Test Report IESNA LM79 - 2008

Photometric testing and evaluation in accordance with LM79-2008

Report prepared for:	R. STAHL Schaltgeräte GmbH Nordstraße 10 99427 Weimar / Germany
Report number:	LM79-20181101-1010834 / 01

Sample tested:	6050/604 80W
Manufacturer:	R. STAHL Schaltgeräte GmbH

Testing laboratory:	ILEXA GbR Werner-von-Siemens-Straße 4a 98693 Ilmenau / Germany Tel.: (+49) 3677 / 466 33 0 Fax: (+49) 3677 / 466 33 14 Internet: www.ilexa.de

Testing location:	Ilmenau University of Technology Group of Lighting Engineering Prof.-Schmidt-Str. 26 98693 Ilmenau / Germany

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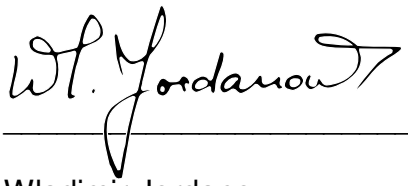
General information



Wladimir Jordanow
ILEXA GbR president

1. Description of test sample

1.1. General information

Sample received:	2018-10-24
Manufacturer:	R. STAHL Schaltgeräte GmbH Nordstraße 10 99427 Weimar / Germany
Model number:	6050/604-801-xxx-000850-000
Model type:	Luminaire
Diameter / Height:	340 mm / 195 mm

1.2. Manufacturer specifications

Rated voltage [V]:	230.0 AC
Rated current [A]:	-/-
Rated frequency [Hz]:	50.0
Rated power [W]:	80.0

1.3. Pictures

Figure 1: Luminaire as measured

2. Scope of testing

Photometric and electrical testing in accordance with IESNA LM 79-2008 IES (Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products).
All measurements are made using the goniophotometer / spectroradiometer test method.

Date of test:	2018-11-01
Report and test prepared by:	Kranhold / ILEXA GbR

3. Test equipment list

Testing is performed in accordance with the procedures outlined in IESNA LM79-2008.
The sample is evaluated for photometric and electrical characteristics using a goniophotometer, located in an temperature - controlled, draft free photometric laboratory.

Item	Manufacturer	Model	Calibration due
Goniophotometer	TechnoTeam	RiGo801	yearly
Spectroradiometer	Jeti	specbos 1211	yearly
Power Supply	Statron	Typ 1201	N/A
Digital Power Meter	Yokogawa	WT110	N/A

Table 3.1: Test instrumentation

4. Additional information

(none)

5. Test results

The results were obtained after stabilization of the sample in accordance with the requirements set forth in section 5.0 of IES LM79-2008.

	Goniophotometer	Spectroradiometer
Total luminous flux [lm]	8772.6	-
Luminous efficacy [lm/W]	112.9	-
Correlated color temperature (CCT) [K]	-	5117
Color rendering index (CRI - R_a)	-	82.9
Chromaticity (x / y)	-	0.3422 / 0.3527

Table 5.1: Photometric results

Input power [W]	77.7
Input voltage [V]	230.1 AC
Input current [A]	0.3483
Input frequency [Hz]	50.0

Table 5.2: Electrical results

Orientation (burning position) during test	horizontal
Prior operation time [minutes]	40
Stabilization time [minutes]	50
Total operating time [minutes]	>180
Ambient temperature [°C]	25 ± 1

