

MEASUREMENT REPORT NUMBER 2014-441/09.12.2014

testing samples of products

Model number or type, referring to the manufacturer: SMD LED HIGHBAY 50W, VT-9051

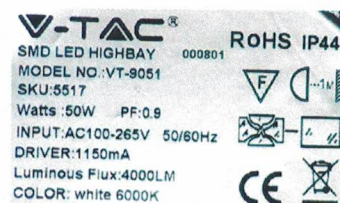
Company identification: V-TAC Europe Ltd., Sofia 1220, 1, Iliansko Shaussee Blvd.

Applicant testing: V-TAC Europe Ltd., Sofia 1220, 1, Iliansko Shaussee Blvd.

Type of test: control measurements

Measurements have been performed:

- luxmeter PU 550, ID 263621/2586, calibration certificate of the METRA BLANSKO a.s. №2887/2012, 19.12.2012;
- luxmeter KYORITSU 5202, ID K0017929, calibration certificate of the National Centre of Metrology 181-OI/15.12.2012;
- luminance-meter L 1003 of angular field 1°, producer "LMT" Germany, ID 0686191, calibration certificate of the National Centre of Metrology 130-OI/20.12.2010;
- Ulbricht photometer with diameter 2m;
- Automated goniophotometer.
- Power Meter HM8115-2 ID 015447345, calibration certificate of the National Centre of Metrology 148-EEI/14.12.2012;
- Digital thermometer with temperature sensor DS18B20 ID 0000011697CDH, calibration certificate of the National Centre of Metrology 268-TI/14.11.2012;
- Ampermeter Д5101 ID 737/1990, calibration certificate of 'ЛК УНИСИСТ' Ltd №733/21.11.2012;
- MEGER UT512 ID 1111074682, calibration certificate of 'ЛК УНИСИСТ' Ltd №732/21.11.2012;
- Laser rangefinder DLE-40
- spectroradiometer MK350 ID HS0313220158, test source MK002, calibration certificate of UPRtek lab № A012001 / 2013/7/5

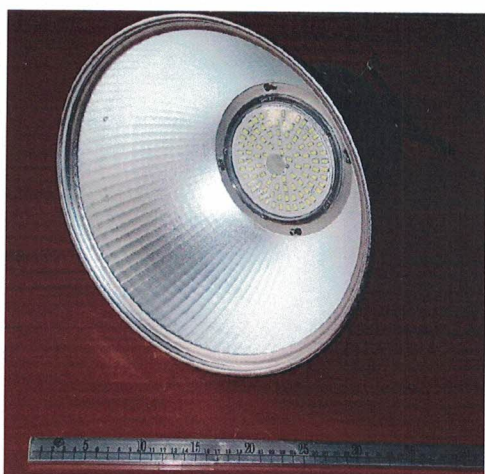


tabele

Technical specifications of documentation:

