

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-120-8Bread-20W
 Manufacturer: METOLIGHT
 Buyer: 7116

Product Type: LED-Röhre-Spezial
 Product Number: 1
 Submitted Unit: 104310

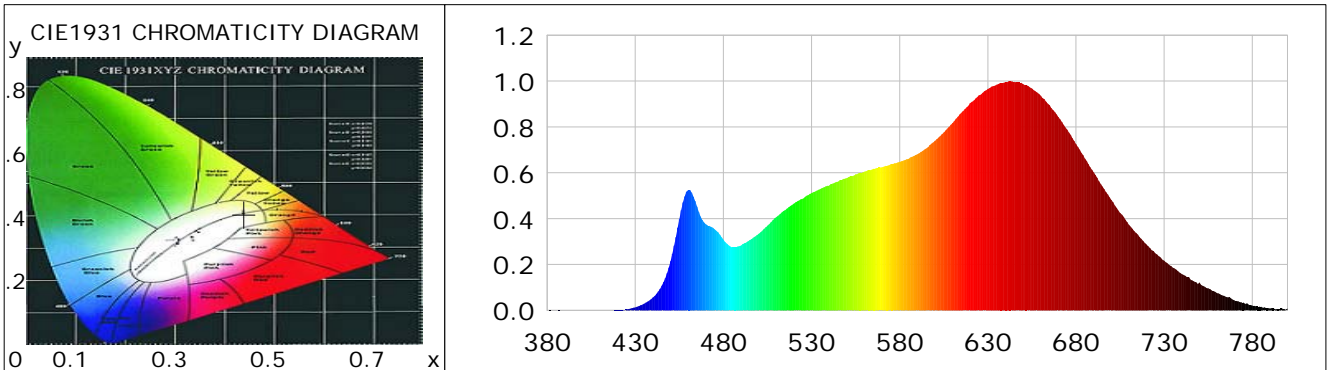
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4393$ $y=0.4062$ $u(u')=0.2512$ $v=0.3484$ $v'=0.5226$
 CCT: $T_c=2978K$ ($duv=0.00053$) Color Ratio: $R=0.254$ $G=0.712$ $B=0.034$
 Peak Wavelength: 642.3nm Half Bandwidth: 171.2nm
 Dominant Wavelength: 582.7nm Color Purity: 0.538
 CRI: $R_a=96.3$, $avgR(1\sim14)=95.1$, $avgR(1\sim15)=95.1$ TM30: $R_f=90$, $R_g=97$
 GAI: $GAI_BB_8=97.5$, $GAI_BB_15=104.9$, $GAI_EES=55.4$

R1 =96	R2 =98	R3 =98	R4 =96	R5 =96	R6 =96	R7 =95	R8 =95
R9 =92	R10=97	R11=98	R12=80	R13=96	R14=98	R15=96	

Color Quality Scale: $Q_a=92.7$, $Q_f=93.7$, $Q_p=95.4$, $Q_g=97.3$

Q1 =86	Q2 =93	Q3 =95	Q4 =92	Q5 =91	Q6 =90	Q7 =96	Q8 =96
Q9 =94	Q10=93	Q11=96	Q12=95	Q13=96	Q14=96	Q15=92	



Photometric Parameters

Luminous Flux: 1698.8 lm	Efficiency: 88.16 lm/W	Radiant Power: 6.686 W
Total mains efficacy: 103.67 lm/W	Energy Efficiency Class: F (EU 2019/2015)	
Pupil Flux: 2318.40 Plm	Pupil Lumens Per Watt: 120.31 Plm/W	Pupil Factor (Kp): 1.365
Cirtopic Flux: 4483.55 lm		

Electric Parameters

Voltage: 230.70V	Current: 0.0870A	Power: 19.27W
Power Factor: 0.9560	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: 46373 (2220)	CCD Integration Time: 311.43 ms