Table 5.3: Additional Parameters

6. Results goniophotometer

6.1. Illuminance plots

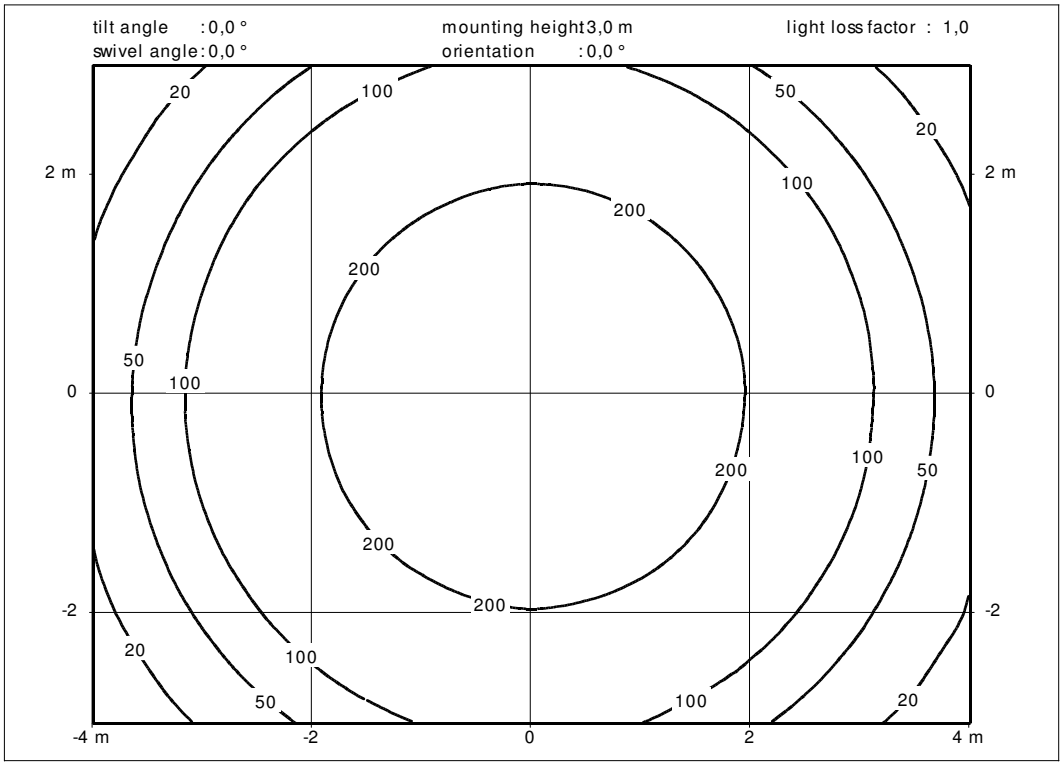


Figure 2: Isolux diagram (mounting height 3m)

