

Digital ballast 1000W HPS

Pin=865W
Vin=230
Iin=3.795
PF=0.998
THD_I=4.85
Fsw=58k
Philips 1000W HPS

V3.10
McMahan Research Lab.,Inc. LIGHTSPEX Report

Measurement: <MEASUREMENT>
Instrument: LIGHTSPEX
Version: V3.10
Serial Number: MRL-00290
DATE: 02/12/06
TIME: 15:28:58
Calibration: -A-
Range: 2
Integration Time(ms): 63

Photometric Data

Illuminance = 24.41 W/m²
= 1549.65 fc
= 16674.18 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

CCT = 2035 K

X = 30.6068
Y = 24.4023
Z = 2.9420

(x,y) = 0.5281 0.4211
(u',v') = 0.3019 0.5416

Radiometric Data

Integrated Irradiance = 4034.54 uW/cm²
Peak Wavelength = 595 nm
Peak Irradiance = 86.2545 uW/cm²/nm

Core&Coil Ballast 1000W HPS

Pin=991.4W
Qin=1033VA
Vin=234V
Iin=4.386
PF=0.963
THD_I=21.5
Sylvania 1000W HPS new

McMahan Research Lab., Inc. LIGHTSPEX Report

Measurement: <MEASUREMENT>
Instrument: LIGHTSPEX
Version: V3.10
Serial Number: MRL-00290
DATE: 02/12/06
TIME: 15:51:04
Calibration: -A-
Range: 2
Integration Time(ms): 63

Photometric Data

Illuminance = 25.07 W/m²
= 1591.24 fc
= 17121.73 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

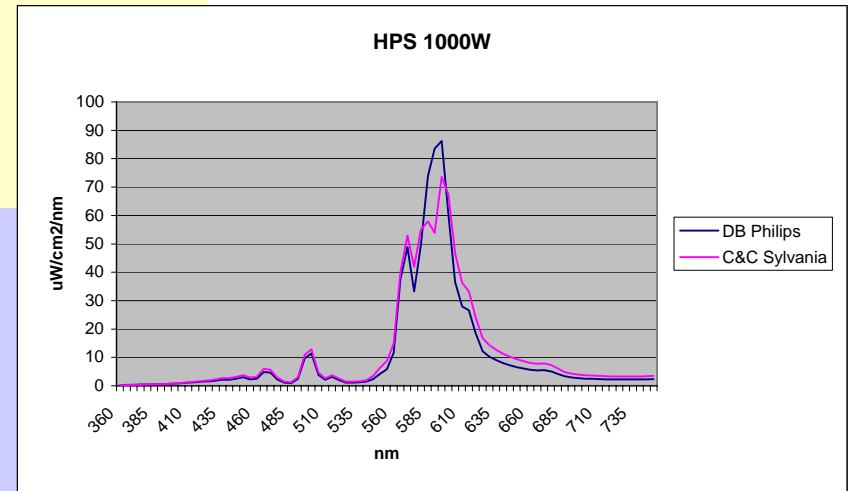
CCT = 2056 K

X = 31.3952
Y = 25.0549
Z = 3.6195

(x,y) = 0.5226 0.4171
(u',v') = 0.3004 0.5394

Radiometric Data

Integrated Irradiance = 4420.87 uW/cm²
Peak Wavelength = 595 nm
Peak Irradiance = 73.6295 uW/cm²/nm



Digital ballast 1000W HPS

Core&Coil Ballast 1000W HPS

Spectral Data

Spectral Data

Irradiance (uW/cm2/nm):

Irradiance (uW/cm2/nm):

360	0.28
365	0.32
370	0.36
375	0.41
380	0.46
385	0.53
390	0.6
395	0.66
400	0.79
405	0.94
410	1.09
415	1.25
420	1.43
425	1.59
430	1.8
435	2.11
440	2.18
445	2.49
450	3.05
455	2.3
460	2.47
465	4.9
470	4.58
475	2.25
480	1.12
485	0.87
490	2.47
495	9.69
500	11.39
505	3.84
510	2.09
515	3.17
520	2.07
525	1.11
530	1.12
535	1.19
540	1.42
545	2.34
550	4.16
555	5.9
560	11.64
565	37.42
570	48.86
575	33.25
580	49.65
585	73.82
590	83.56
595	86.25
600	60.38
605	36.51
610	27.96
615	26.59
620	18.63
625	12.12
630	10.24
635	8.99
640	8.01
645	7.21
650	6.55
655	6.07
660	5.6
665	5.42
670	5.5
675	5.06
680	4.16
685	3.36
690	2.9
695	2.65
700	2.5
705	2.43
710	2.36
715	2.29
720	2.25
725	2.25
730	2.24
735	2.23
740	2.22
745	2.27
750	2.33

