

## Lightsource Test Report

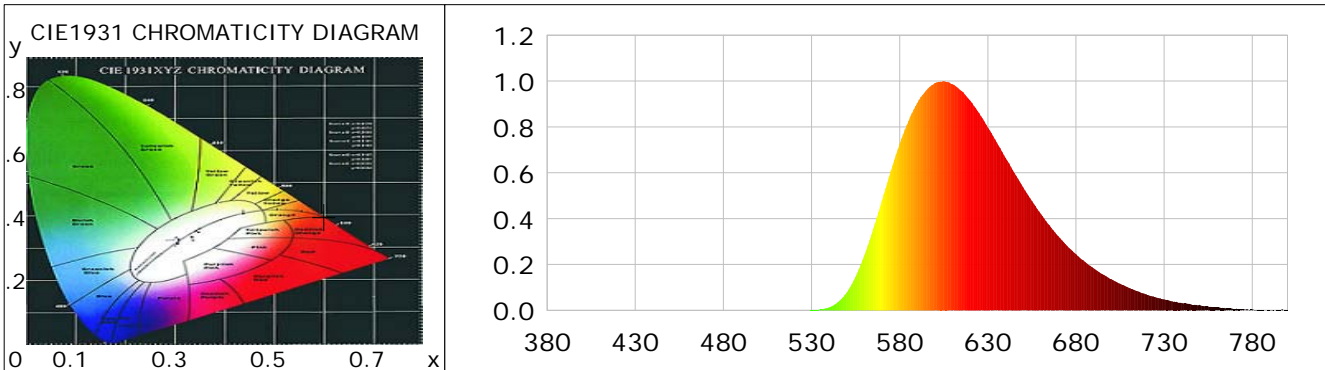
### Product Information

Product Category: LED-Röhre  
 Product Spec: Ledtube-UVL-530-120-T8-18W  
 Manufacturer: METOLIGHT  
 Buyer: 8885

Product Type: LED-Röhre-UVL  
 Product Number: 1  
 Submitted Unit: 100270

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.6010$   $y=0.3982$   $u(u')=0.3656$   $v=0.3633$   $v'=0.5449$   
 CCT:  $T_c=1446K$  ( $duv=0.00319$ ) Color Ratio:  $R=0.402$   $G=0.598$   $B=0.000$   
 Peak Wavelength: 604.9nm Half Bandwidth: 82.3nm  
 Dominant Wavelength: 594.7nm Color Purity: 0.999  
 CRI:  $R_a=34.6$ ,  $avgR(1\sim14)=31.4$ ,  $avgR(1\sim15)=30.6$  TM30:  $R_f=16$ ,  $R_g=3$   
 GAI:  $GAI\_BB\_8=0.7$ ,  $GAI\_BB\_15=0.6$ ,  $GAI\_EES=0.0$   
 R1 =24 R2 =65 R3 =68 R4 =1 R5 =16 R6 =54 R7 =48 R8 =0  
 R9 =0 R10=42 R11=0 R12=13 R13=26 R14=81 R15=20  
 Color Quality Scale:  $Q_a=0.1$ ,  $Q_f=0.2$ ,  $Q_p=0.0$ ,  $Q_g=0.9$   
 Q1 =38 Q2 =13 Q3 =0 Q4 =0 Q5 =0 Q6 =2 Q7 =21 Q8 =24  
 Q9 =0 Q10=0 Q11=0 Q12=0 Q13=0 Q14=0 Q15=3



### Photometric Parameters

Luminous Flux: 1853.2 lm Efficiency: 106.44 lm/W Radiant Power: 6.057 W  
 Total mains efficacy: 125.18 lm/W Energy Efficiency Class: E (EU 2019/2015)  
 Pupil Flux: 666.93 Plm Pupil Lumens Per Watt: 38.31 Plm/W Pupil Factor (Kp): 0.360  
 Circopic Flux: 400.62 lm

### Electric Parameters

Voltage: 230.40V Current: 0.0810A Power: 17.41W  
 Power Factor: 0.9280 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: 55767 (2177) CCD Integration Time: 154.87 ms