6.2. Candela plots

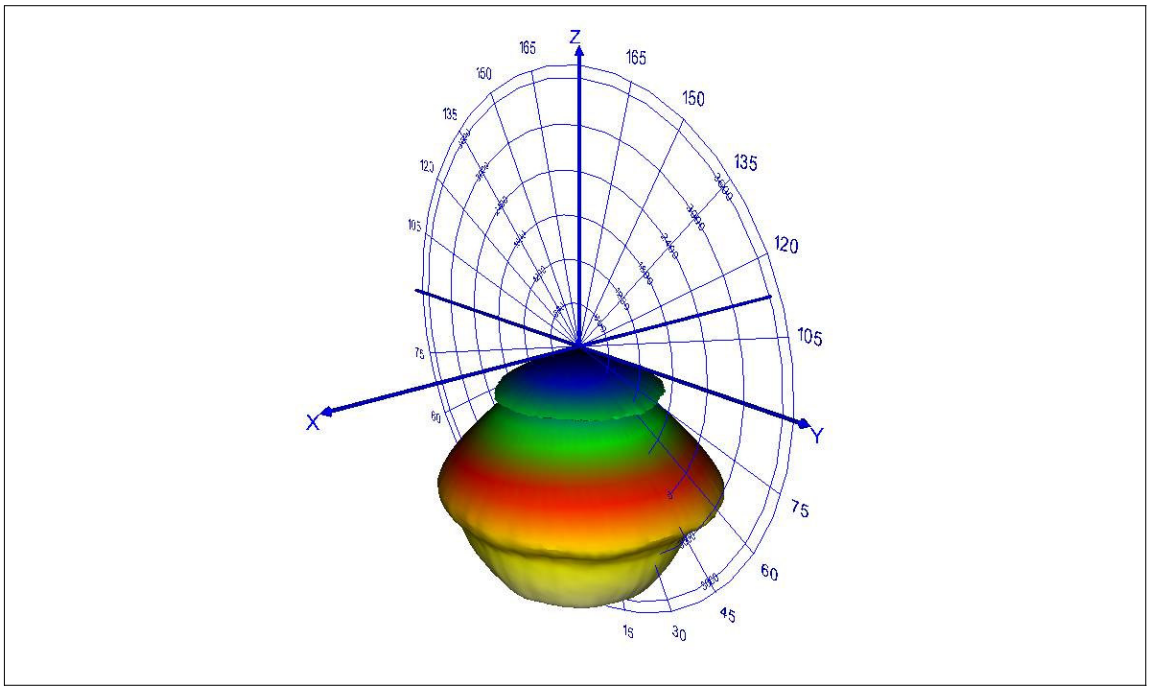


Figure 3: 3D - luminous intensity distribution

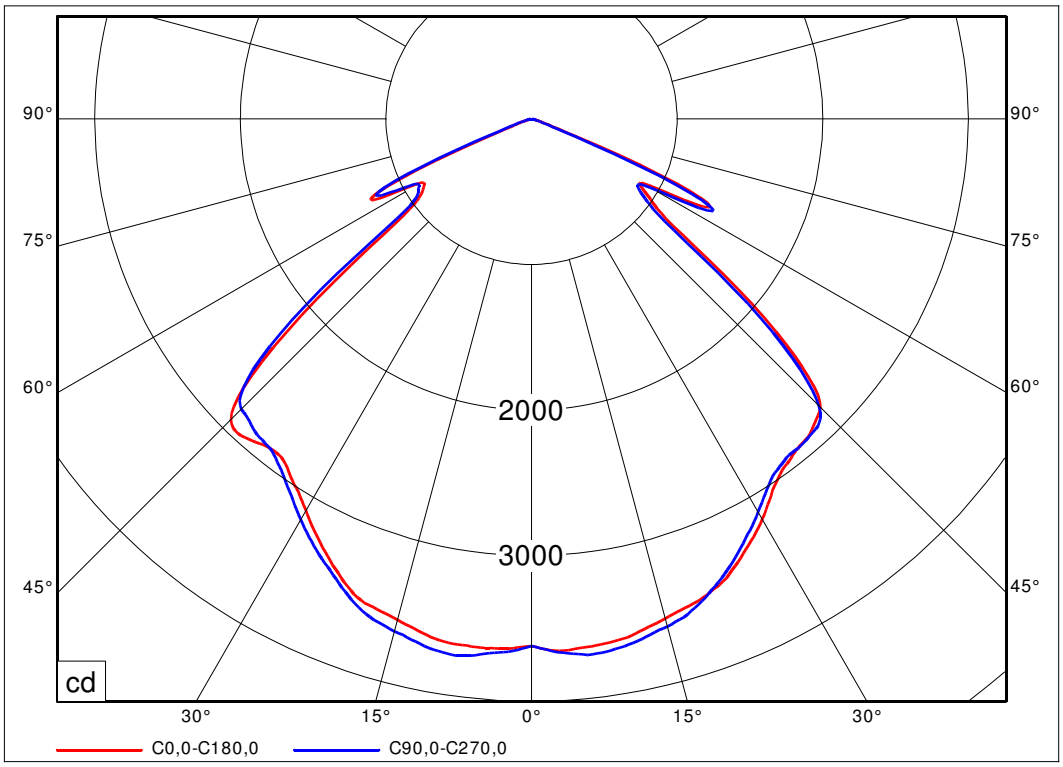


Figure 4: Polar candela distribution

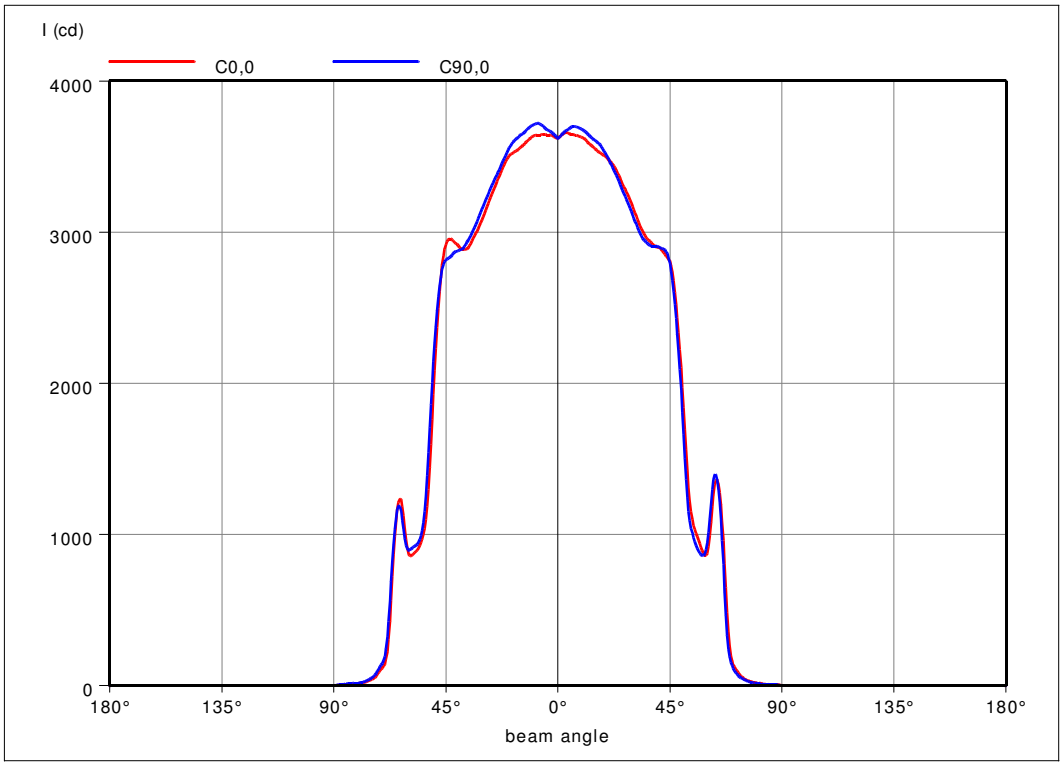


Figure 5: Cartesian candela distribution

7. Results spectroradiometer

7.1. Relative spectral distribution

