

Lightsource Test Report

Product Infomation

Product Category: LED-Röhre
 Product Spec: LEDtube-120-8Meat-P-20WM
 Manufacturer: METOLIGHT
 Buyer: 7116

Product Type: LED-Röhre-Spezial
 Product Number: 1
 Submitted Unit: 101787

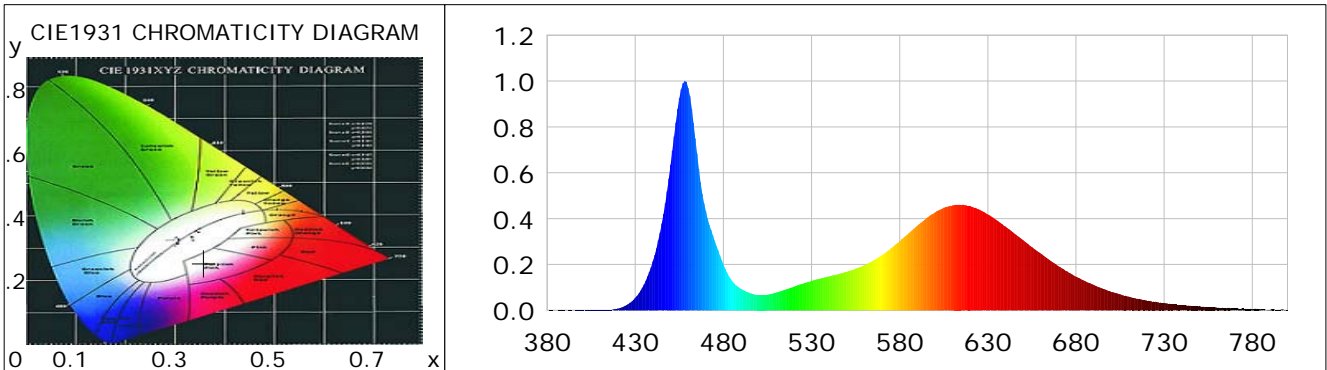
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3578$ $y=0.2528$ $u(u')=0.2691$ $v=0.2852$ $v'=0.4278$
 CCT: $T_c=3274K$ ($duv=-0.06472$) Color Ratio: $R=0.301$ $G=0.629$ $B=0.070$
 Peak Wavelength: 458.2nm Half Bandwidth: 20.6nm
 Dominant Wavelength: 0.0nm Color Purity: 0.000
 CRI: $R_a=65.4$, $avgR(1\sim14)=60.9$, $avgR(1\sim15)=61.5$ TM30: $R_f=78$, $R_g=106$
 GAI: $GAI_BB_8=190.5$, $GAI_BB_15=175.7$, $GAI_EES=122.8$

R1 =78	R2 =61	R3 =56	R4 =79	R5 =72	R6 =40	R7 =58	R8 =80
R9 =80	R10=26	R11=75	R12=0	R13=68	R14=81	R15=69	

Color Quality Scale: $Q_a=71.8$, $Q_f=64.8$, $Q_p=88.2$, $Q_g=112.0$

Q1 =96	Q2 =93	Q3 =61	Q4 =55	Q5 =70	Q6 =83	Q7 =85	Q8 =87
Q9 =90	Q10=77	Q11=64	Q12=56	Q13=56	Q14=75	Q15=86	



Photometric Parameters

Luminous Flux: 1710.0 lm Efficiency: 88.28 lm/W Radiant Power: 7.521 W
 Total mains efficacy: 103.82 lm/W Energy Efficiency Class: F (EU 2019/2015)
 Pupil Flux: 3030.63 Plm Pupil Lumens Per Watt: 156.46 Plm/W Pupil Factor (Kp): 1.772
 Cirtopic Flux: 7665.28 lm

Electric Parameters

Voltage: 230.80V Current: 0.0870A Power: 19.37W
 Power Factor: 0.9570 Frequency: 49.99Hz

Test Infomation

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: 55099 (2206) CCD Integration Time: 91.87 ms