360	0.2
365	0.26
370	0.32
375	0.38
380	0.45
385	0.52
390	0.61
395	0.69
400	0.84
405	1.05
410	1.24
415	1.45
420	1.69
425	1.93
430	2.24
435	2.65
440	2.74
445	3.11
450	3.77
455	2.98
460	3.19
465	5.92
470	5.62
475	2.89
480	1.47
485	1.21
490	3.1
495	10.95
500	12.86
505	4.66
510	2.57
515	3.75
520	2.54
525	1.47
530	1.48
535	1.59
540	1.96
545	3.44
550	6.34
555	8.76
560	14.87
565	40.05
570	52.84
575	41.96
580	55.04
585	57.9
590	53.85
595	73.62
600	67.37
605	46.62
610	36.35
615	33.29
620	24.16
625	16.82
630	14.35
635	12.65
640	11.32
645	10.24
650	9.33
655	8.67
660	8.01
665	7.78
670	7.91
675	7.32
680	6.04
685	4.9
690	4.23
695	3.89
700	3.69
705	3.58
710	3.48
715	3.36
720	3.3
725	3.28
730	3.26
735	3.29
740	3.31
745	3.39
750	3.51



C&C Ballast

Pin	945 W
Qin	974 VA
Vin	240 V
Iin	4.02 A
PF	0.954
THD	27.5 THD
Philips 1000W HPS	

Photometric Data

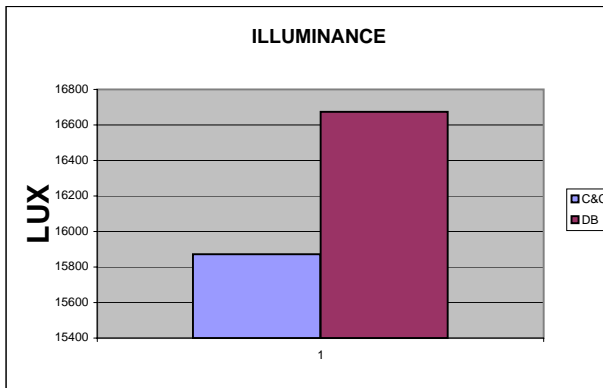
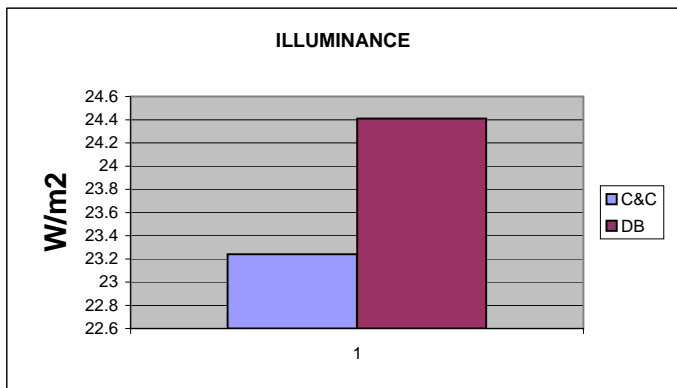
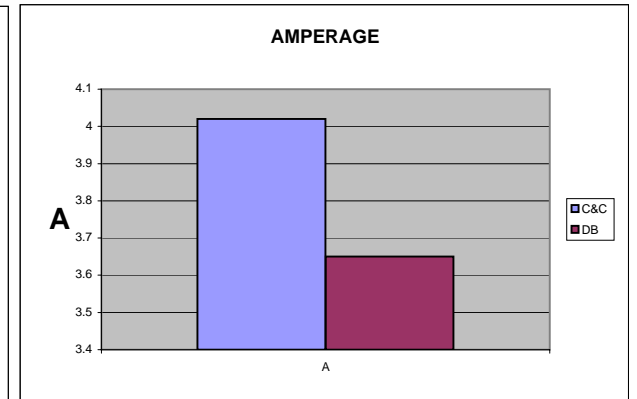
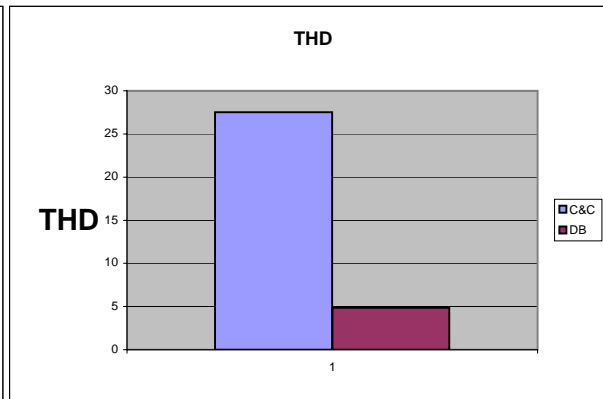
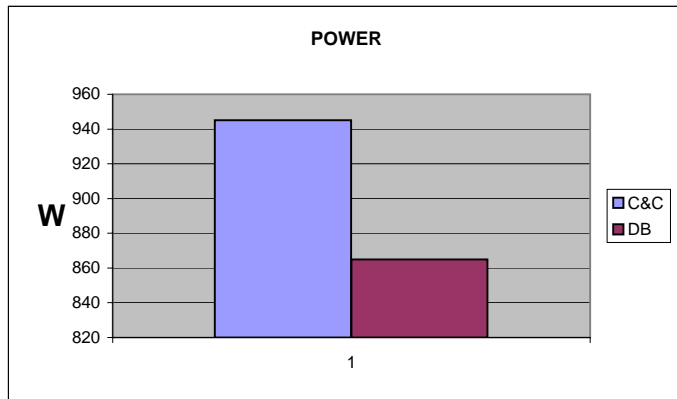
Illuminance	23.24 W/m ²
	1775.1 fc
	15872.07 lux

