

## LED Flux measurement

FORM-L-41 ED1 REV 3

Date : **07-11-19**

Operator : **FCE**



Filename : **2019\_813.xml**

**226-TEST**

**NBN EN ISO/IEC 17025 :2017**

### LEDs

Trademark : **Samsung**

Entry number : **39P055-1**

Type : **LH351C**

Power (Catalogue ) : **0,00** W

BIN Description : **RB**

Flux : **0** lm/LED

Part number : **Unknown**

Color or CCT (Theoretical) : **Neutral White**

Number of LEDs : **20**

### Lenses

Trademark : **None**

Type : **None**

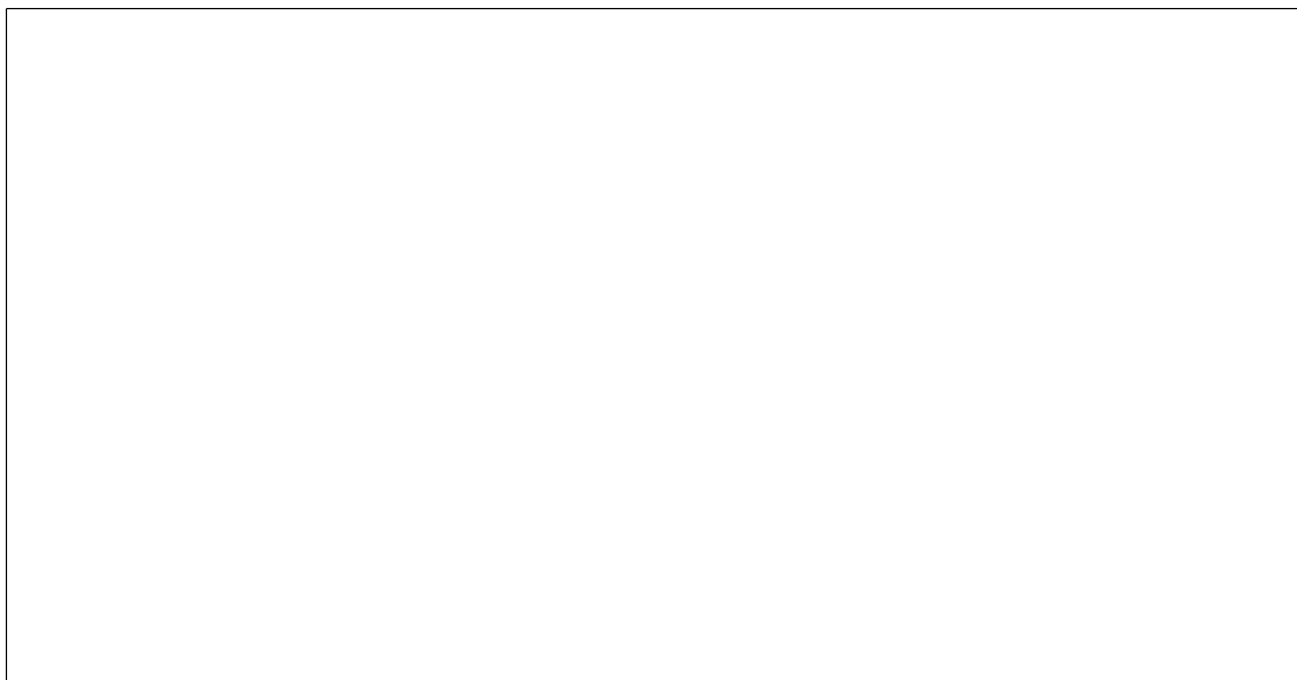
### Power & Print

Type : **DELTA SM400-AR-4**

Print description : **00-84-624 B - lensoflex4**

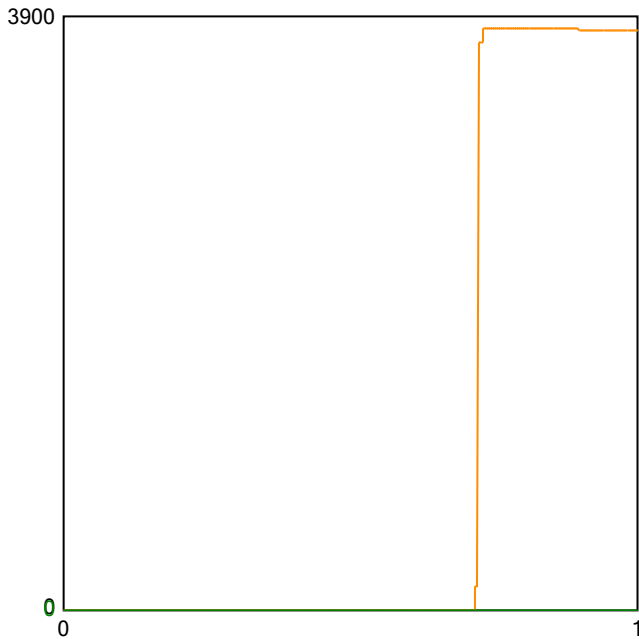
Active

### Picture



### Sphere photometric measurement

Maximum flux : **3831** lumens



### Operating condition

Position in sphere :



Ambient sphere T ° : **24,5**

### Electrical measurement

#### ● Secondary electrical measurement

Voltage : **56,48** V

Current : **0,350** A

Power : **19,74** Watt

→ LEDs light efficiency at 25° :

**194,1** lm/W

**191,6** lm/Led

#### ● Primary electrical measurement

Voltage : **N/A** V

Current : **N/A** A

Power : **N/A** Watt

Cos φ : **N/A**

→ Driver losses : **N/A** %

→ LEDS & Driver light efficiency :

**N/A** lm/W

Description :

Flux @25°/350mA - pcba lensoflex4 - 20 Samsung LH351C - RB 740 - pcba N°1

Comment :

FORM-L-41 ED1 REV 3



226-TEST

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LED 2019/813 2/3



226-TEST

NBN EN ISO/IEC 17025 :2017

### Colorimetry

File Preset Options Extra Calibration Info

Preset: **CRI**

Auto: ref: illuminant - Planckian radiator, CCT= 3927 K

Chromaticity difference DC= 1.3E-3

CRI color samples		JIS color sample	
R1=69.4	R8=48.3	R15=61.5	
R2=81.2	R9=36.6		
R3=90.7	R10=56.5		
R4=71.2	R11=67.9		
R5=70.2	R12=49.3		
R6=73.8	R13=71.7		
R7=79.1	R14=95.0		
		Re=63.27	(mean value of R1 - R15)

