

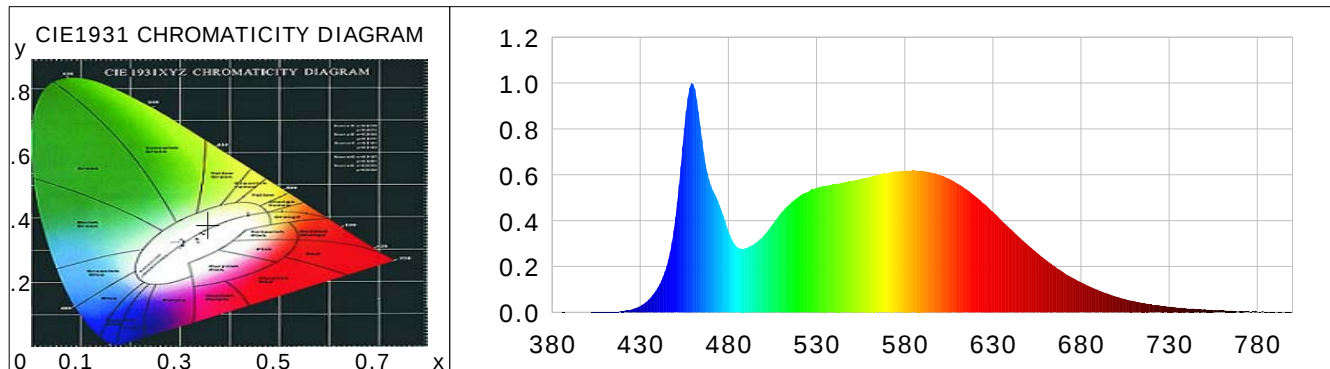
Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-150-8DWM-30W-SCE-RM-175
 Manufacturer: METOLIGHT
 Buyer: 6961
 Product Type: LED-Röhre-SCE
 Product Number: 1
 Submitted Unit: 102601

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3565$ $y=0.3797$ $u(u')=0.2084$ $v=0.3329$ $v'=0.4993$
 CCT: $T_c=4719K$ ($duv=0.00919$)
 Peak Wavelength: 459.3nm
 Dominant Wavelength: 570.0nm
 CRI: $R_a=81.5$, $avgR(1\sim14)=74.2$, $avgR(1\sim15)=74.1$
 GAI: $GAI_BB_8=78.7$, $GAI_BB_15=87.9$, $GAI_EES=69.5$
 R1 =80 R2 =91 R3 =96 R4 =74 R5 =78 R6 =87 R7 =83 R8 =63
 R9 =4 R10=78 R11=73 R12=50 R13=83 R14=98 R15=72
 Color Quality Scale: $Q_a=81.1$, $Q_f=81.6$, $Q_p=78.6$, $Q_g=86.1$
 Q1 =74 Q2 =91 Q3 =86 Q4 =74 Q5 =74 Q6 =73 Q7 =79 Q8 =87
 Q9 =94 Q10=93 Q11=91 Q12=89 Q13=87 Q14=73 Q15=75



Photometric Parameters

Luminous Flux: 4920.3 lm
 Total mains efficacy: 188.36 lm/W
 Pupil Flux: 8250.95 Plm
 Cirtopic Flux: 17885.71 lm
 Efficiency: 160.17 lm/W
 Energy Efficiency Class: B (EU 2019/2015)
 Pupil Lumens Per Watt: 268.59 Plm/W
 Radiant Power: 14.699 W
 Pupil Factor (Kp): 1.677

Electric Parameters

Voltage: 230.50V
 Power Factor: 0.9610
 Current: 0.1380A
 Frequency: 49.99Hz
 Power: 30.72W

Test Information

Scan Range: 380~800:1nm
 Stabilization Time: 0 ms
 Max of Signal: 44856 (2658)
 Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 2.00m, 4PI
 CCD Integration Time: 49.91 ms

