

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre-SCE
 Product Spec: LEDtube-090-8NWM-12W-SCE-RM-160 Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 102592
 Buyer: 6961

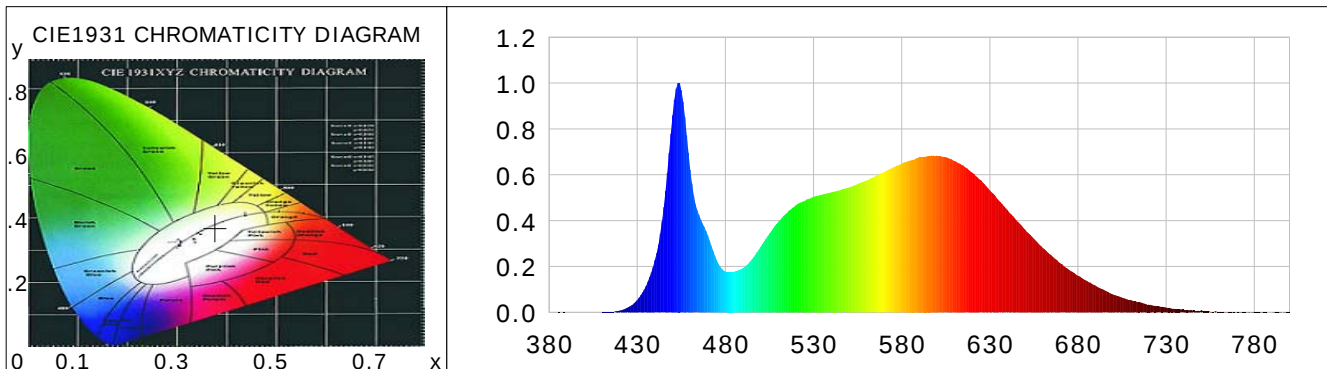
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3770$ $y=0.3700$ $u(u')=0.2255$ $v=0.3320$ $v'=0.4981$
 CCT: $T_c=4047K$ ($duv=-0.00217$) Color Ratio: $R=0.187$ $G=0.777$ $B=0.036$
 Peak Wavelength: 453.5nm Half Bandwidth: 16.7nm
 Dominant Wavelength: 580.2nm Color Purity: 0.242
 CRI: $R_a=84.5$, $avgR(1\sim14)=78.1$, $avgR(1\sim15)=78.2$ TM30: $R_f=83$, $R_g=96$
 GAI: $GAI_BB_8=96.2$, $GAI_BB_15=103.8$, $GAI_EES=76.6$

R1 =84	R2 =91	R3 =94	R4 =83	R5 =83	R6 =86	R7 =86	R8 =68
R9 =18	R10=76	R11=82	R12=58	R13=86	R14=97	R15=79	

Color Quality Scale: $Q_a=82.6$, $Q_f=82.4$, $Q_p=83.5$, $Q_g=94.3$

Q1 =83	Q2 =99	Q3 =77	Q4 =73	Q5 =80	Q6 =83	Q7 =86	Q8 =89
Q9 =97	Q10=88	Q11=85	Q12=84	Q13=84	Q14=75	Q15=78	



Photometric Parameters

Luminous Flux: 1874.2 lm Efficiency: 151.27 lm/W Radiant Power: 5.694 W
 Total mains efficacy: 177.89 lm/W Energy Efficiency Class: C (EU 2019/2015)
 Pupil Flux: 2853.30 Plm Pupil Lumens Per Watt: 230.29 Plm/W Pupil Factor (Kp): 1.522
 Cirtopic Flux: 5848.27 lm

Electric Parameters

Voltage: 230.60V Current: 0.0540A Power: 12.39W
 Power Factor: 0.9330 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: 44337 (1927) CCD Integration Time: 169.84 ms