Condition: Tx:17.1'C, Ti:0.0'C, R.H.:60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-01-22 09:46:49  
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0086	525	0.0011	0.0740	670	0.3233	21.9079
385	0.0000	0.0001	530	0.0011	0.0771	675	0.2812	19.0538
390	0.0003	0.0189	535	0.0042	0.2857	680	0.2455	16.6404
395	0.0001	0.0089	540	0.0131	0.8846	685	0.2116	14.3384
400	0.0000	0.0024	545	0.0361	2.4432	690	0.1834	12.4314
405	0.0000	0.0022	550	0.0781	5.2950	695	0.1577	10.6881
410	0.0001	0.0074	555	0.1466	9.9324	700	0.1363	9.2396
415	0.0002	0.0149	560	0.2399	16.2596	705	0.1166	7.8998
420	0.0002	0.0112	565	0.3564	24.1523	710	0.0980	6.6413
425	0.0002	0.0117	570	0.4804	32.5570	715	0.0832	5.6372
430	0.0001	0.0077	575	0.6089	41.2626	720	0.0695	4.7132
435	0.0001	0.0087	580	0.7271	49.2784	725	0.0578	3.9191
440	0.0001	0.0058	585	0.8257	55.9570	730	0.0479	3.2430
445	0.0001	0.0088	590	0.9052	61.3484	735	0.0390	2.6401
450	0.0002	0.0114	595	0.9587	64.9721	740	0.0322	2.1828
455	0.0001	0.0066	600	0.9915	67.1964	745	0.0267	1.8096
460	0.0001	0.0092	605	1.0000	67.7703	750	0.0238	1.6147
465	0.0000	0.0016	610	0.9861	66.8288	755	0.0168	1.1374
470	0.0000	0.0030	615	0.9578	64.9074	760	0.0130	0.8820
475	0.0001	0.0079	620	0.9146	61.9844	765	0.0087	0.5883
480	0.0000	0.0024	625	0.8604	58.3112	770	0.0059	0.3979
485	0.0000	0.0011	630	0.7971	54.0178	775	0.0055	0.3702
490	0.0001	0.0066	635	0.7323	49.6289	780	0.0046	0.3126
495	0.0001	0.0053	640	0.6652	45.0809	785	0.0022	0.1474
500	0.0002	0.0166	645	0.5997	40.6400	790	0.0007	0.0494
505	0.0001	0.0090	650	0.5365	36.3561	795	0.0013	0.0908
510	0.0001	0.0049	655	0.4770	32.3234	800	0.0026	0.1786
515	0.0002	0.0150	660	0.4211	28.5359			
520	0.0001	0.0070	665	0.3708	25.1317			