Auto: ref: illuminant - Planckian radiator, CCT= 3927 K

Transfer data to table  auto

Luminance  $L_v$  6.259E+2  $\frac{cd}{m^2}$

Radiance  $L_e$  1.787E+0  $\frac{W}{sr \cdot m^2}$

Corr. Color Temp CCT 3928 K

Chromaticity x 0.3828 y 0.3758

Chromaticity u' 0.2271 v' 0.5015

**QUIT**

Target

Calibration File: #1 no accessory

Measurement Mode: Radiance

Weighting Function: None

Average: 1

Cont: 50

Hold Integration Time

Quick mode

**Measurement**

## LED Flux measurement

FORM-L-41 ED1 REV 3

Date : **07-11-19**

Operator : **FCE**

Filename : **2019\_814.xml**



**226-TEST**

**NBN EN ISO/IEC 17025 :2017**

### LEDs

Trademark : **Samsung**

Entry number : **39P055-2**

Type : **LH351C**

Power (Catalogue) : **0,00** W

BIN Description : **RB**

Flux : **0** lm/LED

Part number : **Unknown**

Color or CCT (Theoretical) : **Neutral White**

Number of LEDs : **20**

### Lenses

Trademark : **None**

Type : **None**

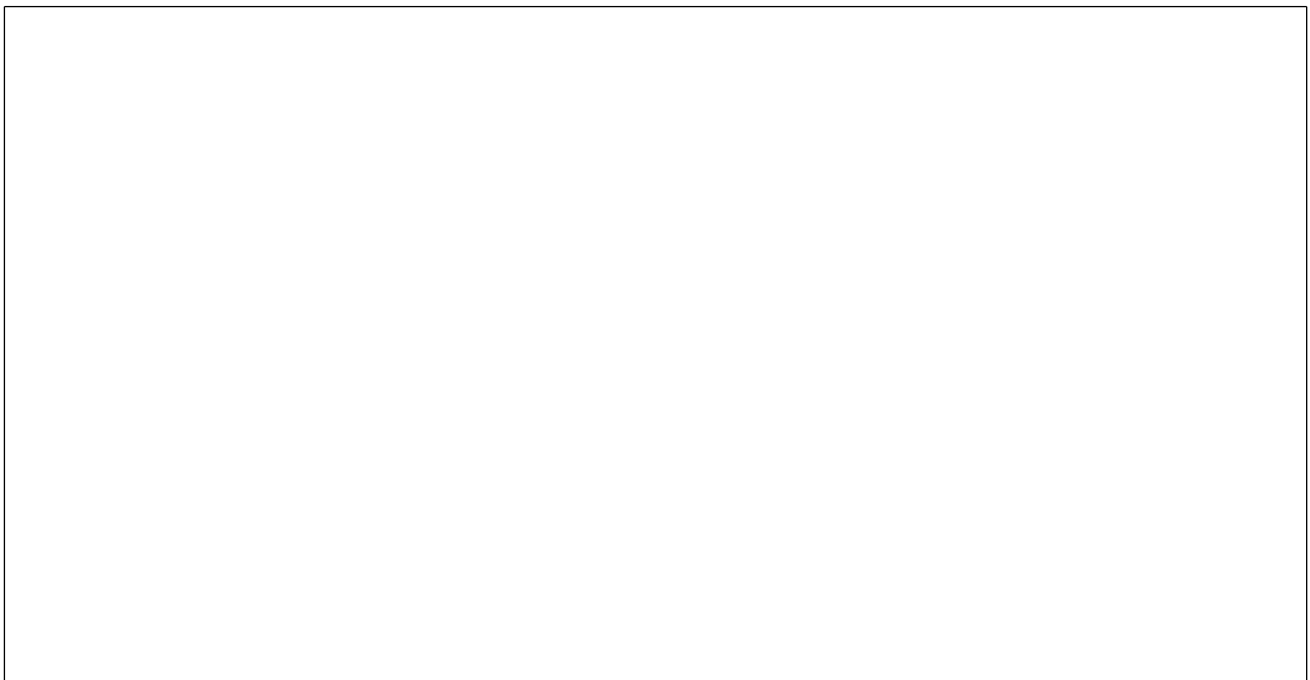
### Power & Print

Type : **DELTA SM400-AR-4**

Print description : **00-84-624 B - lensoflex4**

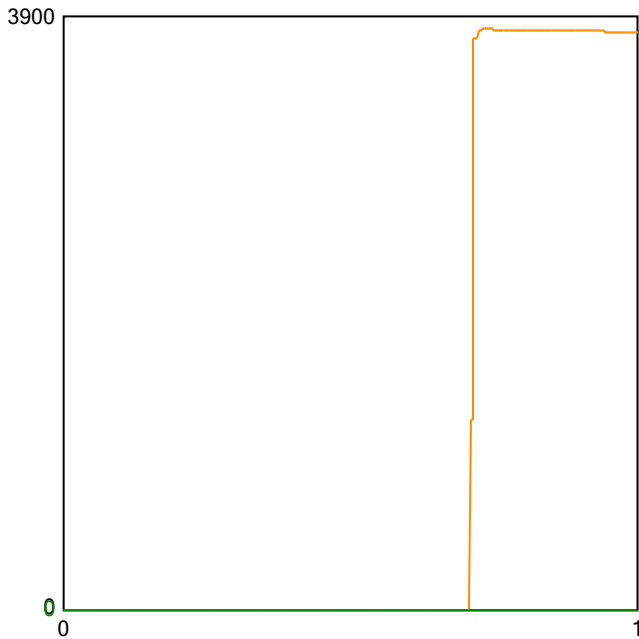
Active