Condition: Tx:16.6'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-18 14:13:58
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0176	525	0.4870	18.6489	670	0.8437	32.3057
385	0.0004	0.0156	530	0.5112	19.5749	675	0.7886	30.1935
390	0.0005	0.0175	535	0.5292	20.2626	680	0.7258	27.7894
395	0.0003	0.0102	540	0.5451	20.8699	685	0.6619	25.3427
400	0.0005	0.0174	545	0.5619	21.5136	690	0.6020	23.0517
405	0.0001	0.0034	550	0.5772	22.1012	695	0.5400	20.6767
410	0.0001	0.0053	555	0.5928	22.6971	700	0.4817	18.4449
415	0.0004	0.0134	560	0.6046	23.1514	705	0.4249	16.2684
420	0.0013	0.0511	565	0.6177	23.6515	710	0.3733	14.2919
425	0.0045	0.1737	570	0.6242	23.8992	715	0.3312	12.6821
430	0.0130	0.4993	575	0.6376	24.4119	720	0.2874	11.0043
435	0.0291	1.1125	580	0.6485	24.8292	725	0.2490	9.5331
440	0.0560	2.1430	585	0.6608	25.3007	730	0.2168	8.2999
445	0.1075	4.1163	590	0.6807	26.0636	735	0.1858	7.1137
450	0.2146	8.2155	595	0.7058	27.0241	740	0.1587	6.0772
455	0.3984	15.2544	600	0.7396	28.3172	745	0.1340	5.1318
460	0.5242	20.0731	605	0.7760	29.7116	750	0.1209	4.6303
465	0.4530	17.3445	610	0.8171	31.2848	755	0.0958	3.6668
470	0.3760	14.3985	615	0.8618	32.9998	760	0.0753	2.8850
475	0.3535	13.5370	620	0.9043	34.6238	765	0.0593	2.2718
480	0.3092	11.8406	625	0.9385	35.9333	770	0.0427	1.6364
485	0.2747	10.5179	630	0.9655	36.9666	775	0.0336	1.2849
490	0.2834	10.8500	635	0.9845	37.6943	780	0.0215	0.8242
495	0.3068	11.7484	640	0.9958	38.1298	785	0.0156	0.5958
500	0.3342	12.7953	645	0.9965	38.1537	790	0.0081	0.3098
505	0.3694	14.1445	650	0.9865	37.7739	795	0.0050	0.1898
510	0.4071	15.5892	655	0.9680	37.0661	800	0.0086	0.3278
515	0.4371	16.7380	660	0.9365	35.8578			
520	0.4662	17.8499	665	0.8955	34.2864			

