

UNIVERSITY OF MINING AND GEOLOGY "Engineering" LTD
Laboratory "Lighting" www.light-bg.eu

MEASUREMENT REPORT NUMBER 2014-189/16.06.2014

testing samples of products

Model number or type, referring to the manufacturer: LED PANEL LIGHT VT2800RD SKU4850

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

Applicant testing: V-TAC Europe Ltd., Sofia 1220, 1, Iljansko 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-OИ/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-OИ/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-EEИ/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
- spectroradiometer MK350 ID HS0313220158, test source MK002, calibration certificate of UPRtek lab № A012001 / 2013/7/5

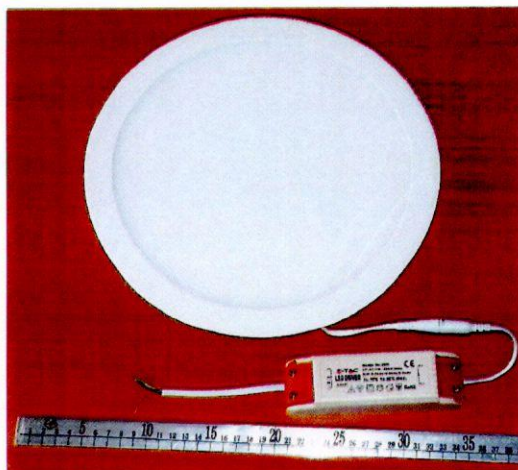
LED PANEL LIGHT
Lamp: VT-2800
SKU 4850
Shape: Round
Color: White 6000K
Watts: 28W
LED Chip: DC 12V
Connect with 600mA Driver
RoHS CE
030001

Technical specifications of documentation:

LED PANEL LIGHT VT2800RD SKU4850

Optics – opal diffuser

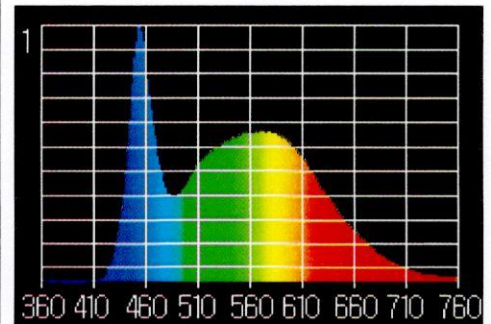
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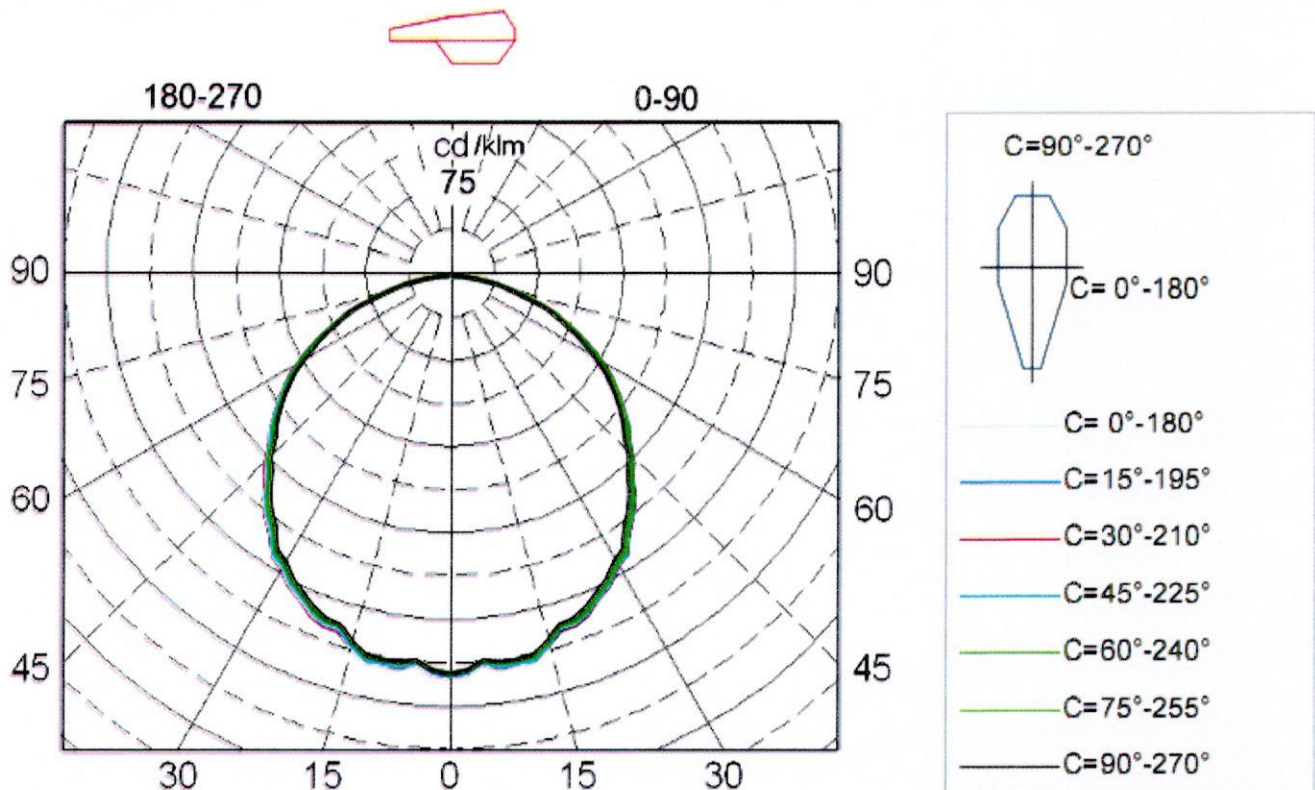
Luminaire

Results of test

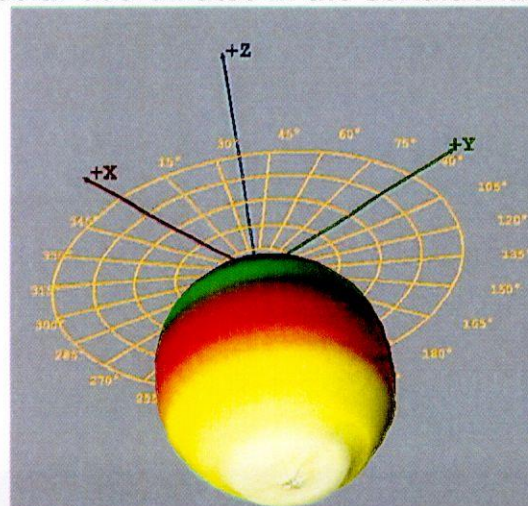
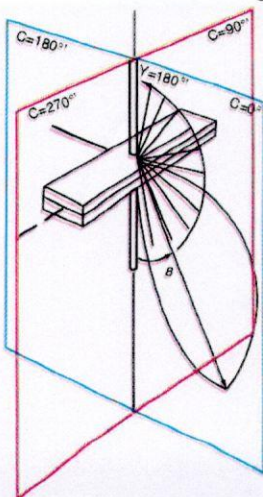
Operating voltage	AC 230V
Operating Current	AC 0.142A
Wattage including ballast (watts)	30.42W
Power factor	0.93
color temperature	5919K
Color rendering index CRI	83
color coordinates CIE 1931	$x=0.3231, y=0.3416$
color coordinates CIE 1976	$u'=0.2003, v'=0.4764$
Luminous flux emitted by a luminaire	2553 lm
Light output of the luminaire	84.0 lm/W



Spectrum of light



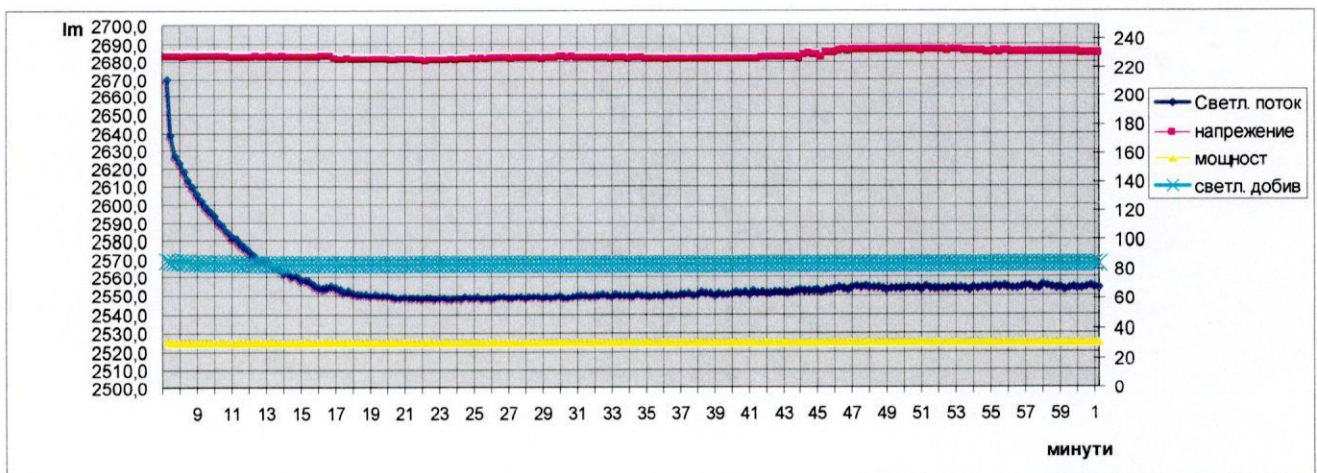
Luminaire light distribution of polar coordinates in the conditional flux 1000lm



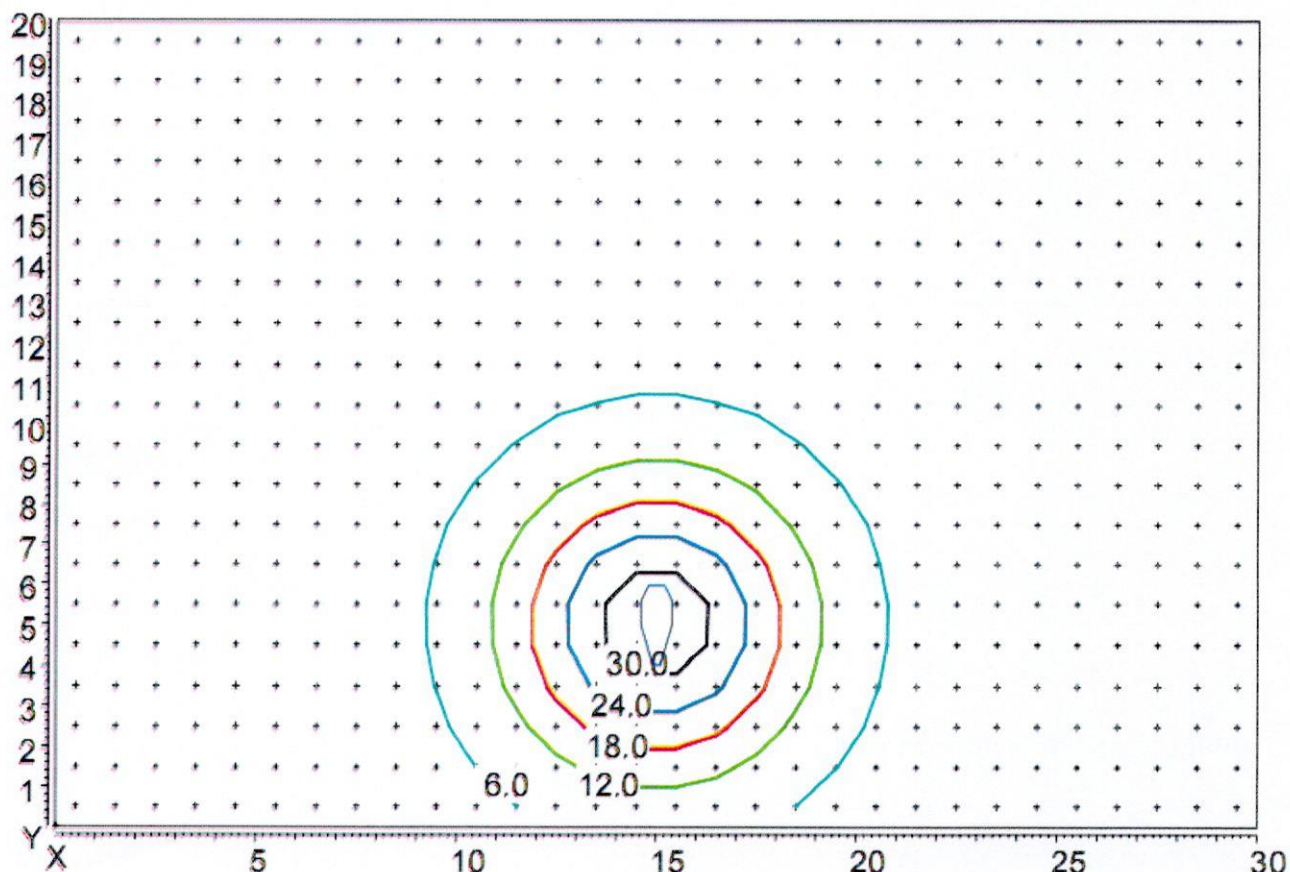
Luminaire light distribution of the 3D

**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	350	349	348	348	348	347	348	347	348	348	348	349	350
2.5	348	347	346	346	346	345	345	345	346	346	346	347	348
5.0	340	339	338	338	338	338	337	338	338	338	338	339	340
7.5	346	345	344	343	342	342	341	342	342	343	344	345	346
10.0	344	343	343	342	342	341	340	341	342	342	343	343	344
12.5	344	344	344	343	342	341	340	341	342	343	344	344	344
15.0	336	335	334	334	333	332	331	332	333	334	334	335	336
17.5	326	325	324	323	322	321	320	321	322	323	324	325	326
20.0	326	325	324	322	321	320	319	320	321	322	324	325	326
22.5	320	319	319	318	316	315	313	315	316	318	319	319	320
25.0	311	310	310	309	308	307	306	307	308	309	310	310	311
27.5	305	305	304	303	301	300	299	300	301	303	304	305	305
30.0	295	294	294	293	292	290	289	290	292	293	294	294	295
32.5	290	290	289	288	287	284	283	284	287	288	289	290	290
35.0	275	275	274	272	271	269	267	269	271	272	274	275	275
37.5	265	265	264	263	262	260	258	260	262	263	264	265	265
40.0	254	253	253	252	250	248	246	248	250	252	253	253	254
42.5	238	238	238	237	236	233	232	233	236	237	238	238	238
45.0	229	228	228	227	226	224	222	224	226	227	228	228	229
47.5	214	214	214	213	212	210	208	210	212	213	214	214	214
50.0	206	205	205	205	203	201	199	201	203	205	205	205	206
52.5	194	194	193	192	191	188	188	188	191	192	193	194	194
55.0	182	182	182	181	180	177	176	177	180	181	182	182	182
57.5	171	171	170	170	168	166	165	166	168	170	170	171	171
60.0	158	158	158	157	156	153	152	153	156	157	158	158	158
62.5	144	143	143	142	140	138	137	138	140	142	143	143	144
65.0	130	130	129	129	127	125	124	125	127	129	129	130	130
67.5	114	114	114	113	112	110	109	110	112	113	114	114	114
70.0	101	101	100	99	98	96	96	96	98	99	100	101	101
72.5	88	87	87	86	85	83	83	83	85	86	87	87	88
75.0	70	70	69	69	68	66	66	66	68	69	69	70	70
77.5	56	56	55	55	54	53	52	53	54	55	55	56	56
80.0	45	45	44	44	43	42	42	42	43	44	44	45	45
82.5	32	32	32	31	31	30	30	30	31	31	32	32	32
85.0	22	22	22	22	21	20	20	20	21	22	22	22	22
87.5	12	12	12	12	11	11	11	11	11	12	12	12	12
90.0	4	3	3	3	2	2	2	2	2	3	3	3	4
92.5	2	2	2	2	2	2	2	2	2	2	2	2	2
95.0	2	2	2	2	2	2	2	2	2	2	2	2	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

- 2014-189-P2.ltd

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

Test results relate only to test samples.

Sofia 16.06.2014

The measurements made:

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

Manager:



/prof. d-r. L. Totev/