

Lightsource Test Report

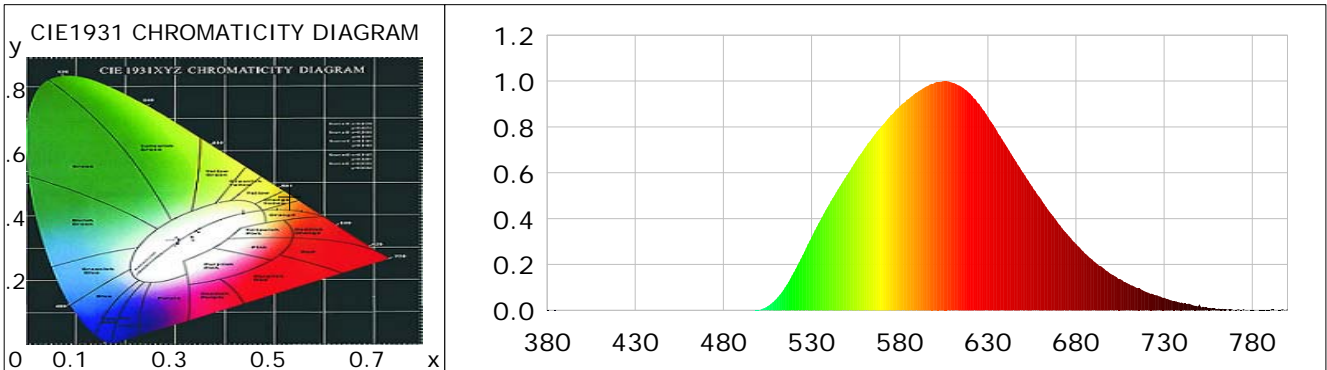
Product Information

Product Category: LED-Röhre
 Product Spec: Ledtube-UVL-470-120-T8-18W
 Manufacturer: METOLIGHT
 Buyer: 9034

Product Type: LED-Röhre-UVL
 Product Number: 1
 Submitted Unit: 101263

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.5323$ $y=0.4633$ $u(u')=0.2841$ $v=0.3709$ $v'=0.5563$
 CCT: $T_c=2257K$ ($duv=0.01426$) Color Ratio: $R=0.261$ $G=0.739$ $B=0.000$
 Peak Wavelength: 605.1nm Half Bandwidth: 115.7nm
 Dominant Wavelength: 583.4nm Color Purity: 0.989
 CRI: $R_a=54.3$, $avgR(1\sim14)=44.1$, $avgR(1\sim15)=44.4$ TM30: $R_f=19$, $R_g=10$
 GAI: $GAI_BB_8=1.1$, $GAI_BB_15=1.2$, $GAI_EES=0.4$
 R1 =55 R2 =66 R3 =66 R4 =44 R5 =49 R6 =50 R7 =68 R8 =37
 R9 =0 R10=23 R11=23 R12=1 R13=55 R14=81 R15=49
 Color Quality Scale: $Q_a=0.4$, $Q_f=0.9$, $Q_p=0.0$, $Q_g=5.9$
 Q1 =47 Q2 =7 Q3 =0 Q4 =3 Q5 =23 Q6 =50 Q7 =36 Q8 =2
 Q9 =0 Q10=0 Q11=0 Q12=0 Q13=0 Q14=2 Q15=50



Photometric Parameters

Luminous Flux: 1970.1 lm Efficiency: 102.82 lm/W Radiant Power: 5.389 W
 Total mains efficacy: 111.97 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 1421.47 Plm Pupil Lumens Per Watt: 74.19 Plm/W Pupil Factor (Kp): 0.722
 Circopic Flux: 1493.30 lm

Electric Parameters

Voltage: 230.10V Current: 0.0870A Power: 19.16W
 Power Factor: 0.9500 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: 47095 (2194) CCD Integration Time: 274.72 ms

