

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: Ledtube-120-8NWS-20W-TRF
 Manufacturer: METOLIGHT
 Buyer: 1878

Product Type: LED-Röhre-TRF
 Product Number: 1
 Submitted Unit: 102276

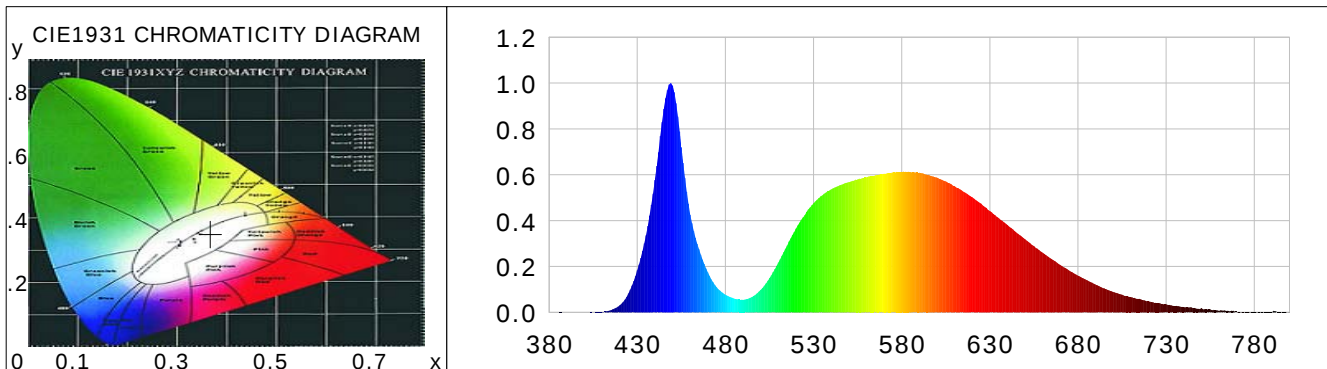
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3676$ $y=0.3516$ $u(u')=0.2268$ $v=0.3253$ $v'=0.4880$
 CCT: $T_c=4196K$ ($duv=-0.00832$) Color Ratio: $R=0.173$ $G=0.802$ $B=0.024$
 Peak Wavelength: 448.9nm Half Bandwidth: 19.9nm
 Dominant Wavelength: 585.9nm Color Purity: 0.158
 CRI: $R_a = 74.1$, $avgR(1\sim14) = 64.8$, $avgR(1\sim15) = 65.4$ TM30: $R_f = 70$, $R_g = 98$
 GAI: $GAI_BB_8=102.3$, $GAI_BB_15=109.3$, $GAI_EES=83.7$

R1 = 74	R2 = 79	R3 = 78	R4 = 73	R5 = 72	R6 = 68	R7 = 82	R8 = 64
R9 = 1	R10 = 47	R11 = 67	R12 = 38	R13 = 75	R14 = 87	R15 = 74	

Color Quality Scale: $Q_a = 69.9$, $Q_f = 67.7$, $Q_p = 75.4$, $Q_g = 95.4$

Q1 = 81	Q2 = 92	Q3 = 55	Q4 = 51	Q5 = 65	Q6 = 70	Q7 = 73	Q8 = 84
Q9 = 87	Q10 = 71	Q11 = 65	Q12 = 68	Q13 = 73	Q14 = 68	Q15 = 73	



Photometric Parameters

Luminous Flux: 2348.3 lm	Efficiency: 117.18 lm/W	Radiant Power: 7.221 W
Total mains efficacy: 137.80 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 3316.19 Plm	Pupil Lumens Per Watt: 165.48 Plm/W	Pupil Factor (Kp): 1.412
Cirtpic Flux: 6412.51 lm		

Electric Parameters

Voltage: 230.40V	Current: 0.0900A	Power: 20.04W
Power Factor: 0.9570	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: 47546 (2343)	CCD Integration Time: 116.51 ms