Condition: Tx:17.7'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-18 14:37:07
 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	0.0234	525	0.1162	11.1796	670	0.1933	18.5922
385	0.0006	0.0616	530	0.1286	12.3715	675	0.1698	16.3380
390	0.0008	0.0788	535	0.1389	13.3573	680	0.1471	14.1489
395	0.0004	0.0413	540	0.1487	14.2994	685	0.1282	12.3306
400	0.0015	0.1467	545	0.1578	15.1745	690	0.1112	10.6944
405	0.0012	0.1138	550	0.1684	16.1966	695	0.0955	9.1826
410	0.0021	0.1987	555	0.1815	17.4599	700	0.0807	7.7668
415	0.0031	0.2963	560	0.1972	18.9653	705	0.0700	6.7377
420	0.0078	0.7505	565	0.2177	20.9410	710	0.0599	5.7625
425	0.0230	2.2131	570	0.2418	23.2597	715	0.0508	4.8850
430	0.0546	5.2479	575	0.2704	26.0079	720	0.0433	4.1626
435	0.1127	10.8375	580	0.3014	28.9953	725	0.0377	3.6287
440	0.2140	20.5844	585	0.3353	32.2522	730	0.0327	3.1464
445	0.3791	36.4675	590	0.3699	35.5816	735	0.0267	2.5716
450	0.6346	61.0455	595	0.4007	38.5448	740	0.0222	2.1378
455	0.9260	89.0730	600	0.4267	41.0462	745	0.0199	1.9183
460	0.9702	93.3256	605	0.4476	43.0541	750	0.0192	1.8488
465	0.6847	65.8605	610	0.4577	44.0289	755	0.0141	1.3576
470	0.4329	41.6402	615	0.4599	44.2403	760	0.0112	1.0765
475	0.3041	29.2562	620	0.4555	43.8125	765	0.0094	0.9013
480	0.2003	19.2661	625	0.4404	42.3656	770	0.0080	0.7726
485	0.1272	12.2398	630	0.4185	40.2549	775	0.0077	0.7436
490	0.0939	9.0311	635	0.3931	37.8096	780	0.0054	0.5157
495	0.0754	7.2551	640	0.3652	35.1262	785	0.0043	0.4146
500	0.0665	6.3933	645	0.3354	32.2637	790	0.0019	0.1799
505	0.0682	6.5570	650	0.3063	29.4626	795	0.0029	0.2800
510	0.0778	7.4829	655	0.2758	26.5288	800	0.0024	0.2277
515	0.0903	8.6848	660	0.2479	23.8491			
520	0.1034	9.9453	665	0.2194	21.1058			

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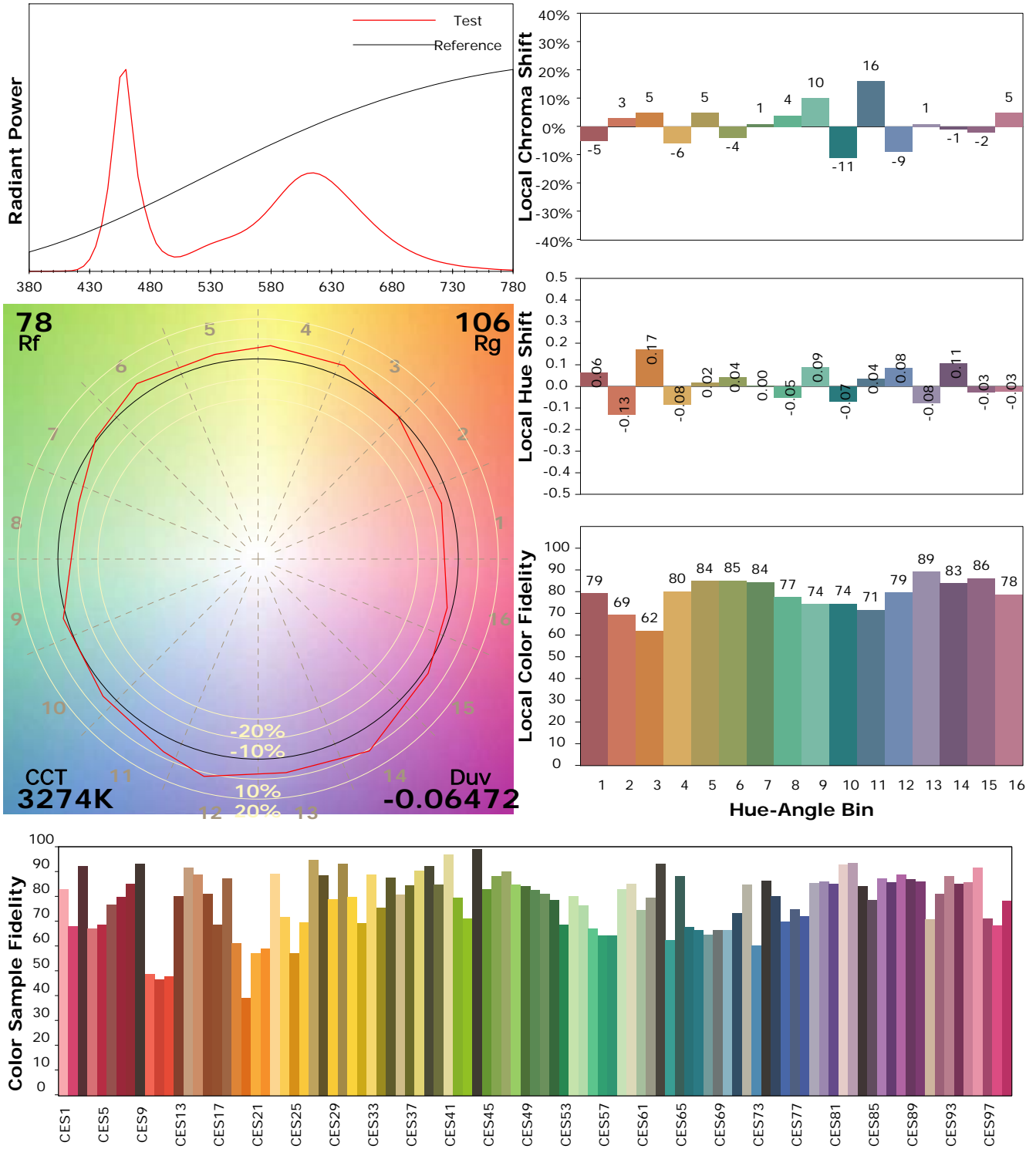
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IES TM-30-18 Color Rendition Report