### Picture



### Sphere photometric measurement

Maximum flux : **3822** lumens



#### Operating condition

Position in sphere :



Ambient sphere T ° : **24,5**

### Electrical measurement

#### ● Secondary electrical measurement

Voltage : **56,42** V

Current : **0,350** A

Power : **19,71** Watt

→ LEDs light efficiency at 25° :

**193,9** lm/W

**191,1** lm/Led

#### ● Primary electrical measurement

Voltage : **N/A** V

Current : **N/A** A

Power : **N/A** Watt

Cos φ : **N/A**

→ Driver losses : **N/A** %

→ LEDS & Driver light efficiency :

**N/A** lm/W

Description :

Flux @25°/350mA - pcba lensoflex4 - 20 Samsung LH351C - RB 740 - pcba N°2

Comment :

FORM-L-41 ED1 REV 3



226-TEST

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LED 2019/814 2/3



226-TEST

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### Colorimetry

Auto: ref: illuminant - Planckian radiator CCT= 3932 K

Auto: ref: illuminant - Planckian radiator, CCT= 3932 K

Chromaticity difference DC= 9.1E-4

CRI color samples

R1=69.5	R8=48.3
R2=81.4	R9=36.6
R3=91.0	R10=56.9
R4=71.1	R11=67.7
R5=70.2	R12=49.3
R6=74.1	R13=71.8
R7=79.3	R14=95.1
	R15=61.5