I.S.E. Digital Ballast

Pin	865 W
Qin	866 VA
Vin	240 V
Iin	3.65 A
PF	0.998
THD	4.85 THD
Philips 1000W HPS	

Photometric Data

Illuminance	24.41 W/m ²
	1549.65 fc
	16674.18 lux



Test Platform - MH 1000W White - 30 min

58.5 kHz

Pin=978 W
Qin=
Vin=240 Vac
Iin=4 A
PF=0.999
Preq= 48 VArBulb - Sylvania - 1000W MH White
Distance - 1m**Test Platform - MH 1000W Clear - 30 min**

58.5 kHz

Pin=978 W
Qin=
Vin=240 Vac
Iin=4 A
PF=0.999
Preq= 48 VArBulb - Sylvania - 1000W MH
Distance - 1m**McMahan Research Lab. Inc. LIGHTSPEX Report**Measurement: <MEASUREMENT>
Instrument: LIGHTSPEX
Version: V3.10
Serial Number: MRL-00290
DATE: 05/06/06
TIME: 12:14:26
Calibration: -A-
Range: 1
Integration Time(ms): 31**Photometric Data**Illuminance = 25.84 W/m²
= 1640.16 fc
= 17648.09 lux**Colorimetric Data**

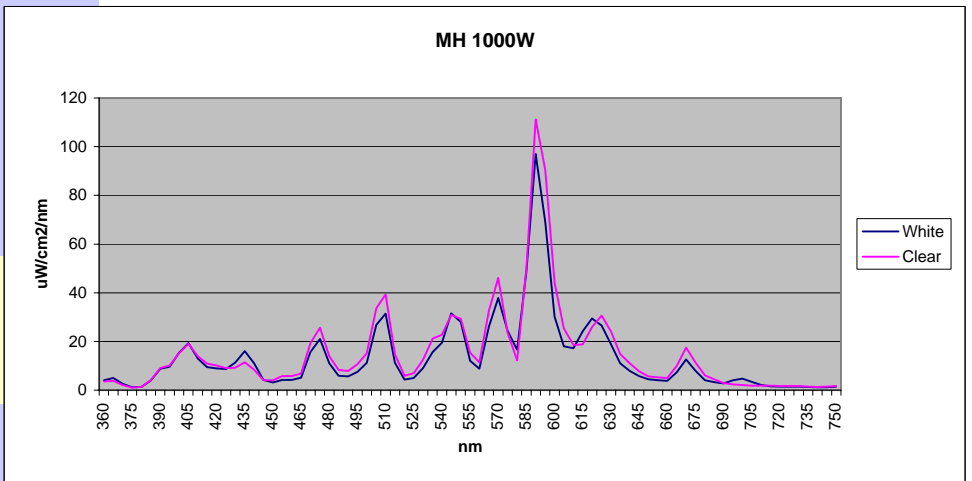
Observer: CIE 1931 2 Degree

CCT = 3096 K

X = 27.3379
Y = 25.7790
Z = 9.9616(x y) = 0.4334 0.4087
(u' v') = 0.2463 0.5227**Radiometric Data**Integrated Irradiance = 5186.26 uW/cm²
Peak Wavelength = 590 nm
Peak Irradiance = 96.9499 uW/cm²/nm**McMahan Research Lab. Inc. LIGHTSPEX Report**Measurement: <MEASUREMENT>
Instrument: LIGHTSPEX
Version: V3.10
Serial Number: MRL-00290
DATE: 05/06/06
TIME: 12:33:20
Calibration: -A-
Range: 1
Integration Time(ms): 31**Photometric Data**Illuminance = 30.08 W/m²
= 1909.46 fc
= 20545.81 lux**Colorimetric Data**

Observer: CIE 1931 2 Degree

CCT = 3133 K

X = 31.3722
Y = 30.0270
Z = 10.7859(x y) = 0.4346 0.4160
(u' v') = 0.2441 0.5256**Radiometric Data**Integrated Irradiance = 5954.74 uW/cm²
Peak Wavelength = 590 nm
Peak Irradiance = 111.2098 uW/cm²/nm