Condition: Tx:24.0'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-17 13:54:35
 Inspector:

Lightsource Test Report

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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	0.0185	525	0.5238	65.6333	670	0.1749	21.9154
385	0.0003	0.0406	530	0.5424	67.9617	675	0.1517	19.0104
390	0.0003	0.0401	535	0.5518	69.1399	680	0.1316	16.4926
395	0.0006	0.0750	540	0.5585	69.9869	685	0.1126	14.1071
400	0.0005	0.0662	545	0.5658	70.9045	690	0.0962	12.0568
405	0.0008	0.1004	550	0.5726	71.7511	695	0.0813	10.1931
410	0.0015	0.1900	555	0.5823	72.9694	700	0.0685	8.5872
415	0.0026	0.3315	560	0.5916	74.1372	705	0.0580	7.2679
420	0.0057	0.7113	565	0.5996	75.1312	710	0.0492	6.1687
425	0.0123	1.5436	570	0.6070	76.0656	715	0.0408	5.1089
430	0.0278	3.4777	575	0.6151	77.0774	720	0.0343	4.3027
435	0.0572	7.1683	580	0.6176	77.3897	725	0.0296	3.7112
440	0.1087	13.6178	585	0.6185	77.5026	730	0.0248	3.1045
445	0.2029	25.4292	590	0.6161	77.2065	735	0.0199	2.4962
450	0.4151	52.0167	595	0.6097	76.3932	740	0.0172	2.1497
455	0.8030	100.6162	600	0.5984	74.9794	745	0.0151	1.8962
460	0.9945	124.6227	605	0.5834	73.1032	750	0.0144	1.8059
465	0.7546	94.5574	610	0.5619	70.4045	755	0.0102	1.2765
470	0.5545	69.4833	615	0.5366	67.2374	760	0.0079	0.9840
475	0.4661	58.4055	620	0.5064	63.4495	765	0.0072	0.8981
480	0.3542	44.3795	625	0.4736	59.3397	770	0.0060	0.7488
485	0.2841	35.6011	630	0.4385	54.9457	775	0.0044	0.5538
490	0.2800	35.0912	635	0.3995	50.0642	780	0.0038	0.4824
495	0.3000	37.5918	640	0.3634	45.5302	785	0.0030	0.3737
500	0.3338	41.8319	645	0.3280	41.1004	790	0.0007	0.0889
505	0.3839	48.0998	650	0.2918	36.5694	795	0.0027	0.3335
510	0.4349	54.4934	655	0.2598	32.5591	800	0.0033	0.4180
515	0.4731	59.2820	660	0.2296	28.7743			
520	0.5054	63.3261	665	0.2011	25.2021			

Condition: Tx:24.0'C, Ti:0.0'C, R.H.:60%
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 Operator: CRE

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IES TM-30-18 Color Rendition Report