SMD LED HIGHBAY 50W, VT-9051

Optics – lens and aluminium reflector



Luminaire with reflector 1

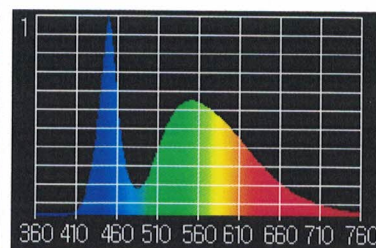


and

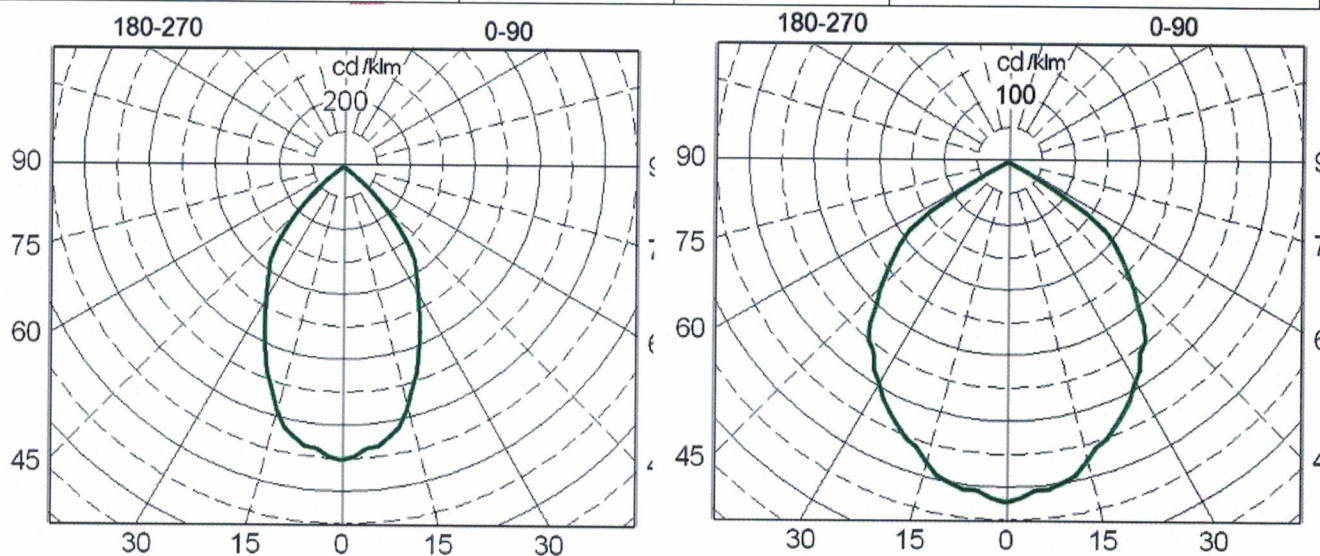
reflector 2

Results of test

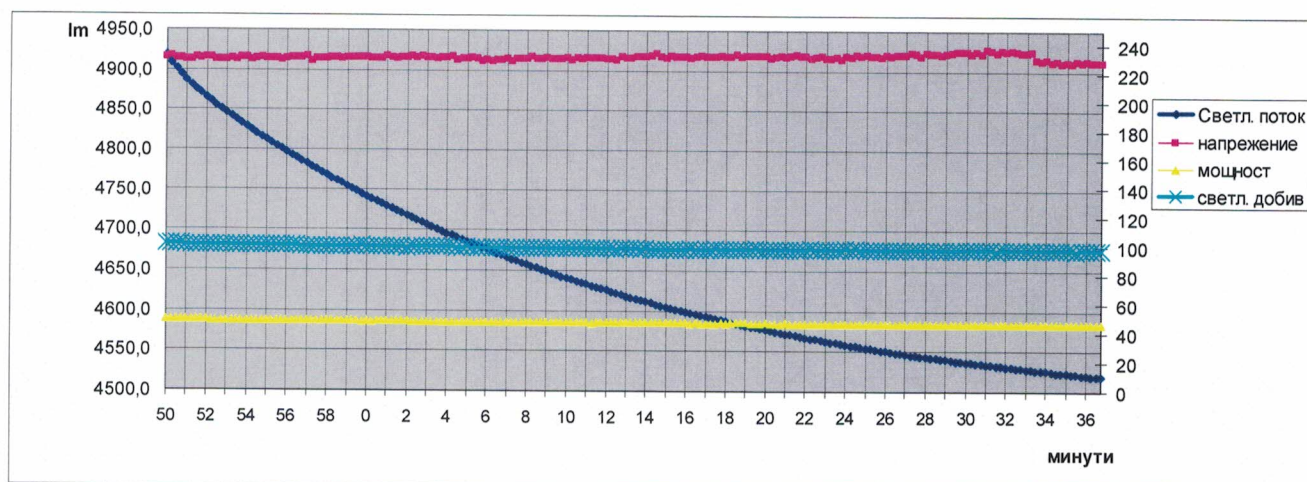
Luminaire with reflector №	1	2
Operating voltage	AC 230 V	AC 230 V
Operating Current	AC 0.207 A	AC 0.207 A
Wattage including ballast (watts)	46.0 W	46.0 W
Power factor	0.97	0.97
color temperature	6119 K	
Color rendering index CRI	83	
color coordinates CIE 1931	$x=0.3193, y=0.3368$	
color coordinates CIE 1976	$u'=0.1994, v'=0.4734$	
Luminous flux emitted by a luminaire	4519 lm	4427 lm
Light output of the luminaire	98.2 lm /W	96.2 lm /W



