

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-150-8NWM-25W-SCE-24
 Manufacturer: METOLIGHT
 Buyer: 4624-20834

Product Type: Spezial
 Product Number: 1
 Submitted Unit: 102049

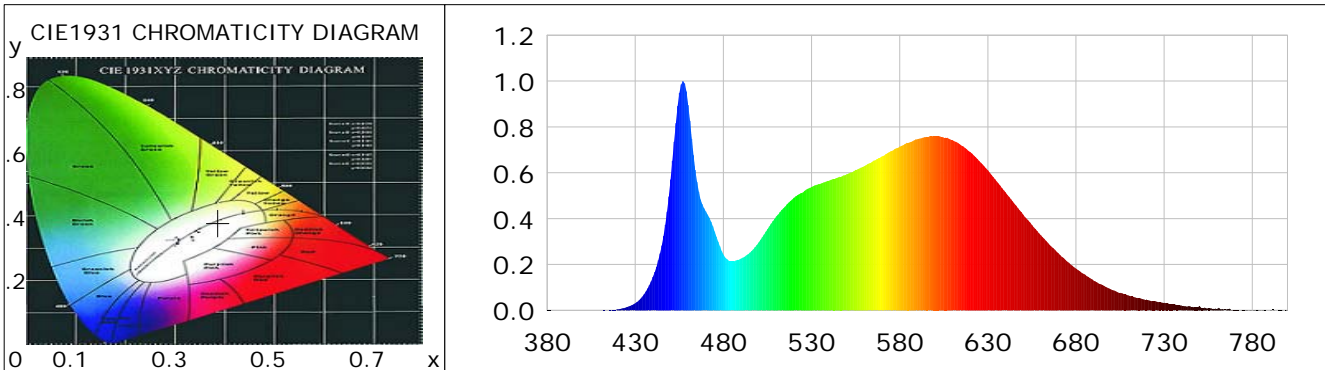
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3865$ $y=0.3797$ $u(u')=0.2279$ $v=0.3359$ $v'=0.5038$
 CCT: $T_c=3860K$ ($duv=-0.00035$) Color Ratio: $R=0.193$ $G=0.770$ $B=0.037$
 Peak Wavelength: 457.1nm Half Bandwidth: 17.5nm
 Dominant Wavelength: 579.8nm Color Purity: 0.300
 CRI: $R_a=84.8$, $avgR(1\sim14)=78.7$, $avgR(1\sim15)=78.7$ TM30: $R_f=83$, $R_g=94$
 GAI: $GAI_BB_8=92.4$, $GAI_BB_15=101.3$, $GAI_EES=70.7$

R1 =84	R2 =93	R3 =96	R4 =82	R5 =83	R6 =89	R7 =85	R8 =67
R9 =19	R10=80	R11=80	R12=58	R13=87	R14=98	R15=79	

Color Quality Scale: $Q_a=83.3$, $Q_f=83.5$, $Q_p=82.7$, $Q_g=92.3$

Q1 =82	Q2 =97	Q3 =80	Q4 =74	Q5 =78	Q6 =81	Q7 =86	Q8 =89
Q9 =98	Q10=91	Q11=87	Q12=86	Q13=86	Q14=76	Q15=79	



Photometric Parameters

Luminous Flux: 2256.4 lm Efficiency: 118.82 lm/W Radiant Power: 6.832 W
 Total mains efficacy: 139.73 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 3384.80 Plm Pupil Lumens Per Watt: 178.24 Plm/W Pupil Factor (Kp): 1.500
 Circopic Flux: 6924.60 lm

Electric Parameters

Voltage: 24.010V Current: 0.7910A Power: 18.99W
 Power Factor: 0.7450 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: 45433 (2604) CCD Integration Time: 105.74 ms

