

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-060-8NWM-10W-CRI95
 Manufacturer: METOLIGHT
 Buyer: 4624

Product Type: LED-Röhre Spezial
 Product Number: 1
 Submitted Unit: 101239

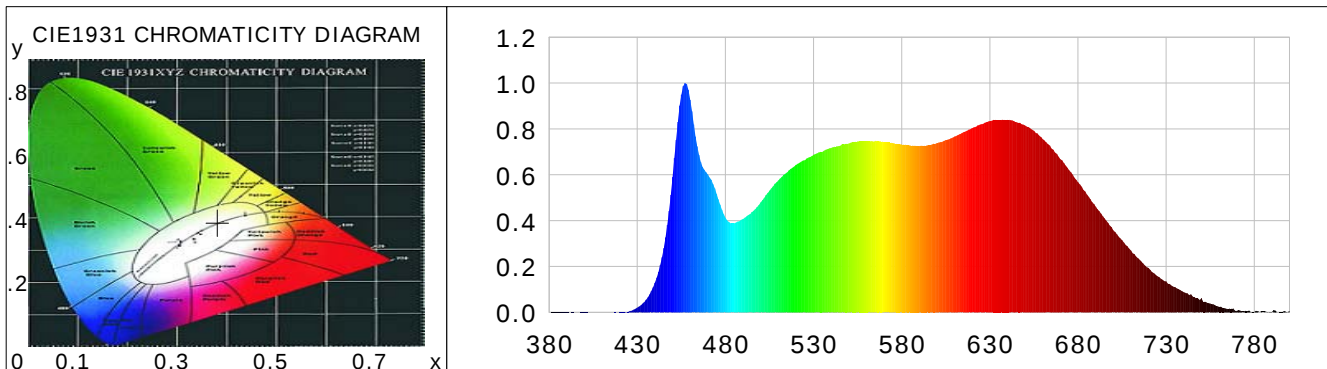
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3818$ $y=0.3873$ $u(u')=0.2219$ $v=0.3376$ $v'=0.5063$
 CCT: $T_c=4038K$ ($duv=0.00444$) Color Ratio: $R=0.197$ $G=0.758$ $B=0.045$
 Peak Wavelength: 457.3nm Half Bandwidth: 26.9nm
 Dominant Wavelength: 576.7nm Color Purity: 0.308
 CRI: $R_a=94.8$, $avgR(1\sim14)=92.6$, $avgR(1\sim15)=92.7$ TM30: $R_f=88$, $R_g=95$
 GAI: $GAI_BB_8=90.8$, $GAI_BB_15=98.5$, $GAI_EES=72.2$

R1 =96	R2 =98	R3 =97	R4 =91	R5 =93	R6 =95	R7 =94	R8 =94
R9 =92	R10=93	R11=92	R12=65	R13=97	R14=98	R15=94	

Color Quality Scale: $Q_a=92.3$, $Q_f=92.1$, $Q_p=91.9$, $Q_g=96.2$

Q1 =87	Q2 =94	Q3 =91	Q4 =87	Q5 =87	Q6 =88	Q7 =94	Q8 =97
Q9 =96	Q10=94	Q11=97	Q12=98	Q13=98	Q14=99	Q15=94	



Photometric Parameters

Luminous Flux: 1093.5 lm	Efficiency: 105.55 lm/W	Radiant Power: 3.888 W
Total mains efficacy: 124.13 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 1756.90 Plm	Pupil Lumens Per Watt: 169.58 Plm/W	Pupil Factor (Kp): 1.607
Cirtpic Flux: 3707.65 lm		

Electric Parameters

Voltage: 230.60V	Current: 0.0490A	Power: 10.36W
Power Factor: 0.9160	Frequency: 50.00Hz	

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: 47569 (2285)	CCD Integration Time: 338.20 ms