Condition: Tx:19.1'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-22 11:14:00
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.0436	525	0.4242	27.8209	670	0.2066	13.5527
385	0.0006	0.0425	530	0.4757	31.2002	675	0.1823	11.9567
390	0.0005	0.0338	535	0.5107	33.4923	680	0.1604	10.5191
395	0.0002	0.0101	540	0.5362	35.1682	685	0.1403	9.2028
400	0.0006	0.0366	545	0.5546	36.3737	690	0.1212	7.9472
405	0.0006	0.0388	550	0.5677	37.2345	695	0.1044	6.8450
410	0.0028	0.1804	555	0.5800	38.0377	700	0.0888	5.8241
415	0.0097	0.6391	560	0.5887	38.6107	705	0.0775	5.0797
420	0.0305	2.0001	565	0.5978	39.2048	710	0.0665	4.3624
425	0.0827	5.4228	570	0.6048	39.6686	715	0.0587	3.8485
430	0.1831	12.0101	575	0.6106	40.0453	720	0.0484	3.1754
435	0.3364	22.0626	580	0.6129	40.1969	725	0.0408	2.6739
440	0.5767	37.8221	585	0.6117	40.1170	730	0.0351	2.3041
445	0.8878	58.2251	590	0.6093	39.9633	735	0.0274	1.7946
450	0.9888	64.8495	595	0.6001	39.3559	740	0.0235	1.5399
455	0.7198	47.2102	600	0.5881	38.5743	745	0.0192	1.2623
460	0.4264	27.9650	605	0.5716	37.4918	750	0.0187	1.2232
465	0.2752	18.0506	610	0.5506	36.1088	755	0.0128	0.8389
470	0.1746	11.4501	615	0.5265	34.5310	760	0.0069	0.4526
475	0.1097	7.1951	620	0.5023	32.9409	765	0.0075	0.4931
480	0.0772	5.0664	625	0.4740	31.0879	770	0.0042	0.2744
485	0.0602	3.9489	630	0.4412	28.9373	775	0.0038	0.2504
490	0.0554	3.6334	635	0.4113	26.9725	780	0.0031	0.2055
495	0.0667	4.3723	640	0.3805	24.9569	785	0.0021	0.1375
500	0.0979	6.4227	645	0.3490	22.8884	790	0.0012	0.0774
505	0.1497	9.8188	650	0.3190	20.9224	795	0.0013	0.0850
510	0.2176	14.2685	655	0.2892	18.9649	800	0.0030	0.1967
515	0.2918	19.1370	660	0.2602	17.0640			
520	0.3652	23.9514	665	0.2328	15.2691			

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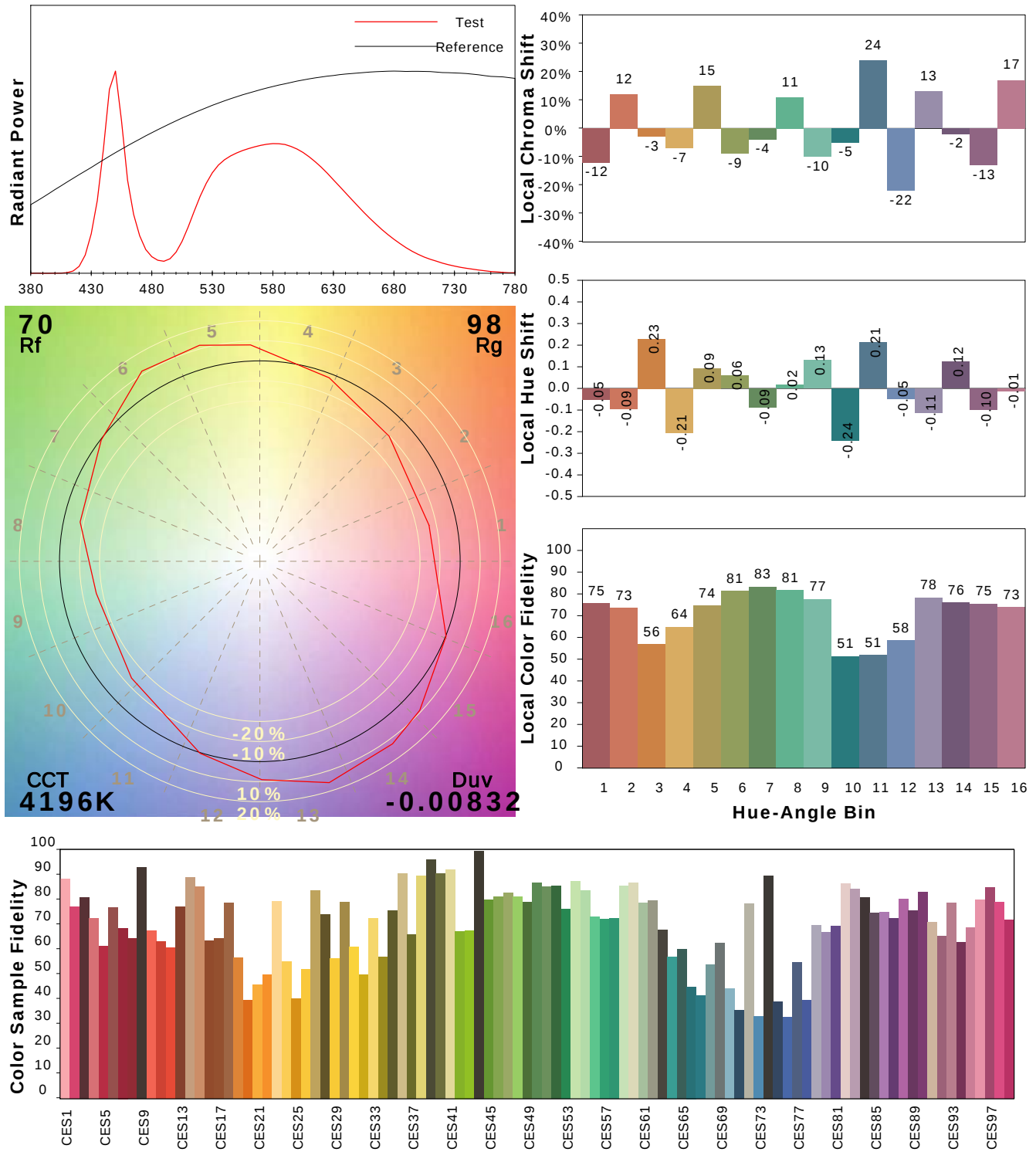
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IES TM-30-18 Color Rendition Report