Condition: Tx:12.3'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-08 09:11:40
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0080	525	0.4864	23.0911	670	0.2143	10.1715
385	0.0007	0.0335	530	0.5032	23.8857	675	0.1853	8.7952
390	0.0003	0.0156	535	0.5138	24.3886	680	0.1598	7.5862
395	0.0003	0.0138	540	0.5230	24.8272	685	0.1372	6.5112
400	0.0007	0.0318	545	0.5324	25.2741	690	0.1162	5.5160
405	0.0002	0.0088	550	0.5447	25.8557	695	0.0959	4.5535
410	0.0008	0.0393	555	0.5598	26.5715	700	0.0781	3.7098
415	0.0026	0.1222	560	0.5752	27.3038	705	0.0645	3.0635
420	0.0080	0.3779	565	0.5938	28.1893	710	0.0532	2.5232
425	0.0224	1.0654	570	0.6108	28.9962	715	0.0446	2.1162
430	0.0544	2.5846	575	0.6316	29.9836	720	0.0338	1.6052
435	0.1152	5.4674	580	0.6483	30.7733	725	0.0272	1.2907
440	0.2271	10.7819	585	0.6621	31.4297	730	0.0216	1.0245
445	0.4592	21.8007	590	0.6773	32.1532	735	0.0152	0.7200
450	0.8589	40.7743	595	0.6814	32.3456	740	0.0125	0.5924
455	0.9694	46.0190	600	0.6835	32.4443	745	0.0081	0.3862
460	0.6224	29.5470	605	0.6764	32.1081	750	0.0095	0.4496
465	0.4250	20.1764	610	0.6600	31.3314	755	0.0042	0.1980
470	0.3364	15.9705	615	0.6404	30.3992	760	0.0029	0.1386
475	0.2288	10.8620	620	0.6101	28.9596	765	0.0030	0.1415
480	0.1780	8.4505	625	0.5754	27.3130	770	0.0012	0.0578
485	0.1773	8.4157	630	0.5314	25.2242	775	0.0022	0.1050
490	0.1927	9.1465	635	0.4886	23.1919	780	0.0015	0.0697
495	0.2304	10.9383	640	0.4459	21.1649	785	0.0009	0.0451
500	0.2858	13.5650	645	0.4017	19.0664	790	0.0001	0.0045
505	0.3443	16.3434	650	0.3602	17.0994	795	0.0033	0.1563
510	0.3945	18.7266	655	0.3207	15.2242	800	0.0019	0.0900
515	0.4346	20.6294	660	0.2809	13.3344			
520	0.4673	22.1835	665	0.2480	11.7721			

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IES TM-30-18 Color Rendition Report

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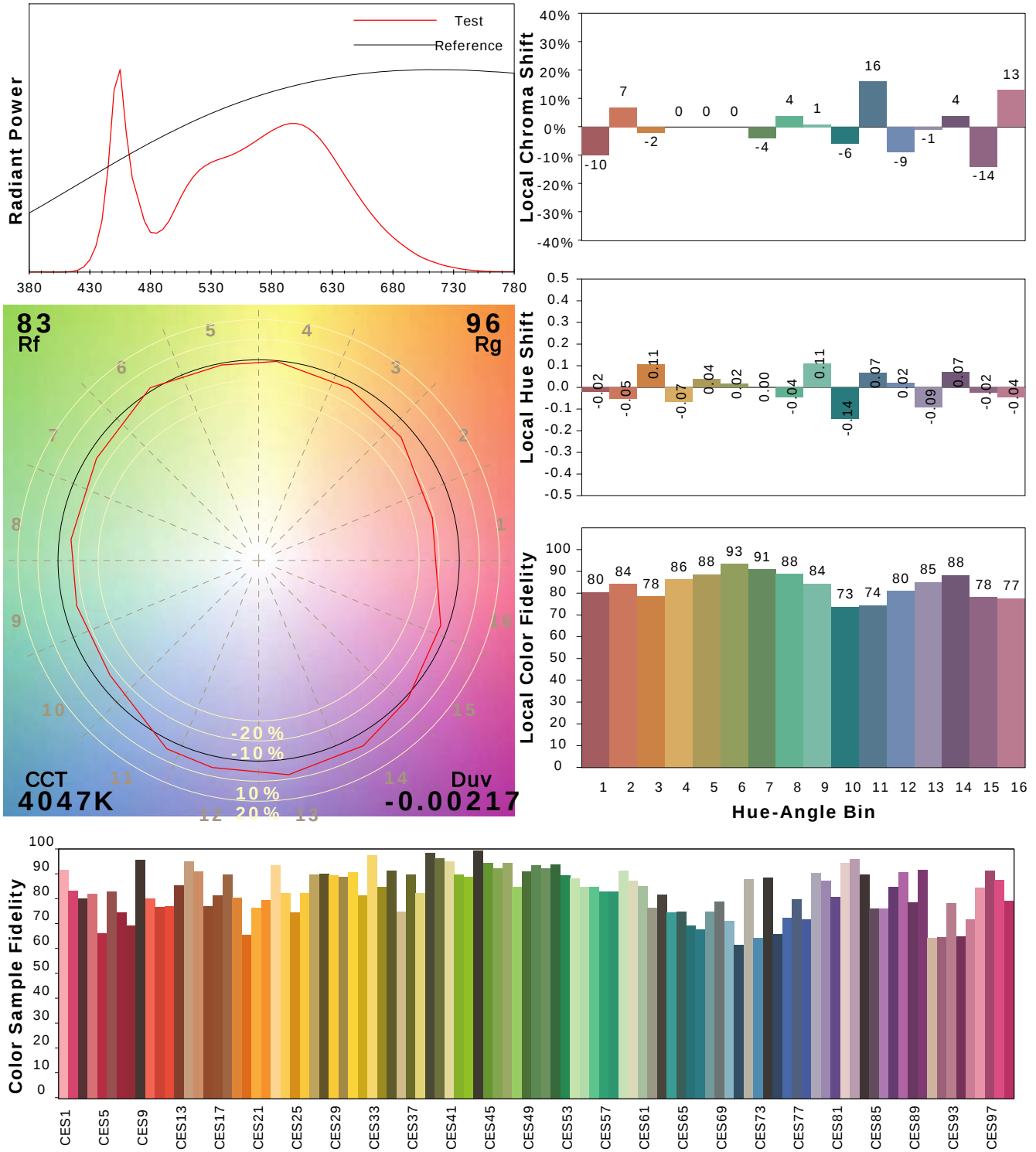
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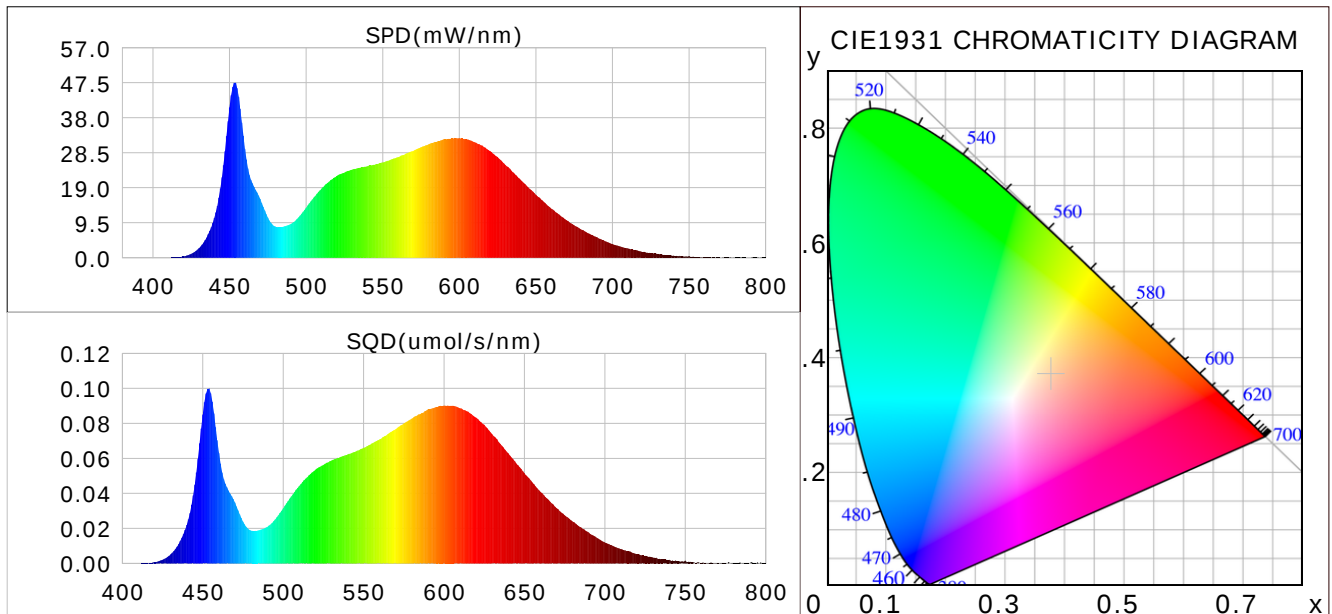
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Plant optical param data

