

UNIVERSITY OF MINING AND GEOLOGY "Engineering" LTD

Laboratory "Lighting"

MEASUREMENT REPORT NUMBER 2014-080/15.03.2014

testing samples of products

Model number or type, referring to the manufacturer: LED luminarie VT-4750 SKU 5323 50W

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

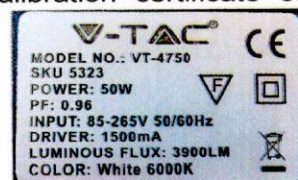
Measurements have been performed:

- 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

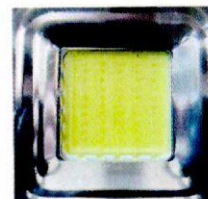
Technical specifications of documentation:

LED luminarie: VT-4750 SKU 5323 50W

Optics - specular reflector



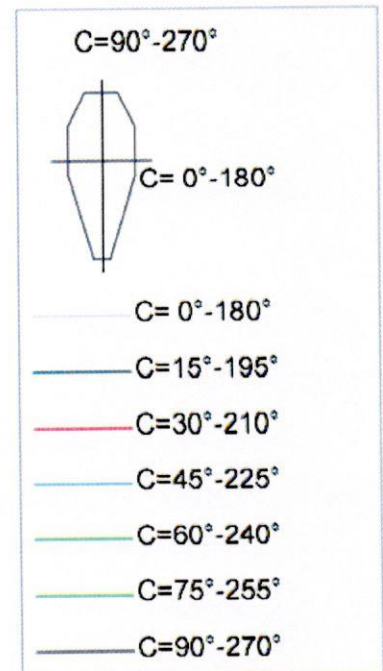
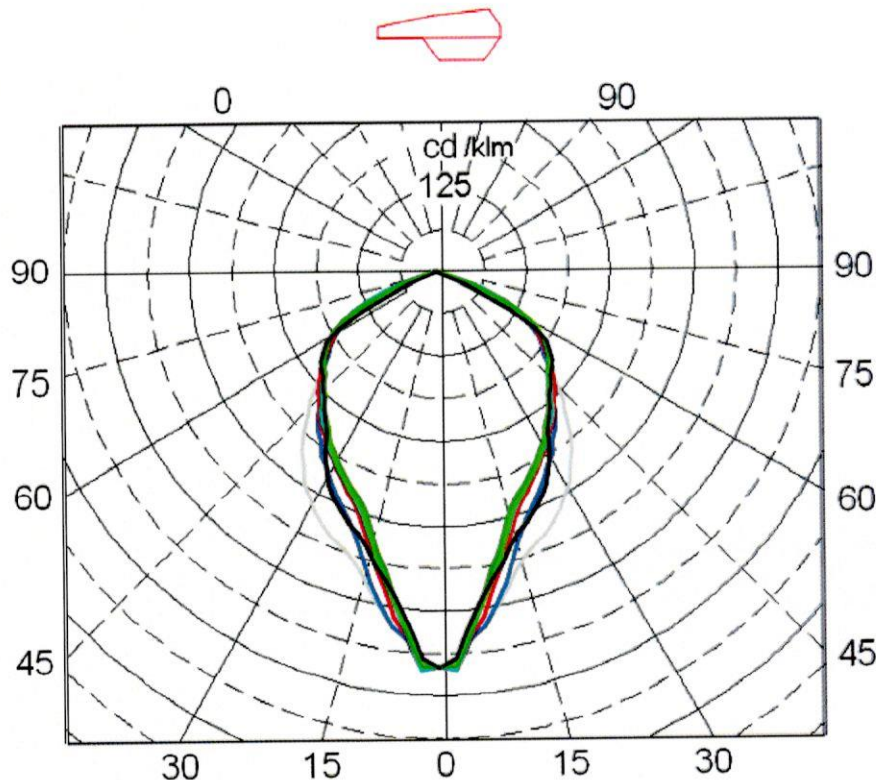
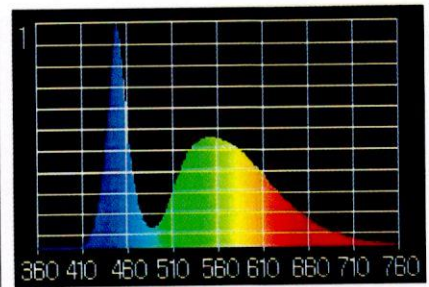
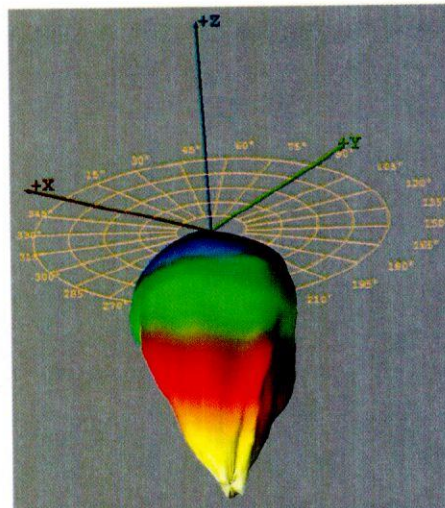
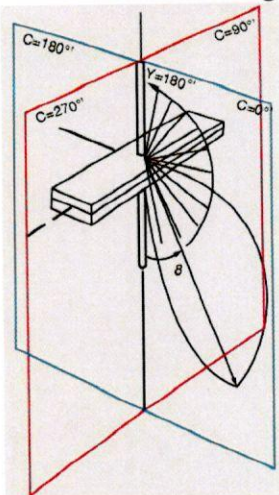
tabele