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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	0.0391	525	0.5142	26.7961	670	0.2498	13.0141
385	0.0006	0.0295	530	0.5381	28.0382	675	0.2134	11.1186
390	0.0005	0.0277	535	0.5517	28.7483	680	0.1827	9.5225
395	0.0003	0.0141	540	0.5661	29.4980	685	0.1567	8.1645
400	0.0002	0.0094	545	0.5797	30.2060	690	0.1298	6.7638
405	0.0001	0.0059	550	0.5940	30.9501	695	0.1108	5.7734
410	0.0007	0.0349	555	0.6126	31.9190	700	0.0914	4.7608
415	0.0012	0.0649	560	0.6295	32.7993	705	0.0767	3.9990
420	0.0048	0.2504	565	0.6524	33.9947	710	0.0647	3.3714
425	0.0135	0.7023	570	0.6719	35.0088	715	0.0542	2.8249
430	0.0310	1.6129	575	0.6945	36.1904	720	0.0470	2.4504
435	0.0700	3.6487	580	0.7144	37.2252	725	0.0398	2.0740
440	0.1455	7.5798	585	0.7305	38.0637	730	0.0331	1.7244
445	0.2833	14.7634	590	0.7463	38.8872	735	0.0267	1.3928
450	0.5710	29.7546	595	0.7567	39.4304	740	0.0205	1.0675
455	0.9485	49.4225	600	0.7605	39.6273	745	0.0163	0.8516
460	0.8952	46.6481	605	0.7538	39.2810	750	0.0195	1.0174
465	0.5600	29.1807	610	0.7424	38.6855	755	0.0098	0.5089
470	0.4318	22.5022	615	0.7197	37.5020	760	0.0066	0.3464
475	0.3438	17.9137	620	0.6906	35.9839	765	0.0038	0.1989
480	0.2437	12.6996	625	0.6519	33.9714	770	0.0025	0.1281
485	0.2140	11.1501	630	0.6104	31.8082	775	0.0020	0.1034
490	0.2257	11.7612	635	0.5621	29.2884	780	0.0009	0.0464
495	0.2518	13.1192	640	0.5149	26.8302	785	0.0011	0.0567
500	0.2961	15.4301	645	0.4657	24.2686	790	0.0011	0.0598
505	0.3540	18.4439	650	0.4180	21.7818	795	0.0020	0.1041
510	0.4098	21.3553	655	0.3726	19.4152	800	0.0039	0.2013
515	0.4527	23.5865	660	0.3286	17.1238			
520	0.4914	25.6045	665	0.2860	14.9028			