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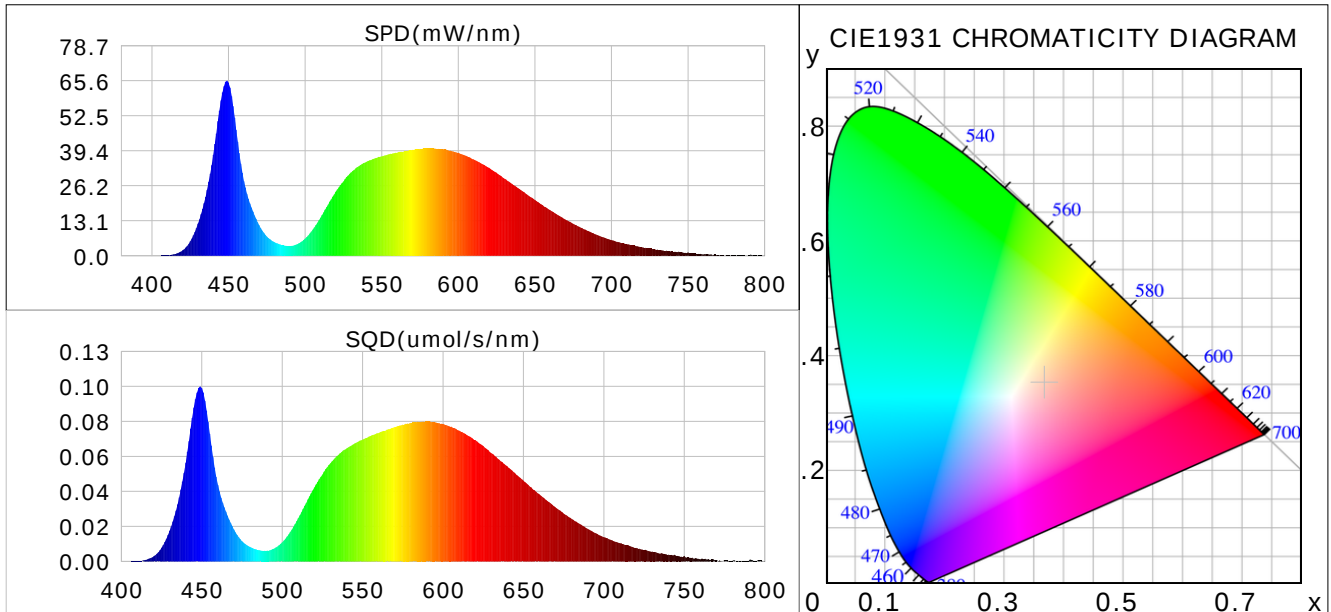
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Plant optical param data

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 CRI: Ra= 74.1



Plant Optical Param

$\mu_v(\text{lm})$: 2348.30	$Q_v(\text{lm.s})$: 2348.30
$\mu_e, \dot{E}(\text{W/nm})$: 7.22	$Q_e(\text{J})$: 7.22
$\mu_e(\text{W})$: 7.06	$\mu_{fr}(\text{W})$: 0.17
$\dot{Q}_e$: 0.35	$\dot{Q}_{fr}$: 0.01
$PPE(\mu\text{mol/s/w})$: 1.64	K_{fr} : 0.05
E_{rb_Ratio} : 1.27	$PPF(\mu\text{mol/s})$: 32.85
$PF_{uv}(360-400)(\mu\text{mol/s})$: 0.00	$PPF(400-500)(\mu\text{mol/s})$: 6.34
$PPF(500-600)(\mu\text{mol/s})$: 15.16	$PPF(600-700)(\mu\text{mol/s})$: 11.36
$PF_{fr}(700-800)(\mu\text{mol/s})$: 0.97	$PPF.t(\mu\text{mol})$: 32.85
$\mu_{ch-A.t}(\text{J})$: 0.66	$\mu_{ch-A}(W)$: 0.66
$\mu_{ch-B.t}(\text{J})$: 0.35	$\mu_{ch-B}(W)$: 0.35
$\mu_b.t(\text{J})$: 1.68	$\mu_b(W)$: 1.68
$\mu_y.t(\text{J})$: 3.26	$\mu_y(W)$: 3.26
$\mu_r.t(\text{J})$: 2.17	$\mu_r(W)$: 2.17

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