Luminaire

Results of test

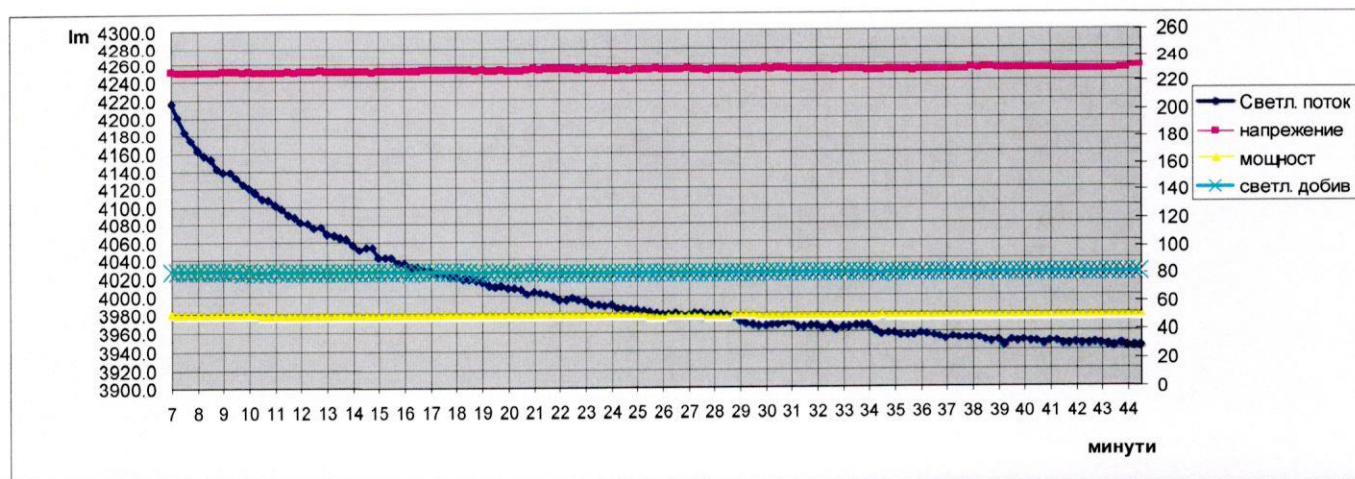
Operating voltage	AC 230V
Operating Current	AC 0.243A
Wattage including ballast (watts)	49.0W
Power factor	0.88
color temperature	6697K
Color rendering index CRI	72
color coordinates CIE 1931	$x=0.3109, y=0.3187$
color coordinates CIE 1976	$u'=0.2005, v'=0.4624$
Luminous flux emitted by a luminaire	3943 lm
Light output of the luminaire	80.5 lm/W