Test Platform - MH 1000W White - 30 min**Test Platform - MH 1000W Clear - 30 min****Spectral Data**

Irradiance (uW/cm2/nm):

360	4.12
365	5
370	2.67
375	1.13
380	1.25
385	3.95
390	8.77
395	9.61
400	15.26
405	19.32
410	13.02
415	9.44
420	8.93
425	8.71
430	11.26
435	16.1
440	11.09
445	4.16
450	3.17
455	4.22
460	4.17
465	5.13
470	15.61
475	21.08
480	11.01
485	5.91
490	5.62
495	7.51
500	11.14
505	26.82
510	31.38
515	11.36
520	4.33
525	5.05
530	9.1
535	15.62
540	19.5
545	31.58
550	27.95
555	12.1
560	8.77
565	26.17
570	37.81
575	24.46
580	16.5
585	48.74
590	96.95
595	68.99
600	30.18
605	18.07
610	17.18
615	24.12
620	29.44
625	26.58
630	18.87
635	11.05
640	7.95
645	5.74
650	4.49
655	4.12
660	3.78
665	7.38
670	12.66
675	8.07
680	4.13
685	3.28
690	2.75
695	4.01
700	4.75
705	3.47
710	2.05
715	1.58
720	1.48
725	1.5
730	1.48
735	1.31
740	1.18
745	1.23
750	1.44

Spectral Data

Irradiance (uW/cm2/nm):

360	3.55
365	3.82
370	2.11
375	1.11
380	1.29
385	4.01
390	9.07
395	10.16
400	15.18
405	19.09
410	13.88
415	10.94
420	10.16
425	9.02
430	9.21
435	11.44
440	8.35
445	4.1
450	4.08
455	5.82
460	5.76
465	6.79
470	19.28
475	25.61
480	13.97
485	8.24
490	7.87
495	10.65
500	15.17
505	33.64
510	39.26
515	14.75
520	5.96
525	6.91
530	12.45
535	21.1
540	22.78
545	30.92
550	29.31
555	15.33
560	11.43
565	32.67
570	46.07
575	23.65
580	12.18
585	50.14
590	111.2
595	90.35
600	44.22
605	25.4
610	18.58
615	18.77
620	25.83
625	30.57
630	24.18
635	14.88
640	11.05
645	7.75
650	5.7
655	5.29
660	5.03
665	10.04
670	17.49
675	11.42
680	6
685	4.52
690	2.86
695	2.34
700	2.06
705	1.84
710	1.85
715	1.88
720	1.75
725	1.73
730	1.68
735	1.48
740	1.36
745	1.43
750	1.74

