

UNIVERSITY OF MINING AND GEOLOGY "Engineering" LTD

Laboratory "Lighting"

MEASUREMENT REPORT NUMBER 2013-130/25.04.2013

testing samples of products

Model number or type, referring to the manufacturer: LED Street Luminaire VT-1202G
Company identification: ВИ-ТЕК ЕВРОПА ООД, София 1220, ул. Илиянско шосе No1.
Applicant testing: ВИ-ТЕК ЕВРОПА ООД, София 1220, ул. Илиянско шосе No 1.
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-ОИ/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-ОИ/20.12.2010;
- Ulbricht photometer with diameter 2м;
- Automated goniophotometer.
- Power Meter HM8115-2 ID 015447345, calibration certificate of the National Centre of Metrology 148-ЕЕИ/14.12.2012;
- Digital thermometer with temperature sensor DS18B20 ID 0000011697CDH, calibration certificate of the National Centre of Metrology 268-ТИ/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

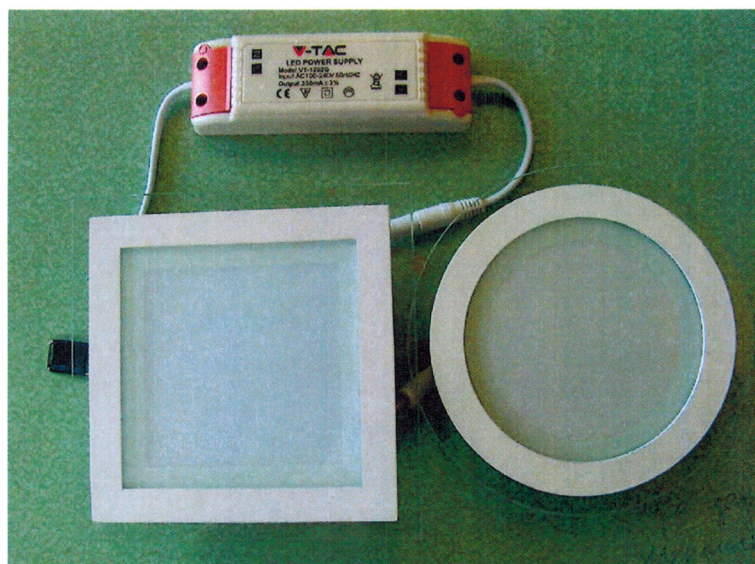
Technical specifications of documentation:

Luminescent luminaries: LED Street Luminaire VT-1202G

Optics - matt diffuser and safety glass

Lamp: VT-1202G
Color: White
Voltage: AC100-240V
Frequency: 50/60Hz
RoHS CE

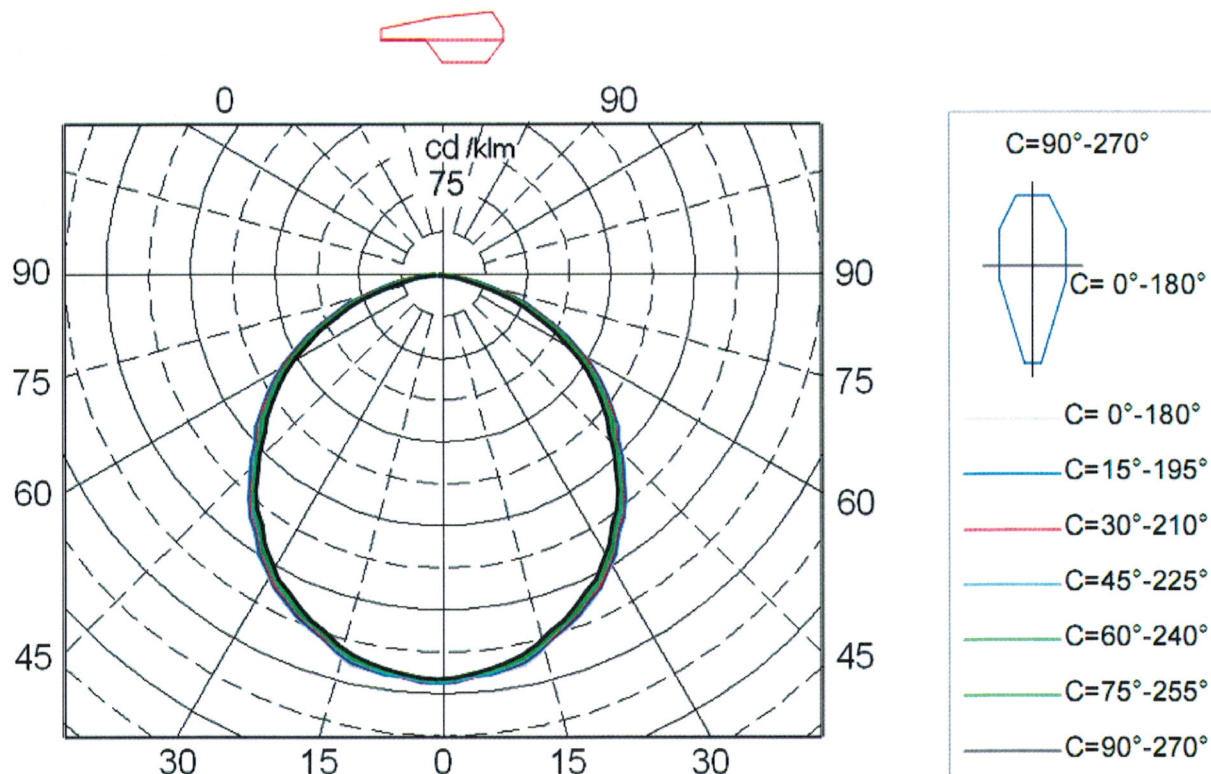
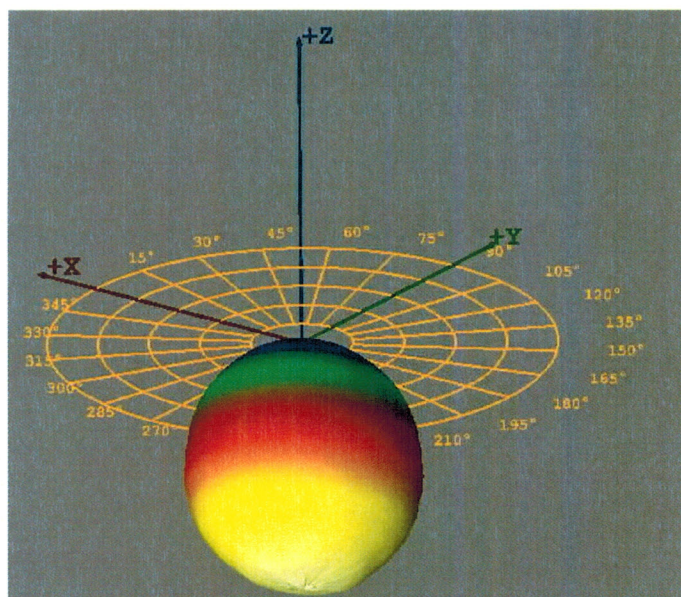
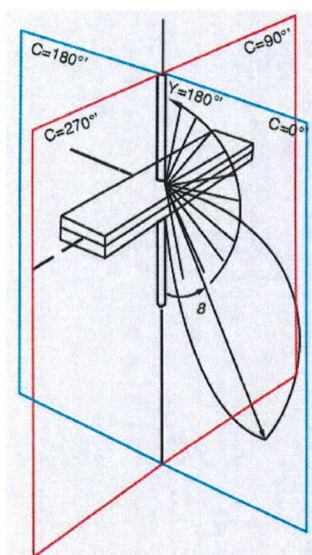
tabele



Luminaire

Results of test

	Lamp with power
Operating voltage	AC 230V
Operating Current	AC 0.059A
Wattage including ballast (watts)	12.6W
Power factor	0.93
Luminous flux emitted by a luminaire	674 lm
light output	53.5 lm/W

