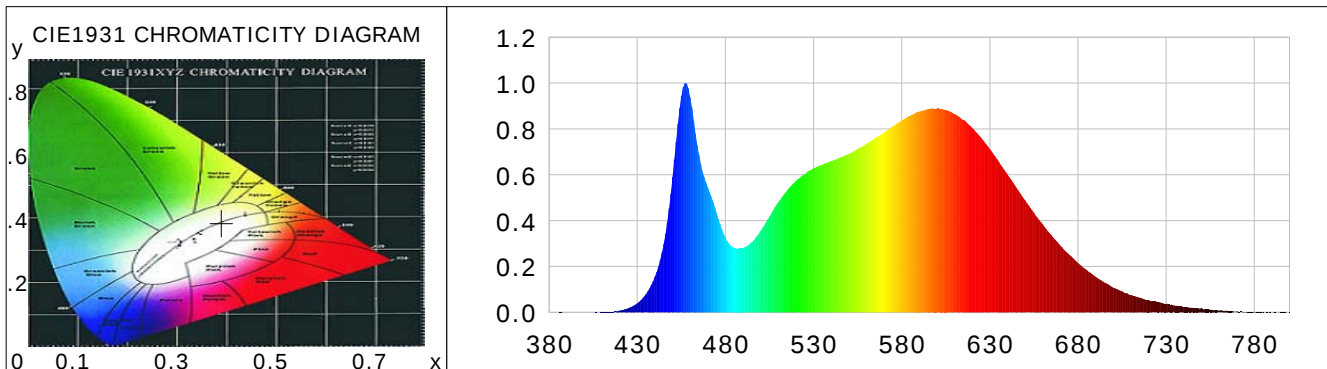
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3897$ $y=0.3855$ $u(u')=0.2277$ $v=0.3378$ $v'=0.5067$
 CCT: $T_c=3825K$ ($duv=0.00145$) Color Ratio: $R=0.192$ $G=0.770$ $B=0.038$
 Peak Wavelength: 457.4nm Half Bandwidth: 23.5nm
 Dominant Wavelength: 597.9nm Color Purity: 0.327
 CRI: $R_a=84.6$, $avgR(1\sim14)=78.5$, $avgR(1\sim15)=78.5$ TM30: $R_f=83$, $R_g=92$
 GAI: $GAI_BB_8=88.9$, $GAI_BB_15=98.0$, $GAI_EES=67.5$

R1 =84	R2 =93	R3 =96	R4 =81	R5 =83	R6 =89	R7 =85	R8 =66
R9 =17	R10=81	R11=80	R12=59	R13=87	R14=99	R15=78	

Color Quality Scale: $Q_a=83.7$, $Q_f=84.1$, $Q_p=82.1$, $Q_g=91.0$

Q1 =80	Q2 =96	Q3 =83	Q4 =76	Q5 =79	Q6 =81	Q7 =85	Q8 =90
Q9 =98	Q10=93	Q11=89	Q12=87	Q13=86	Q14=76	Q15=78	



Photometric Parameters

Luminous Flux: 2039.0 lm Efficiency: 166.04 lm/W Radiant Power: 6.138 W
 Total mains efficacy: 195.27 lm/W Energy Efficiency Class: B (EU 2019/2015)
 Pupil Flux: 3050.16 Plm Pupil Lumens Per Watt: 248.38 Plm/W Pupil Factor (K_p): 1.496
 Cirtopic Flux: 6225.05 lm

Electric Parameters

Voltage: 230.60V Current: 0.0530A Power: 12.28W
 Power Factor: 0.9670 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: 54027 (2450) CCD Integration Time: 123.78 ms

