

Customer:

date: 02.10.2025

Harman Professional Denmark ApS.  
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Project No.: 25000137-4

Inspection Order: Colorimetric measurement according DIN EN 13032-4:2015

- Evaluation of Colour Temperature [CCT]
- Evaluation of Colour Rendering [CRI]

Measurement Procedure: - Measurement with Doublemonochromator 300-800nm

Test sample Specification:

Luminaire: LED fixture for stage and studio, direct beam

Description: MAC Encore Two - medium beam

Serial No.: 15000000014

DMX Settings:      dimmer: 65535  
                         zoom: 22528  
                         focus: 30080  
                         fans: Regulated High

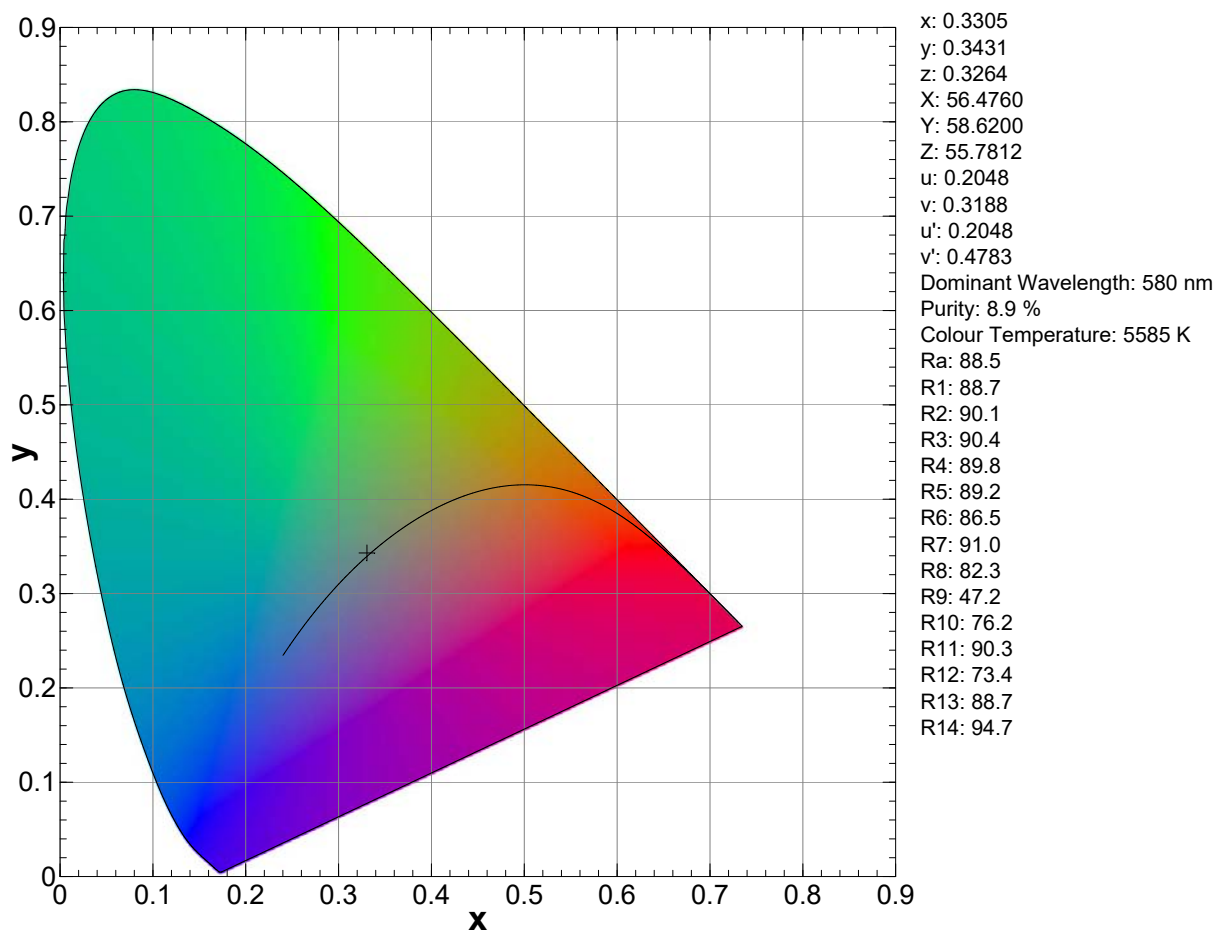
Test Conditions:

Stabilisation Time: 30 min.  
 Operating Voltage: 230 V AC (const. <0.1%)  
 Ambient Temperature: 25 ° C ± 1°C