Product Information

Product Category: LED-Röhre

Product Spec: LEDtube-150-8DWM-30W-SCE-RM-175

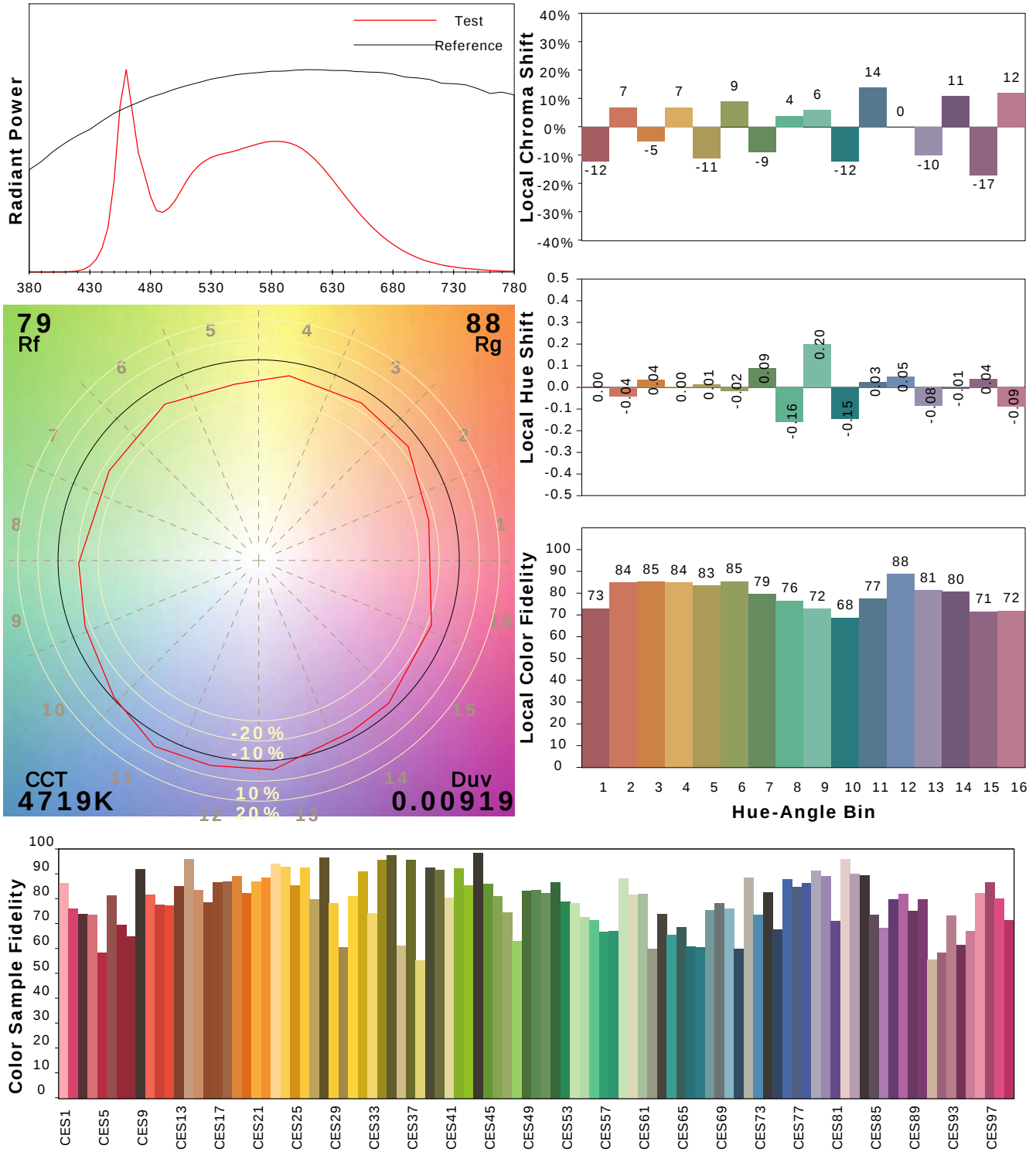
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Buyer: 6961

