

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-120-CWC-19W-TRF-RC
 Manufacturer: METOLIGHT
 Buyer: 6852

Product Type: LED-Röhre-TRF
 Product Number: 1
 Submitted Unit: 102278

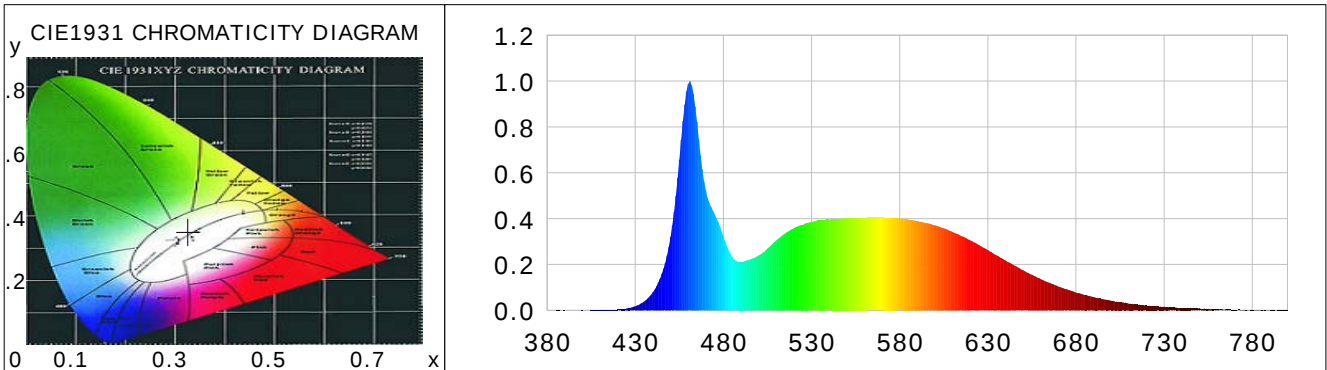
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3259$ $y=0.3519$ $u(u')=0.1984$ $v=0.3213$ $v'=0.4820$
 CCT: $T_c=5778K$ ($duv=0.00838$) Color Ratio: $R=0.142$ $G=0.797$ $B=0.062$
 Peak Wavelength: 460.9nm Half Bandwidth: 17.7nm
 Dominant Wavelength: 528.6nm Color Purity: 0.039
 CRI: $R_a=82.2$, $avgR(1\sim14)=75.7$, $avgR(1\sim15)=75.7$ TM30: $R_f=79$, $R_g=87$
 GAI: $GAI_BB_8=83.0$, $GAI_BB_15=90.9$, $GAI_EES=77.9$

R1 =82	R2 =94	R3 =93	R4 =73	R5 =79	R6 =89	R7 =82	R8 =65
R9 =10	R10=83	R11=72	R12=53	R13=87	R14=97	R15=76	

Color Quality Scale: $Q_a=80.0$, $Q_f=80.6$, $Q_p=77.6$, $Q_g=86.7$

Q1 =74	Q2 =91	Q3 =86	Q4 =72	Q5 =71	Q6 =71	Q7 =78	Q8 =86
Q9 =95	Q10=95	Q11=89	Q12=87	Q13=86	Q14=73	Q15=75	



Photometric Parameters

Luminous Flux: 2865.9 lm	Efficiency: 146.67 lm/W	Radiant Power: 8.964 W
Total mains efficacy: 172.48 lm/W	Energy Efficiency Class: C (EU 2019/2015)	
Pupil Flux: 5341.89 Plm	Pupil Lumens Per Watt: 273.38 Plm/W	Pupil Factor (Kp): 1.864
Cirtpic Flux: 12404.38 lm		

Electric Parameters

Voltage: 230.00V	Current: 0.0850A	Power: 19.54W
Power Factor: 0.9480	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: 46240 (2210)	CCD Integration Time: 57.27 ms