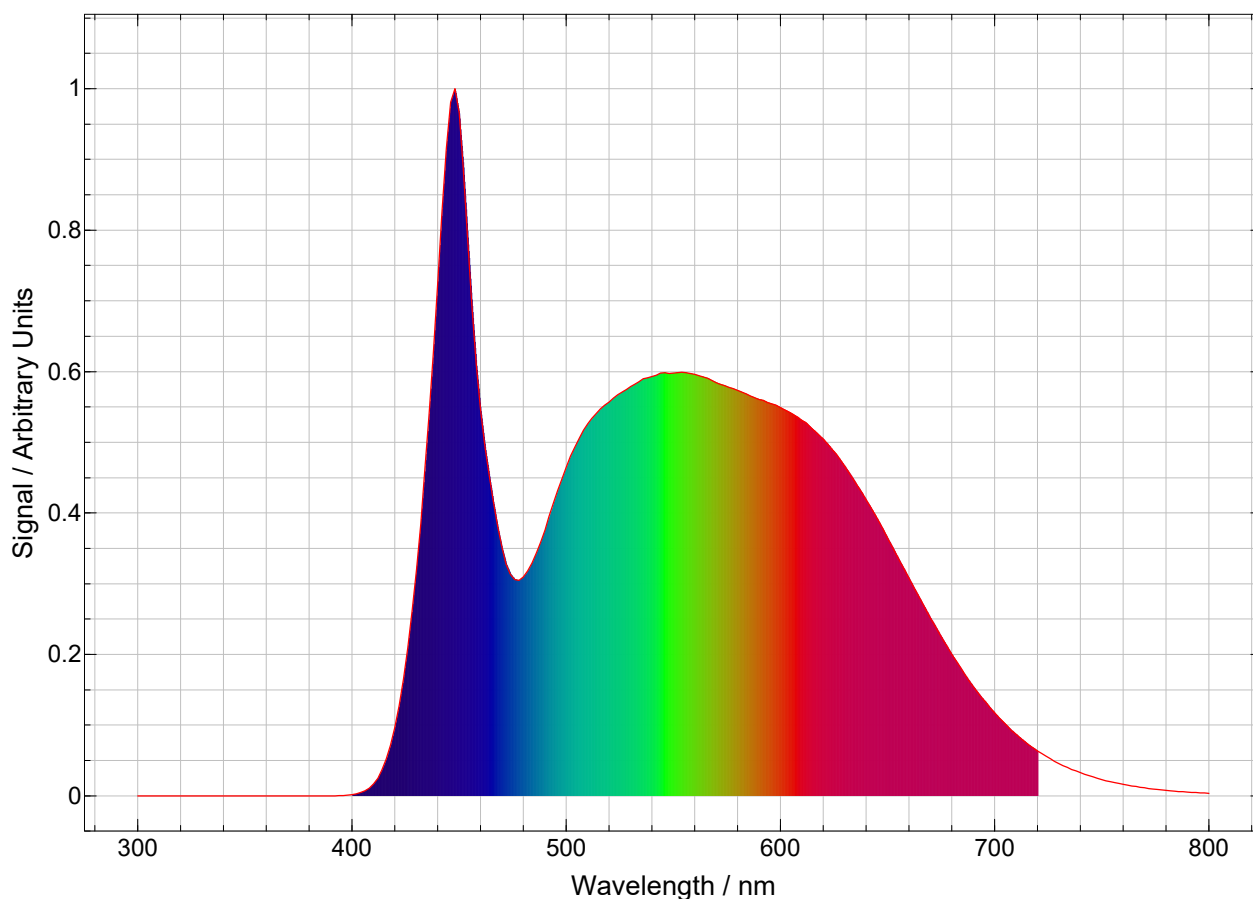
Colorimetric Data:

Color Temp. CCT [K]	x- Coordinate	y- Coordinate	$\Delta uv$	CRI / Ra
5585	0,3305	0,3431	0,0019	88,5

TM 30 Rf	TM 30 Rg	TLCI	CQS
88	100	87	88

Colour Temperature at CIE - Colour Triangle:

Spectral Light Distribution:



The company ILUmetriX insures that all statements are made by the best of knowledge, according to European standards.

Meschede, 02.10.2025

*F. Siepe*

F. Siepe (Management Board)



Annex: page 4 Test Sample  
page 5 Test Equipment

Testsample:

Dimensions [L x W x H]: 430 x 270 x 760 mm



*Test Equipment Spectrometry - ILUmetriX GmbH*

**IDR 300-PSL Spectroradiometer System, Bentham Instruments Ltd. UK**

Monochromator configuration: Symmetric, Single Czerny-Turner  
Monochromator focal length: Single 300mm, double 600mm  
Bandwidth: Software controlled motorised slit  
Number of gratings: 1-3 mounted on turret

Resolution:		<b>Single</b>	<b>Double</b>
	2400g/mm	-	0,075 nm
	1200g/mm	0,3 nm	0,15 nm
	400g/mm	0,9 nm	0,45 nm
Dispersion:	2400g/mm	-	0,68 nm/mm
	1200g/mm	2,7 nm/mm	1,35 nm/mm
	400g/mm	8,1 nm/mm	4,05 nm/mm
Wavelength accuracy:	2400g/mm	-	±0,1 nm
	1200g/mm	±0,2 nm	±0,2 nm
	400g/mm	±0,6 nm	±0,6 Nm

**Detection Electronics**

Current amplifier: Six decade trans-impedance amplifier  
Gain ranges:  $10^{10} - 10^5$  V/A  
Analogue digital converter: 100ms Integration

**Input Optics**

Light Transport: Flexible quartz fibre bundle, 200 - 1400 nm  
Diffuser cosine response:  $f^2$  error <1% 200 - 1100 nm  
Sphere cosine response:  $f^2$  error <5% 200 - 3000 nm  
Telescope, fields of view: 1.7 + 11 mrad  
Tel- measurement range: 200mm to 50m

**Calibration Standards**

Irradiance: CL6 Irradiance Standard  
Serial No: 13449/1  
Radiance: SRS12 Radiance Standard  
Serial No: 13559/1  
Traceability: NPL, UK

**BTS256-EF Lux- and Luminous Color Lightmeter, Gigahertz-Optik GmbH**

Serial No.: 50491