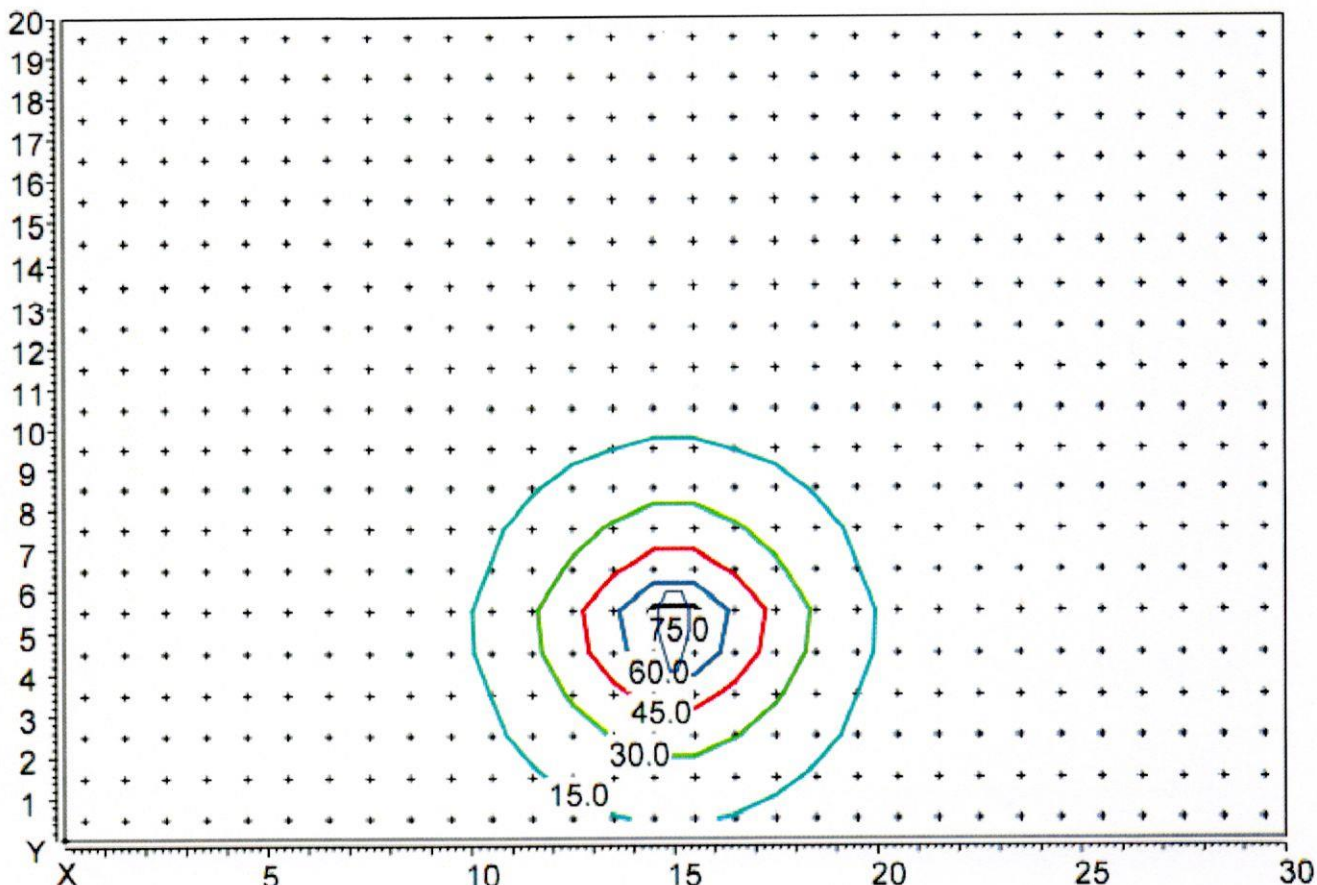
**Luminaire light distribution of polar coordinates in the conditional flux 1000lm****Luminaire light distribution of the 3D**