Condition: Tx:18.3'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2020-12-21 10:31:53
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0008	0.0846	525	0.3726	40.0631	670	0.1045	11.2330
385	0.0008	0.0865	530	0.3865	41.5661	675	0.0918	9.8689
390	0.0008	0.0904	535	0.3935	42.3184	680	0.0780	8.3914
395	0.0006	0.0624	540	0.3960	42.5787	685	0.0667	7.1671
400	0.0012	0.1304	545	0.3994	42.9539	690	0.0580	6.2384
405	0.0007	0.0782	550	0.4017	43.1943	695	0.0494	5.3084
410	0.0017	0.1819	555	0.4043	43.4736	700	0.0422	4.5384
415	0.0026	0.2797	560	0.4045	43.5003	705	0.0357	3.8370
420	0.0040	0.4325	565	0.4062	43.6847	710	0.0293	3.1487
425	0.0082	0.8846	570	0.4050	43.5546	715	0.0256	2.7490
430	0.0178	1.9177	575	0.4043	43.4775	720	0.0210	2.2533
435	0.0382	4.1043	580	0.4007	43.0932	725	0.0183	1.9643
440	0.0794	8.5394	585	0.3961	42.5947	730	0.0161	1.7344
445	0.1596	17.1675	590	0.3903	41.9747	735	0.0119	1.2797
450	0.3201	34.4214	595	0.3809	40.9624	740	0.0102	1.1020
455	0.6582	70.7812	600	0.3709	39.8813	745	0.0097	1.0389
460	0.9877	106.2099	605	0.3585	38.5494	750	0.0094	1.0099
465	0.8221	88.3991	610	0.3414	36.7151	755	0.0067	0.7183
470	0.5230	56.2426	615	0.3241	34.8541	760	0.0043	0.4609
475	0.4196	45.1220	620	0.3053	32.8250	765	0.0053	0.5675
480	0.3227	34.6961	625	0.2846	30.6013	770	0.0025	0.2652
485	0.2330	25.0547	630	0.2630	28.2851	775	0.0035	0.3776
490	0.2117	22.7612	635	0.2399	25.7962	780	0.0028	0.3011
495	0.2219	23.8571	640	0.2177	23.4056	785	0.0026	0.2817
500	0.2399	25.7997	645	0.1955	21.0260	790	0.0010	0.1062
505	0.2699	29.0252	650	0.1747	18.7814	795	0.0023	0.2439
510	0.3054	32.8356	655	0.1554	16.7121	800	0.0007	0.0801
515	0.3353	36.0510	660	0.1365	14.6824			
520	0.3584	38.5361	665	0.1201	12.9183			

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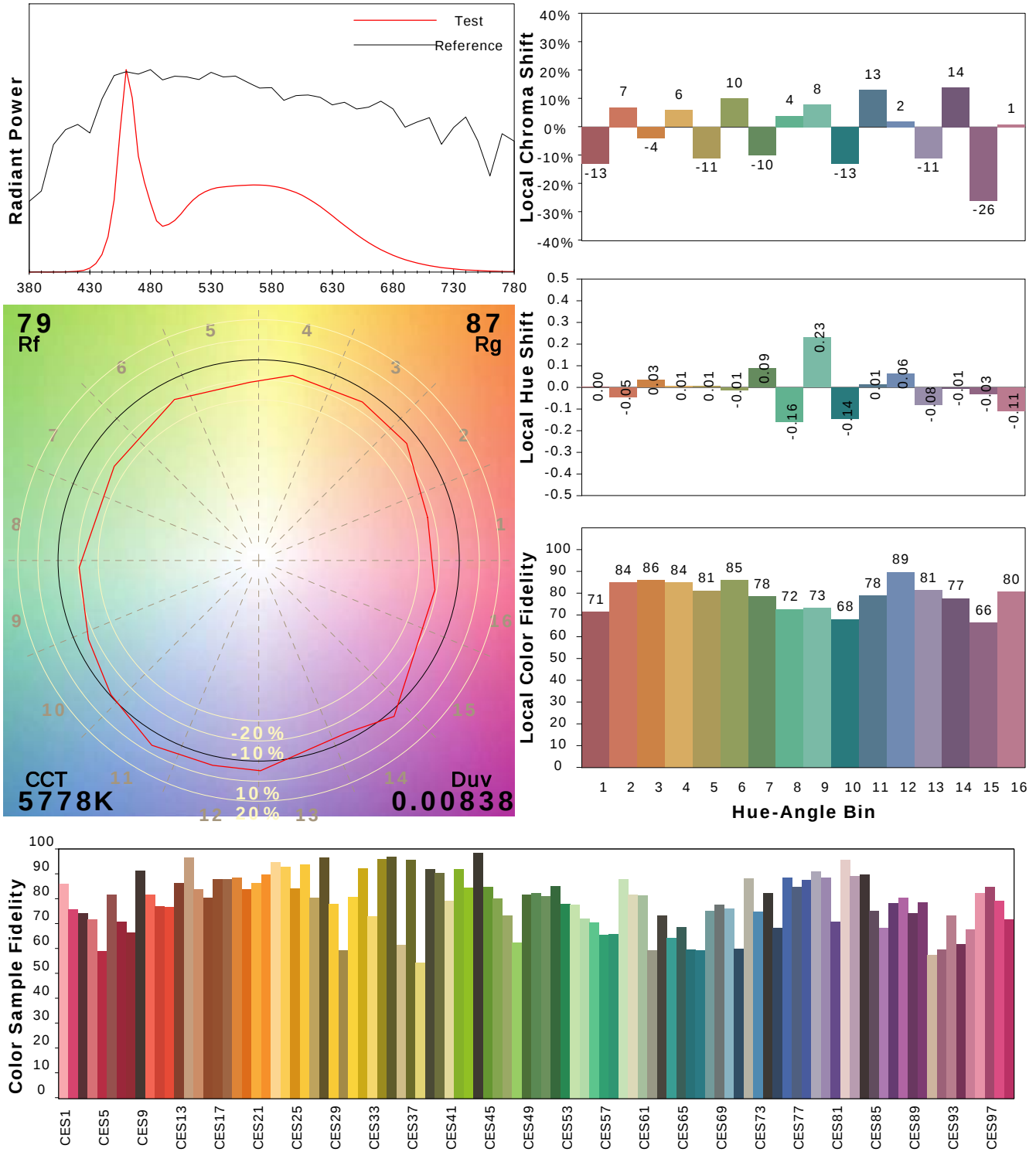
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IES TM-30-18 Color Rendition Report