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 CRI: Ra= 84.5



Plant Optical Param

$\mu_v(\text{lm})$: 1874.20	$Q_v(\text{lm.s})$: 1874.20
$\mu_e, \dot{E}(\text{W/nm})$: 5.69	$Q_e(\text{J})$: 5.69
$\mu_e(\text{W})$: 5.62	$\mu_{fr}(\text{W})$: 0.08
$\dot{C}_e$: 0.45	$\dot{C}_{fr}$: 0.01
$PPE(\mu\text{mol/s/w})$: 2.12	K_{fr} : 0.04
E_{rb_Ratio} : 1.42	$PPF(\mu\text{mol/s})$: 26.27
$PF_{uv}(360-400)(\mu\text{mol/s})$: 0.00	$PPF(400-500)(\mu\text{mol/s})$: 4.83
$PPF(500-600)(\mu\text{mol/s})$: 12.03	$PPF(600-700)(\mu\text{mol/s})$: 9.41
$PF_{fr}(700-800)(\mu\text{mol/s})$: 0.48	$PPF.t(\mu\text{mol})$: 26.27
$\mu_{ch-A.t}(\text{J})$: 0.44	$\mu_{ch-A}(\text{W})$: 0.44
$\mu_{ch-B.t}(\text{J})$: 0.27	$\mu_{ch-B}(\text{W})$: 0.27
$\mu_{b.t}(\text{J})$: 1.25	$\mu_b(\text{W})$: 1.25
$\mu_{y.t}(\text{J})$: 2.60	$\mu_y(\text{W})$: 2.60
$\mu_{r.t}(\text{J})$: 1.80	$\mu_r(\text{W})$: 1.80

Electric Parameters

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