JIS color sample

Auto: ref: illuminant - Planckian radiator, CCT= 3932 K

Chromaticity difference DC= 9.1E-4

JIS color sample

R1=69.5	R8=48.3
R2=81.4	R9=36.6
R3=91.0	R10=56.9
R4=71.1	R11=67.7
R5=70.2	R12=49.3
R6=74.1	R13=71.8
R7=79.3	R14=95.1
	R15=61.5

Mean value of R1 - R8) Ra= 73.09

Mean value of R1 - R15) Re= 63.37

File Preset Options Extra Calibration Info

Preset: CRI

Auto: ref: illuminant - Planckian radiator, CCT= 3932 K

Target

Calibration File: #1 no accessory

Measurement Mode: Radiance

Weighting Function: None

Average: 1

Cont: 50

Hold Integration Time: 5

Quick mode

Measurement

Transfer data to table

auto

Luminance  $L_v$  6.324E+2  $\frac{cd}{m^2}$

Radiance  $L_e$  1.805E+0  $\frac{W}{m^2 \cdot sr}$  (380-780nm)

Corr. Color Temp CCT 3932 K

Chromaticity x 0.3829 y 0.3766

Chromaticity u' 0.2268 v' 0.5019

QUIT

## LED Flux measurement

FORM-L-41 ED1 REV 3

Date : **07-11-19**

Operator : **FCE**

Filename : **2019\_815.xml**



**226-TEST**

**NBN EN ISO/IEC 17025 :2017**

### LEDs

Trademark : **Samsung**

Entry number : **39P055-3**

Type : **LH351C**

Power (Catalogue) : **0,00** W

BIN Description : **RB**

Flux : **0** lm/LED

Part number : **Unknown**

Color or CCT (Theoretical) : **Neutral White**

Number of LEDs : **20**

### Lenses

Trademark : **None**

Type : **None**

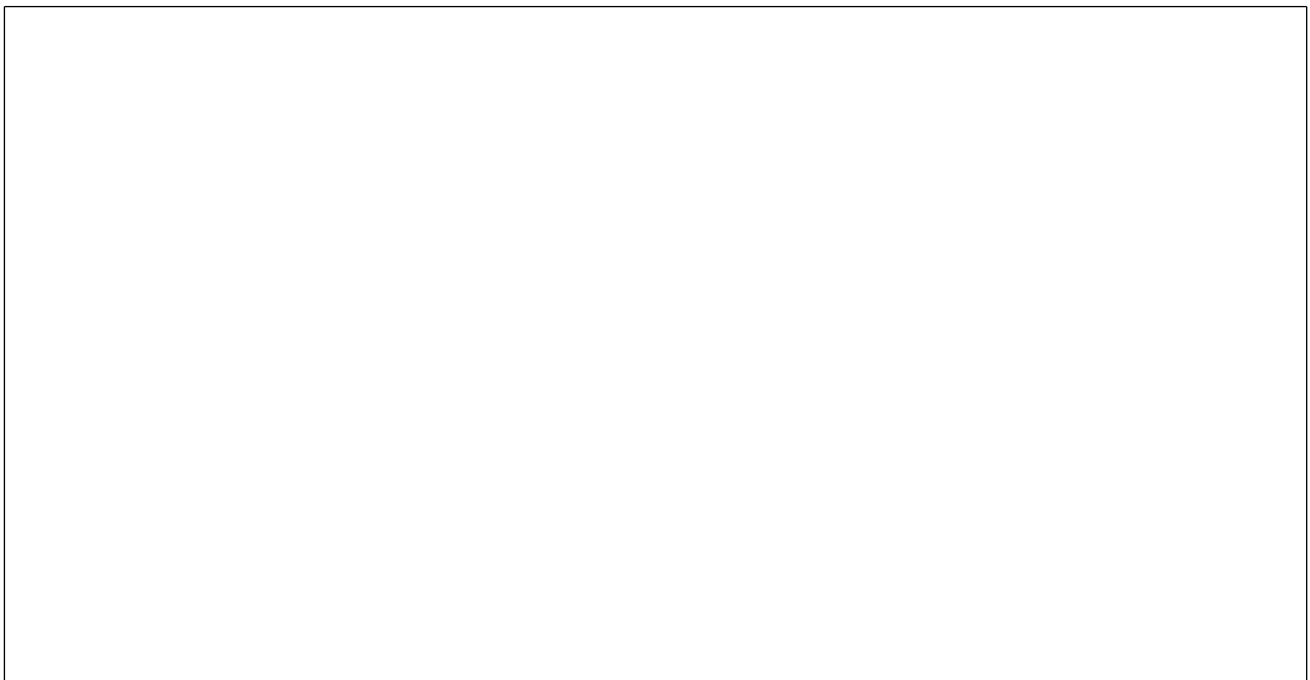
### Power & Print

Type : **DELTA SM400-AR-4**

Print description : **00-84-624 B - lensoflex4**

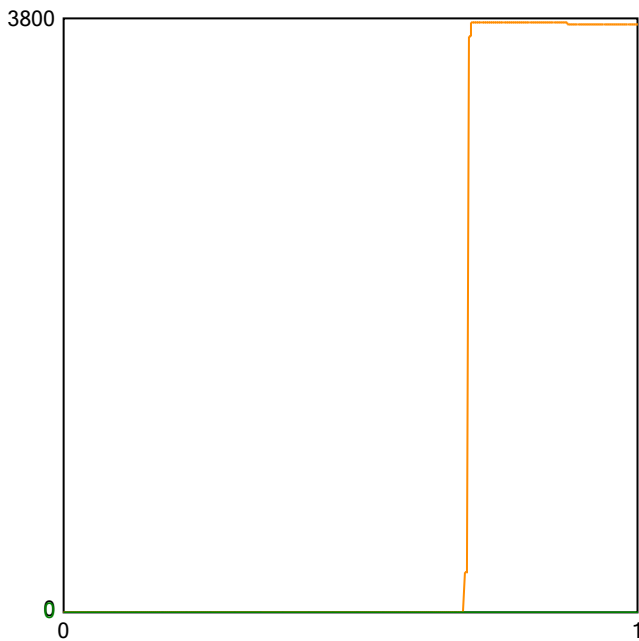
Active

### Picture



### Sphere photometric measurement

Maximum flux : **3785** lumens



### Operating condition

Position in sphere :



Ambient sphere T ° : **24,5**