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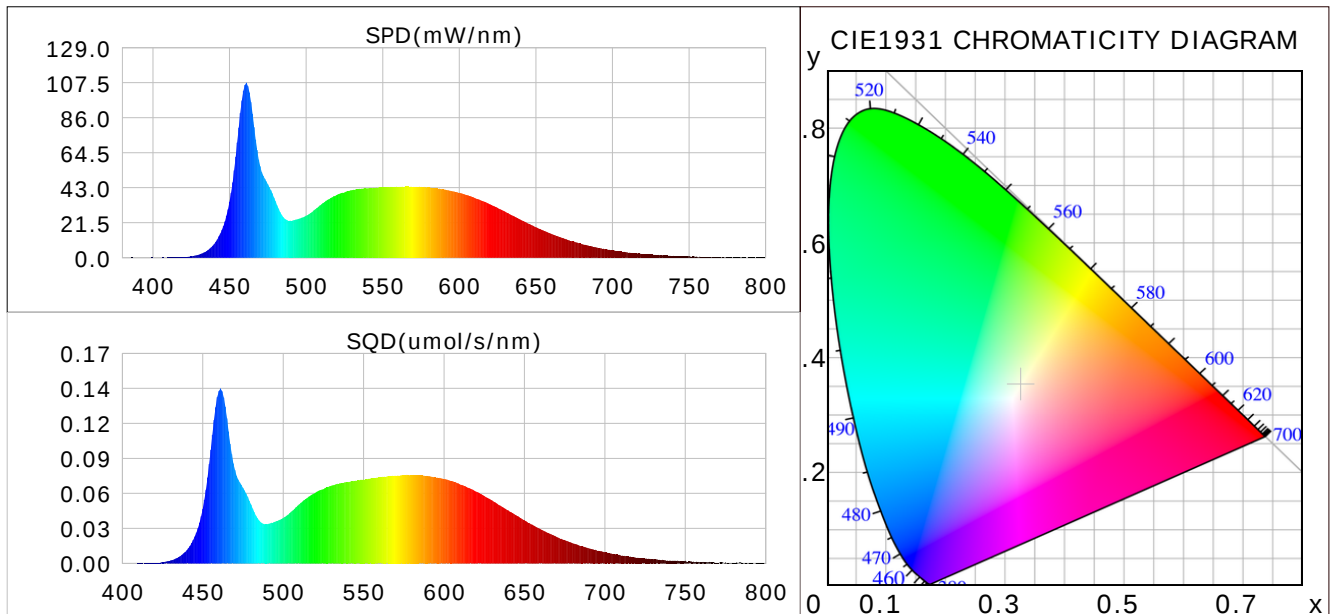
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Plant optical param data

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 CRI: Ra= 82.2



Plant Optical Param

$\mu_v(lm): 2865.90$	$Q_v(lm.s): 2865.90$
$\mu_e, \dot{E}(W/nm): 8.96$	$Q_e(J): 8.96$
$\mu_e(W): 8.84$	$\mu_{fr}(W): 0.13$
$\dot{C}_e: 0.45$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 2.06$	$K_{fr}: 0.04$
$Erb_Ratio: 0.72$	$PPF(umol/s): 40.23$
$PF_{uv}(360-400)(umol/s): 0.01$	$PPF(400-500)(umol/s): 10.85$
$PPF(500-600)(umol/s): 18.72$	$PPF(600-700)(umol/s): 10.66$
$PF_{fr}(700-800)(umol/s): 0.76$	$PPF.t(umol): 40.23$
$\mu_{ch-A.t}(J): 0.62$	$\mu_{ch-A}(W): 0.62$
$\mu_{ch-B.t}(J): 0.53$	$\mu_{ch-B}(W): 0.53$
$\mu_b.t(J): 2.78$	$\mu_b(W): 2.78$
$\mu_y.t(J): 4.08$	$\mu_y(W): 4.08$
$\mu_r.t(J): 2.05$	$\mu_r(W): 2.05$

Electric Parameters

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