



Spectroradiometer Lightsource Test

Report No: 63**Test Time:** 2024-05-29 12:42:05

Category: Industrial

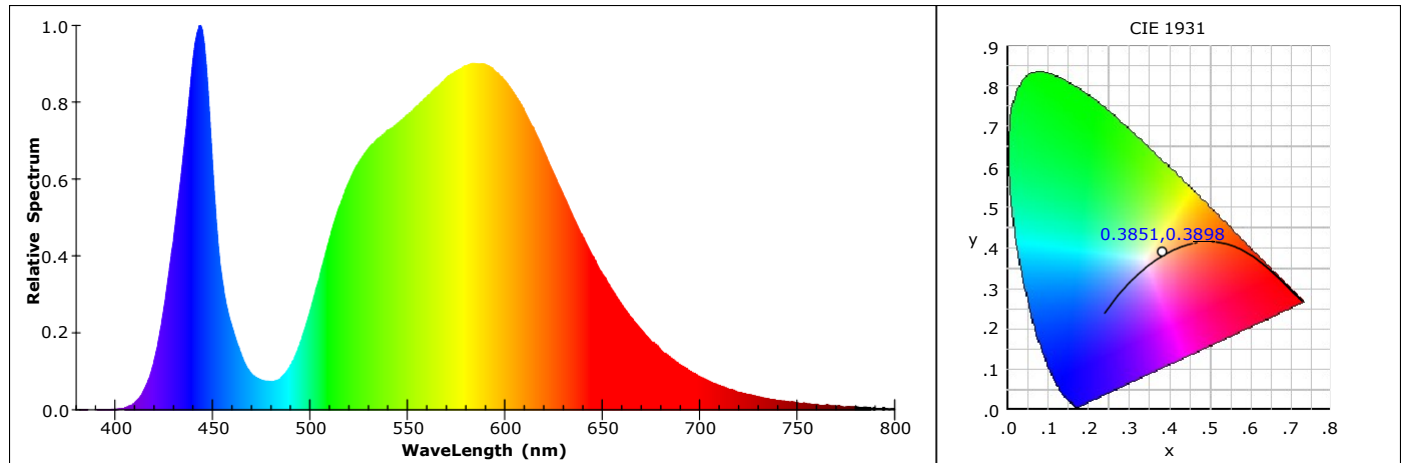
Type: Hydra Alphard 500W 272 -230

Spec: 506.7W

Number: 63

Manufacturer: Industrial Lighting Ltd.

Submitter:



CIE Colorimetric Parameters

CIE(x,y): 0.3851,0.3898

CIE(u,v): 0.2230,0.3386

CIE(u',v'): 0.2230,0.5079

CCT: 3971 K (Duv=0.004644)

Dominant Wavelength: 577.0 nm

Color Purity: 0.326

Peak Wavelength: 443.6 nm

Half Width: 20.7 nm

Color Ratio: R:0.165, G:0.817, B:0.018

Color Render Index: Ra:69.8 , avgR(1~14):59.3 , avgR(1~15):59.3

R1: 67

R2: 75

R3: 83

R4: 71

R5: 67

R6: 66

R7: 79

R8: 51

R9: -37

R10: 42

R11: 69

R12: 41

R13: 68

R14: 90

R15: 59

Color Quality Scale: Qa:72.3 , Qf:72.0 , Qp:73.8 , Qg:90.3 ,

Q1: 71

Q2: 95

Q3: 69

Q4: 67

Q5: 71

Q6: 70

Q7: 73

Q8: 83

Q9: 93

Q10: 77

Q11: 74

Q12: 74

Q13: 75

Q14: 57

Q15: 63

Photometric Parameters

Luminous Flux: 85920.51 lm

Radiant Power: 242.151 W

Efficiency: 169.57 lm/W

Energy Efficiency Class:G (EU 2019/2015 η_{TM} :169.57lm/W)

S/P: 1.455

Pupil Flux: 115098.52 Plm (Kp=1.340)

Pupil Lumens per Watt: 0.00 Plm/W

Cirtopic Flux: 220229.66 lm

Mesopic Flux (CIE R.): 94008.84 lm (Lp=0.300)

Mesopic Flux (USP): 95377.13 lm (Lp=0.300)

Mesopic Flux (MOVE): 95905.00 lm (Lp=0.300)