Спектр на светлината



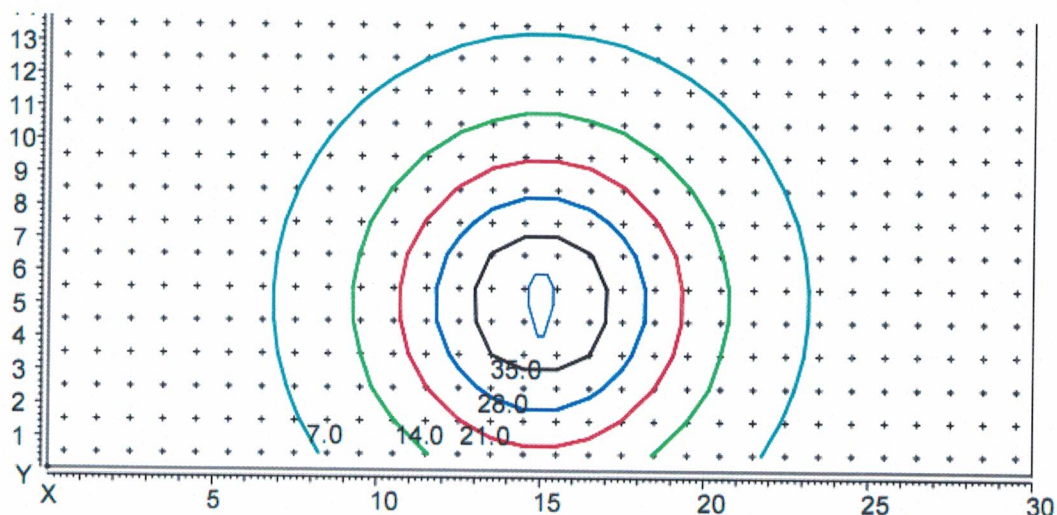
Luminaire light distribution of polar coordinates in the conditional flux 1000lm



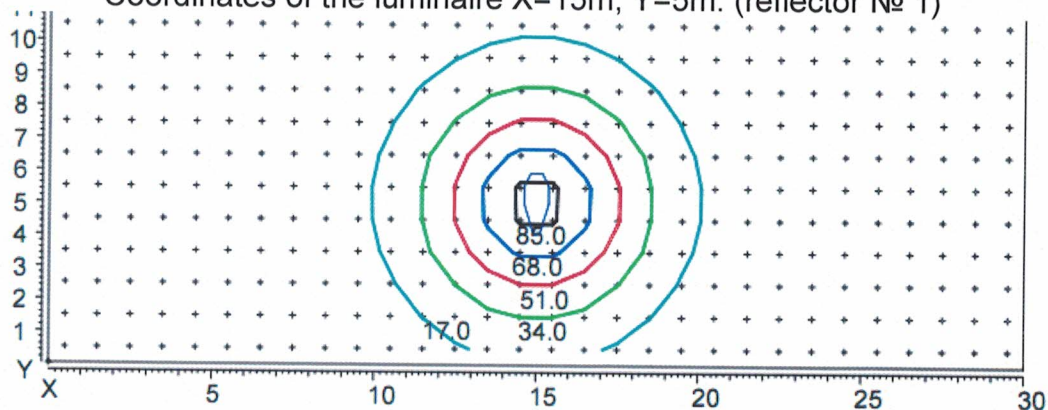
Changing the light flux

**Light distribution of luminaries are in tabular form
for conditional luminous flux 1000lm:**

γ	reflector № 1	reflector № 2
0.0	909	526
2.5	899	520
5.0	877	509
7.5	873	510
10.0	850	503
12.5	827	496
15.0	780	479
17.5	721	462
20.0	677	454
22.5	620	441
25.0	568	427
27.5	518	413
30.0	469	395
32.5	432	382
35.0	395	360
37.5	368	351
40.0	319	329
42.5	258	298
45.0	206	277
47.5	152	251
50.0	100	231
52.5	59	210
55.0	19	186
57.5	7	142
60.0	5	83
62.5	4	33
65.0	3	5
67.5	2	3
70.0	2	3
72.5	2	2
75.0	1	2
77.5	1	2
80.0	0	2
82.5	0	1
85.0	0	1
87.5	0	1
90.0	0	1
92.5	0	1
95.0	0	1



Distribution of illumination in height hanging lamp 10 m
Coordinates of the luminaire X=15m, Y=5m. (reflector № 1)



Distribution of illumination in height hanging lamp 5 m
Coordinates of the luminaire X=15m, Y=5m. (reflector № 2)

Applications:

Files with the EULUMDAT format. Light distribution is captured in γ -C planes with step 2.5° in plane γ (от 0° - 95°) и 5° in plane C (от 0° - 360°) accordance with EN 13032-1 p 4.2.3.

Files with the measured values

- 2014-441-S.ldt (reflector № 1)

- 2014-441a-S.ldt (reflector № 2)

(photometric data in a standard format for axel of symmetry),

Test results relate only to test samples.

Sofia 09.12.2014

The measurements made:

/assoc. prof. d-r. Krasimir Velinov/

Manager:

/ prof. d-r. L. Totev/