

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre-SCE
 Product Spec: LEDtube-120-8NWM-20W-SCE-RM-175 Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 102584
 Buyer: 6961-20840

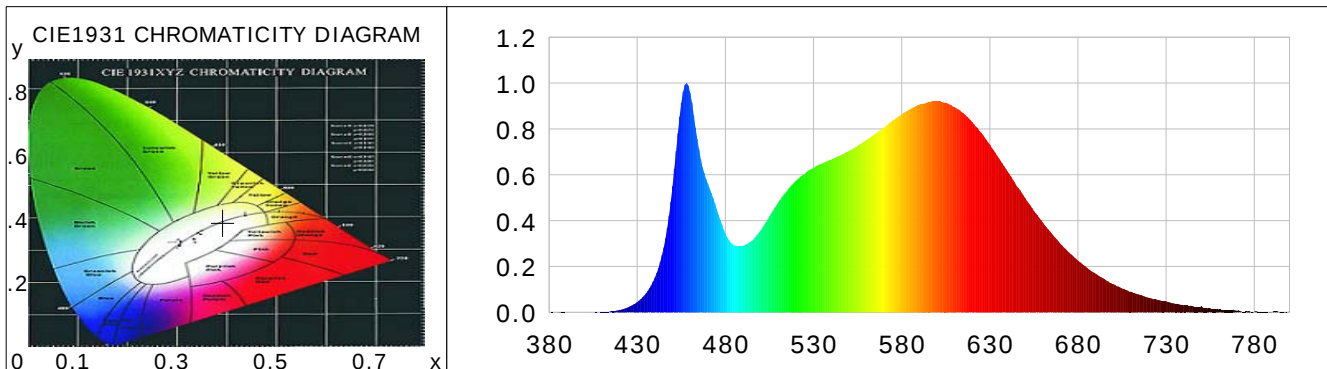
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3925$ $y=0.3869$ $u(u')=0.2290$ $v=0.3385$ $v'=0.5077$
 CCT: $T_c=3766K$ ($duv=0.00134$) Color Ratio: $R=0.194$ $G=0.768$ $B=0.038$
 Peak Wavelength: 457.9nm Half Bandwidth: 23.7nm
 Dominant Wavelength: 579.3nm Color Purity: 0.339
 CRI: $R_a=84.2$, $avgR(1\sim14)=78.1$, $avgR(1\sim15)=78.1$ TM30: $R_f=82$, $R_g=92$
 GAI: $GAI_BB_8=88.6$, $GAI_BB_15=97.7$, $GAI_EES=66.3$

R1 =83	R2 =93	R3 =96	R4 =80	R5 =82	R6 =90	R7 =84	R8 =65
R9 =15	R10=81	R11=79	R12=60	R13=86	R14=99	R15=77	

Color Quality Scale: $Q_a=83.3$, $Q_f=83.8$, $Q_p=81.6$, $Q_g=90.6$

Q1 =80	Q2 =96	Q3 =83	Q4 =76	Q5 =78	Q6 =80	Q7 =85	Q8 =89
Q9 =98	Q10=93	Q11=89	Q12=87	Q13=86	Q14=75	Q15=78	



Photometric Parameters

Luminous Flux: 3356.2 lm Efficiency: 167.31 lm/W Radiant Power: 10.131 W
 Total mains efficacy: 196.75 lm/W Energy Efficiency Class: B (EU 2019/2015)
 Pupil Flux: 4978.13 Plm Pupil Lumens Per Watt: 248.16 Plm/W Pupil Factor (Kp): 1.483
 Cirtopic Flux: 10126.25 lm

Electric Parameters

Voltage: 230.60V Current: 0.0890A Power: 20.06W
 Power Factor: 0.9680 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: 45692 (2585) CCD Integration Time: 100.55 ms