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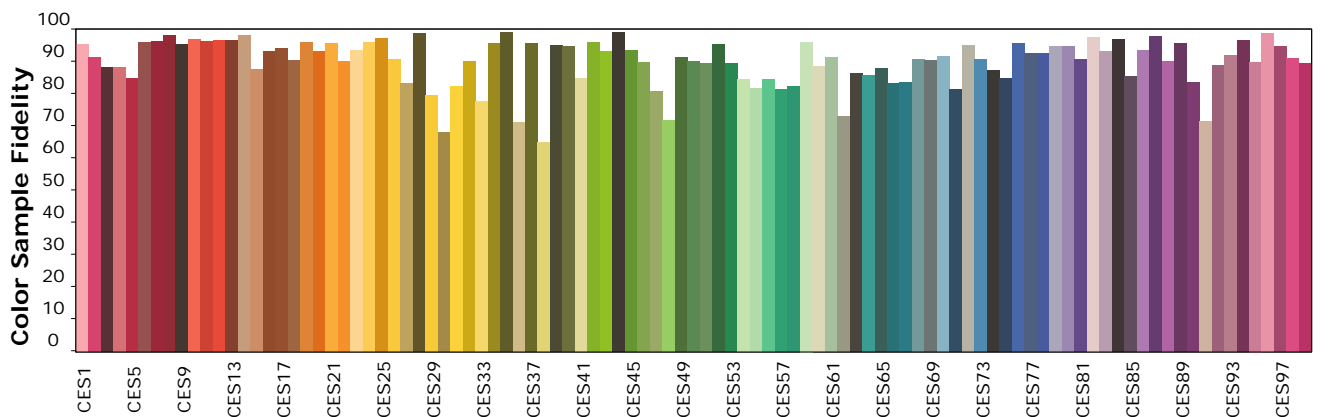
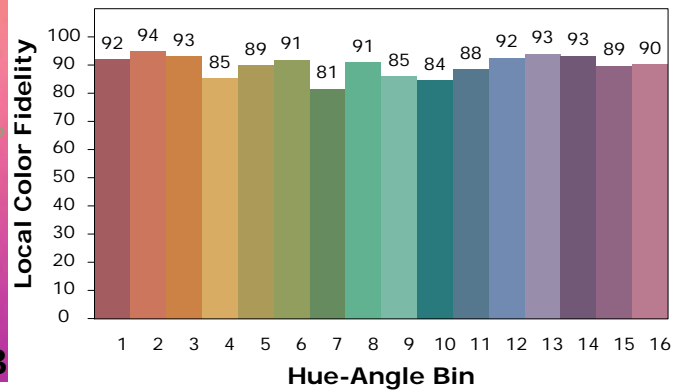
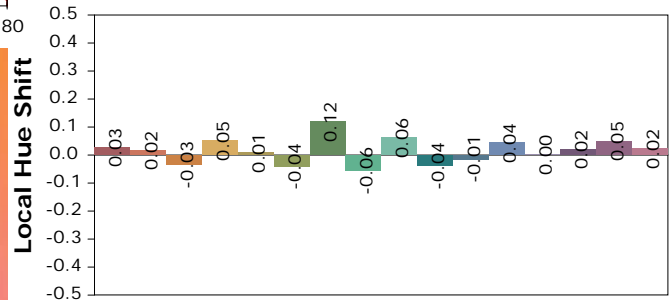
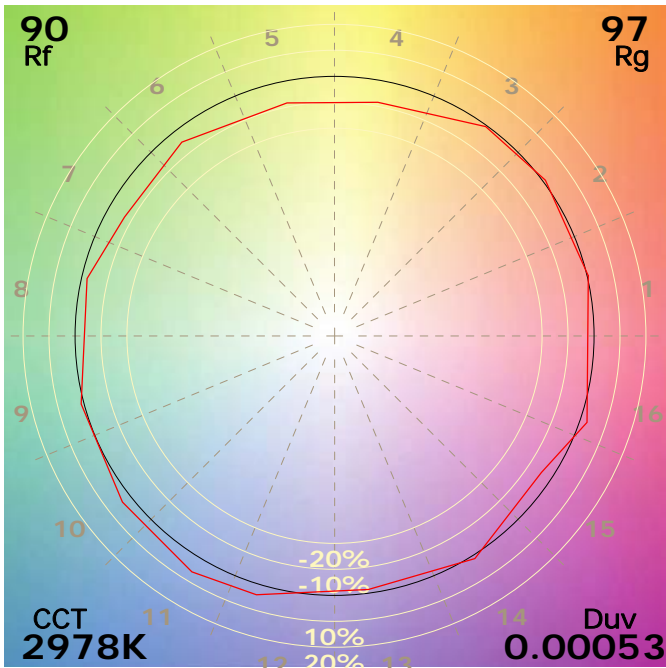
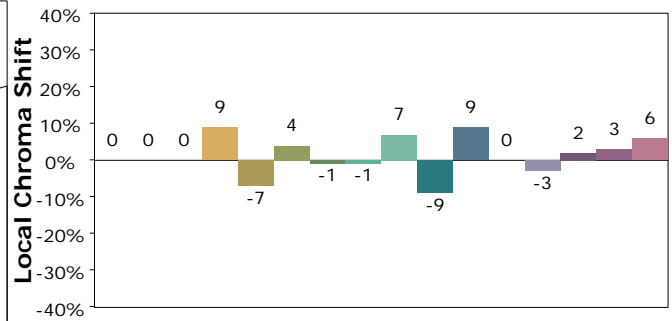
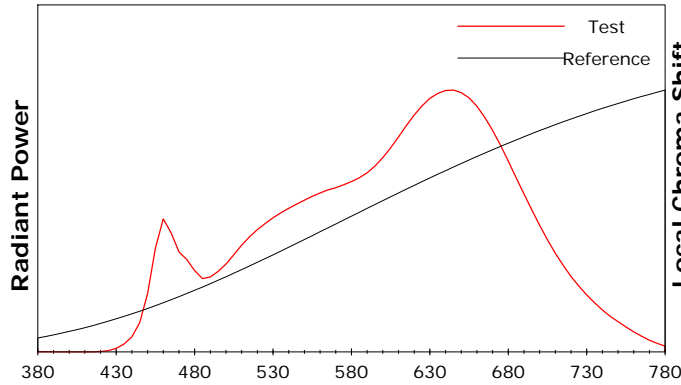
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IES TM-30-18 Color Rendition Report