Condition: Tx: 17.1°C, Ti: 0.0°C, R.H.: 60%  
 Test Lab:  
 Operator: CRE

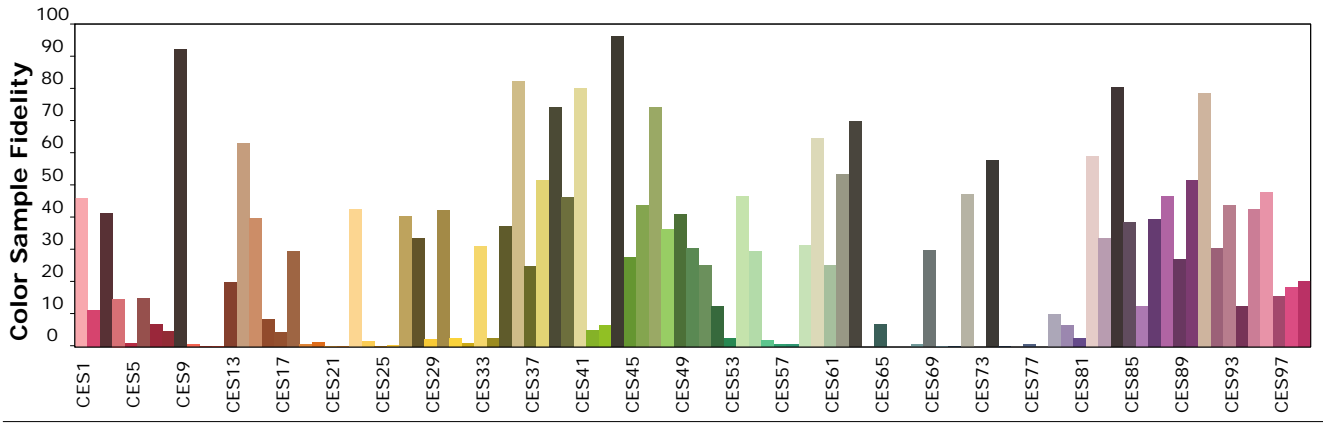
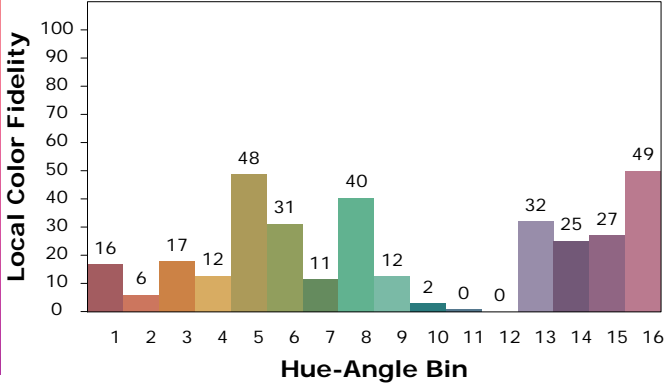
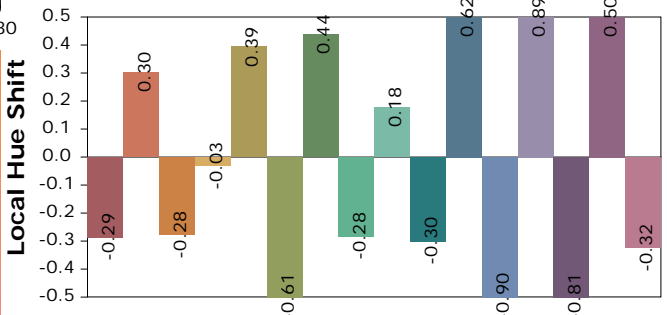
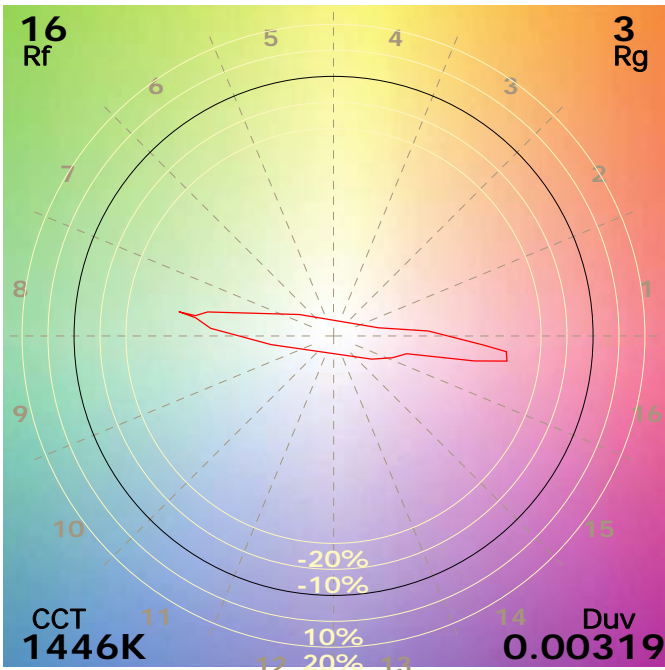
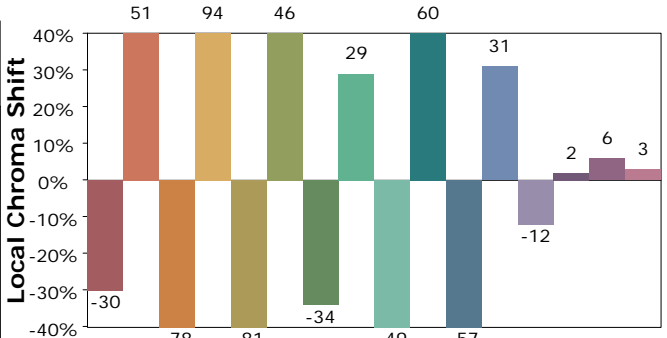
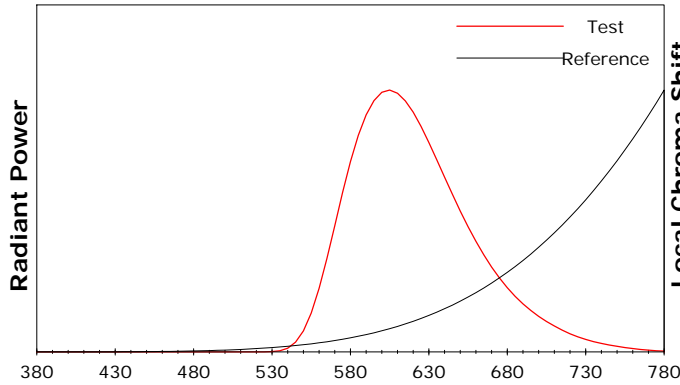
Test Device: Lisun LMS-9000B  
 Test Time: 2021-01-22 09:46:49  
 Inspector:

## IES TM-30-18 Color Rendition Report

### Product Information

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 Product Spec: Ledtube-UVL-530-120-T8-18W  
 Manufacturer: METOLIGHT  
 Buyer: 8885