C&C MH 1000W

Pin=991.4W 991.4 W
 Qin=1033VA 1033 VA
 Vin=234V 240 V
 Iin=4.386 4.4 A
 PF=0.963 0.963

Sylvania 1000W HPS new

Test Platform - MH 1000W Clear - 30 min

Pin=978 W 978 W
 Qin= 987 VA
 Vin=240 Vac 240 V
 Iin=4 A 4 A
 PF=0.999 0.998

Bulb - Sylvania - 1000W MH

McMahan Research Lab., Inc. LIGHTSPEX Report

Measurement: <MEASUREMENT>
 Instrument: LIGHTSPEX
 Version: V3.10
 Serial Number: MRL-00290
 DATE: 02/12/06
 TIME: 15:51:04
 Calibration: -A-
 Range: 2
 Integration Time(ms): 63

Photometric Data

Illuminance = 25.07 W/m²
 = 1591.24 fc
 = 17121.73 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

CCT = 2056 K

X = 31.3952
 Y = 25.0549
 Z = 3.6195

(x,y) = 0.5226 0.4171
 (u',v') = 0.3004 0.5394

Radiometric Data

Integrated Irradiance = 4420.87 uW/cm²
 Peak Wavelength = 595 nm
 Peak Irradiance = 73.6295 uW/cm²/nm

McMahan Research Lab., Inc. LIGHTSPEX Report

Measurement: <MEASUREMENT>
 Instrument: LIGHTSPEX
 Version: V3.10
 Serial Number: MRL-00290
 DATE: 05/06/06
 TIME: 12:33:20
 Calibration: -A-
 Range: 1
 Integration Time(ms): 31

Photometric Data

Illuminance = 30.08 W/m²
 = 1909.46 fc
 = 20545.81 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

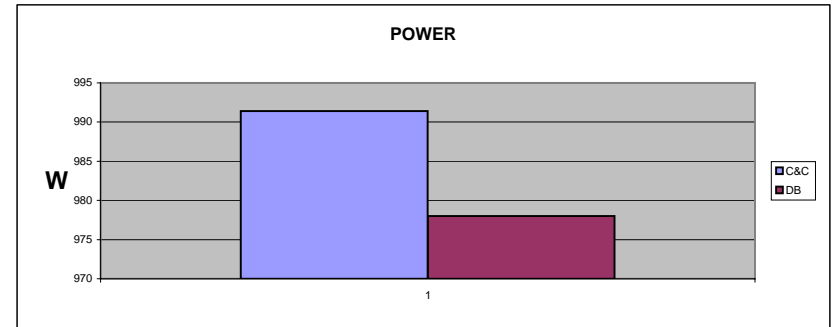
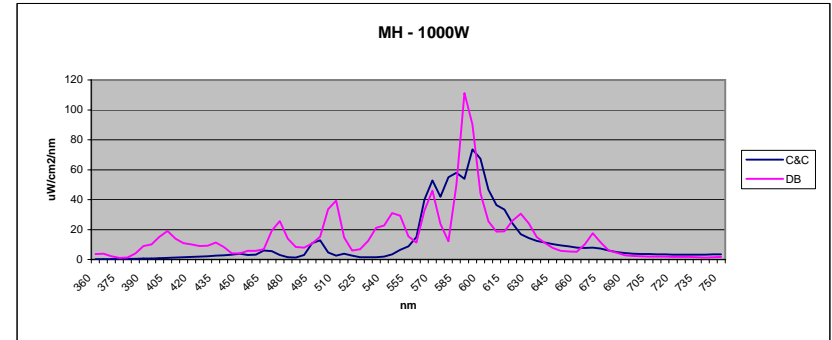
CCT = 3133 K

X = 31.3722
 Y = 30.0270
 Z = 10.7859

(x y) = 0.4346 0.4160
 (u' v') = 0.2441 0.5256

Radiometric Data

Integrated Irradiance = 5954.74 uW/cm²
 Peak Wavelength = 590 nm
 Peak Irradiance = 111.2098 uW/cm²/nm



Spectral Data

Irradiance (uW/cm2/nm):