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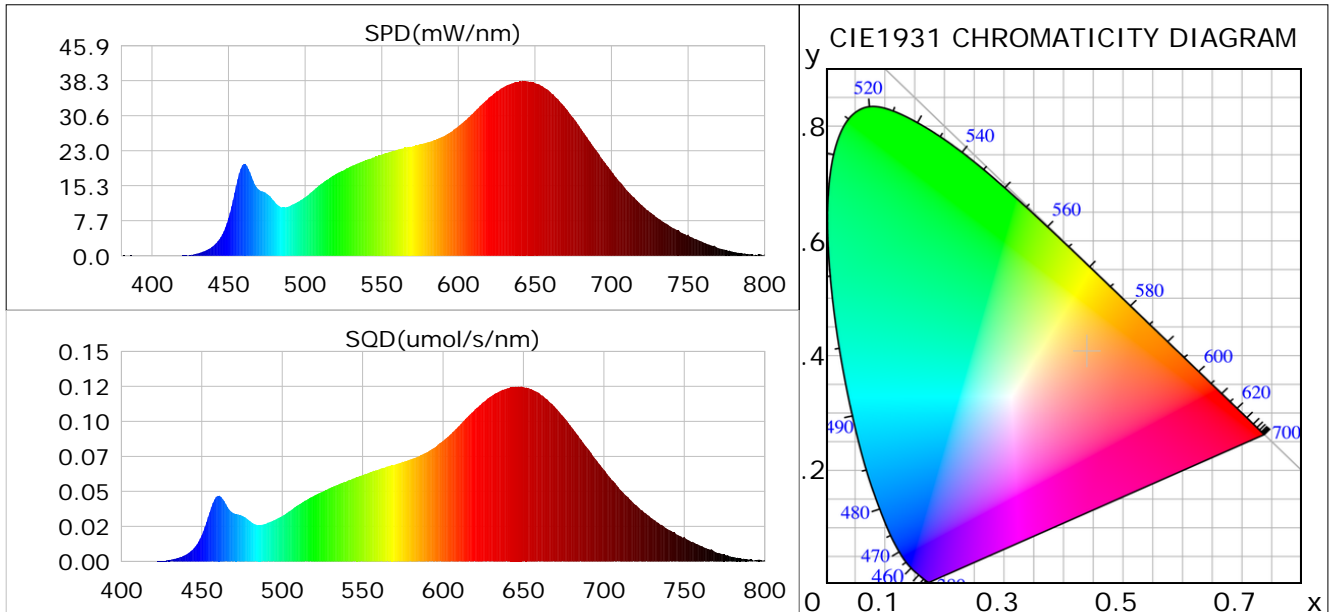
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Plant optical param data

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Plant Optical Param

$ \mu_v(lm)$: 1698.80	$Q_v(lm.s)$: 1698.80
$ \mu_e, \dot{E}(W/nm)$: 6.69	$Q_e(J)$: 6.69
$ \mu_e(W)$: 6.11	$ \mu_{fr}(W)$: 0.60
$ \zeta_e$: 0.32	$ \zeta_{fr}$: 0.03
PPE(umol/s/w): 1.57	Kfr: 0.18
Erb_Ratio: 4.29	PPF(umol/s): 30.33
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 2.95
PPF(500-600)(umol/s): 10.00	PPF(600-700)(umol/s): 17.39
PPfr(700-800)(umol/s): 3.52	PPF.t(umol): 30.33
$ \mu_{ch-A.t}(J)$: 0.54	$ \mu_{ch-A}(W)$: 0.54
$ \mu_{ch-B.t}(J)$: 0.25	$ \mu_{ch-B}(W)$: 0.25
$ \mu_b.t(J)$: 0.75	$ \mu_b(W)$: 0.75
$ \mu_y.t(J)$: 2.17	$ \mu_y(W)$: 2.17
$ \mu_r.t(J)$: 3.24	$ \mu_r(W)$: 3.24

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