Condition: Tx:16.9'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-06 14:21:38
 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	0.0109	525	0.6634	14.1214	670	0.6688	14.2358
385	0.0011	0.0227	530	0.6873	14.6300	675	0.6193	13.1837
390	0.0014	0.0300	535	0.6998	14.8960	680	0.5676	12.0817
395	0.0003	0.0064	540	0.7169	15.2613	685	0.5143	10.9475
400	0.0010	0.0209	545	0.7265	15.4658	690	0.4613	9.8201
405	0.0002	0.0044	550	0.7370	15.6879	695	0.4098	8.7242
410	0.0001	0.0022	555	0.7453	15.8646	700	0.3580	7.6201
415	0.0008	0.0168	560	0.7476	15.9145	705	0.3146	6.6961
420	0.0009	0.0191	565	0.7479	15.9210	710	0.2697	5.7404
425	0.0032	0.0671	570	0.7423	15.8023	715	0.2290	4.8751
430	0.0206	0.4381	575	0.7383	15.7170	720	0.1935	4.1180
435	0.0551	1.1729	580	0.7320	15.5816	725	0.1578	3.3591
440	0.1285	2.7364	585	0.7270	15.4757	730	0.1349	2.8713
445	0.2803	5.9670	590	0.7255	15.4445	735	0.1103	2.3483
450	0.5903	12.5665	595	0.7292	15.5226	740	0.0886	1.8858
455	0.9500	20.2230	600	0.7383	15.7155	745	0.0693	1.4750
460	0.9271	19.7349	605	0.7514	15.9957	750	0.0618	1.3149
465	0.6867	14.6169	610	0.7665	16.3171	755	0.0387	0.8246
470	0.6013	12.7997	615	0.7856	16.7239	760	0.0243	0.5177
475	0.5162	10.9883	620	0.8040	17.1153	765	0.0148	0.3144
480	0.4137	8.8058	625	0.8207	17.4704	770	0.0068	0.1453
485	0.3886	8.2725	630	0.8346	17.7663	775	0.0064	0.1355
490	0.4076	8.6763	635	0.8379	17.8354	780	0.0025	0.0529
495	0.4372	9.3061	640	0.8396	17.8728	785	0.0036	0.0770
500	0.4802	10.2215	645	0.8299	17.6668	790	0.0016	0.0341
505	0.5310	11.3025	650	0.8150	17.3485	795	0.0010	0.0209
510	0.5756	12.2533	655	0.7922	16.8642	800	0.0073	0.1552
515	0.6107	12.9991	660	0.7559	16.0913			
520	0.6433	13.6945	665	0.7143	15.2048			

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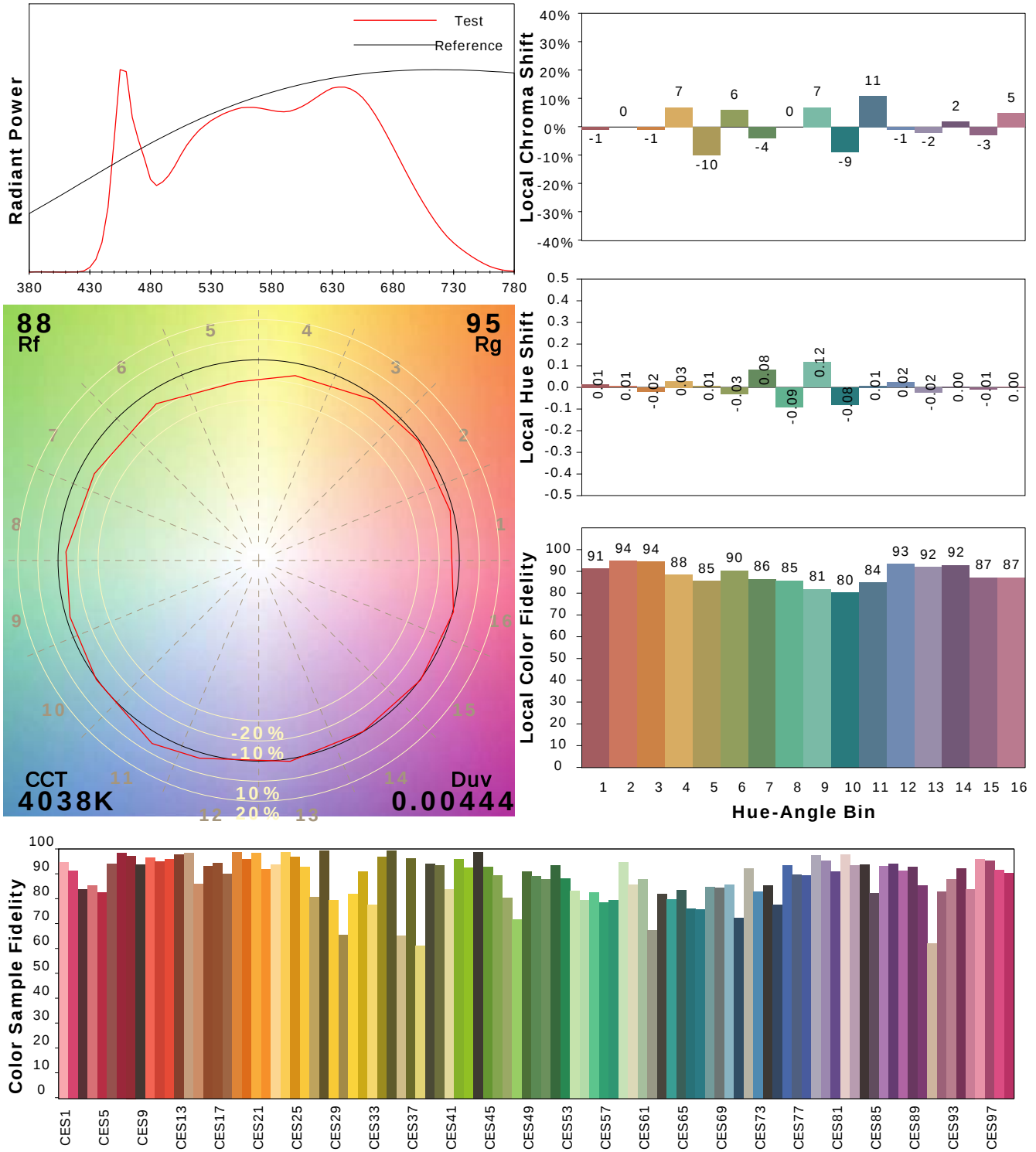
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IES TM-30-18 Color Rendition Report