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: 2021-02-22 14:11:59
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.0239	525	0.6012	24.2101	670	0.2913	11.7316
385	0.0002	0.0074	530	0.6280	25.2893	675	0.2520	10.1493
390	0.0004	0.0156	535	0.6429	25.8879	680	0.2156	8.6837
395	0.0001	0.0028	540	0.6591	26.5438	685	0.1839	7.4076
400	0.0009	0.0368	545	0.6751	27.1852	690	0.1545	6.2224
405	0.0002	0.0062	550	0.6909	27.8242	695	0.1300	5.2362
410	0.0008	0.0317	555	0.7127	28.6990	700	0.1078	4.3425
415	0.0027	0.1103	560	0.7355	29.6187	705	0.0918	3.6959
420	0.0080	0.3203	565	0.7620	30.6874	710	0.0758	3.0544
425	0.0187	0.7510	570	0.7857	31.6396	715	0.0639	2.5752
430	0.0395	1.5896	575	0.8117	32.6852	720	0.0532	2.1406
435	0.0796	3.2059	580	0.8373	33.7162	725	0.0451	1.8167
440	0.1550	6.2409	585	0.8583	34.5625	730	0.0379	1.5275
445	0.3000	12.0811	590	0.8760	35.2747	735	0.0295	1.1880
450	0.5906	23.7850	595	0.8868	35.7095	740	0.0235	0.9473
455	0.9424	37.9519	600	0.8891	35.8028	745	0.0196	0.7889
460	0.9381	37.7764	605	0.8831	35.5626	750	0.0201	0.8112
465	0.6887	27.7333	610	0.8646	34.8174	755	0.0116	0.4683
470	0.5457	21.9762	615	0.8393	33.7972	760	0.0074	0.2971
475	0.4335	17.4555	620	0.8047	32.4042	765	0.0058	0.2320
480	0.3264	13.1426	625	0.7620	30.6850	770	0.0042	0.1707
485	0.2813	11.3265	630	0.7111	28.6373	775	0.0037	0.1481
490	0.2806	11.3002	635	0.6579	26.4928	780	0.0037	0.1495
495	0.3063	12.3326	640	0.6012	24.2093	785	0.0018	0.0737
500	0.3550	14.2938	645	0.5446	21.9293	790	0.0005	0.0187
505	0.4177	16.8204	650	0.4880	19.6535	795	0.0026	0.1027
510	0.4804	19.3457	655	0.4347	17.5046	800	0.0016	0.0648
515	0.5307	21.3695	660	0.3840	15.4632			
520	0.5740	23.1161	665	0.3358	13.5235			

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%
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IES TM-30-18 Color Rendition Report