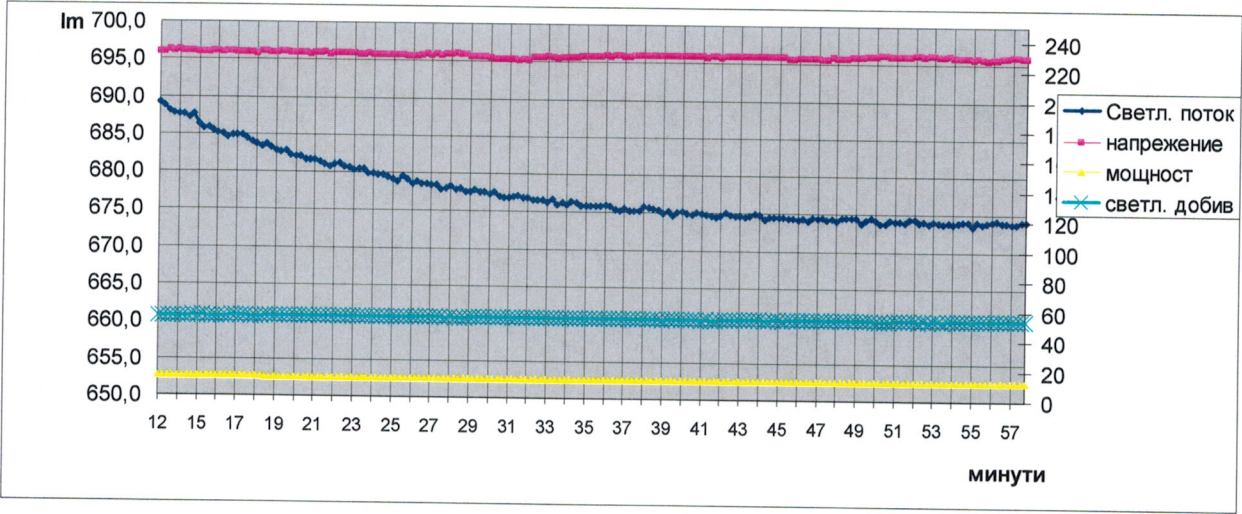
**Luminaire light distribution of polar coordinates in the conditional flux 1000lm****Luminaire light distribution of the 3D**