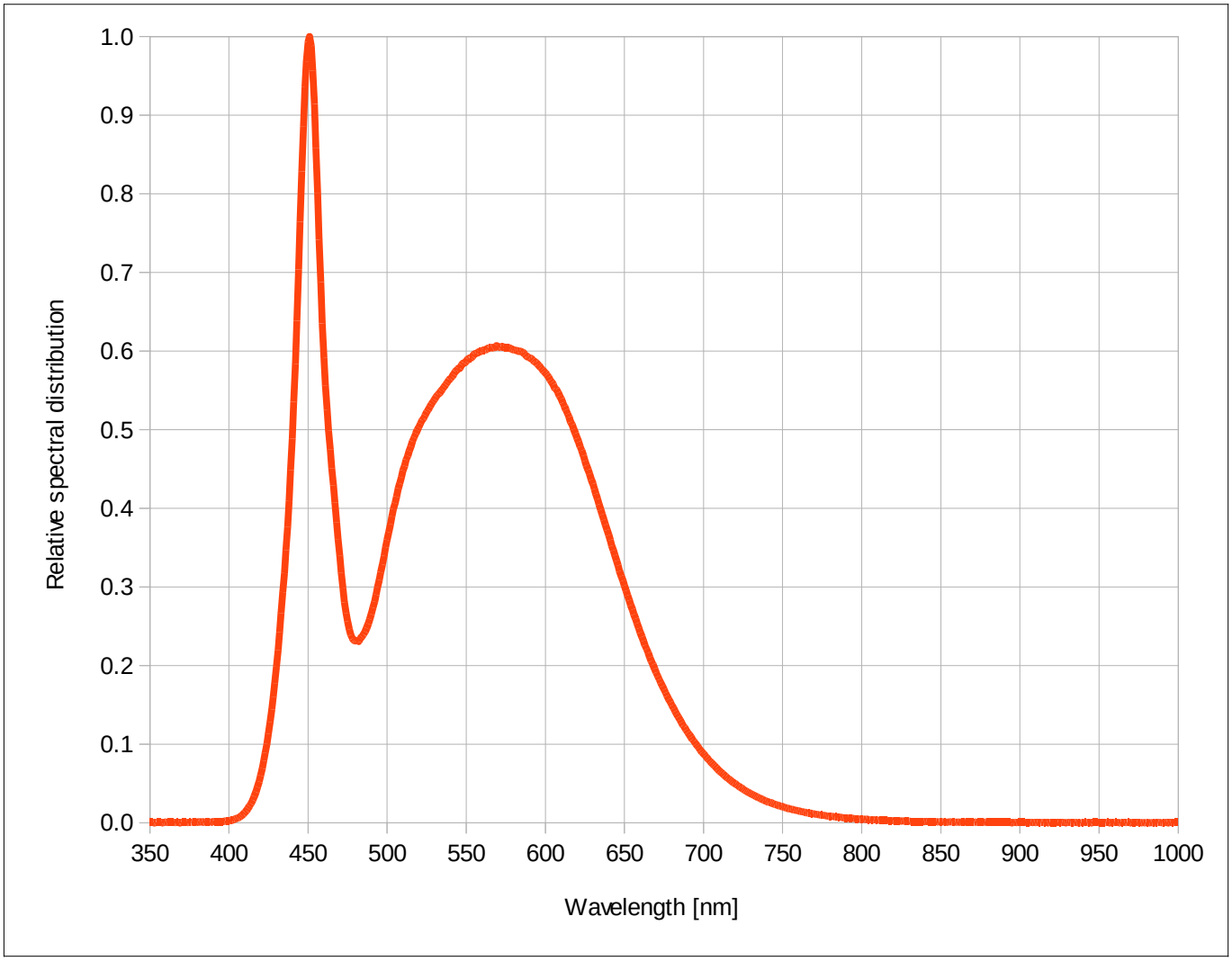


Figure 6: Relative spectral distribution

7.2. Chromaticity diagram

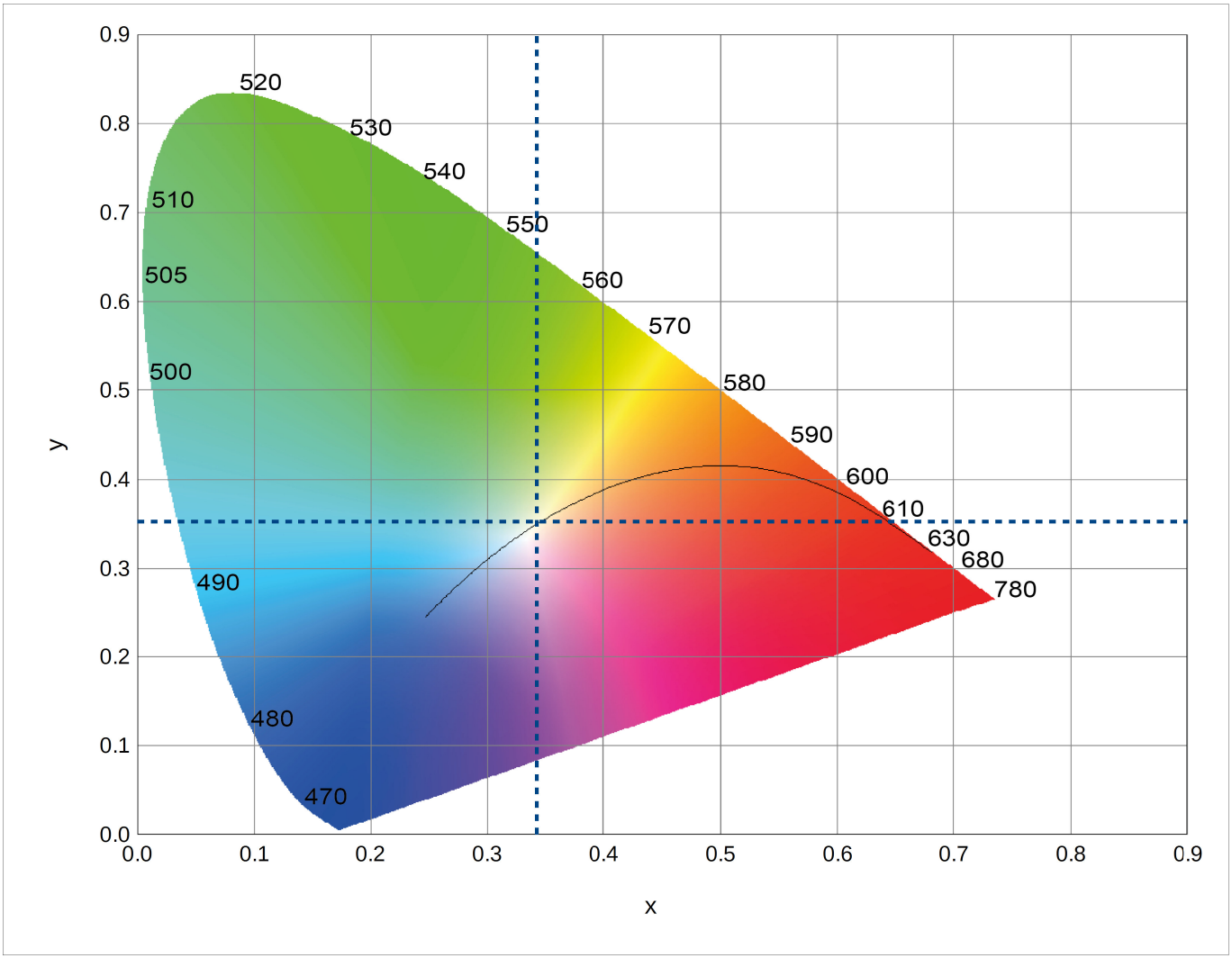


Figure 7: Chromaticity diagram

Tristimulus Value	
x	0.3422
y	0.3527

Table 7.1: Chromaticity coordinates

The location of the tristimulus coordinates is indicated by the blue cross on the diagram.

7.3. Color calculation

color sample	CRI	color sample	CRI
R1	81.6	R9	14.0
R2	86.9	R10	68.3
R3	90.1	R11	82.1
R4	83.3	R12	61.2
R5	82.0	R13	82.7
R6	81.5	R14	94.5
R7	87.5	R15	77.0
R8	70.2		
Ra	**82.9**	**CCT**	**5117 K**

Table 7.2: Color calculation – CRI R1-R15, R_a and correlated color temperature