

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-060-8CWS-10W-SCE-RS
 Manufacturer: METOLIGHT
 Buyer: 2105

Product Type: LED-Röhre-SCE
 Product Number: 1
 Submitted Unit: 101078

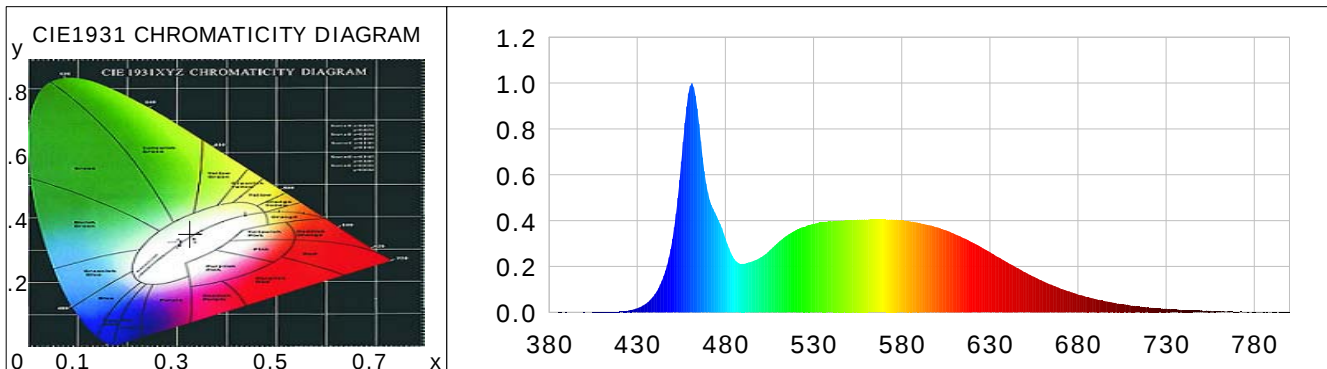
CIE Colorimetric Parameters

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: 1178.0 lm	Efficiency: 130.89 lm/W	Radiant Power: 3.685 W
Total mains efficacy: 153.93 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 2195.73 Plm	Pupil Lumens Per Watt: 243.97 Plm/W	Pupil Factor (Kp): 1.864
Cirtpic Flux: 5098.70 lm		

Electric Parameters

Voltage: 230.00V	Current: 0.0400A	Power: 9.00W
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	0.0348	525	0.3726	16.4675	670	0.1045	4.6172
385	0.0008	0.0356	530	0.3865	17.0854	675	0.0918	4.0565
390	0.0008	0.0372	535	0.3935	17.3945	680	0.0780	3.4492
395	0.0006	0.0257	540	0.3960	17.5015	685	0.0667	2.9460
400	0.0012	0.0536	545	0.3994	17.6558	690	0.0580	2.5642
405	0.0007	0.0321	550	0.4017	17.7546	695	0.0494	2.1820
410	0.0017	0.0748	555	0.4043	17.8694	700	0.0422	1.8655
415	0.0026	0.1150	560	0.4045	17.8804	705	0.0357	1.5772
420	0.0040	0.1778	565	0.4062	17.9562	710	0.0293	1.2942
425	0.0082	0.3636	570	0.4050	17.9027	715	0.0256	1.1299
430	0.0178	0.7883	575	0.4043	17.8710	720	0.0210	0.9262
435	0.0382	1.6870	580	0.4007	17.7130	725	0.0183	0.8074
440	0.0794	3.5100	585	0.3961	17.5081	730	0.0161	0.7129
445	0.1596	7.0565	590	0.3903	17.2533	735	0.0119	0.5260
450	0.3201	14.1486	595	0.3809	16.8372	740	0.0102	0.4530
455	0.6582	29.0939	600	0.3709	16.3928	745	0.0097	0.4270
460	0.9877	43.6565	605	0.3585	15.8453	750	0.0094	0.4151
465	0.8221	36.3356	610	0.3414	15.0914	755	0.0067	0.2953
470	0.5230	23.1180	615	0.3241	14.3264	760	0.0043	0.1895
475	0.4196	18.5469	620	0.3053	13.4924	765	0.0053	0.2333
480	0.3227	14.2615	625	0.2846	12.5784	770	0.0025	0.1090
485	0.2330	10.2985	630	0.2630	11.6263	775	0.0035	0.1552
490	0.2117	9.3558	635	0.2399	10.6033	780	0.0028	0.1237
495	0.2219	9.8062	640	0.2177	9.6207	785	0.0026	0.1158
500	0.2399	10.6047	645	0.1955	8.6425	790	0.0010	0.0437
505	0.2699	11.9305	650	0.1747	7.7199	795	0.0023	0.1003
510	0.3054	13.4967	655	0.1554	6.8694	800	0.0007	0.0329
515	0.3353	14.8184	660	0.1365	6.0351			
520	0.3584	15.8399	665	0.1201	5.3100			