Condition: Tx:22.0'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2020-11-16 15:13:18
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0003	0.0221	525	0.6025	39.0592	670	0.3002	19.4576
385	0.0009	0.0606	530	0.6292	40.7906	675	0.2610	16.9208
390	0.0006	0.0381	535	0.6490	42.0703	680	0.2261	14.6602
395	0.0004	0.0241	540	0.6664	43.2018	685	0.1948	12.6286
400	0.0003	0.0207	545	0.6838	44.3277	690	0.1683	10.9080
405	0.0004	0.0263	550	0.7033	45.5938	695	0.1445	9.3684
410	0.0016	0.1008	555	0.7265	47.0984	700	0.1234	7.9981
415	0.0042	0.2728	560	0.7524	48.7730	705	0.1043	6.7598
420	0.0105	0.6813	565	0.7790	50.4961	710	0.0902	5.8462
425	0.0229	1.4861	570	0.8062	52.2608	715	0.0764	4.9520
430	0.0449	2.9116	575	0.8380	54.3255	720	0.0638	4.1361
435	0.0827	5.3600	580	0.8630	55.9452	725	0.0548	3.5537
440	0.1512	9.7999	585	0.8869	57.4918	730	0.0481	3.1162
445	0.2829	18.3376	590	0.9065	58.7660	735	0.0382	2.4735
450	0.5507	35.6988	595	0.9167	59.4274	740	0.0308	1.9965
455	0.9142	59.2601	600	0.9198	59.6264	745	0.0273	1.7701
460	0.9564	62.0008	605	0.9149	59.3080	750	0.0279	1.8066
465	0.7107	46.0723	610	0.8950	58.0202	755	0.0177	1.1453
470	0.5615	36.3997	615	0.8686	56.3087	760	0.0124	0.8025
475	0.4508	29.2239	620	0.8305	53.8389	765	0.0091	0.5924
480	0.3432	22.2486	625	0.7835	50.7918	770	0.0073	0.4747
485	0.2921	18.9374	630	0.7313	47.4076	775	0.0036	0.2344
490	0.2898	18.7870	635	0.6731	43.6358	780	0.0040	0.2580
495	0.3123	20.2438	640	0.6147	39.8481	785	0.0025	0.1645
500	0.3578	23.1966	645	0.5534	35.8757	790	0.0011	0.0682
505	0.4193	27.1813	650	0.4991	32.3539	795	0.0033	0.2146
510	0.4805	31.1463	655	0.4426	28.6888	800	0.0043	0.2785
515	0.5294	34.3168	660	0.3923	25.4324			
520	0.5736	37.1844	665	0.3444	22.3238			

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IES TM-30-18 Color Rendition Report