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

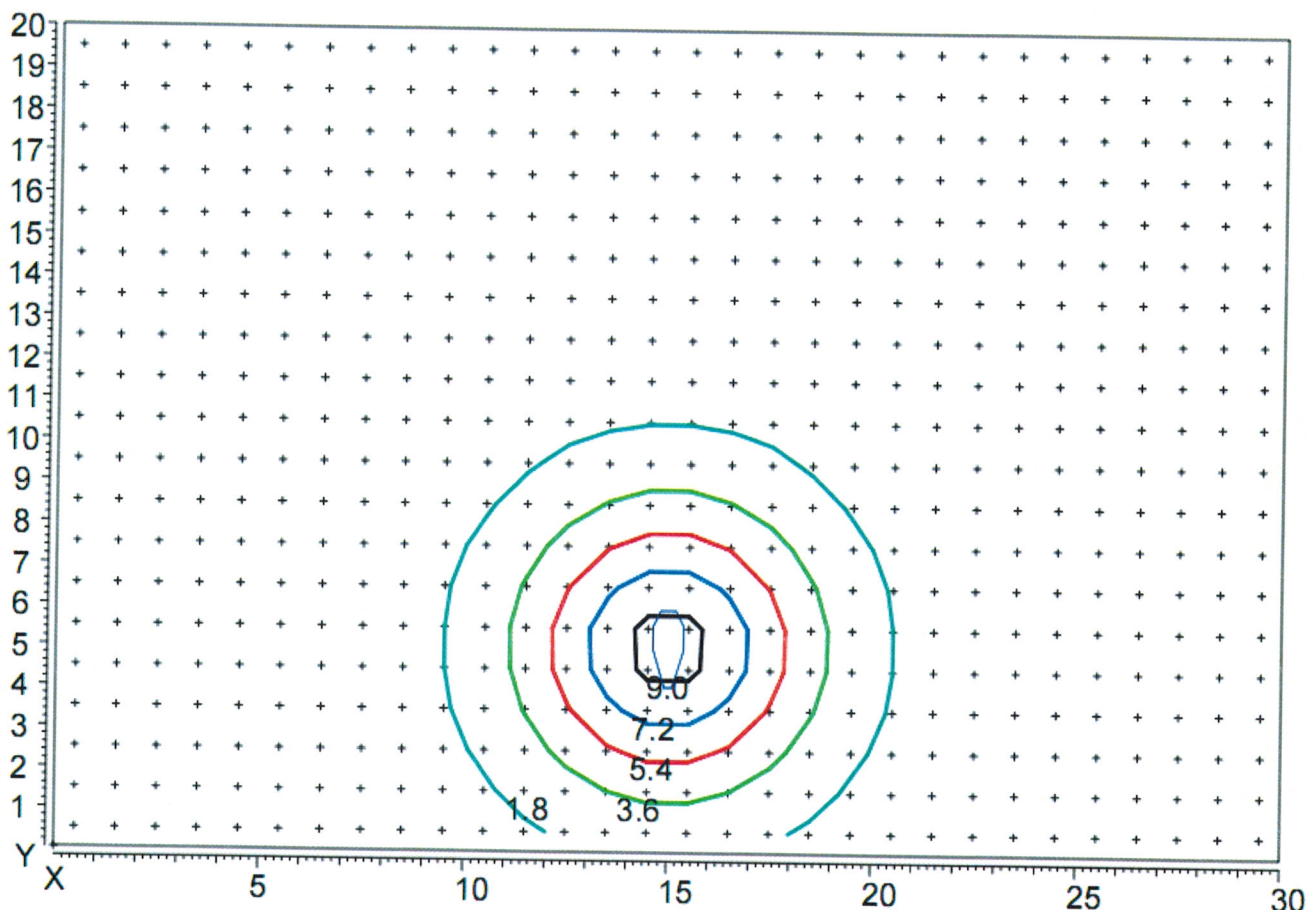
gm/C	0	15	30	45	60	75	90	105	120	135	150	165	180
0.0	368	368	367	367	366	366	365	366	366	367	367	368	368
2.5	368	367	366	366	364	364	364	364	364	366	366	367	368
5.0	364	363	363	363	362	361	361	361	362	363	363	363	364
7.5	364	363	362	362	360	360	359	360	360	362	362	363	364
10.0	362	361	360	359	357	356	356	356	357	359	360	361	362
12.5	360	358	356	356	354	353	352	353	354	356	356	358	360
15.0	353	351	350	349	347	346	345	346	347	349	350	351	353
17.5	344	343	342	340	340	338	337	338	340	340	342	343	344
20.0	340	338	337	335	333	332	332	332	333	335	337	338	340
22.5	333	332	330	329	328	325	324	325	328	329	330	332	333
25.0	326	324	322	320	318	317	315	317	318	320	322	324	326
27.5	319	317	316	313	312	311	310	311	312	313	316	317	319
30.0	308	306	305	303	301	299	298	299	301	303	305	306	308
32.5	299	298	295	293	292	290	288	290	292	293	295	298	299
35.0	286	284	282	280	278	275	275	275	278	280	282	284	286
37.5	277	275	274	271	268	267	266	267	268	271	274	275	277
40.0	265	263	261	258	257	255	254	255	257	258	261	263	265
42.5	250	248	246	243	241	240	238	240	241	243	246	248	250
45.0	238	236	233	232	229	227	225	227	229	232	233	236	238
47.5	222	221	218	216	214	212	210	212	214	216	218	221	222
50.0	214	212	210	207	205	203	200	203	205	207	210	212	214
52.5	200	198	197	193	191	189	187	189	191	193	197	198	200
55.0	187	186	183	181	178	176	174	176	178	181	183	186	187
57.5	175	173	171	168	165	163	160	163	165	168	171	173	175
60.0	161	159	157	154	151	149	147	149	151	154	157	159	161
62.5	144	142	140	137	134	132	130	132	134	137	140	142	144
65.0	130	128	126	123	120	118	116	118	120	123	126	128	130
67.5	113	112	109	106	103	101	99	101	103	106	109	112	113
70.0	98	96	94	91	89	87	84	87	89	91	94	96	98
72.5	85	83	80	78	76	74	71	74	76	78	80	83	85
75.0	66	64	62	60	57	55	52	55	57	60	62	64	66
77.5	51	49	47	46	43	41	38	41	43	46	47	49	51
80.0	39	38	36	34	32	29	28	29	32	34	36	38	39
82.5	26	25	24	22	20	18	17	18	20	22	24	25	26
85.0	16	16	15	13	12	11	9	11	12	13	15	16	16
87.5	8	8	8	7	6	5	4	5	6	7	8	8	8
90.0	4	4	4	4	3	3	2	3	3	4	4	4	4
92.5	2	2	2	2	2	2	2	2	2	2	2	2	2
95.0	2	1	1	1	2	2	2	2	2	1	1	1	2