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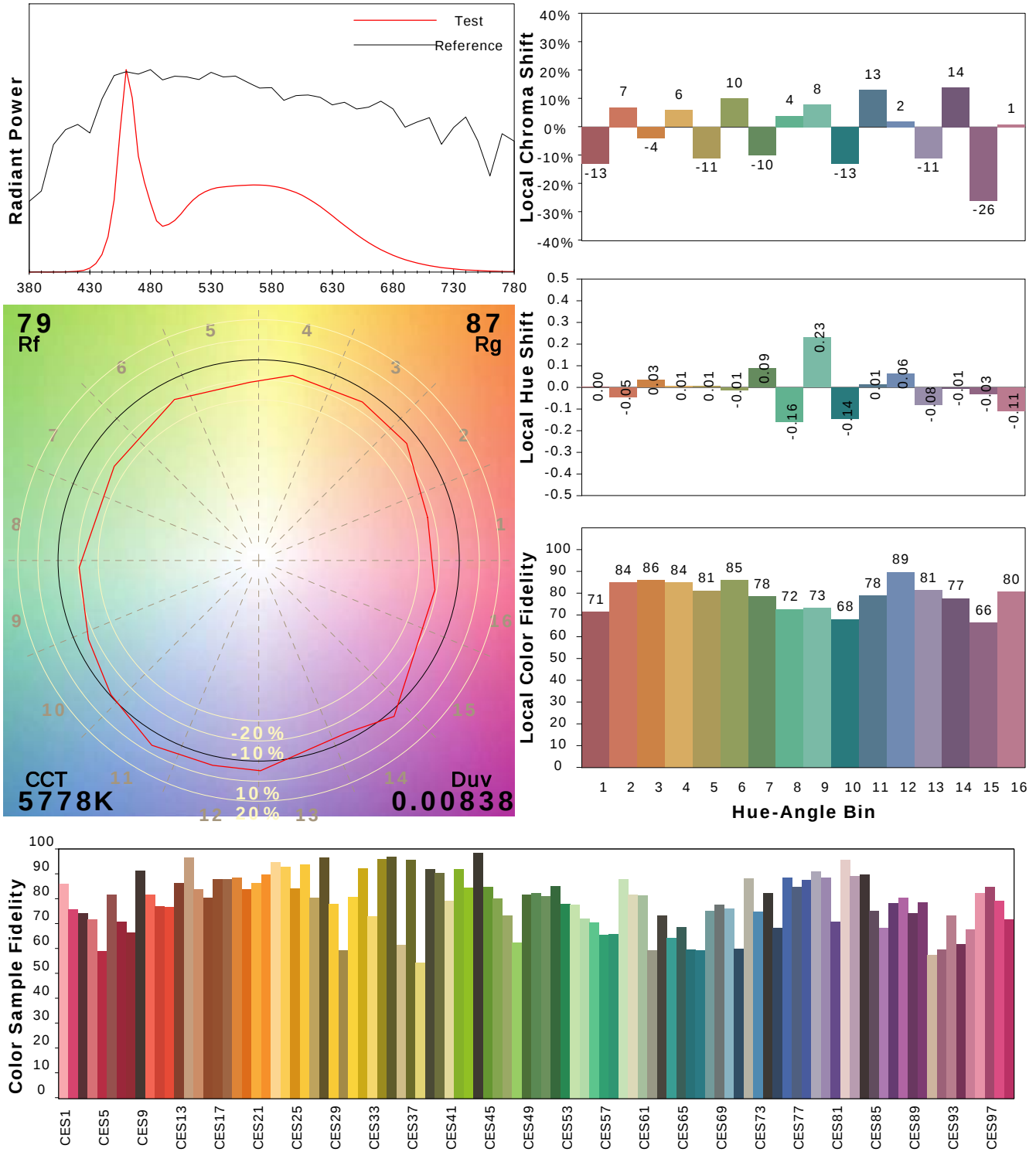
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IES TM-30-18 Color Rendition Report