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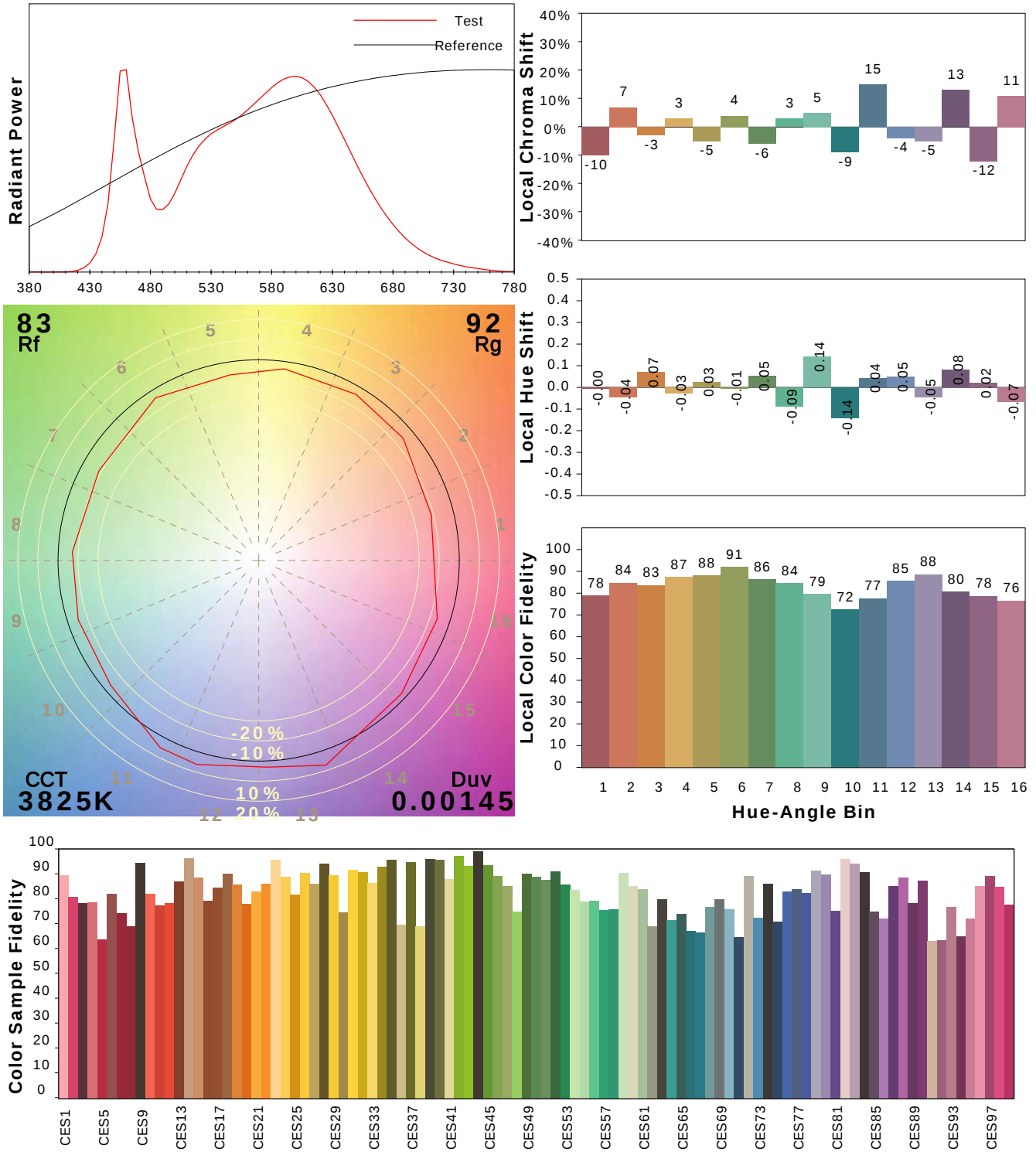
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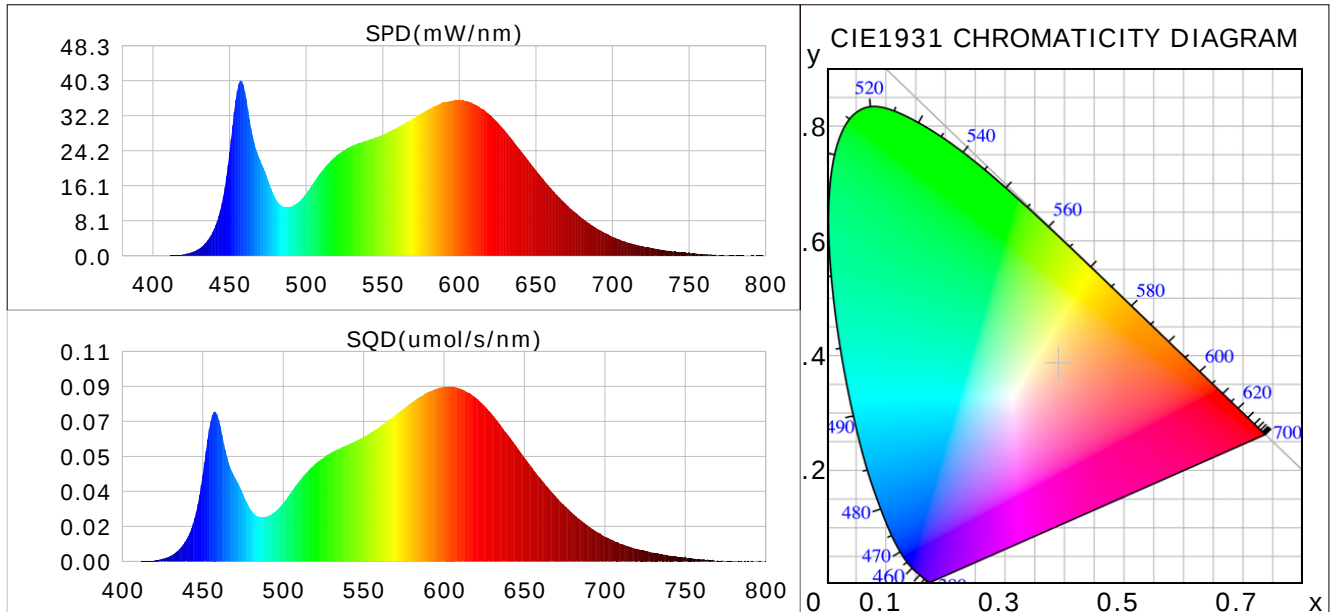
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Plant optical param data

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 CRI: Ra= 84.6



Plant Optical Param

$\mu_v(lm): 2039.00$	$Q_v(lm.s): 2039.00$
$\mu_e, \dot{E}(W/nm): 6.14$	$Q_e(J): 6.14$
$\mu_e(W): 6.03$	$\mu_{fr}(W): 0.11$
$\dot{C}_e: 0.49$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 2.32$	$K_{fr}: 0.05$
$Erb_Ratio: 1.62$	$PPF(umol/s): 28.43$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 4.82$
$PPF(500-600)(umol/s): 12.96$	$PPF(600-700)(umol/s): 10.65$
$PF_{fr}(700-800)(umol/s): 0.66$	$PPF.t(umol): 28.43$
$\mu_{ch-A.t}(J): 0.45$	$\mu_{ch-A}(W): 0.45$
$\mu_{ch-B.t}(J): 0.29$	$\mu_{ch-B}(W): 0.29$
$\mu_{b.t}(J): 1.24$	$\mu_b(W): 1.24$
$\mu_{y.t}(J): 2.80$	$\mu_y(W): 2.80$
$\mu_{r.t}(J): 2.04$	$\mu_r(W): 2.04$

Electric Parameters

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Power Factor: 0.9670	Frequency: 49.99Hz	

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