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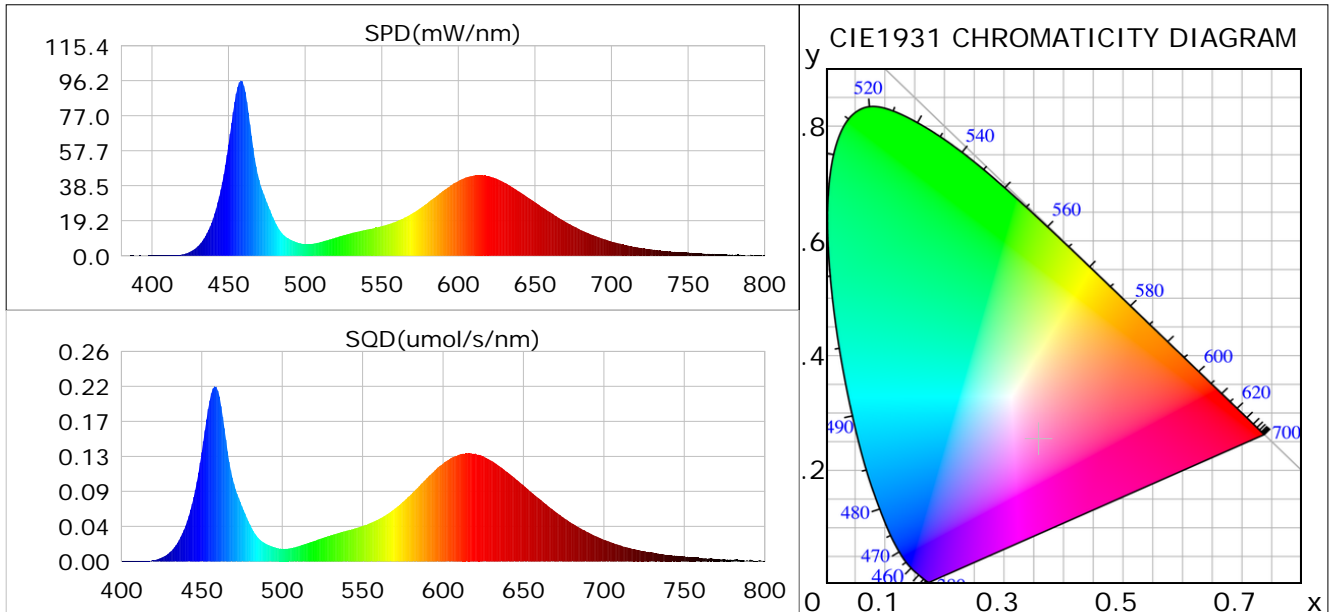
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Plant optical param data

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 CRI: $R_a=65.4$



Plant Optical Param

μ_v (lm): 1710.00	Q_v (lm.s): 1710.00
μ_e (W/nm): 7.52	Q_e (J): 7.52
μ_e (W): 7.30	μ_{fr} (W): 0.24
ζ_e : 0.38	ζ_{fr} : 0.01
PPE(umol/s/w): 1.75	Kfr: 0.07
Erb_Ratio: 1.11	PPF(umol/s): 33.95
PFuv(360-400)(umol/s): 0.01	PPF(400-500)(umol/s): 9.77
PPF(500-600)(umol/s): 9.08	PPF(600-700)(umol/s): 15.10
PPfr(700-800)(umol/s): 1.41	PPF.t(umol): 33.95
$\mu_{ch-A.t}$ (J): 0.71	μ_{ch-A} (W): 0.71
$\mu_{ch-B.t}$ (J): 0.51	μ_{ch-B} (W): 0.51
$\mu_b.t$ (J): 2.54	μ_b (W): 2.54
$\mu_y.t$ (J): 1.93	μ_y (W): 1.93
$\mu_r.t$ (J): 2.87	μ_r (W): 2.87

Electric Parameters

Voltage: 230.80V	Current: 0.0870A	Power: 19.37W
Power Factor: 0.9570	Frequency: 49.99Hz	

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