Condition: Tx:16.6'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-22 09:40:08
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0009	0.0393	525	0.2411	10.9367	670	0.3786	17.1762
385	0.0012	0.0531	530	0.3187	14.4581	675	0.3328	15.0982
390	0.0004	0.0166	535	0.3925	17.8055	680	0.2898	13.1485
395	0.0000	0.0003	540	0.4619	20.9550	685	0.2485	11.2732
400	0.0005	0.0240	545	0.5273	23.9223	690	0.2137	9.6955
405	0.0000	0.0013	550	0.5893	26.7327	695	0.1865	8.4594
410	0.0005	0.0219	555	0.6489	29.4376	700	0.1572	7.1313
415	0.0005	0.0235	560	0.7051	31.9873	705	0.1364	6.1886
420	0.0002	0.0108	565	0.7586	34.4150	710	0.1152	5.2245
425	0.0002	0.0100	570	0.8063	36.5748	715	0.0973	4.4146
430	0.0003	0.0117	575	0.8511	38.6101	720	0.0794	3.6024
435	0.0006	0.0250	580	0.8903	40.3858	725	0.0668	3.0316
440	0.0003	0.0154	585	0.9218	41.8178	730	0.0556	2.5227
445	0.0002	0.0094	590	0.9513	43.1529	735	0.0411	1.8636
450	0.0004	0.0159	595	0.9760	44.2764	740	0.0343	1.5554
455	0.0004	0.0170	600	0.9929	45.0439	745	0.0259	1.1739
460	0.0003	0.0148	605	1.0000	45.3641	750	0.0257	1.1662
465	0.0000	0.0002	610	0.9920	45.0033	755	0.0104	0.4738
470	0.0002	0.0084	615	0.9757	44.2627	760	0.0059	0.2665
475	0.0002	0.0085	620	0.9450	42.8694	765	0.0050	0.2261
480	0.0001	0.0064	625	0.9000	40.8263	770	0.0019	0.0881
485	0.0002	0.0111	630	0.8438	38.2796	775	0.0047	0.2116
490	0.0005	0.0247	635	0.7840	35.5648	780	0.0019	0.0865
495	0.0004	0.0172	640	0.7225	32.7744	785	0.0022	0.1007
500	0.0023	0.1027	645	0.6598	29.9330	790	0.0009	0.0395
505	0.0175	0.7957	650	0.5994	27.1904	795	0.0017	0.0759
510	0.0497	2.2531	655	0.5412	24.5499	800	0.0062	0.2821
515	0.1006	4.5638	660	0.4867	22.0792			
520	0.1667	7.5611	665	0.4296	19.4866			