Product Type: LED-Röhre-UVL  
 Product Number: 1  
 Submitted Unit: 100270



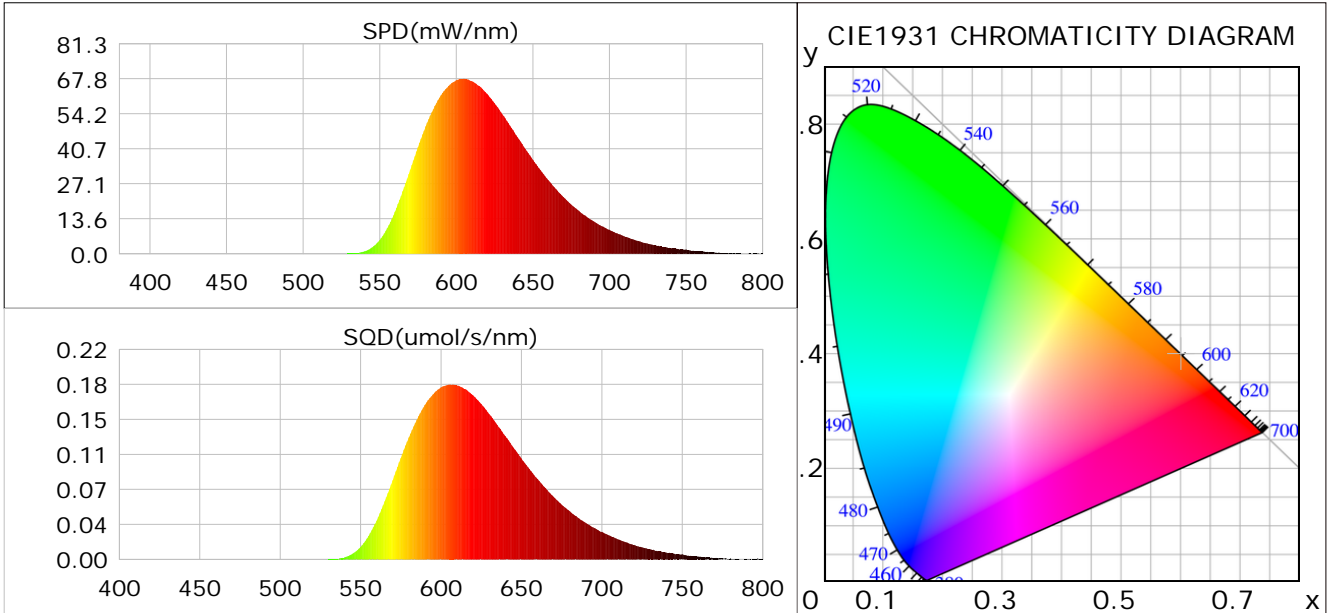
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 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-01-22 09:46:49  
 Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.6010$   $y=0.3982$   $u(u')=0.3656$   $v=0.3633$   $v'=0.5449$   
 CCT:  $T_c=1446K$  ( $duv=0.00319$ ) Color Ratio:  $R=0.402$   $G=0.598$   $B=0.000$   
 Peak Wavelength: 604.9nm Half Bandwidth: 82.3nm  
 Dominant Wavelength: 594.7nm Color Purity: 0.999  
 CRI:  $R_a=34.6$



### Plant Optical Param

$ \mu_v(lm): 1853.20$	$Q_v(lm.s): 1853.20$
$ \mu_e, \dot{E}(W/nm): 6.06$	$Q_e(J): 6.06$
$ \mu_e(W): 5.82$	$ \mu_{fr}(W): 0.25$
$ \zeta_e: 0.33$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.72$	$K_{fr}: 0.08$
$Erb\_Ratio: 3876.70$	$PPF(umol/s): 30.01$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 0.00$
$PPF(500-600)(umol/s): 9.85$	$PPF(600-700)(umol/s): 20.15$
$PPF_{fr}(700-800)(umol/s): 1.44$	$PPF.t(umol): 30.01$
$ \mu_{ch-A.t}(J): 0.51$	$ \mu_{ch-A}(W): 0.51$
$ \mu_{ch-B.t}(J): 0.18$	$ \mu_{ch-B}(W): 0.18$
$ \mu_b.t(J): 0.00$	$ \mu_b(W): 0.00$
$ \mu_y.t(J): 2.02$	$ \mu_y(W): 2.02$
$ \mu_r.t(J): 3.86$	$ \mu_r(W): 3.86$

### Electric Parameters

Voltage: 230.40V	Current: 0.0810A	Power: 17.41W
Power Factor: 0.9280	Frequency: 49.99Hz	

Condition:  $T_x: 17.1^\circ C$ ,  $T_i: 0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
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