Electric Parameters

Voltage: 230.400 V

Current: 2.325 A

Power: 506.70 W

Power Factor: 0.9540

Frequency: 49.99 Hz

Geometry: 4n, m

Self-absorption Factor: 1.445

Photometric Method: sphere-spectroradiometer

Warmup Time: 29 Minutes 13 Seconds

Integration Time: 5 ms

Peak of Signal: 47099

Spectroradiometer: LMS-9000A

Digital Power Meter: LS2010

Power Source: LSP Series

Test Lab:

Testing Environment: Ts:25.6°C, Ta:23.6°C,

Operator:

Approver:



IES TM-30-18 Color Rendition Report

Report No: 63

Test Time: 2024-05-29 12:42:05

Category: Industrial

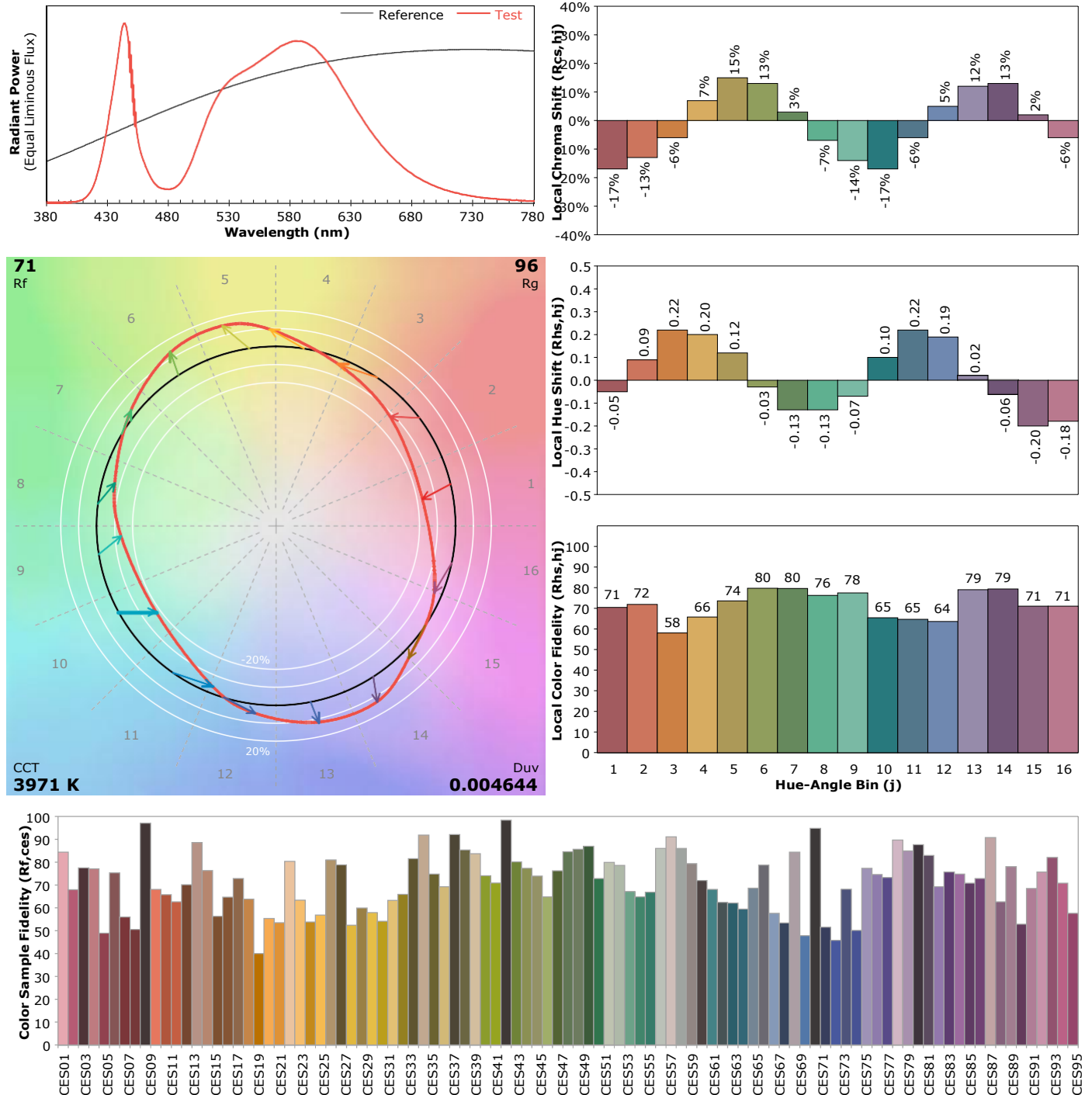
Type: Hydra Alphard 500W 272 -230

Spec: 506.7W

Number: 63

Manufacturer: Industrial Lighting Ltd.