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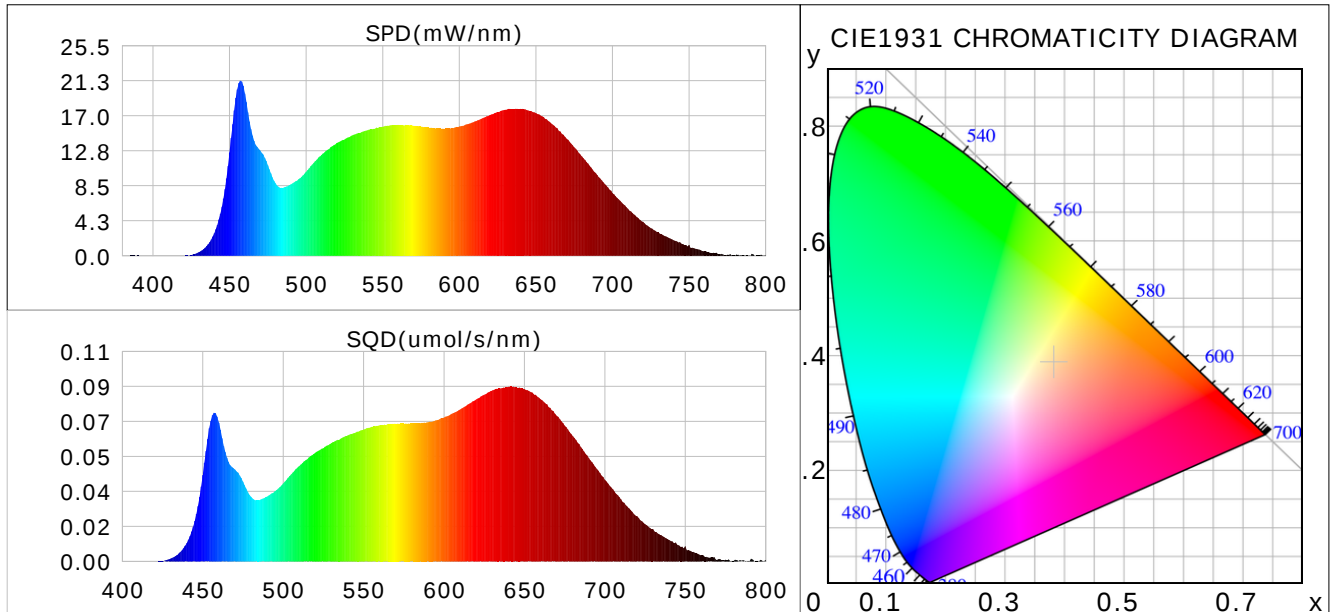
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Plant optical param data

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 CRI: Ra= 94.8



Plant Optical Param

$\mu_v(lm)$: 1093.52	$Q_v(lm.s)$: 1093.52
$\mu_e, \dot{E}(W/nm)$: 3.89	$Q_e(J)$: 3.89
$\mu_e(W)$: 3.69	$\mu_{fr}(W)$: 0.21
$\dot{C}_e$: 0.36	$\dot{C}_{fr}$: 0.02
$PPE(umol/s/w)$: 1.71	K_{fr} : 0.12
E_{rb_Ratio} : 2.11	$PPF(umol/s)$: 17.72
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 2.79
$PPF(500-600)(umol/s)$: 6.82	$PPF(600-700)(umol/s)$: 8.11
$PF_{fr}(700-800)(umol/s)$: 1.20	$PPF.t(umol)$: 17.72
$\mu_{ch-A.t}(J)$: 0.30	$\mu_{ch-A}(W)$: 0.30
$\mu_{ch-B.t}(J)$: 0.17	$\mu_{ch-B}(W)$: 0.17
$\mu_{b.t}(J)$: 0.71	$\mu_b(W)$: 0.71
$\mu_{y.t}(J)$: 1.49	$\mu_y(W)$: 1.49
$\mu_{r.t}(J)$: 1.52	$\mu_r(W)$: 1.52

Electric Parameters

Voltage: 230.60V	Current: 0.0490A	Power: 10.36W
Power Factor: 0.9160	Frequency: 50.00Hz	

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