[illegible]

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

gm/C	180	195	210	225	240	255	270	285	300	315	330	345	360
0.0	587	587	587	587	587	588	588	588	587	587	587	587	587
2.5	593	593	594	594	587	579	575	579	587	594	594	593	593
5.0	549	549	547	543	543	534	524	534	543	543	547	549	549
7.5	532	531	517	499	494	500	490	500	494	499	517	531	532
10.0	506	502	475	454	449	465	463	465	449	454	475	502	506
12.5	483	472	444	428	422	433	442	433	422	428	444	472	483
15.0	457	438	411	401	390	398	420	398	390	401	411	438	457
17.5	440	410	385	377	366	373	403	373	366	377	385	410	440
20.0	430	390	366	361	352	359	393	359	352	361	366	390	430
22.5	421	376	352	347	341	346	382	346	341	347	352	376	421
25.0	411	360	339	334	329	335	369	335	329	334	339	360	411
27.5	399	346	328	324	319	326	354	326	319	324	328	346	399
30.0	383	332	315	313	307	311	334	311	307	313	315	332	383
32.5	371	322	308	305	298	301	314	301	298	305	308	322	371
35.0	349	304	293	290	282	283	288	283	282	290	293	304	349
37.5	333	293	286	282	274	273	275	273	274	282	286	293	333
40.0	311	278	275	270	263	261	263	261	263	270	275	278	311
42.5	285	259	260	254	248	247	249	247	248	254	260	259	285
45.0	269	251	251	244	238	239	242	239	238	244	251	251	269
47.5	241	236	237	230	225	227	230	227	225	230	237	236	241
50.0	220	221	227	223	220	222	226	222	220	223	227	221	220
52.5	203	204	210	212	212	215	218	215	212	212	210	204	203
55.0	193	195	196	201	202	205	208	205	202	201	196	195	193
57.5	180	182	183	191	190	193	195	193	190	191	183	182	180
60.0	166	168	172	179	176	176	172	176	176	179	172	168	166
62.5	146	146	150	159	154	138	126	138	154	159	150	146	146
65.0	126	127	130	136	119	79	61	79	119	136	130	127	126
67.5	61	87	108	111	58	21	14	21	58	111	108	87	61
70.0	8	21	68	77	17	6	7	6	17	77	68	21	8
72.5	5	5	23	28	5	5	5	5	5	28	23	5	5
75.0	4	4	10	10	4	4	4	4	4	10	10	4	4
77.5	3	3	3	3	3	3	3	3	3	3	3	3	3
80.0	2	2	2	2	2	2	2	2	2	2	2	2	2
82.5	1	1	1	1	1	1	1	1	1	1	1	1	1
85.0	1	1	1	1	1	1	1	1	1	1	1	1	1
87.5	1	1	1	1	1	1	1	1	1	1	1	1	1
90.0	1	1	1	1	1	1	1	1	1	1	1	1	1
92.5	1	1	1	1	1	1	1	1	1	1	1	1	1
95.0	1	1	1	1	1	1	1	1	1	1	1	1	1





Distribution of illumination in height hanging lamp 5 m
Coordinates of the luminaire X=15m, Y=5m.

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

- 2014-080-P2.ldt - photometric data in a standard format for two plane of symmetry $C = 0^\circ - 180^\circ$ и $C = 90^\circ - 270^\circ$,

- 2014-080.ocb - complete data in tabular form.

Test results relate only to test samples.

Sofia 15.03.2014

The measurements made:

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

Manager:

/ prof. d-r. L. Totev/