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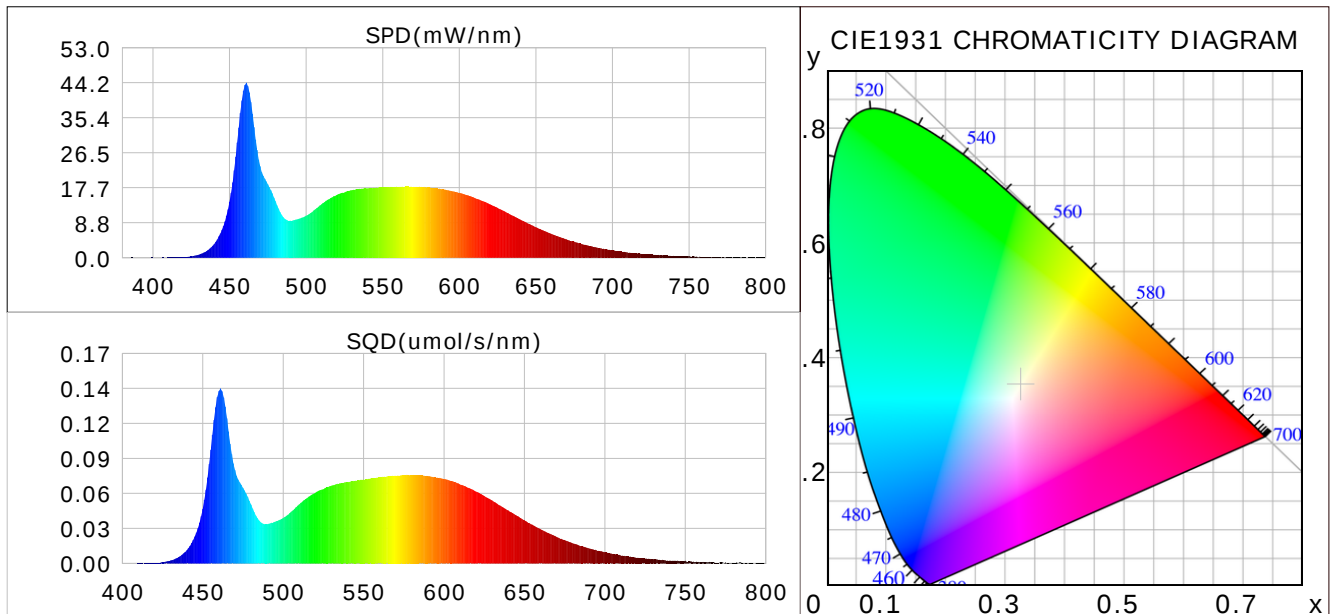
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Plant optical param data

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 CRI: Ra= 82.2



Plant Optical Param

$\mu_v(lm)$: 1178.00	$Q_v(lm.s)$: 1178.00
$\mu_e, \dot{E}(W/nm)$: 3.68	$Q_e(J)$: 3.68
$\mu_e(W)$: 3.63	$\mu_{fr}(W)$: 0.05
$\dot{Q}_e$: 0.40	$\dot{Q}_{fr}$: 0.01
$PPE(umol/s/w)$: 1.84	K_{fr} : 0.03
E_{rb_Ratio} : 0.72	$PPF(umol/s)$: 16.53
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 4.46
$PPF(500-600)(umol/s)$: 7.69	$PPF(600-700)(umol/s)$: 4.38
$PF_{fr}(700-800)(umol/s)$: 0.31	$PPF.t(umol)$: 16.53
$\mu_{ch-A.t}(J)$: 0.25	$\mu_{ch-A}(W)$: 0.25
$\mu_{ch-B.t}(J)$: 0.22	$\mu_{ch-B}(W)$: 0.22
$\mu_{b.t}(J)$: 1.14	$\mu_b(W)$: 1.14
$\mu_{y.t}(J)$: 1.68	$\mu_y(W)$: 1.68
$\mu_{r.t}(J)$: 0.84	$\mu_r(W)$: 0.84

Electric Parameters

Voltage: 230.00V	Current: 0.0400A	Power: 9.00W
Power Factor: 0.9480	Frequency: 49.99Hz	

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