360	0.21
365	0.26
370	0.32
375	0.38
380	0.45
385	0.52
390	0.61
395	0.69
400	0.84
405	1.05
410	1.24
415	1.45
420	1.69
425	1.93
430	2.24
435	2.65
440	2.74
445	3.11
450	3.77
455	2.98
460	3.19
465	5.92
470	5.62
475	2.89
480	1.47
485	1.21
490	3.1
495	10.95
500	12.86
505	4.66
510	2.57
515	3.75
520	2.54
525	1.47
530	1.48
535	1.59
540	1.96
545	3.44
550	6.34
555	8.76
560	14.87
565	40.05
570	52.84
575	41.96
580	55.04
585	57.9
590	53.85
595	73.62
600	67.37
605	46.62
610	36.35
615	33.29
620	24.16
625	16.82
630	14.35
635	12.35
640	11.32
645	10.24
650	9.33
655	8.67
660	8.01
665	7.78
670	7.91
675	7.32
680	6.04
685	4.9
690	4.23
695	3.89
700	3.69
705	3.58
710	3.48
715	3.36
720	3.3
725	3.28
730	3.26
735	3.29
740	3.31
745	3.39
750	3.51

Spectral Data

Irradiance (uW/cm2/nm):

360	3.55
365	3.82
370	2.11
375	1.11
380	1.29
385	4.01
390	9.07
395	10.16
400	15.18
405	19.09
410	13.88
415	10.94
420	10.16
425	9.02
430	9.21
435	11.44
440	8.35
445	4.1
450	4.08
455	5.82
460	5.76
465	6.79
470	19.28
475	25.61
480	13.97
485	8.24
490	7.87
495	10.65
500	15.17
505	33.64
510	39.26
515	14.75
520	5.96
525	6.91
530	12.45
535	21.1
540	22.78
545	30.92
550	29.31
555	15.33
560	11.43
565	32.67
570	46.07
575	23.65
580	12.18
585	50.14
590	111.2
595	90.35
600	44.22
605	25.4
610	18.58
615	18.77
620	25.83
625	30.57
630	24.18
635	14.88
640	11.05
645	7.75
650	5.7
655	5.29
660	5.03
665	10.04
670	17.49
675	11.42
680	6
685	4.52
690	2.86
695	2.34
700	2.06
705	1.84
710	1.85
715	1.88
720	1.75
725	1.73
730	1.68
735	1.48
740	1.36
745	1.43
750	1.74

Test Platform HPS 1000W

Pin=865W
Vin=230
Iin=3.795
PF=0.998

Philips 1000W HPS

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DATE: 02/12/06
TIME: 15:28:58
Calibration: -A-
Range: 2
Integration Time(ms): 63

Photometric Data

Illuminance = 24.41 W/m²
= 1549.65 fc
= 16674.18 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

CCT = 2035 K

X = 30.6068
Y = 24.4023
Z = 2.9420

(x,y) = 0.5281 0.4211
(u',v') = 0.3019 0.5416

Radiometric Data

Integrated Irradiance = 4034.54 uW/cm²
Peak Wavelength = 595 nm
Peak Irradiance = 86.2545 uW/cm²/nm

Test Platform - MH 1000W Clear

Pin=978 W
Vin=240 Vac
Iin=4 A
PF=0.999

Bulb - Sylvania - 1000W MH

V3.10 McMahan Research Lab., Inc. LIGHTSPEX Report

Measurement: <MEASUREMENT>
Instrument: LIGHTSPEX
Version: V3.10
Serial Number: MRL-00290
DATE: 05/06/06
TIME: 12:33:20
Calibration: -A-
Range: 1
Integration Time(ms): 31