Product Type: LED-Röhre-SCE

Product Number: 1

Submitted Unit: 102601



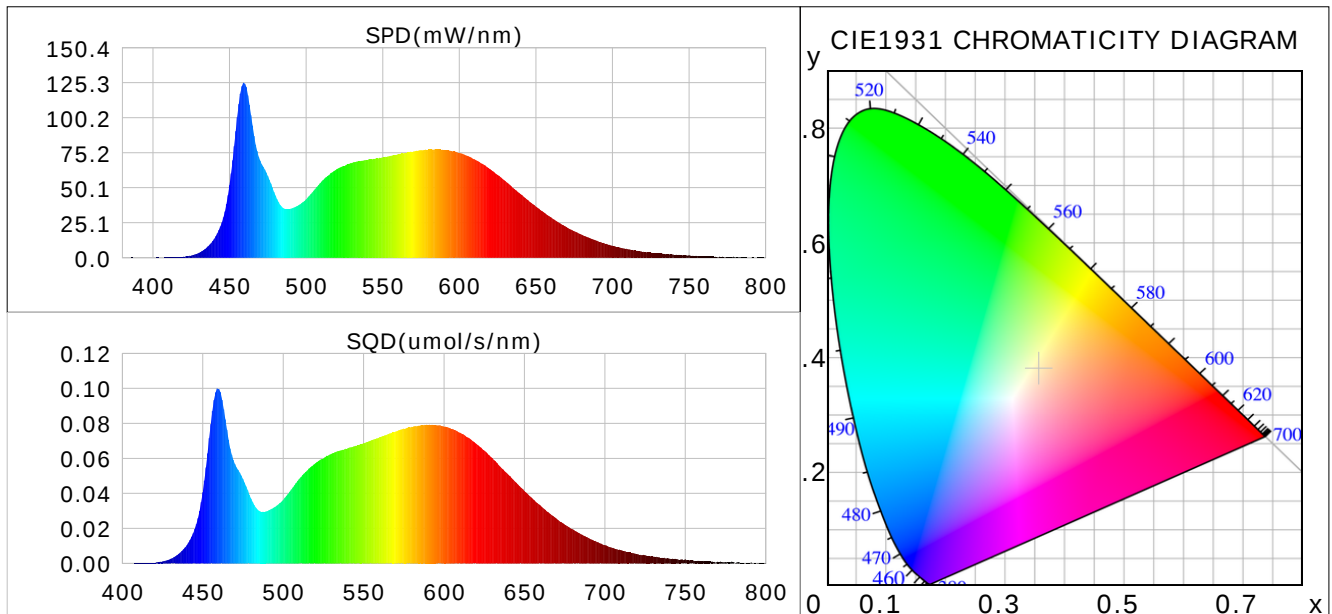
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 Test Lab:
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Test Device: Lisun LMS-9000B
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Plant optical param data

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3565$ $y=0.3797$ $u(u')=0.2084$ $v=0.3329$ $v'=0.4993$
 CCT: $T_c=4719K$ ($duv=0.00919$) Color Ratio: $R=0.158$ $G=0.793$ $B=0.048$
 Peak Wavelength: 459.3nm Half Bandwidth: 22.0nm
 Dominant Wavelength: 570.0nm Color Purity: 0.209
 CRI: Ra= 81.5



Plant Optical Param

$\mu_v(lm)$: 4920.30	$Q_v(lm.s)$: 4920.30
$\mu_e, \ddot{E}(W/nm)$: 14.70	$Q_e(J)$: 14.70
$\mu_e(W)$: 14.47	$\mu_{fr}(W)$: 0.24
$\dot{C}_e$: 0.47	$\dot{C}_{fr}$: 0.01
$PPE(umol/s/w)$: 2.18	K_{fr} : 0.05
Erb_Ratio : 1.06	$PPF(umol/s)$: 66.96
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 14.25
$PPF(500-600)(umol/s)$: 32.11	$PPF(600-700)(umol/s)$: 20.61
$PF_{fr}(700-800)(umol/s)$: 1.41	$PPF.t(umol)$: 66.96
$\mu_{ch-A.t}(J)$: 1.01	$\mu_{ch-A}(W)$: 1.01
$\mu_{ch-B.t}(J)$: 0.75	$\mu_{ch-B}(W)$: 0.75
$\mu_b.t(J)$: 3.65	$\mu_b(W)$: 3.65
$\mu_y.t(J)$: 6.98	$\mu_y(W)$: 6.98
$\mu_r.t(J)$: 3.96	$\mu_r(W)$: 3.96

Electric Parameters

Voltage: 230.50V	Current: 0.1380A	Power: 30.72W
Power Factor: 0.9610	Frequency: 49.99Hz	

Condition: Tx:24.0'C, Ti:0.0'C, R.H.:60%
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