Condition: Tx:22.9°C, Ti:0.0°C, R.H.:60%
 Test Lab:
 Operator: CRE

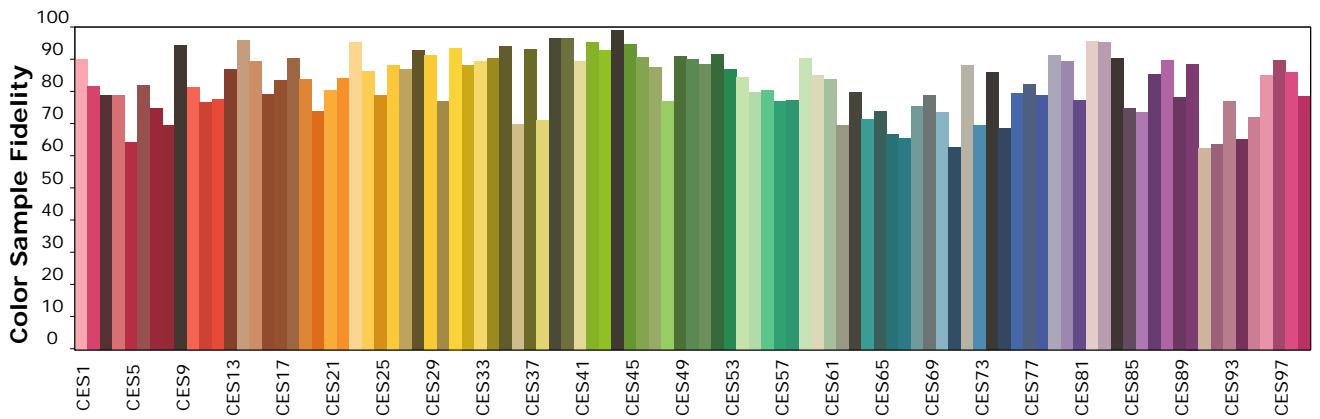
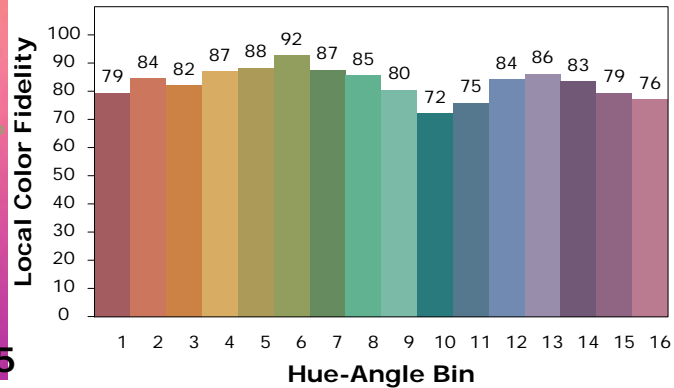
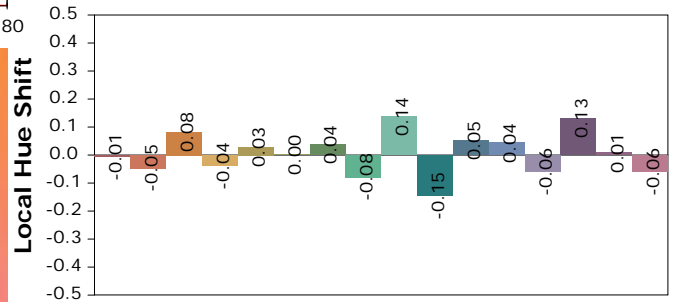
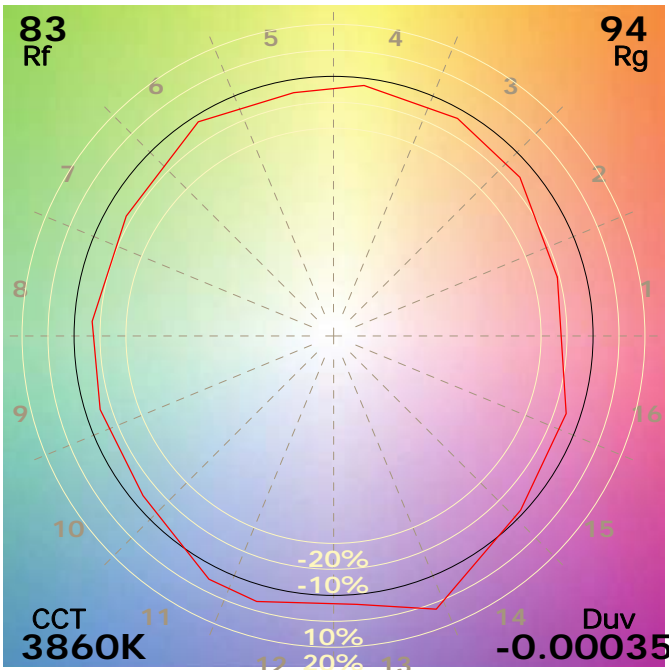
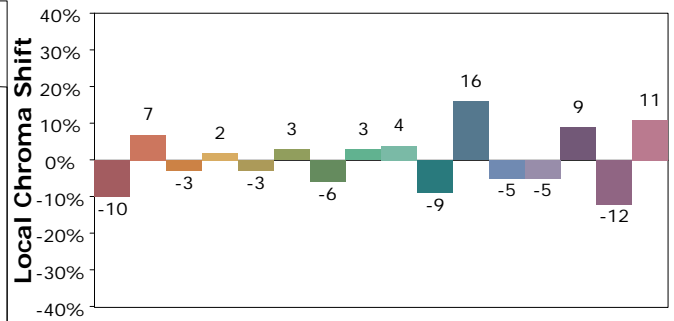
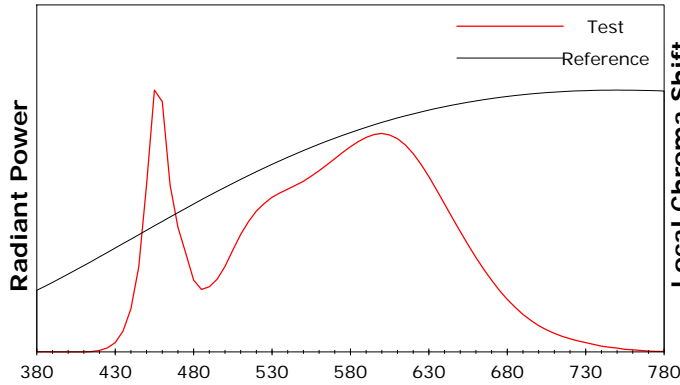
Test Device: Lisun LMS-9000B
 Test Time: 2020-11-16 14:29:24
 Inspector:

IES TM-30-18 Color Rendition Report

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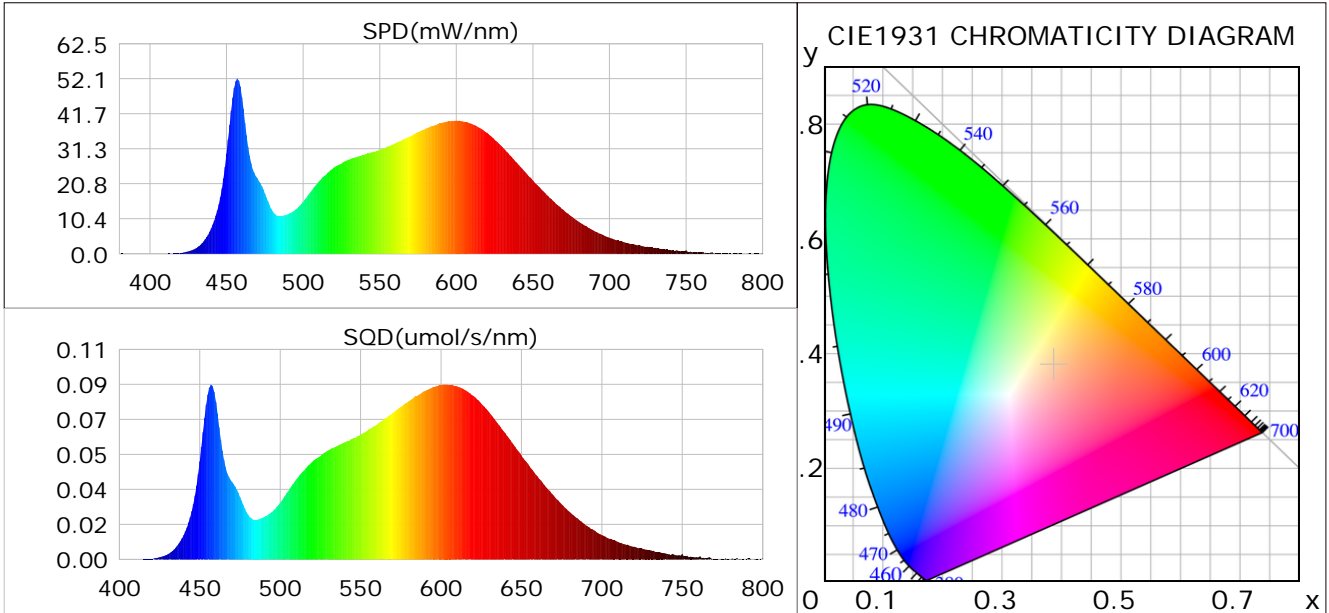
Condition: Tx:22.9°C, Ti:0.0°C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2020-11-16 14:29:24
 Inspector:

Plant optical param data

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3865$ $y=0.3797$ $u(u')=0.2279$ $v=0.3359$ $v'=0.5038$
 CCT: $T_c=3860K$ ($duv=-0.00035$) Color Ratio: $R=0.193$ $G=0.770$ $B=0.037$
 Peak Wavelength: 457.1nm Half Bandwidth: 17.5nm
 Dominant Wavelength: 579.8nm Color Purity: 0.300
 CRI: $R_a=84.8$



Plant Optical Param

$ \mu_v(lm): 2256.40$	$Q_v(lm.s): 2256.40$
$ \mu_e, \dot{E}(W/nm): 6.83$	$Q_e(J): 6.83$
$ \mu_e(W): 6.71$	$ \mu_{fr}(W): 0.12$
$ \zeta_e: 0.35$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.66$	$K_{fr}: 0.04$
$Erb_Ratio: 1.58$	$PPF(umol/s): 31.60$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 5.47$
$PPF(500-600)(umol/s): 14.34$	$PPF(600-700)(umol/s): 11.79$
$PPF_{fr}(700-800)(umol/s): 0.72$	$PPF.t(umol): 31.60$
$ \mu_{ch-A.t}(J): 0.50$	$ \mu_{ch-A}(W): 0.50$
$ \mu_{ch-B.t}(J): 0.32$	$ \mu_{ch-B}(W): 0.32$
$ \mu_b.t(J): 1.41$	$ \mu_b(W): 1.41$
$ \mu_y.t(J): 3.10$	$ \mu_y(W): 3.10$
$ \mu_r.t(J): 2.26$	$ \mu_r(W): 2.26$

Electric Parameters

Voltage: 24.010V	Current: 0.7910A	Power: 18.99W
Power Factor: 0.7450	Frequency: 49.99Hz	

Condition: $T_x: 22.9^\circ C$, $T_i: 0.0^\circ C$, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2020-11-16 14:29:24
 Inspector: