

MEASUREMENT REPORT NUMBER 2014-172/30.05.2014

testing samples of products

Model number or type, referring to the manufacturer: LED luminarie Floodlight 100
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

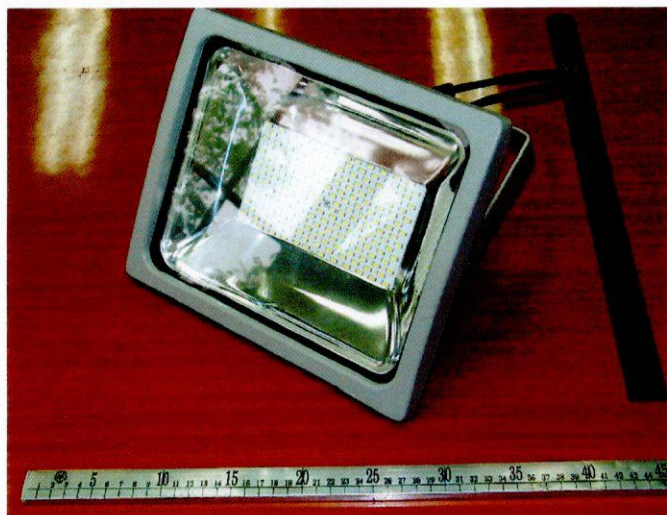
Measurements have been performed:

- 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-OV/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-OV/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-EEV/14.12.2012;
- Digital thermometer with temperature sensor DS18B20 ID 0000011697CDH, calibration certificate of the National Centre of Metrology 268-TM/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 Floodlight 100

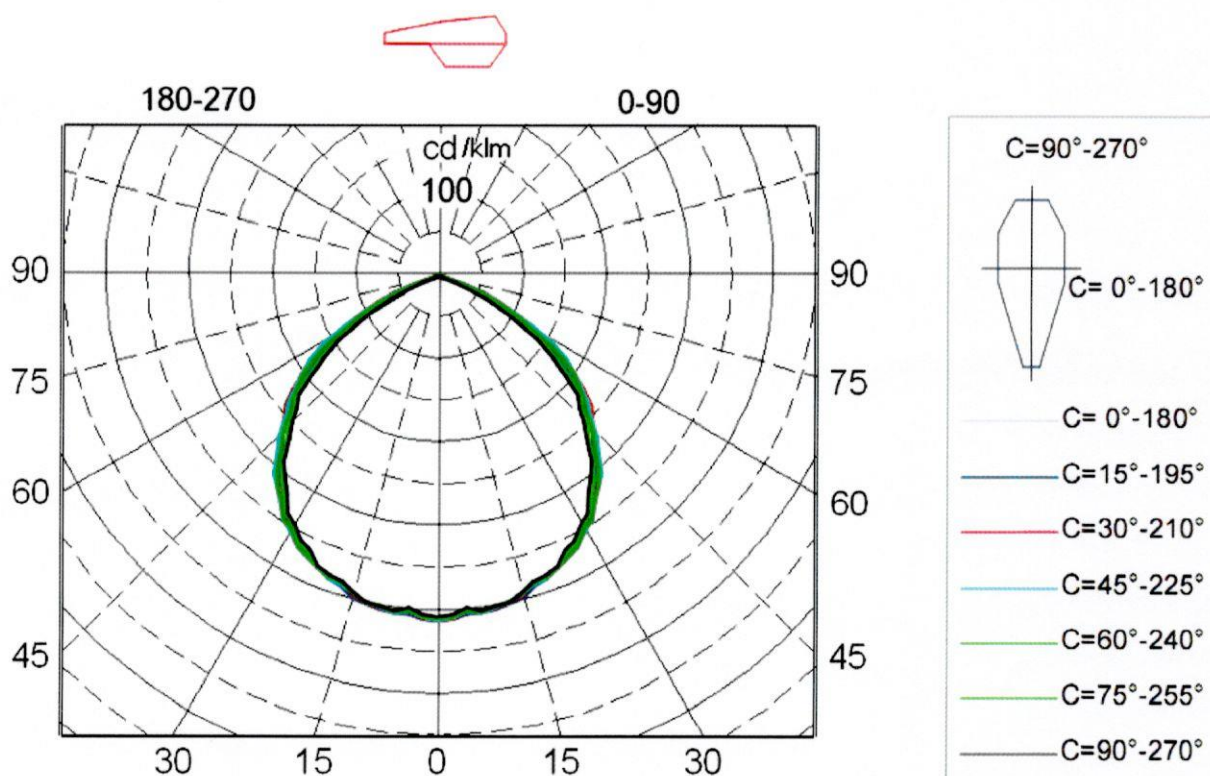
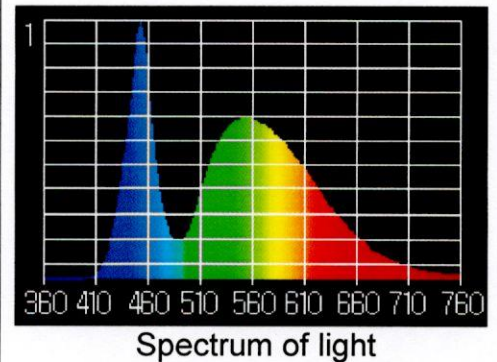
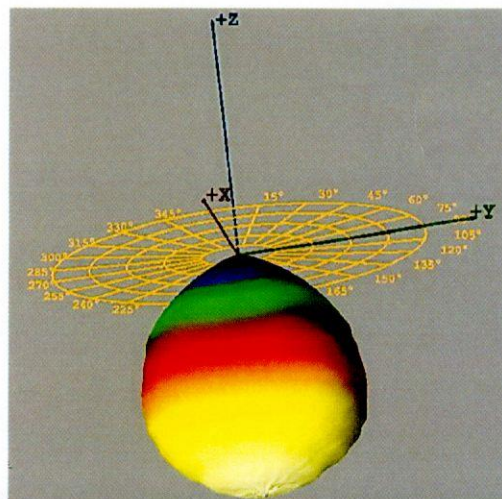
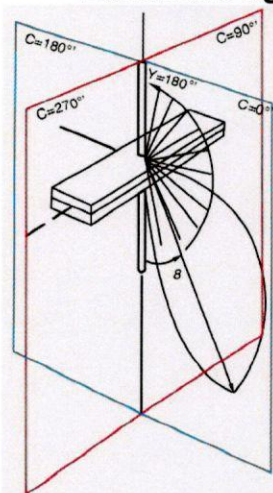
Optics - aluminum reflector



Luminaire

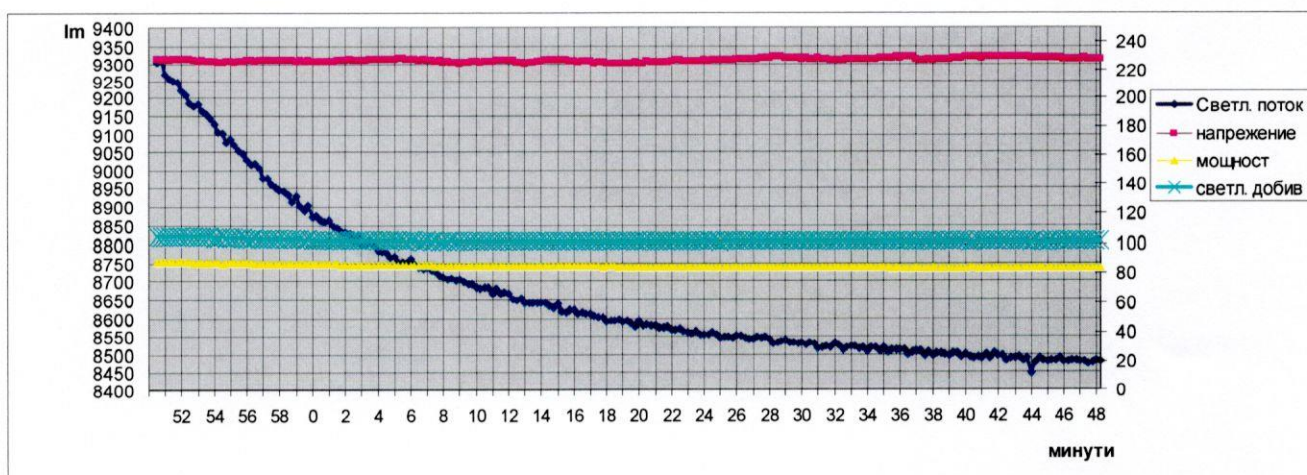
Results of test

Operating voltage	AC 230V
Operating Current	AC 0.39A
Wattage including ballast (watts)	83.4W
Power factor	0.93
color temperature	6104K
Color rendering index CRI	73
color coordinates CIE 1931	$x=0.3196, y=0.3361$
color coordinates CIE 1976	$u'=0.2000, v'=0.4731$
Luminous flux emitted by a luminaire	8508 lm
Light output of the luminaire	102.0 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:**

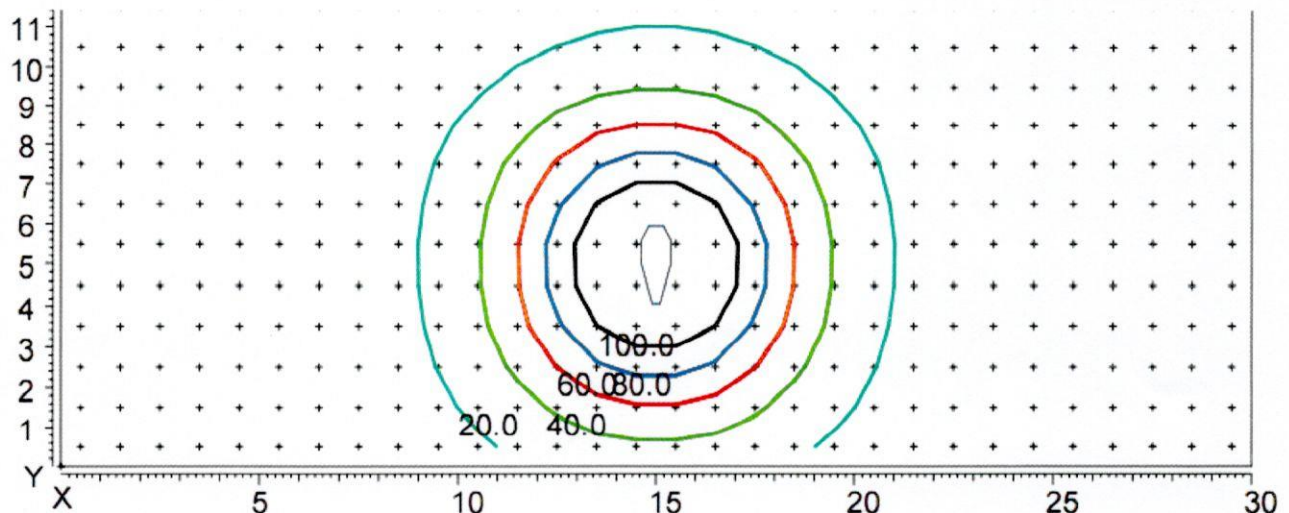
gm/C	0	15	30	45	60	75	90	105	120	135	150	165	180
0.0	413	412	412	412	410	410	409	410	410	412	412	412	413
2.5	411	411	411	410	408	408	406	408	408	410	411	411	411
5.0	406	406	404	403	404	401	399	401	404	403	404	406	406
7.5	406	406	406	407	406	405	405	405	406	407	406	406	406
10.0	406	405	404	403	401	401	401	401	401	403	404	405	406
12.5	401	401	401	400	400	401	400	401	400	400	401	401	401
15.0	399	398	396	394	393	393	392	393	393	394	396	398	399
17.5	389	388	386	386	384	384	384	384	384	386	386	388	389
20.0	385	385	384	385	384	383	381	383	384	385	384	385	385
22.5	378	378	379	379	378	378	377	378	378	379	379	378	378
25.0	370	370	371	373	371	366	364	366	371	373	371	370	370
27.5	363	362	363	367	366	362	359	362	366	367	363	362	363
30.0	348	350	352	355	352	347	346	347	352	355	352	350	348
32.5	340	341	345	347	346	340	337	340	346	347	345	341	340
35.0	321	322	329	332	329	322	318	322	329	332	329	322	321
37.5	309	310	316	319	318	309	303	309	318	319	316	310	309
40.0	294	296	303	308	301	292	289	292	301	308	303	296	294
42.5	276	276	283	287	279	270	266	270	279	287	283	276	276
45.0	264	266	270	272	264	254	249	254	264	272	270	266	264
47.5	243	248	252	250	242	234	232	234	242	250	252	248	243
50.0	224	227	241	237	229	224	220	224	229	237	241	227	224
52.5	202	207	221	218	212	202	193	202	212	218	221	207	202
55.0	181	184	200	202	197	176	170	176	197	202	200	184	181
57.5	159	162	176	184	170	149	144	149	170	184	176	162	159
60.0	135	139	153	161	139	123	116	123	139	161	153	139	135
62.5	112	116	127	129	110	96	91	96	110	129	127	116	112
65.0	89	92	102	99	85	70	64	70	85	99	102	92	89
67.5	65	69	78	69	56	42	36	42	56	69	78	69	65
70.0	48	50	56	47	35	25	20	25	35	47	56	50	48
72.5	29	33	35	28	16	6	6	6	16	28	35	33	29
75.0	12	16	17	12	5	5	5	5	5	12	17	16	12
77.5	4	5	7	5	4	4	4	4	4	5	7	5	4
80.0	4	4	4	4	3	3	3	3	3	4	4	4	4
82.5	3	3	3	3	3	3	2	3	3	3	3	3	3
85.0	3	3	3	3	3	2	2	2	3	3	3	3	3
87.5	2	2	2	2	2	2	2	2	2	2	2	2	2
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



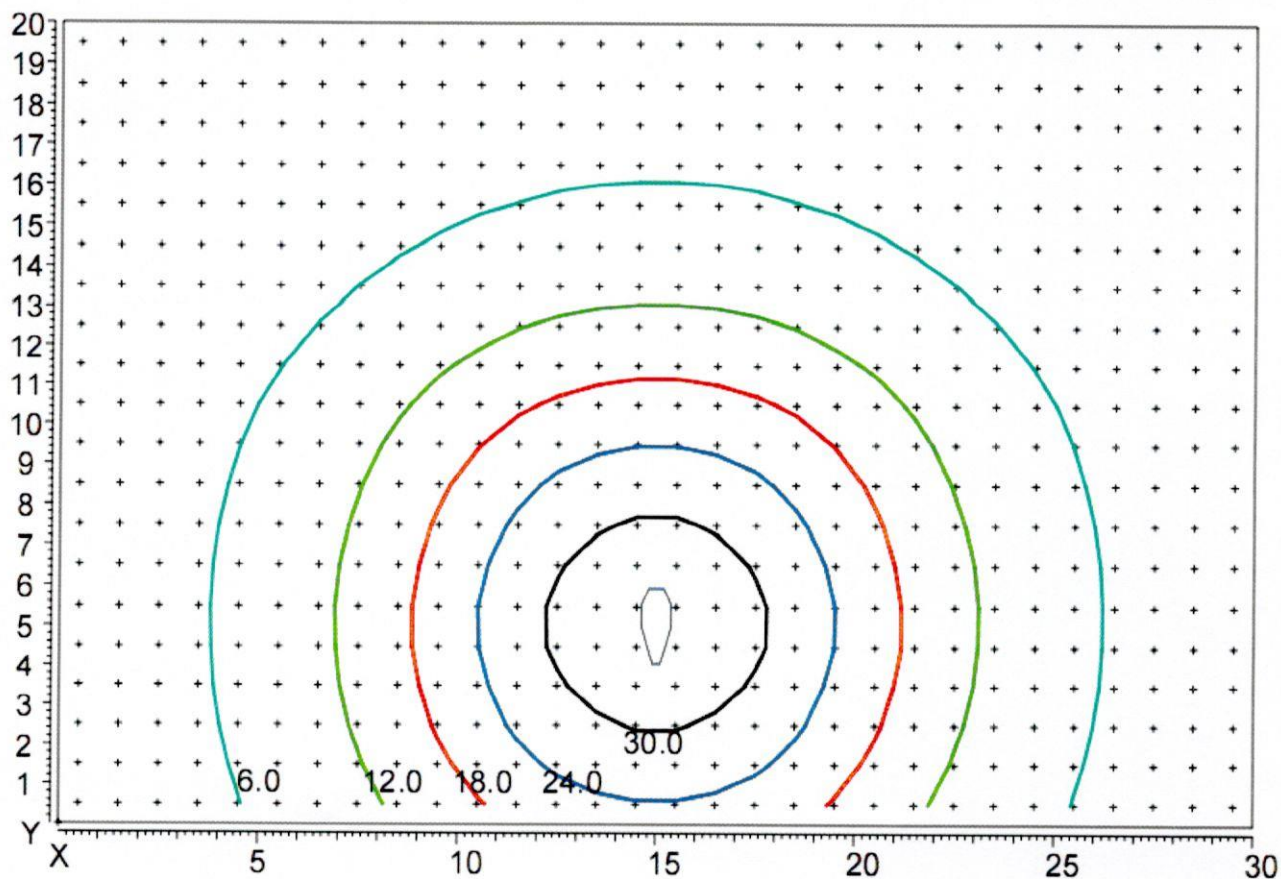
Changing the light flux

**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	413	412	412	412	410	410	409	410	410	412	412	412	413
2.5	411	411	411	410	408	408	406	408	408	410	411	411	411
5.0	406	406	404	403	404	401	399	401	404	403	404	406	406
7.5	406	406	406	407	406	405	405	405	406	407	406	406	406
10.0	406	405	404	403	401	401	401	401	401	403	404	405	406
12.5	401	401	401	400	400	401	400	401	400	400	401	401	401
15.0	399	398	396	394	393	393	392	393	393	394	396	398	399
17.5	389	388	386	386	384	384	384	384	384	386	386	388	389
20.0	385	385	384	385	384	383	381	383	384	385	384	385	385
22.5	378	378	379	379	378	378	377	378	378	379	379	378	378
25.0	370	370	371	373	371	366	364	366	371	373	371	370	370
27.5	363	362	363	367	366	362	359	362	366	367	363	362	363
30.0	348	350	352	355	352	347	346	347	352	355	352	350	348
32.5	340	341	345	347	346	340	337	340	346	347	345	341	340
35.0	321	322	329	332	329	322	318	322	329	332	329	322	321
37.5	309	310	316	319	318	309	303	309	318	319	316	310	309
40.0	294	296	303	308	301	292	289	292	301	308	303	296	294
42.5	276	276	283	287	279	270	266	270	279	287	283	276	276
45.0	264	266	270	272	264	254	249	254	264	272	270	266	264
47.5	243	248	252	250	242	234	232	234	242	250	252	248	243
50.0	224	227	241	237	229	224	220	224	229	237	241	227	224
52.5	202	207	221	218	212	202	193	202	212	218	221	207	202
55.0	181	184	200	202	197	176	170	176	197	202	200	184	181
57.5	159	162	176	184	170	149	144	149	170	184	176	162	159
60.0	135	139	153	161	139	123	116	123	139	161	153	139	135
62.5	112	116	127	129	110	96	91	96	110	129	127	116	112
65.0	89	92	102	99	85	70	64	70	85	99	102	92	89
67.5	65	69	78	69	56	42	36	42	56	69	78	69	65
70.0	48	50	56	47	35	25	20	25	35	47	56	50	48
72.5	29	33	35	28	16	6	6	6	16	28	35	33	29
75.0	12	16	17	12	5	5	5	5	5	12	17	16	12
77.5	4	5	7	5	4	4	4	4	4	5	7	5	4
80.0	4	4	4	4	3	3	3	3	3	4	4	4	4
82.5	3	3	3	3	3	3	2	3	3	3	3	3	3
85.0	3	3	3	3	3	2	2	2	3	3	3	3	3
87.5	2	2	2	2	2	2	2	2	2	2	2	2	2
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.



Distribution of illumination in height hanging lamp 10 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

- 2014-172.ltd

Test results relate only to test samples.

Sofia 30.05.2014

The measurements made:

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

Manager:

/ prof. d-r. L. Totev/