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	368	368	367	367	366	366	365	366	366	367	367	368	368
2.5	368	367	366	366	364	364	364	364	364	366	366	367	368
5.0	364	363	363	363	362	361	361	361	362	363	363	363	364
7.5	364	363	362	362	360	360	359	360	360	362	362	363	364
10.0	362	361	360	359	357	356	356	356	357	359	360	361	362
12.5	360	358	356	356	354	353	352	353	354	356	356	358	360
15.0	353	351	350	349	347	346	345	346	347	349	350	351	353
17.5	344	343	342	340	340	338	337	338	340	340	342	343	344
20.0	340	338	337	335	333	332	332	332	333	335	337	338	340
22.5	333	332	330	329	328	325	324	325	328	329	330	332	333
25.0	326	324	322	320	318	317	315	317	318	320	322	324	326
27.5	319	317	316	313	312	311	310	311	312	313	316	317	319
30.0	308	306	305	303	301	299	298	299	301	303	305	306	308
32.5	299	298	295	293	292	290	288	290	292	293	295	298	299
35.0	286	284	282	280	278	275	275	275	278	280	282	284	286
37.5	277	275	274	271	268	267	266	267	268	271	274	275	277
40.0	265	263	261	258	257	255	254	255	257	258	261	263	265
42.5	250	248	246	243	241	240	238	240	241	243	246	248	250
45.0	238	236	233	232	229	227	225	227	229	232	233	236	238
47.5	222	221	218	216	214	212	210	212	214	216	218	221	222
50.0	214	212	210	207	205	203	200	203	205	207	210	212	214
52.5	200	198	197	193	191	189	187	189	191	193	197	198	200
55.0	187	186	183	181	178	176	174	176	178	181	183	186	187
57.5	175	173	171	168	165	163	160	163	165	168	171	173	175
60.0	161	159	157	154	151	149	147	149	151	154	157	159	161
62.5	144	142	140	137	134	132	130	132	134	137	140	142	144
65.0	130	128	126	123	120	118	116	118	120	123	126	128	130
67.5	113	112	109	106	103	101	99	101	103	106	109	112	113
70.0	98	96	94	91	89	87	84	87	89	91	94	96	98
72.5	85	83	80	78	76	74	71	74	76	78	80	83	85
75.0	66	64	62	60	57	55	52	55	57	60	62	64	66
77.5	51	49	47	46	43	41	38	41	43	46	47	49	51
80.0	39	38	36	34	32	29	28	29	32	34	36	38	39
82.5	26	25	24	22	20	18	17	18	20	22	24	25	26
85.0	16	16	15	13	12	11	9	11	12	13	15	16	16
87.5	8	8	8	7	6	5	4	5	6	7	8	8	8
90.0	4	4	4	4	3	3	2	3	3	4	4	4	4
92.5	2	2	2	2	2	2	2	2	2	2	2	2	2
95.0	2	1	1	1	2	2	2	2	2	1	1	1	2



Changing the light flux



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

- 2013-130-P2.ltd - photometric data in a standard format for two plane of symmetry $C = 0^\circ - 180^\circ$ и $C = 90^\circ - 270^\circ$,
- 2013-130.ocb - complete data in tabular form.

Test results relate only to test samples.

Sofia 25.04.2013

The measurements:


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

Manager:


/ prof. d-r. L. Totev/