### Electrical measurement

#### ● Secondary electrical measurement

Voltage : **56,33** V

Current : **0,350** A

Power : **19,68** Watt

→ LEDs light efficiency at 25° :

**192,4** lm/W

**189,2** lm/Led

#### ● Primary electrical measurement

Voltage : **N/A** V

Current : **N/A** A

Power : **N/A** Watt

Cos  $\varphi$  : **N/A**

→ Driver losses : **N/A** %

→ LEDS & Driver light efficiency :

**N/A** lm/W

Description :

Flux @25°/350mA - pcba lensoflex4 - 20 Samsung LH351C - RB 740 - pcba N°3

Comment :

FORM-L-41 ED1 REV 3



226-TEST

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LED 2019/815 2/3





226-TEST

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### Colorimetry

File Preset Options Extra Calibration Info

Preset: **CRI**

Auto: ref: illuminant - Planckian radiator, CCT= 3930 K

Sample #	Sample Name	Value
1	R1	69.4
2	R2	81.3
3	R3	91.0
4	R4	71.1
5	R5	70.1
6	R6	74.1
7	R7	79.3
8	R8	48.2
9	R9	36.9
10	R10	56.9
11	R11	67.7
12	R12	49.3
13	R13	71.7
14	R14	95.2
15	R15	61.3

Auto: ref: illuminant - Planckian radiator, CCT= 3930 K

Chromaticity difference DC= 7.9E-4

JIS color sample

Auto: ref: illuminant - Planckian radiator, CCT= 3930 K

Chromaticity difference DC= 7.9E-4

JIS color sample

Transfer data to table  auto

Luminance  $L_v$  6.249E+2  $\frac{cd}{m^2}$

Radiance  $L_e$  1.782E+0  $\frac{W}{sr \cdot m^2}$

Corr. Color Temp CCT 3930 K

Chromaticity  $x$  0.3831  $y$  0.3769

Chromaticity  $u'$  0.2268  $v'$  0.5020

Average  $\frac{1}{1}$  Cont.  $\frac{10}{5}$  Hold integration Time  Quick mode

Measurement

Calibration File: #1 no accessory

Measurement Mode: Radiance

Weighting Function: None

Target

QUIT

LED 2019/815 3/3