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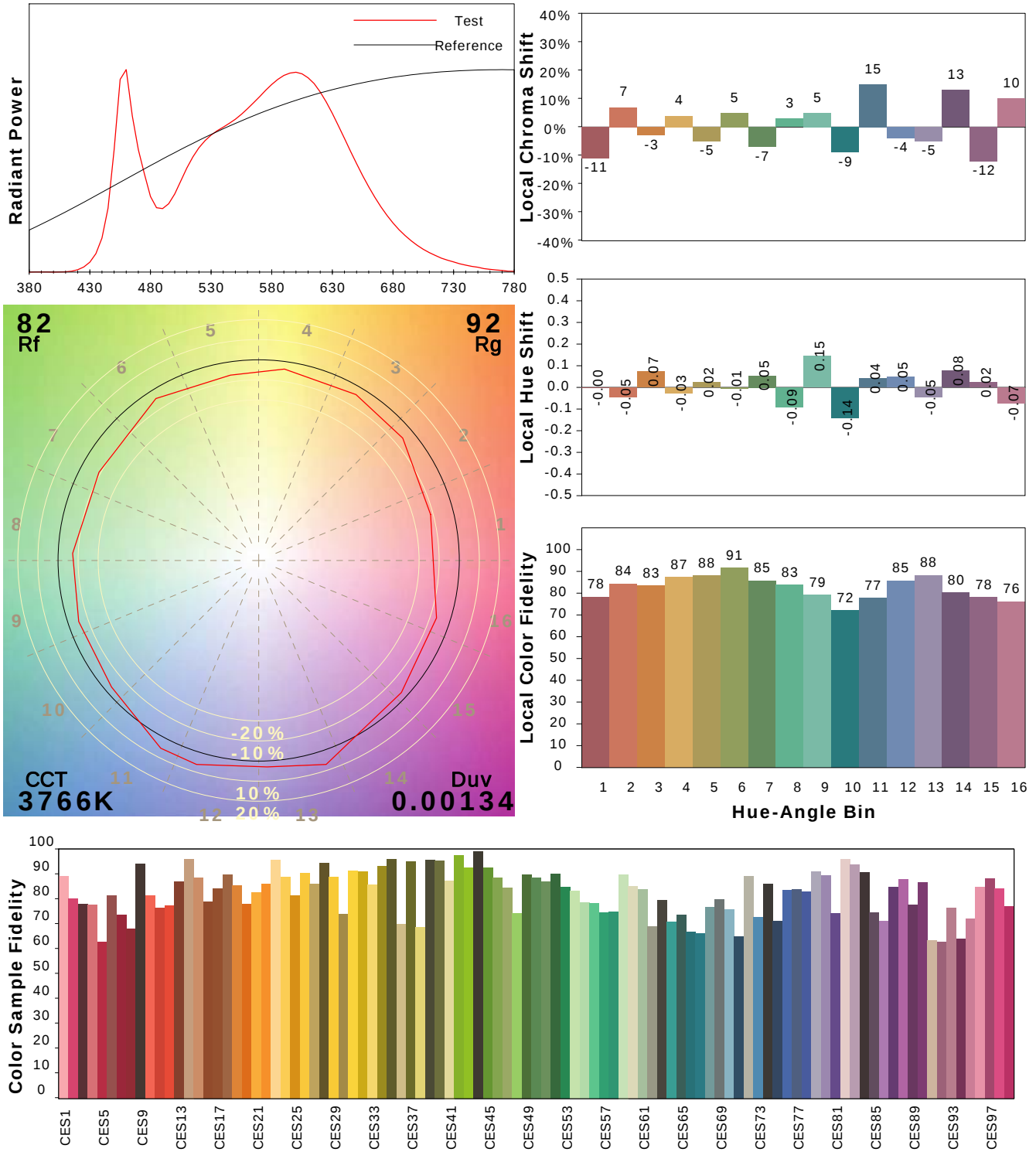
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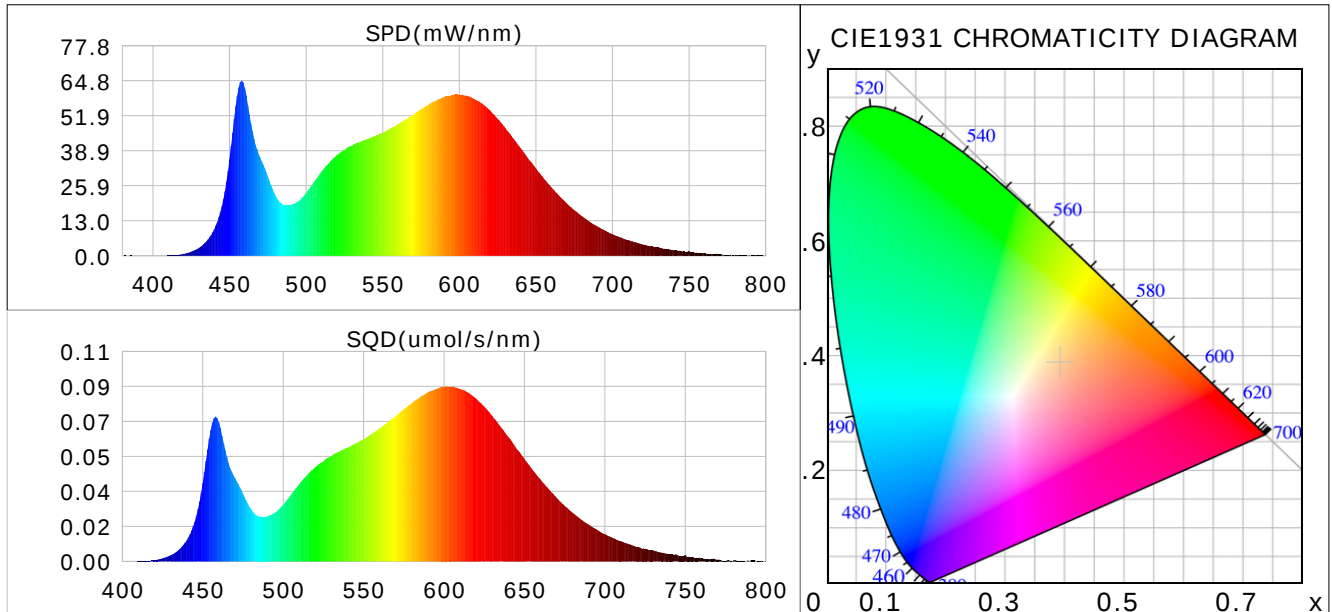
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Plant optical param data

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 CRI: Ra= 84.2



Plant Optical Param

$\mu_v(lm): 3356.20$	$Q_v(lm.s): 3356.20$
$\mu_e, \dot{E}(W/nm): 10.13$	$Q_e(J): 10.13$
$\mu_e(W): 9.92$	$\mu_{fr}(W): 0.22$
$\dot{C}_e: 0.49$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 2.33$	$K_{fr}: 0.07$
$Erb_Ratio: 1.66$	$PPF(umol/s): 46.82$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 7.82$
$PPF(500-600)(umol/s): 21.29$	$PPF(600-700)(umol/s): 17.70$
$PF_{fr}(700-800)(umol/s): 1.31$	$PPF.t(umol): 46.82$
$\mu_{ch-A.t}(J): 0.73$	$\mu_{ch-A}(W): 0.73$
$\mu_{ch-B.t}(J): 0.47$	$\mu_{ch-B}(W): 0.47$
$\mu_b.t(J): 2.01$	$\mu_b(W): 2.01$
$\mu_y.t(J): 4.60$	$\mu_y(W): 4.60$
$\mu_r.t(J): 3.39$	$\mu_r(W): 3.39$

Electric Parameters

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