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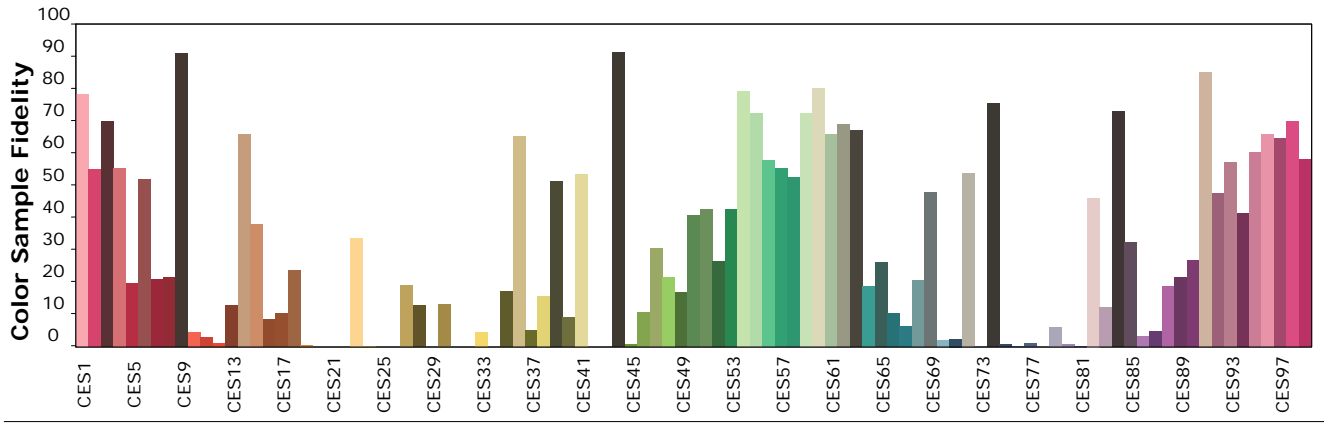
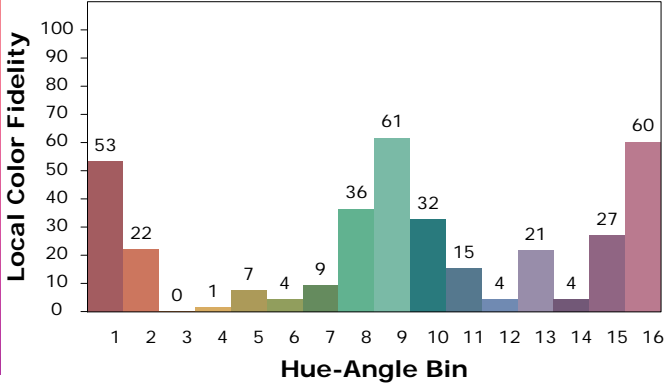
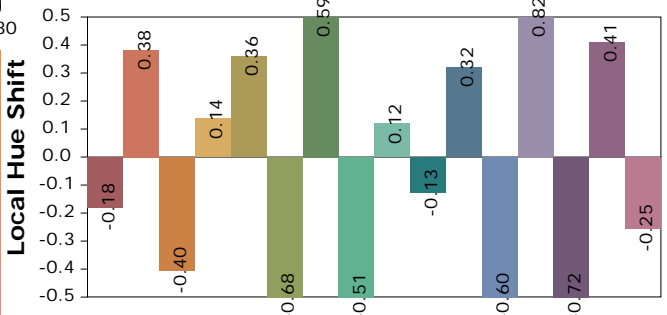
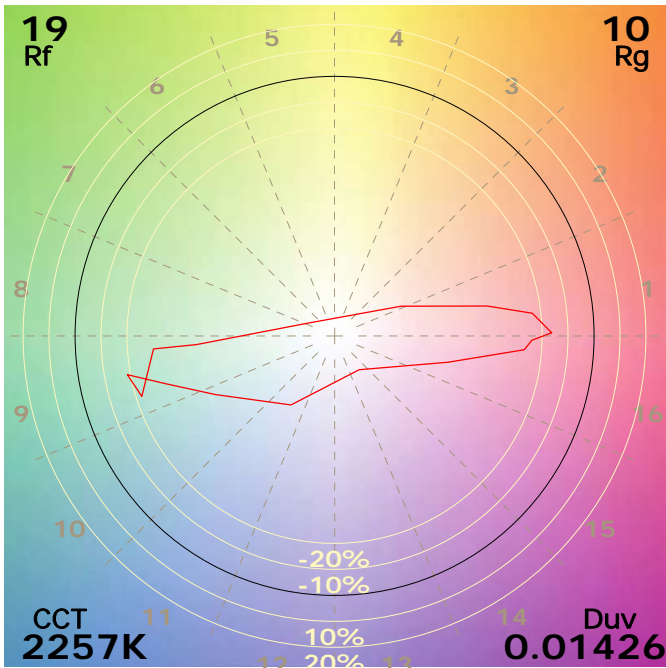
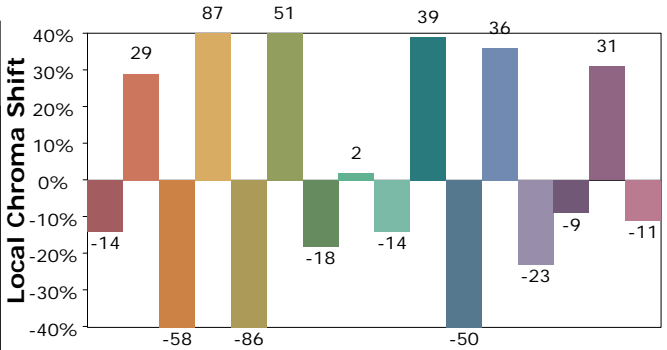
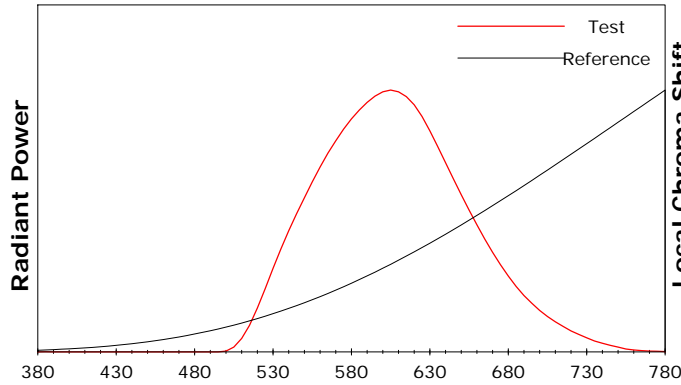
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IES TM-30-18 Color Rendition Report

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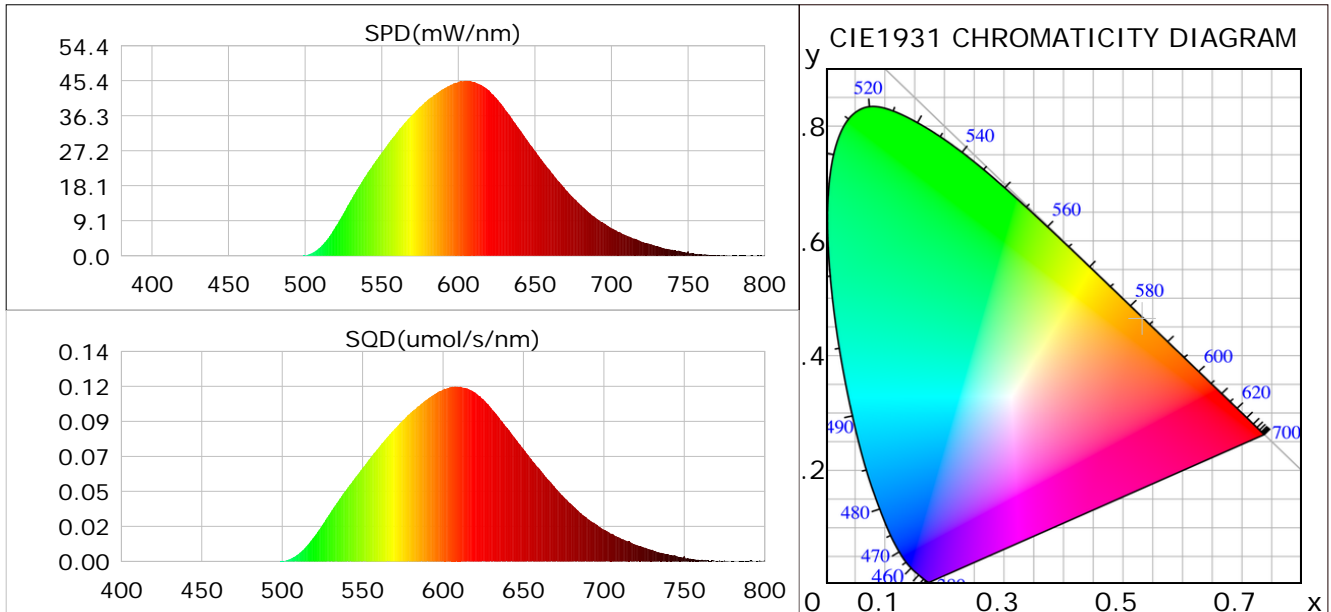
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Plant optical param data

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 Dominant Wavelength: 583.4nm Color Purity: 0.989
 CRI: $R_a=54.3$



Plant Optical Param

μ_v (lm): 1970.10	Q_v (lm.s): 1970.10
μ_e (W/nm): 5.39	Q_e (J): 5.39
μ_e (W): 5.22	μ_{fr} (W): 0.18
ζ_e : 0.27	ζ_{fr} : 0.01
PPE(umol/s/w): 1.37	Kfr: 0.05
Erb_Ratio: 1743.20	PPF(umol/s): 26.32
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 0.01
PPF(500-600)(umol/s): 11.81	PPF(600-700)(umol/s): 14.51
PPfr(700-800)(umol/s): 1.05	PPF.t(umol): 26.32
$\mu_{ch-A.t}$ (J): 0.40	μ_{ch-A} (W): 0.40
$\mu_{ch-B.t}$ (J): 0.14	μ_{ch-B} (W): 0.14
$\mu_b.t$ (J): 0.00	μ_b (W): 0.00
$\mu_y.t$ (J): 2.49	μ_y (W): 2.49
$\mu_r.t$ (J): 2.77	μ_r (W): 2.77

Electric Parameters

Voltage: 230.10V	Current: 0.0870A	Power: 19.16W
Power Factor: 0.9500	Frequency: 49.99Hz	

Condition: $T_x=16.6^\circ C$, $T_i=0.0^\circ C$, R.H.: 60%
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