Photometric Data

Illuminance = 30.08 W/m²
= 1909.46 fc
= 20545.81 lux

Colorimetric Data

Observer: CIE 1931 2 Degree

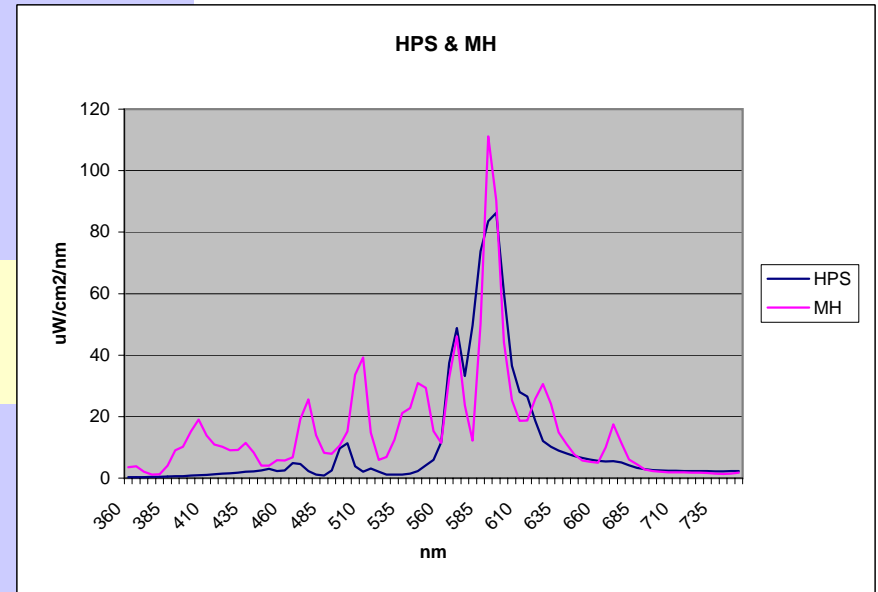
CCT = 3133 K

X = 31.3722
Y = 30.0270
Z = 10.7859

(x, y) = 0.4346 0.4160
(u', v') = 0.2441 0.5256

Radiometric Data

Integrated Irradiance = 5954.74 uW/cm²
Peak Wavelength = 590 nm
Peak Irradiance = 111.2098 uW/cm²/nm



Test Platform HPS 1000W**Test Platform - MH 1000W Clear****Spectral Data**

Irradiance (uW/cm2/nm):

360	0.28
365	0.32
370	0.36
375	0.41
380	0.46
385	0.53
390	0.6
395	0.66
400	0.79
405	0.94
410	1.09
415	1.25
420	1.43
425	1.59
430	1.8
435	2.11
440	2.18
445	2.49
450	3.05
455	2.3
460	2.47
465	4.9
470	4.58
475	2.25
480	1.12
485	0.87
490	2.47
495	9.69
500	11.39
505	3.84
510	2.09
515	3.17
520	2.07
525	1.11
530	1.12
535	1.19
540	1.42
545	2.34
550	4.16
555	5.9
560	11.64
565	37.42
570	48.86
575	33.25
580	49.65
585	73.82
590	83.56
595	86.25
600	60.38
605	36.51
610	27.96
615	26.59
620	18.63
625	12.12
630	10.24
635	8.99
640	8.01
645	7.21
650	6.55
655	6.07
660	5.6
665	5.42
670	5.5
675	5.06
680	4.16
685	3.36
690	2.9
695	2.65
700	2.5
705	2.43
710	2.36
715	2.29
720	2.25
725	2.25
730	2.24
735	2.23
740	2.22
745	2.27
750	2.33

Spectral Data

Irradiance (uW/cm2/nm):

360	3.55
365	3.82
370	2.11
375	1.11
380	1.29
385	4.01
390	9.07
395	10.16
400	15.18
405	19.09
410	13.88
415	10.94
420	10.16
425	9.02
430	9.21
435	11.44
440	8.35
445	4.1
450	4.08
455	5.82
460	5.76
465	6.79
470	19.28
475	25.61
480	13.97
485	8.24
490	7.87
495	10.65
500	15.17
505	33.64
510	39.26
515	14.75
520	5.96
525	6.91
530	12.45
535	21.1
540	22.78
545	30.92
550	29.31
555	15.33
560	11.43
565	32.67
570	46.07
575	23.65
580	12.18
585	50.14
590	111.2
595	90.35
600	44.22
605	25.4
610	18.58
615	18.77
620	25.83
625	30.57
630	24.18
635	14.88
640	11.05
645	7.75
650	5.7
655	5.29
660	5.03
665	10.04
670	17.49
675	11.42
680	6
685	4.52
690	2.86
695	2.34
700	2.06
705	1.84
710	1.85
715	1.88
720	1.75
725	1.73
730	1.68
735	1.48
740	1.36
745	1.43
750	1.74