Submitter:



Notes: This is a recommended method for displaying IES TM-30-18 information.

x 0.3851
y 0.3898
u' 0.2230
v' 0.5079

CIE13.3-1995
(CRI)
Ra 70
R9 -37

Test Lab:

Operator:

Testing Environment: Ts:25.6°C, Ta:23.6°C,

Approver:



Spectral Power Distribution Data

Report No: 63

Test Time: 2024-05-29 12:42:05

Category: Industrial

Type: Hydra Alphard 500W 272 -230

Spec: 506.7W

Number: 63

Manufacturer: Industrial Lighting Ltd.

Submitter:

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	1.0083	525	0.6561	1087.2650	670	0.2129	352.8124
385	0.0012	2.0082	530	0.6935	1149.3538	675	0.1832	303.6442
390	0.0008	1.3994	535	0.7196	1192.5450	680	0.1591	263.7065
395	0.0015	2.5661	540	0.7416	1229.0015	685	0.1376	228.0979
400	0.0025	4.1371	545	0.7604	1260.2397	690	0.1180	195.5307
405	0.0066	10.8678	550	0.7823	1296.5477	695	0.1016	168.4034
410	0.0191	31.6601	555	0.8063	1336.2249	700	0.0870	144.1105
415	0.0537	88.9243	560	0.8305	1376.4202	705	0.0743	123.0897
420	0.1304	216.0444	565	0.8552	1417.2797	710	0.0639	105.8595
425	0.2663	441.3643	570	0.8796	1457.7115	715	0.0539	89.2683
430	0.4553	754.4738	575	0.8984	1488.8505	720	0.0464	76.9547
435	0.6727	1114.8185	580	0.9122	1511.8302	725	0.0405	67.1511
440	0.9243	1531.7642	585	0.9173	1520.2109	730	0.0347	57.5596
445	1.0000	1657.2689	590	0.9137	1514.1860	735	0.0291	48.2246
450	0.6617	1096.5735	595	0.8975	1487.3816	740	0.0244	40.4750
455	0.3436	569.3847	600	0.8740	1448.3800	745	0.0217	35.8943
460	0.2213	366.6708	605	0.8362	1385.7300	750	0.0181	30.0228
465	0.1441	238.7990	610	0.7936	1315.2440	755	0.0161	26.7449
470	0.0953	157.9747	615	0.7425	1230.5806	760	0.0146	24.1134
475	0.0784	129.8739	620	0.6870	1138.5118	765	0.0143	23.6773
480	0.0748	123.9739	625	0.6290	1042.4534	770	0.0098	16.2293
485	0.0845	140.0917	630	0.5704	945.3091	775	0.0080	13.2200
490	0.1185	196.3072	635	0.5134	850.8290	780	0.0082	13.5413
495	0.1787	296.1966	640	0.4589	760.5717	785	0.0071	11.7738
500	0.2608	432.1397	645	0.4087	677.3553	790	0.0056	9.3060
505	0.3562	590.3088	650	0.3613	598.8197	795	0.0048	7.9053
510	0.4531	750.9268	655	0.3187	528.1605	800	0.0028	4.5655
515	0.5370	889.9596	660	0.2793	462.9164			
520	0.6045	1001.8921	665	0.2442	404.6332			

Test Lab:

Operator:

Testing Environment: Ts:25.6°C, Ta:23.6°C,

Approver:



Warmup Curve

Report No: 63

Test Time: 2024-05-29 12:42:05

Category: Industrial

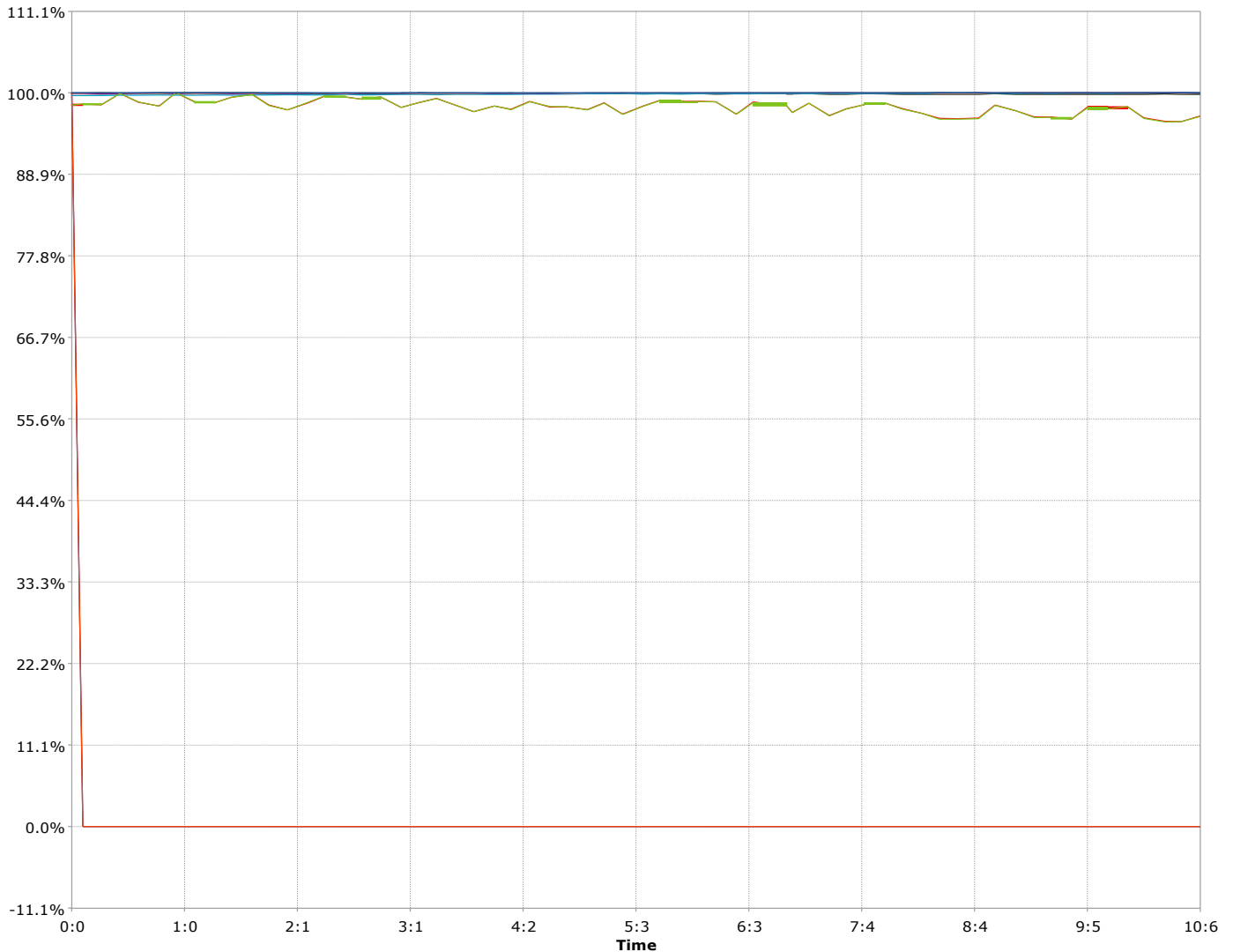
Type: Hydra Alphard 500W 272 -230

Spec: 506.7W

Number: 63

Manufacturer: Industrial Lighting Ltd.

Submitter:



Stable time: 10:6

Uptime: 0:0

Parameters	Maximum	Minimum	Change
Luminous Flux ,lm	88425.25	84943.97	3481.28
Power ,W	1.310	0.000	1.310
Efficiency ,lm/W	66350.17	0.00	66350.17
CCT ,K	3980	3971	9
CIE x	0.3852	0.3844	0.0007
CIE y	0.3900	0.3884	0.0016
Peak Wavelength ,nm	443.5	442.7	0.8
Ra	69.8	69.7	0.1
Radiant Power ,W	249.330	239.454	9.876
Dominant Wavelength ,nm	577.1	577.0	0.1

Test Lab:

Testing Environment: Ts:25.6°C, Ta:23.6°C,

Operator:

Approver: