

TEST REPORT

Ref. no. B/2017/158 dated 12/06/2017

Subject: Examination of the degree of protection IK09 for the URBINO street lighting fixture.

Tested for:	LUG Light Factory Sp. z o.o.		
	ul. Gorzowska 11		
	65-127 Zielona Góra		
Tested at:	Institutes for Research and Certification "ZETOM" Katowice		
	Testing and Calibration Laboratory "ZETOM" Katowice.		
Customer Order Index:	Order (e-mail)	dated:	26/05/2017
Laboratory Log Reference No. of Order: B/2017/144			
Test start date:	06/06/2017	Test end date:	08/06/2017
This Test Report contains:	5 pages		
3 copies hereof are issued to the following recipients:			
	1. LUG Light Factory Sp. z o.o.		
	2. LUG Light Factory Sp. z o.o.		
	3. LT		
Test supervisor:	Katarzyna Hadam Ph.D.		
Tested and measured by:	Piotr Jureczko, MSc Eng.	Lab Section: WE	
	Kamil Długajczyk	Lab Section: WE	
Test Report prepared by:	Kamil Długajczyk		

Authorised by:
mgr inż. Piotr Jureczko**Approved by:**
p.o. Z-ca Dyrektora
ds. Badań i Wzorcowania
Kierownik Laboratorium
Badawczego i Wzorcującego
dr Katarzyna Hadam

Zakłady Badań i Atestacji „ZETOM”
im. Prof. F. Stauba w Katowicach sp. z o.o.
Institutions for Research and Certification “ZETOM” Ltd.
EU Notified Body no. 1436,
for the following Directives: Construction, Low Voltage & Machinery
ul. Ks. Bpa H. Bednorza 17; 40-384 Katowice, Poland
Phone: 0048(032) 2569-257, 0048(032) 2569-273, 0048(032) 2569-353

PROVISIONS

A. Obligatory:

1. The Test Report shall be property of the Customer who has ordered to have the test done.
2. The Test Report and all information contained therein shall only be used with the consent of the Test Report owner.
3. This Test Report shall only be used in full.
4. All test and measurement reports listed herein refer to the test objects only and shall not be construed as a quality approval thereof.
5. The work covered herein has been carried out according to its Work Plan and in line with the Management System requirements specified in the Testing and Calibration Laboratory Quality Manual.
6. All reference to this Test Report shall be made with the following statement (or its equivalent in meaning):

Tested by the Testing and Calibration Laboratory "ZETOM" in Katowice, a unit accredited by the Polish Centre for Accreditation seated in Warsaw within the scope of the Certificate No. AB 024 Annex.

B. Complementary (listed in this Test Report) Section

C. Anomalies (listed in this Test Report) Section

When using the contents of this Test Report, the owner hereof shall state that they use the results produced by the Testing and Calibration Laboratory at the Institutes for Research and Certification "ZETOM" in Katowice, accredited by the Polish Centre for Accreditation in Warsaw.

1. BASIS OF TESTING

1.1. Customer's document title: Order LUG Light Factory Sp. z o.o. to do the research in the Research and Calibration Laboratory "ZETOM" Katowice

1.2. Customer's document identification: Order (e-mail)

dated: 26/05/2017

1.3. Subject: Performance test IK09 degree for lighting fixture

2. TESTING OBJECTIVE Verification of properties and characteristics according to PN-EN 50102:2001

3. TEST OBJECT

3.1. Nazwa przedmiotu: URBINO street lighting luminaire

3.2. Customer: LUG Light Factory Sp. z o.o.

3.3. Supplier/Manufacturer: LUG Light Factory Sp. z o.o.

3.4. Place of production: ul. Gorzowska 11; 65-127 Zielona Góra

3.5. Method of object delivery for testing: delivered by the Customer

3.6. Objects collected at: LUG Light Factory Sp. z o.o.

3.7. Collect Report: -

3.8. Date of receiving the test objects: 31/05/2017

3.9. Collector's additional labelling applied: -

3.10. Object packaging: cardboard box

3.11. In-laboratory labelling of objects:

Object labelling in prior of delivery to the Lab	Labelling of objects made at the Lab ¹⁾	Notes
-	2017/144	-
¹⁾ Remains the Sample Index		

4. TESTING PROGRAM

The Testing Program includes the testing's cope of the following reference standards:

- PN-EN 50102:2001 "Degree of protection against external mechanical impacts provided by enclosures of electrical equipment (IK code)".

This standard is essentially identical to the standard PN-EN 62262:2003.

5. Results

5.1 Results of the IK degree of protection provided by the URBINO street lighting fixture

Degree of protection IK09
<p>The test was done by hitting a 5.0 kg hammer with an energy equivalent to 10 J impact on the outside of the luminaire.</p> <p>Three hits in different lighting fixtures (total with a translucent glass shade) did not cause distortion of the housing body or cracks in the glass cover.</p> <p>Proper protection provided by the luminaire is ensured.</p>

Photos of the lighting fixture tested:





TEST REPORT

Test Report No.: 801442-01/02

Issued: 27. 7. 2018

Name of product: Fixed general purpose luminaires, street lighting

Type of product: URBINO PREMIUM LED variants: class II
130252.6L14X.0X1 (99 W, Ta +55°C, IP 66, IK 09)
130252.6L17X.0X1 (128 W, Ta +40°C, IP 66, IK 09)
130252.6L20X.0X1 (157 W, Ta +35°C, IP 66, IK 09)

Ratings: 220-240 V, 50/60 Hz

Serial number: -

Manufacturer: LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra,
the Republic of Poland

Production site: LUG Light Factory Sp. z o.o., ul. Gorzowska 11, 65-127
Zielona Góra, Poland

Ordering firm: LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra,
the Republic of Poland

Number of tested samples: 1

Samples submitted on: 4. 7. 2018

Location of testing: Elektrotechnický zkušební ústav, s. p.

Tests performed from 17. 7. 2018 through 24. 7. 2018

Other data: Type representative: 130252.6L202.031

Tested according to: ČSN EN 55015 ed. 4:14 (idt EN 55015:13)
ČSN EN 61547 ed. 2:10 (idt EN 61547:09)
ČSN EN 61000-3-3 ed. 3:14 (idt EN 61000-3-3:13)
ČSN EN 61000-3-2 ed. 4:15 (idt EN 61000-3-2:14)

Compiled by: David Nádherný



Approved by: Miroslav Vondra
Testing laboratory technical manager

No. of pages: 34

No. of annexes: 0

No. of annexes pages: 0

Test results stated in the test report apply only to the tested subject and unless specified otherwise in the test report, the tests were performed using the method and under the conditions determined in the test regulations, technical norm, instructions for use and information provided by the manufacturer on the tested subject and using accessories required by the manufacturer.
Without written consent of Elektrotechnický zkušební ústav, s. p., this report must not be reproduced in any other way than as a whole.

1. Emission

- EN 55015:2013 *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*
- EN 61000-3-2:2014 *Electromagnetic compatibility (EMC) - Limits - Limits for harmonic current emission*
- EN 61000-3-3:2013 *Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16A$ per phase and not subject to conditional connection*

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Type representative: 130252.6L202.031

Requirements at tests:


Standard	Frequency band	Allowed values	Note
EN 55015 Art. 4.3.3	f [MHz] 0.15 - 0.5 0.05 - 30	QP / AV [dB(μ V)] 84 - 74 / 74 - 64 74 / 64	Pass
EN 55015 Art. 4.3.1	f [MHz] 0.009 - 0.05 0.05 - 0.15 0.15 - 0.5 0.5 - 5 5 - 30	QP / AV [dB(μ V)] 110 / --- 90-80 / --- 66-56 / 56-46 56 / 46 60 / 50	Pass
EN 55015 Art. 4.4.1 (d=2m)	f [MHz] 0.009 - 0.07 0.07 - 0.15 0.15 - 3 3 - 30	QP [dB(μ A)] 88 88-58 58-22 22	Pass
EN 55015 Art. 4.4.2	f [MHz] 30 - 230 230 - 300	QP [dB(μ V/m)] 30 d=10m 37	Pass
EN 61000-3-2 Art. 7.3	0 - 2 kHz	Class C	Pass
EN 61000-3-3	50 Hz	---	Not applicable *1)

Notes:

The results of the tests specified in the protocol relating to device with electronic ballasts:
130252.6L202.031: TRIDONIC LCA 160W 350-1050mA one4all C PRE OTD

*1) According to EN 61000-3-3, Art. A2 (LED luminaires with power input $\leq 200W$)

Test result: Pass

Compiled by: Nádherný 

Measured at: Elektrotechnický zkušební ústav, s.p.

Measurement of interference voltages introduced into the mains
According to: EN 55015 art. 4.3.1

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

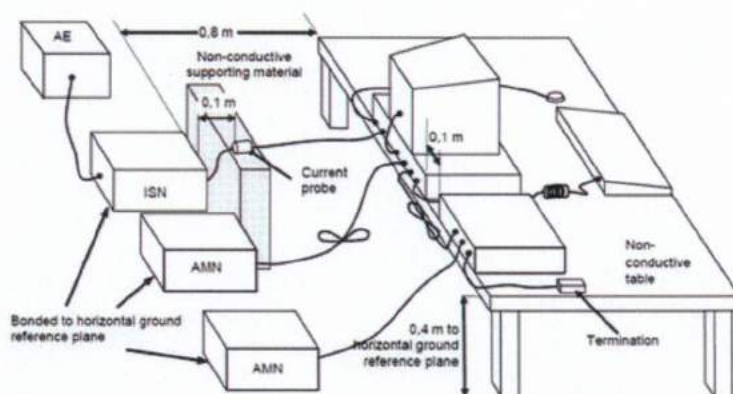
230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Applied limits:

Pásmo - Band	Limits dB(μV), quasi-peak/average
9kHz - 50kHz	110 /--
50kHz - 150kHz	90 - 80 /--
150kHz - 0,5MHz	66 - 56 / 56 - 46
0,5MHz - 5,0MHz	56 / 46
5,0MHz - 30MHz	60 / 50

Measuring arrangement:



Notes:

For measured values see next pages

Test result: Pass

Measured by: Nádherný Date: 17. 7. 2018

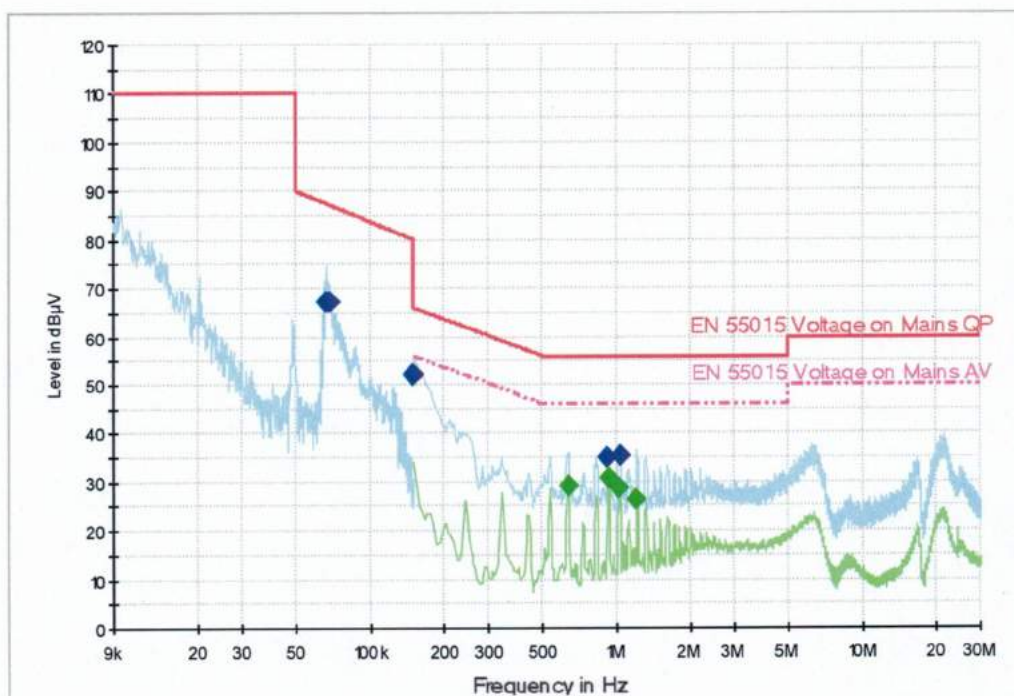
Measured at: Elektrotechnický zkušební ústav, s.p.

EMI Measurement

Common Information

EUT Name: Fixed general purpose luminaire, street lighting
 Type: URBINO PREMIUM LED (130252.6L202.031)
 Test Description: EN 55015
 Operating Conditions: 230V, 50Hz, Pmax
 Operator Name: Nadherny
 Comment: Mains L, N

Voltage EN 55015 tab2a



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.066460	67.1	1000.0	0.200	FL	L1	10.3	20.3	87.4
0.068500	67.4	1000.0	0.200	FL	N	10.3	19.7	87.1
0.150000	52.1	1000.0	9.000	FL	L1	10.3	13.9	66.0
0.150000	52.2	1000.0	9.000	FL	L1	10.3	13.8	66.0
0.921500	35.1	1000.0	9.000	FL	N	10.4	20.9	56.0
1.029500	35.4	1000.0	9.000	FL	N	10.4	20.6	56.0

Final Result 2

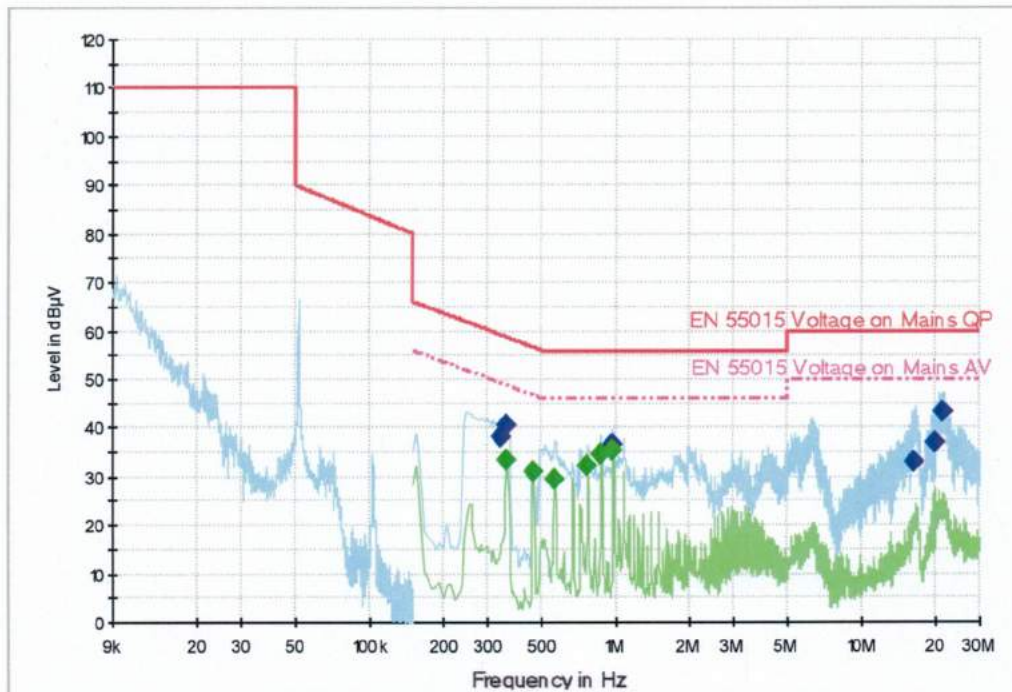
Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.633500	29.3	1000.0	9.000	FL	L1	10.4	16.7	46.0
0.926500	30.5	1000.0	9.000	FL	L1	10.4	15.5	46.0
1.025500	28.7	1000.0	9.000	FL	N	10.4	17.3	46.0
1.209500	26.4	1000.0	9.000	FL	L1	10.5	19.6	46.0

EMI Measurement

Common Information

EUT Name: Fixed general purpose luminaires, street lighting
 Type: URBINO PREMIUM LED (130252.6L202.031)
 Test Description: EN 55015
 Operating Conditions: 230V, 50Hz, Pmin
 Operator Name: Nadherny
 Comment: Mains L, N

Voltage EN 55015tab2a



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.341500	38.1	1000.0	9.000	FL	N	10.3	21.1	59.2
0.357500	40.7	1000.0	9.000	FL	N	10.3	18.1	58.8
0.973500	36.4	1000.0	9.000	FL	L1	10.4	19.6	56.0
16.269500	33.0	1000.0	9.000	FL	L1	11.8	27.0	60.0
19.890500	36.8	1000.0	9.000	FL	N	11.9	23.2	60.0
21.461500	43.2	1000.0	9.000	FL	N	12.0	16.8	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.361500	33.3	1000.0	9.000	FL	N	10.3	15.4	48.7
0.461500	31.1	1000.0	9.000	FL	L1	10.4	15.6	46.7
0.565500	29.7	1000.0	9.000	FL	L1	10.4	16.3	46.0
0.769500	32.4	1000.0	9.000	FL	L1	10.4	13.6	46.0
0.869500	34.6	1000.0	9.000	FL	L1	10.4	11.4	46.0
0.973500	35.4	1000.0	9.000	FL	L1	10.4	10.6	46.0

Measurement of interference voltages on the control terminals
According to: EN 55015 art. 4.3.3

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

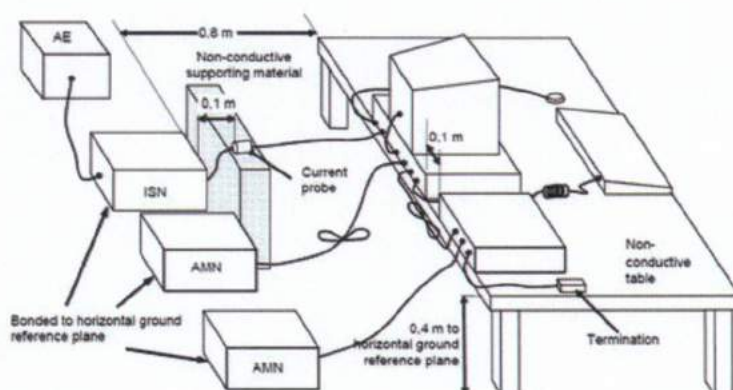
Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Applied limits:

Band	Limits dB(μV), quasi-peak/average
150kHz - 0,5MHz	84 - 74 / 74 - 64
0,5MHz - 30,0MHz	74 / 64



Notes:

For measured values see next pages.

Test result: Pass

Measured by: Nádherný Date: 17. 7. 2018

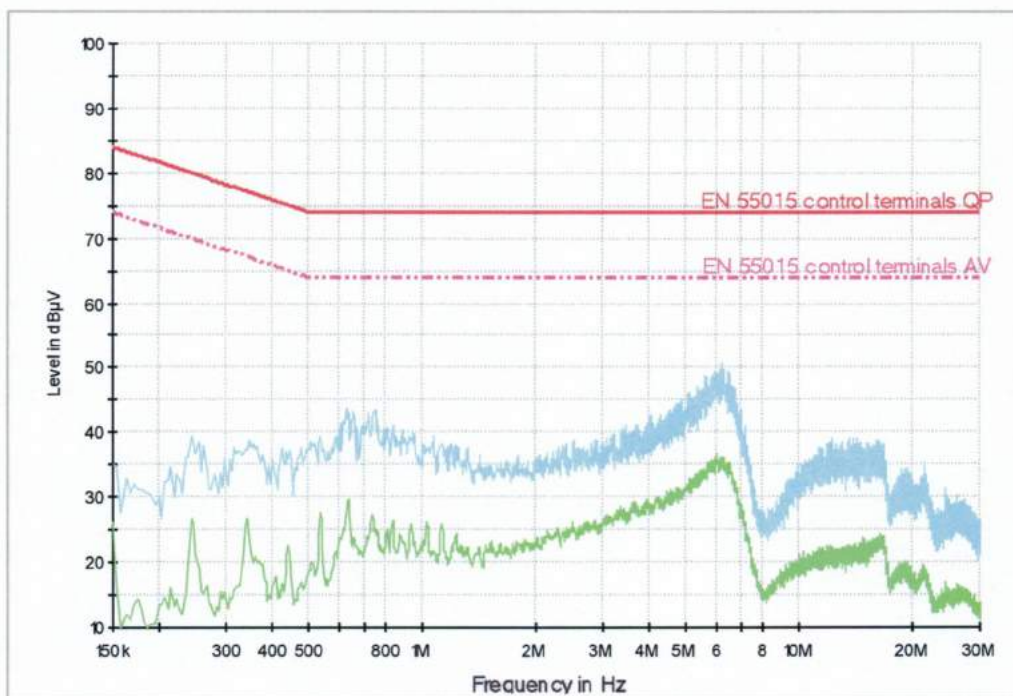
Measured at: Elektrotechnický zkušební ústav, s.p.

EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz, Pmax
Operator Name:	Nadherny
Comment:	DALI terminals

EN 55022 VoltageA EMC O

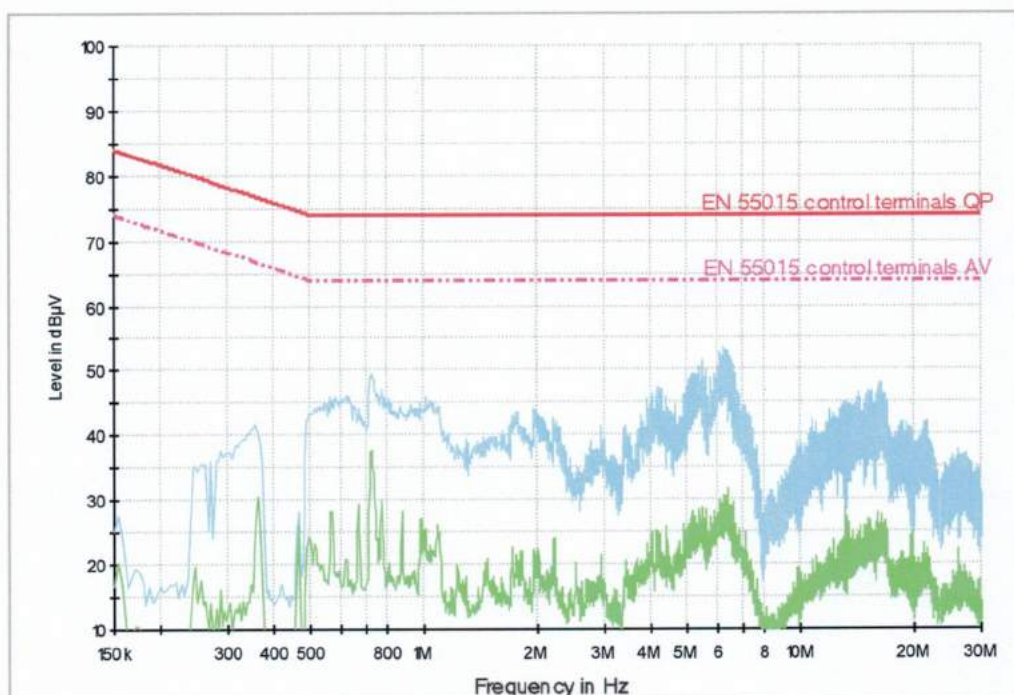


EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz, Pmin
Operator Name:	Nadherny
Comment:	DALI terminals

EN 55022 VoltageA EMC O



**Measurement of interfering radiation in the 9 kHz - 30 MHz band
According to: EN 55015 art 4.4.1**

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

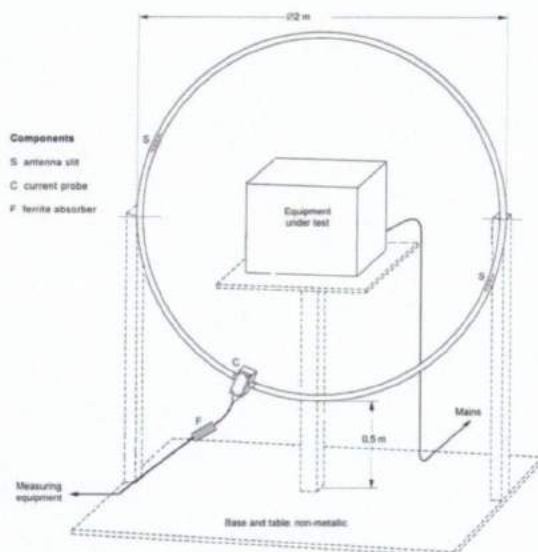
230V, 50Hz, minimally 15 minutes in operation

Temperature: 25°C Rel. humidity: 35 – 45 %

Applied limits:

Band	Limits dB(μA), quasi-peak
9 - 70 kHz	88
70 - 150 kHz	88 - 58
150 kHz - 3 MHz	58 - 22
3 - 30 MHz	22

Measuring arrangement:



Notes:

For measured values see next page – the worst case is introduced.

Test result: Pass

Measured by: Nádherný Date: 20. 7. 2018

[Signature]

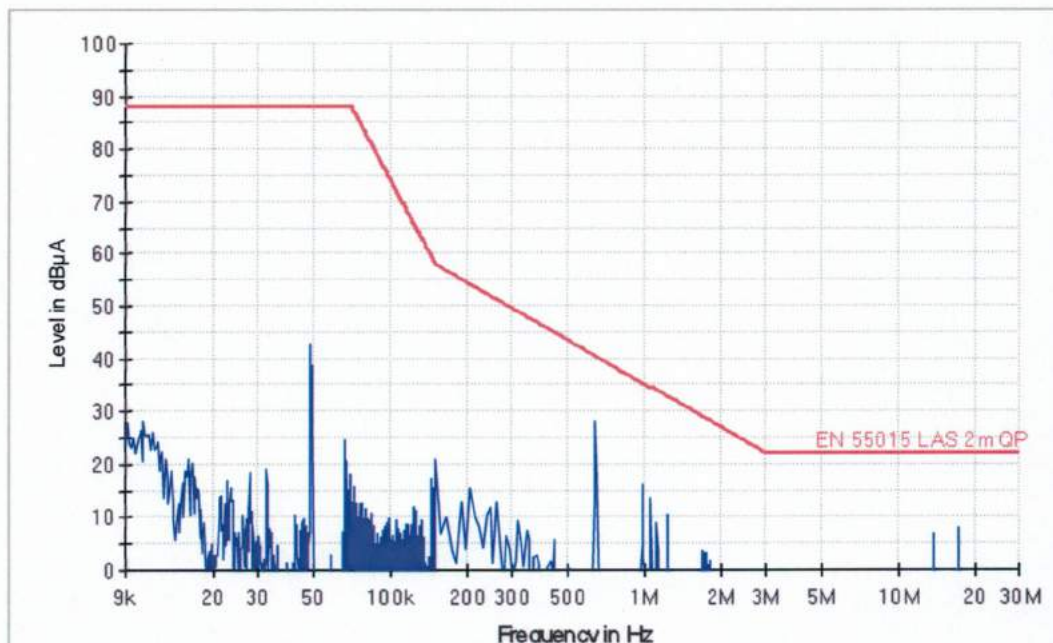
Measured at: Elektrotechnický zkušební ústav, s.p.

EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz
Operator Name:	Nadherny
Comment:	Axis X

EFS with Scans EZU KRUH2M2

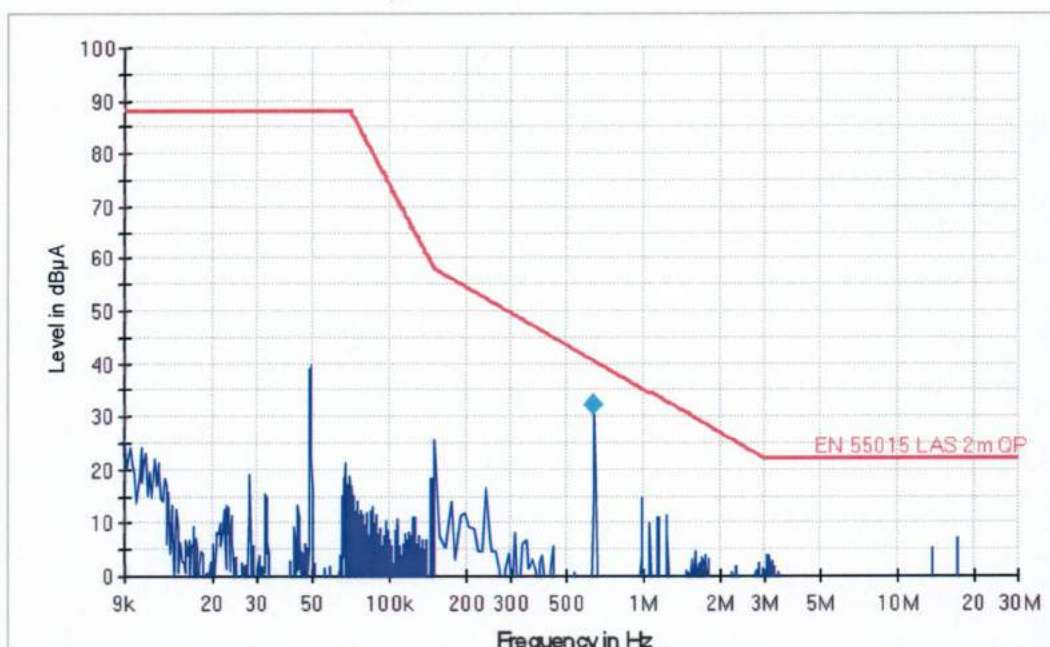


EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz
Operator Name:	Nadherny
Comment:	Axis Y

EFS with Scans EZU KRUH2M2



Final Result 1

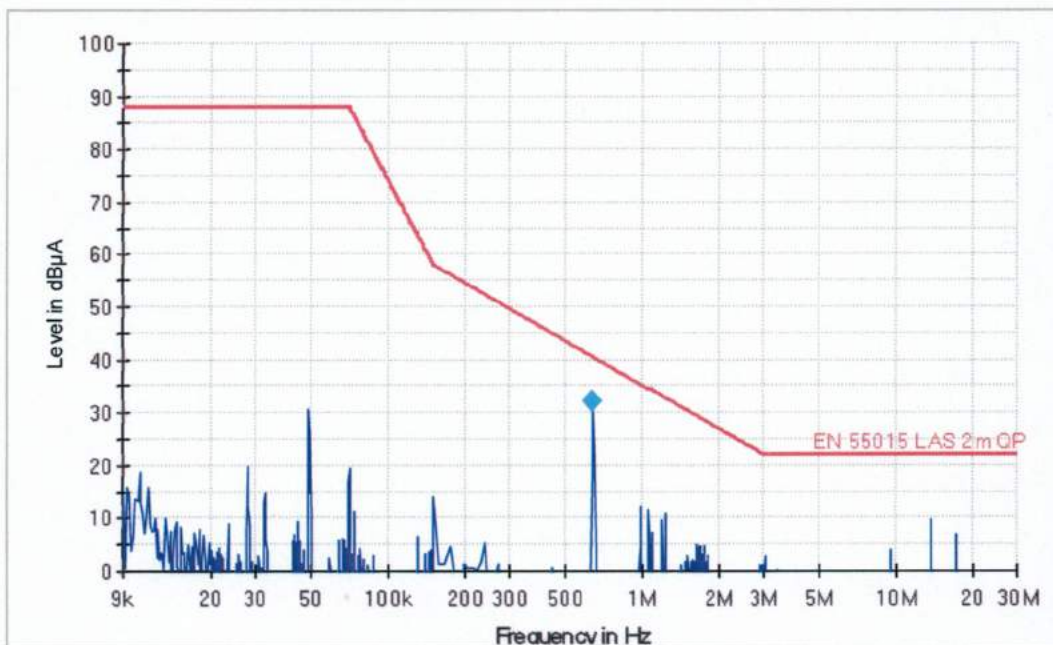
Frequency (MHz)	QuasiPeak (dBμA)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin (dB)	Limit (dBμA)
0.638000	32.2	1000.00	9.000	1.1	8.4	40.6

EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz
Operator Name:	Nadherny
Comment:	Axis Z

EFS with Scans EZU KRUH2M2



Final Result 1

Frequency (MHz)	QuasiPeak (dBμA)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin (dB)	Limit (dBμA)
0.638000	32.4	1000.00	9.000	1.1	8.2	40.6

**Measurement of interfering radiation in the 30 - 300 MHz band
According to: EN 55015 čl. 4.4.2**

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class I)

Operating conditions:

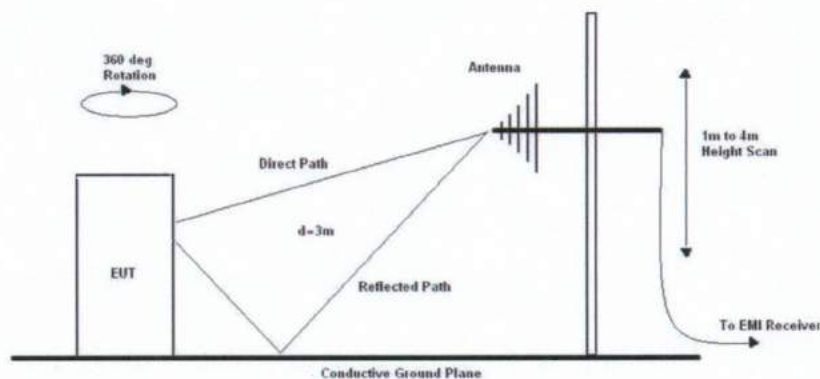
230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Applied limits:

Band (MHz)	Limits dB(μ V/m), quasi-peak	
30 - 300	*)	30 (d=10m)
230 - 300	*)	37 (d=10m)

Measuring arrangement:



Notes:

For measured values see next pages

*) Limits and values converted to 3 m measuring distance

Test result: Pass

Measured by: Nádherný Date: 24. 7. 2018

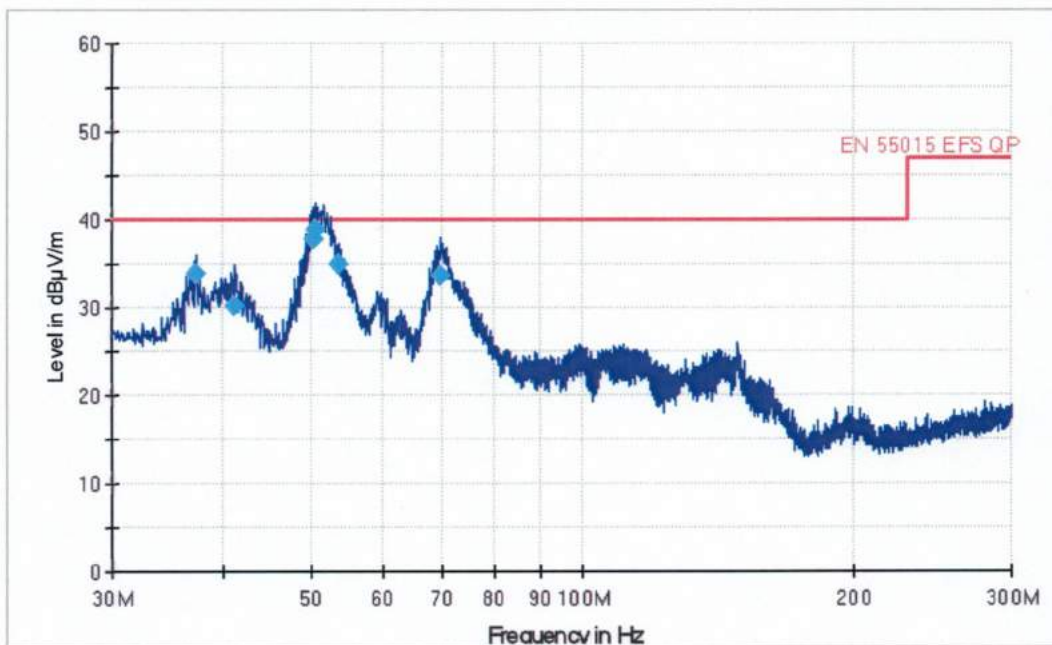
Measured at: Elektrotechnický zkušební ústav, s.p.

EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz, Pmax
Operator Name:	Nadherny
Comment:	V, H polarization

EFS EZU Luminaire



Final Result 1

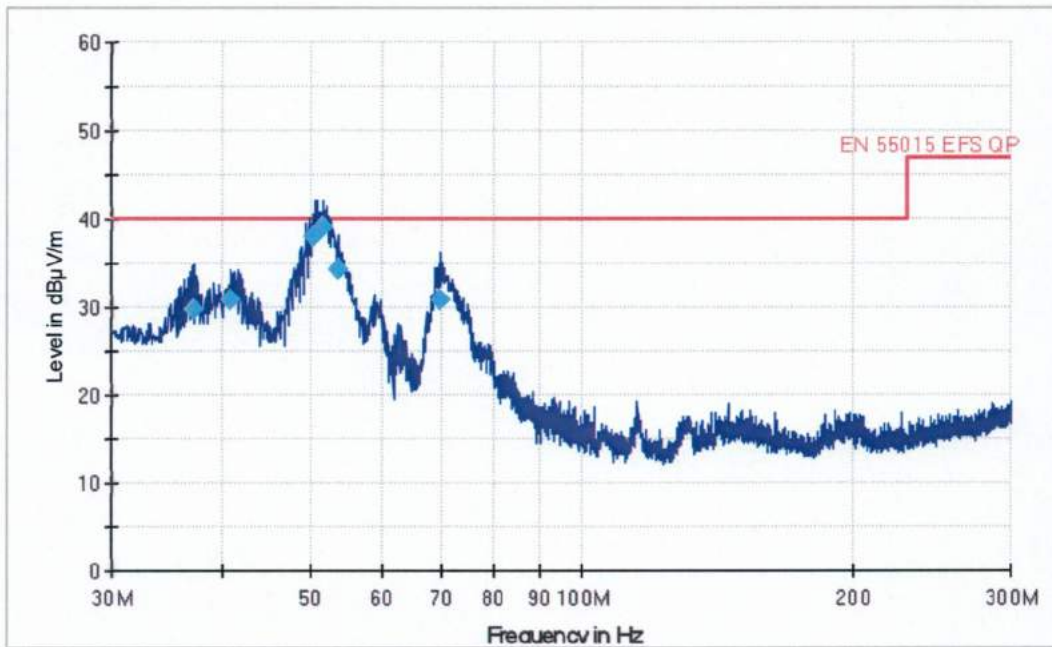
Frequency (MHz)	QuasiPeak (dBμV/m)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
37.200000	33.9	153.0	V	135.0	24.0	6.1	40.0
41.160000	30.2	110.0	V	90.0	22.1	9.8	40.0
50.220000	37.9	110.0	V	188.0	19.8	2.1	40.0
50.520000	38.9	110.0	V	90.0	19.6	1.1	40.0
53.520000	35.0	110.0	V	0.0	17.6	5.0	40.0
69.540000	33.8	130.0	V	135.0	10.9	6.2	40.0

EMI Measurement

Common Information

EUT Name:	Fixed general purpose luminaires, street lighting
Type	URBINO PREMIUM LED (130252.6L202.031)
Test Description	EN 55015
Operating Conditions	230V, 50Hz, Pmin
Operator Name:	Nadherny
Comment:	V, H polarization

EFS EZU Luminaire



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
37.020000	29.8	160.0	V	205.0	24.1	10.2	40.0
40.680000	31.0	110.0	V	188.0	22.3	9.0	40.0
50.340000	38.0	110.0	V	0.0	19.7	2.0	40.0
51.540000	39.2	115.0	V	180.0	18.9	0.8	40.0
53.580000	34.3	110.0	V	8.0	17.6	5.7	40.0
69.480000	31.0	132.0	V	159.0	10.9	9.0	40.0

**Electromagnetic compatibility (EMC) - Limits -
Limits for harmonic current emission
According to: EN 61000-3-2 art. 7.3**

Product: Fixed general purpose luminaires, street lighting

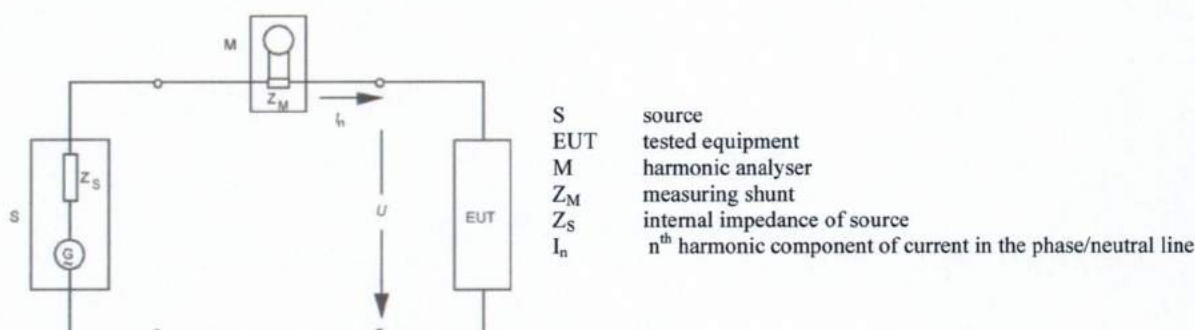
Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Measuring arrangement:



Applied limits:

Order of harmonics	Limit (%I ₁) P > 25W
2	2
3	30.λ
5	10
7	7
9	5
n 11 - 39 (only odd)	3

λ = power factor

Notes:

Equipment class C

For measured values see next pages

Test result: Pass

Measured by: Nádherný Date: 20. 7. 2018

Measured at: Elektrotechnický zkušební ústav, s.p.

Report title:	801442-01/02
Company Name:	Elektrotechnický zkušební ústav, s.p.
Date of test:	13:15 20.Jul 2018
Measurement file name:	Harmonics_3_2_Ed4.rsd
Tester:	Nádherný
Standard used:	EN/IEC 61000-3-2 Ed.4 Quasi-stationary Equipment class C
Observation time:	10s
Windows width:	10 periods - (EN/IEC 61000-4-7 Edition 2002 + A1:2008)
Customer:	LUG LIGHT FACTORY SP.Z O.O.
E. U. T.:	URBINO PREMIUM LED (variants: class II) (130252.6L202.031)
Temperature :	24
Humidity :	39
Comment:	230 V, 50 Hz, 159W (rated 157W)
Measurement smoothed data:	Fund. Current: 0.695A , 0.618A, 0.496A, 0.268A, 0.156A Power Factor: 0.99, 0.988, 0.983, 0.951, 0.858

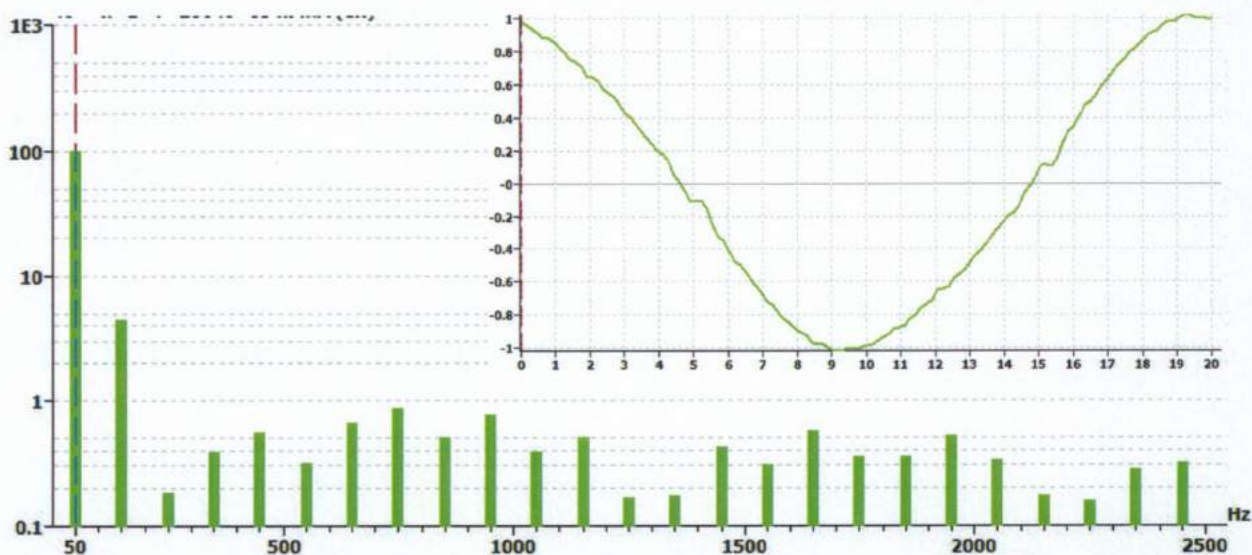
Test Result	
E. U. T.:	PASS
Power Source:	PASS

20.Jul 2018

(Date)

Nádherný

(Sign)



E. U. T. Result

Check harmonics 2..40 [exception odd 21..39]:

Harmonic(s) > 150%:		
Order (n):	None	
Harmonic(s) with average > 100%:		
Order (n):	None	

Check odd harmonics 21..39:

All Partial Odd Harmonics below partial limits.		
Harmonic(s) > 150%:		
Order (n):	None	
Harmonic(s) with average > 150%:		
Order (n):	None	

Power Source Result

First dataset out of limit:		
DS (time):	None	
Harmonic(s) out of limit:		
Order (n):	None	

Average harmonic current results-159W

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	694.564E-3	99.983	29.71	PASS
2	594.544E-6	0.086		
3	30.634E-3	4.410		
4	599.012E-6	0.086		
5	1.382E-3	0.199		
6	558.427E-6	0.080		
7	2.753E-3	0.396		
8	553.367E-6	0.080		
9	4.006E-3	0.577		
10	548.696E-6	0.079		
11	2.275E-3	0.327		
12	582.882E-6	0.084		
13	4.776E-3	0.687		
14	511.965E-6	0.074		
15	6.094E-3	0.877	3.00	PASS
16	538.513E-6	0.078		
17	3.563E-3	0.513		
18	559.689E-6	0.081		
19	5.215E-3	0.751		
20	521.774E-6	0.075		
21	2.639E-3	0.380		
22	565.961E-6	0.081		
23	3.695E-3	0.532		
24	598.070E-6	0.086		
25	1.315E-3	0.189	3.00	PASS
26	568.583E-6	0.082		
27	1.320E-3	0.190		
28	530.246E-6	0.076		
29	3.020E-3	0.435		
30	539.716E-6	0.078		
31	2.190E-3	0.315		
32	586.544E-6	0.084		
33	4.000E-3	0.576		
34	600.245E-6	0.086		
35	2.491E-3	0.359		
36	584.068E-6	0.084		
37	2.479E-3	0.357		
38	567.992E-6	0.082		
39	3.971E-3	0.572		
40	573.934E-6	0.083		

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Average harmonic current results-141W

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	617.608E-3	99.981		
2	590.831E-6	0.096		PASS
3	27.944E-3	4.524	29.64	PASS
4	612.039E-6	0.099		PASS
5	2.026E-3	0.328		PASS
6	618.548E-6	0.100		PASS
7	1.644E-3	0.266		PASS
8	571.073E-6	0.092		PASS
9	3.715E-3	0.601		PASS
10	578.618E-6	0.094		PASS
11	1.325E-3	0.214		PASS
12	544.132E-6	0.088		PASS
13	4.123E-3	0.668		PASS
14	550.711E-6	0.089		PASS
15	5.135E-3	0.831	3.00	PASS
16	575.372E-6	0.093		PASS
17	2.668E-3	0.432		PASS
18	591.856E-6	0.096		PASS
19	5.698E-3	0.922	3.00	PASS
20	583.092E-6	0.094		PASS
21	3.409E-3	0.552		PASS
22	585.096E-6	0.095		PASS
23	3.838E-3	0.621		PASS
24	603.681E-6	0.098		PASS
25	1.874E-3	0.303		PASS
26	581.471E-6	0.094		PASS
27	1.530E-3	0.248		PASS
28	585.650E-6	0.095		PASS
29	3.530E-3	0.571		PASS
30	588.263E-6	0.095		PASS
31	2.141E-3	0.347		PASS
32	554.471E-6	0.090		PASS
33	4.153E-3	0.672		PASS
34	554.356E-6	0.090		PASS
35	2.465E-3	0.399		PASS
36	601.453E-6	0.097		PASS
37	2.228E-3	0.361		PASS
38	575.806E-6	0.093		PASS
39	3.217E-3	0.521		PASS
40	614.498E-6	0.099		PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Average harmonic current results-112W

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	495.795E-3	99.976	29.50	PASS
2	529.328E-6	0.107		
3	24.373E-3	4.915		
4	600.269E-6	0.121		
5	2.625E-3	0.529		
6	582.716E-6	0.118		
7	2.143E-3	0.432		
8	563.032E-6	0.114		
9	3.183E-3	0.642		
10	563.244E-6	0.114		
11	1.317E-3	0.266		
12	583.722E-6	0.118		
13	4.647E-3	0.937		
14	581.388E-6	0.117		
15	5.892E-3	1.188	3.00	PASS
16	582.622E-6	0.117		
17	3.002E-3	0.605		
18	604.413E-6	0.122		
19	5.150E-3	1.039	3.00	PASS
20	589.149E-6	0.119		
21	3.076E-3	0.620		
22	593.913E-6	0.120		
23	3.199E-3	0.645		
24	571.612E-6	0.115		
25	1.475E-3	0.298		
26	566.457E-6	0.114		
27	1.026E-3	0.207		
28	593.007E-6	0.120		
29	2.342E-3	0.472		
30	589.117E-6	0.119		
31	1.399E-3	0.282		
32	551.951E-6	0.111		
33	2.780E-3	0.560		
34	566.809E-6	0.114		
35	3.074E-3	0.620		
36	556.383E-6	0.112		
37	1.900E-3	0.383		
38	534.932E-6	0.108		
39	3.041E-3	0.613		
40	544.884E-6	0.110		

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Average harmonic current results-60W

Hn	leff [A]	leff [%]	Limit [%]	Result
1	267.709E-3	99.967	28.53	PASS
2	638.318E-6	0.238		
3	21.295E-3	7.952		
4	709.920E-6	0.265		
5	4.183E-3	1.562		
6	768.086E-6	0.287		
7	1.965E-3	0.734		
8	733.582E-6	0.274		
9	4.510E-3	1.684		
10	723.687E-6	0.270		
11	2.396E-3	0.895		
12	709.234E-6	0.265		
13	2.296E-3	0.858		
14	708.407E-6	0.265		
15	4.873E-3	1.820		
16	658.423E-6	0.246		
17	3.339E-3	1.247		
18	678.249E-6	0.253		
19	2.819E-3	1.053		
20	656.433E-6	0.245		
21	3.037E-3	1.134		
22	677.685E-6	0.253		
23	1.873E-3	0.700		
24	637.557E-6	0.238		
25	2.598E-3	0.970		
26	629.296E-6	0.235		
27	2.273E-3	0.849		
28	612.399E-6	0.229		
29	1.275E-3	0.476		
30	681.155E-6	0.254		
31	1.004E-3	0.375		
32	669.997E-6	0.250		
33	1.494E-3	0.558		
34	691.339E-6	0.258		
35	3.278E-3	1.224		
36	647.055E-6	0.242		
37	1.700E-3	0.635		
38	638.610E-6	0.238		
39	2.056E-3	0.768		
40	657.091E-6	0.245		

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Average harmonic current results-31W

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	155.734E-3	99.965		
2	770.999E-6	0.495		PASS
3	17.794E-3	11.422	25.75	PASS
4	914.613E-6	0.587		PASS
5	7.501E-3	4.815	10.00	PASS
6	981.526E-6	0.630		PASS
7	3.412E-3	2.190		PASS
8	929.523E-6	0.597		PASS
9	3.246E-3	2.084		PASS
10	846.919E-6	0.544		PASS
11	2.255E-3	1.447		PASS
12	831.583E-6	0.534		PASS
13	1.024E-3	0.658		PASS
14	800.059E-6	0.514		PASS
15	2.425E-3	1.557		PASS
16	789.996E-6	0.507		PASS
17	3.078E-3	1.975		PASS
18	768.710E-6	0.493		PASS
19	3.606E-3	2.315		PASS
20	710.494E-6	0.456		PASS
21	1.979E-3	1.270		PASS
22	712.792E-6	0.458		PASS
23	2.493E-3	1.600		PASS
24	740.926E-6	0.476		PASS
25	2.882E-3	1.850		PASS
26	701.512E-6	0.450		PASS
27	2.087E-3	1.340		PASS
28	686.870E-6	0.441		PASS
29	1.148E-3	0.737		PASS
30	664.360E-6	0.426		PASS
31	2.718E-3	1.745		PASS
32	667.312E-6	0.428		PASS
33	3.522E-3	2.261		PASS
34	683.764E-6	0.439		PASS
35	3.014E-3	1.934		PASS
36	650.961E-6	0.418		PASS
37	3.650E-3	2.343		PASS
38	656.390E-6	0.421		PASS
39	1.941E-3	1.246		PASS
40	642.052E-6	0.412		PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

2. Immunity

EN 61547
Equipment for general lighting purposes - EMC - immunity requirements

Product: Fixed general purpose luminaires, street lighting**Type:** URBINO PREMIUM LED (variants: class II)

Type representative: 130252.6L202.031

Requirements at tests:

Generic standard	Level	Allowed error *1)	Note
EN61000-4-2	$\pm 4\text{kV} / \pm 8\text{kV}$	B	Pass
EN61000-4-3	3V/m 80 - 1000 MHz	A	Pass
EN61000-4-4	$\pm 1\text{kV}$ AC power, $\pm 0,5\text{kV}$ signal lines	B	Pass
EN61000-4-5	$\pm 1\text{kV} / \pm 2\text{kV}$	C	Pass
EN61000-4-6	3 V 0,15 - 80 MHz	A	Pass
EN61000-4-8	3 A/m	A	*2) Pass
EN61000-4-11	200 ms / 70% U_T 10 ms / 0% U_T	C B	Pass

Notes:

The results of the tests specified in the protocol relating to device with electronic ballasts:

130252.6L202.031; TRIDONIC LCA 160W 350-1050mA one4all C PRE OTD

*1) Performance criteria according to EN 61547, art. 4.2

*2) Devices do not contain parts sensitive to the magnetic field

Test result: Pass

Compiled by: Nádherný



Measured at: Elektrotechnický zkušební ústav, s.p.

***Test of electric discharge resistance
According to: EN 61000-4-2***

Product: Fixed general purpose luminaires, street lighting
Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Allowed criterion: B

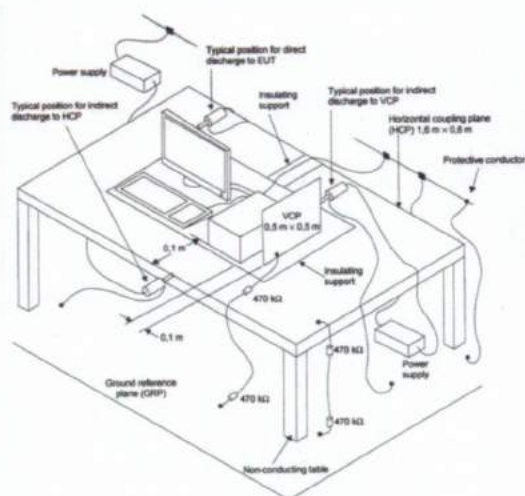
Number of testing discharges: 10/10 contact/air discharge to every test-places in each polarity, besides indirect contact discharges into a vertical and horizontal coupling plane

Tested points: Contact discharge into the metal parts and to the horizontal and vertical coupling plane. Air discharge into plastic parts, contact discharge into conducted parts.

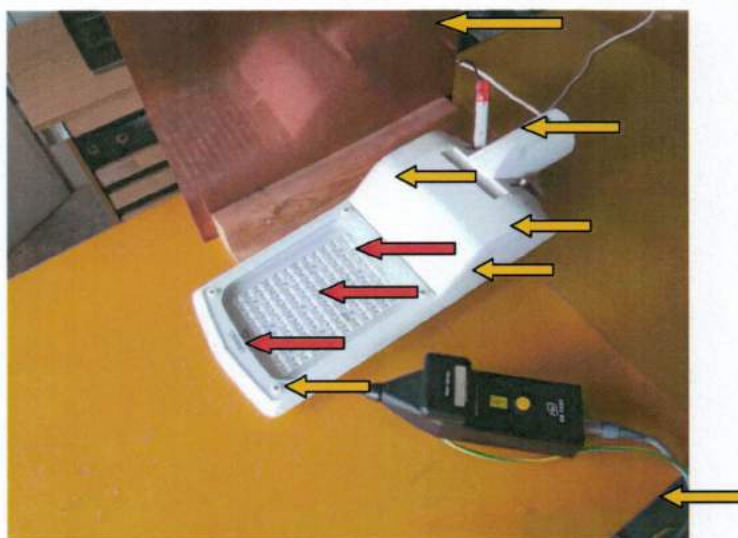
Testing voltage [kV]: ± 4 – contact discharge / ± 8 – air discharge

Achieved criterion: A

Measuring arrangement:



Contact → , air →



Notes:--

Test result: Pass

Measured by: Nádherný Date: 20. 7. 2018

Measured at: Elektrotechnický zkušební ústav, s.p.

Immunity test - radiated electromagnetic field requirements
According to: EN 61000-4-3

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Applied limits:

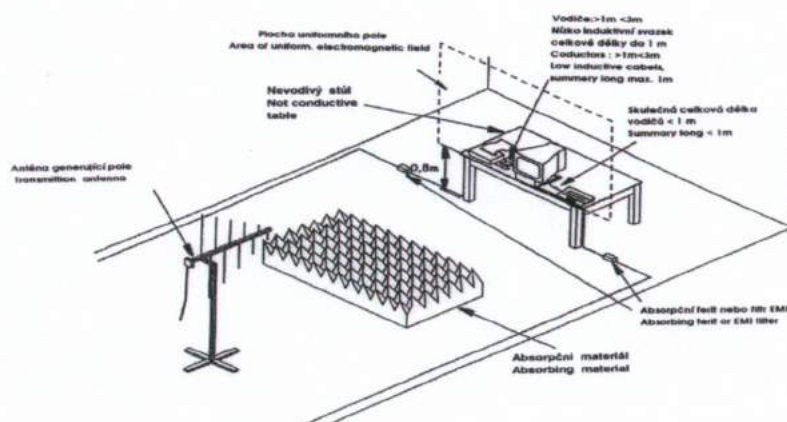
Scan spectrum: 80 - 1000 MHz

Intensity of field: 3 V/m (80% AM, 1kHz)

Allowed criterion: A

Achieved criterion: A

Measuring arrangement:



Notes: --

Test result: Pass

Měřil - Measured by: Nádherný Datum - Date: 24. 7. 2018

Místo měření - Measured at: Elektrotechnický zkušební ústav, s.p.

*Test by quick transient burst
According to: EN 61000-4-4*

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

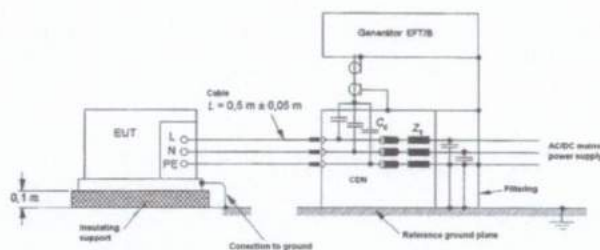
Temperature: 25°C Rel. humidity: 35 – 45 %

Allowed criterion: B

Testing voltage applied:

Applied to	Testing level	Performance criterion	Remark
L,N,L+N	$\pm 1\text{kV}$	A	Coupling networks to power supply
L+PE	$\pm 1\text{kV}$	-	
N+PE	$\pm 1\text{kV}$	-	
L+N+PE	$\pm 1\text{kV}$	-	
DA, DA	$\pm 0,5\text{kV}$	A	By coupling network to DALI terminals

Measuring arrangement:



Notes:--

Test result: Pass

Measured by: Nádherný Date: 20. 7. 2018

Measured at: Elektrotechnický zkušební ústav, s.p.

Surge immunity test
According to: EN 61000-4-5

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

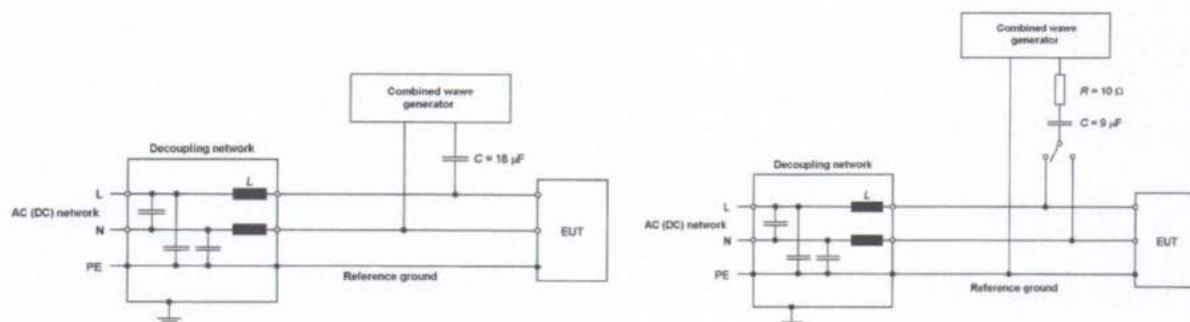
Temperature: 25°C Rel. humidity: 35 – 45 %

Allowed criterion: C

Testing voltage applied:

Applied voltage	Testing level	Performance criterion	Remark
L-N	P>25W: $\pm 1\text{kV}$	B	90°, 270°
L-PE, N-PE, L+N-PE	P>25W: $\pm 2\text{kV}$	-	90°, 270°

Measuring arrangement:



Notes: --

Test result: Pass

Measured by: Nádherný Date: 20. 7. 2018

Measured at: Elektrotechnický zkušební ústav, s.p.

Immunity test - conducted disturbances induced by radio-frequency fields
According to: EN 61000-4-6

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 25 °C Rel. humidity: 35 – 45 %

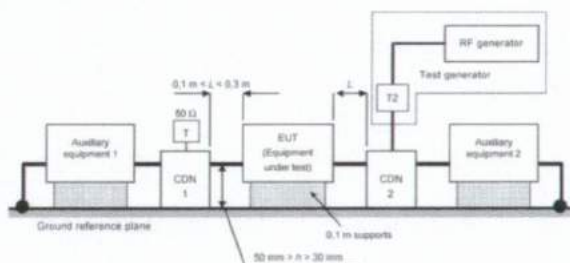
Allowed criterion: A

Testing voltage applied:

Frequency band	Testing voltage level	Note
150kHz - 80MHz	3V (mod. 80% AM / 1 kHz)	Applied by coupling network to Mains and DALI terminals

Achieved criterion: A

Measuring arrangement:



Notes: --

Test result: Pass

Measured by: Nádherný Date: 23. 7. 2018

Measured at: Elektrotechnický zkušební ústav, s.p.

Voltage dips, short interruptions and voltage variations
According to: EN 61000-4-11

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

Operating conditions:

230V, 50Hz, minimally 15 minutes in operation

Temperature: 24°C Rel. humidity: 35 – 45 %

Allowed criterion: C, B

Tests requirements:

Test level [%] Ut	Duration 50 / 60Hz [ms]	Allowed criterion	Achieved criterion
0	10 / 8,3	B	B
70	200 / 167	C	A

Notes: --

Test result: Pass

Measured by: Nádherný Date: 23. 7. 2018



Measured at: Elektrotechnický zkušební ústav, s.p.

Measuring equipment used:

<input checked="" type="checkbox"/> Test receiver RaS	ESCI	110213	04.2020
<input checked="" type="checkbox"/> Měřicí přijímač- Test receiver RaS	ESIB26	110097	02.2020
<input checked="" type="checkbox"/> Continuos wave simulátor EM Test	CWS500N1	110232	03.2019
<input checked="" type="checkbox"/> Harmonic analyzer EM TEST	DPA503N	110272	02.2019
<input checked="" type="checkbox"/> Power fail simulator EM Test	PFS 500	98-6040	10.2019
<input checked="" type="checkbox"/> Ultra Compact Simulator EM Test	UCS 500N	110235	02.2019
<input checked="" type="checkbox"/> ESD generator	ESD30N	110196	03.2019
<input type="checkbox"/> ESD generátor	ESD30	110090	12.2018
<input checked="" type="checkbox"/> Artificial mains EMCO	3825/2	95-5852	07.2019
<input type="checkbox"/> Artificial mains Narda	PMM L3-32	110250	11.2019
<input checked="" type="checkbox"/> Artificial mains ESH	ESH4-Z5	5821/1	05.2020
<input checked="" type="checkbox"/> Antenna Frankonia	BTA-M	00-6321	05.2020
<input type="checkbox"/> Antenna Double Ridget	HF 907	110177	08.2020
<input checked="" type="checkbox"/> Burst generátor Haefely	PEFT Junior	5872	12.2018
<input checked="" type="checkbox"/> Surge generator	VCS500-M	110114	04.2020
<input type="checkbox"/> Current Probe R&S	EZ-17	110098	05.2019

Auxiliary equipment:

<input checked="" type="checkbox"/> Supply source EM TEST	HFS300	98-6042	02.2019
<input type="checkbox"/> Ref. impedance SCHAFFNER	LR4	X71773	02.2019
<input checked="" type="checkbox"/> Attenuator 6dB	ATT6	110233/3	05.2020
<input checked="" type="checkbox"/> Electric Field Probe Narda	EP603	110273	01.2019
<input checked="" type="checkbox"/> Amplifier PRÁNA	AP32 LT225	07-110145	
<input type="checkbox"/> Amplifier MILMEGA	AS0822-100	98-6038	
<input type="checkbox"/> Amplifier MILMEGA	AS0204-125	110144	
<input type="checkbox"/> Amplifier MILMEGA (1.8-6GHz)	AS1860-100	110219	
<input checked="" type="checkbox"/> Signal generator RaS	SMF100A	110167	05.2021
<input type="checkbox"/> Multimetr - Multimeter	FLUKE189	550049	02.2020
<input type="checkbox"/> Probe RFT	TK12	700044	06.2020
<input checked="" type="checkbox"/> Coupling/dec. EM TEST	CDN M3N	552097	11.2019
<input checked="" type="checkbox"/> Coupling/dec. EM TEST	CDN M2N	110233/2	11.2019
<input type="checkbox"/> Coupling/SCHAFFNER ISN T4xx	ISN T4xx	110032	
<input type="checkbox"/> Capacitive coupling clamp	Haefely		
<input type="checkbox"/> Current probe	P MP-120		
<input type="checkbox"/> Current probe	AM503	79-4221	
<input checked="" type="checkbox"/> Current probe RFT	SMZ 11 -9076	700459	06.2021
<input type="checkbox"/> Elektromag. kleště- Electromag. injection clamp	EM-101	110233	11.2019
<input type="checkbox"/> Ferite clamp 1-1000 MHz	EZ-24	10003	
<input checked="" type="checkbox"/> Anechoic chamber - Euroshield Oy	RFMSD-F/A	6341	02.2020
<input type="checkbox"/> Absorbing Clamp	MDS-21	5425	06.2022
<input checked="" type="checkbox"/> Notebook Dell	Dell D351	551492	
<input type="checkbox"/> Multimeter Fluke	289	552550	06.2020
<input checked="" type="checkbox"/> Ocelové pásmo – Metal meter	5m	N400014	12.2020
<input checked="" type="checkbox"/> Pulse Limiter RaS	ESH3-Z2	5424	01.2019
<input checked="" type="checkbox"/> Hygrometer	TESTO 608-H2	551002	10.2018
<input checked="" type="checkbox"/> Hygrometer	TESTO 625	50021821	10.2018

Cables:

- ☐ K1
- ☒ K22 , ESH3-Z2
- ☐ K14 , K15a , K16
- ☐ KB01, KB02, KB04
- ☒ KB06
- ☐ K4 , K19
- ☐ K23
- ☒ K27
- ☒ K25, K2, K4

EZU equipments:

- ☒ PR 51 – EN 61000-4-2 – Vertical coupling plane
- ☐ Dummy lamp: dle - according to EN55015
- ☒ Regulating transformer - ZPA RA20
- ☐ PR-21 - Stabilized power supply BS 525
- ☐ P10 - EN55015 - Spherical cover
- ☐ P11 - EN6100-4-8 - EZÚ test setup
- ☐ P13 – Třífázový přepínač - three-phase switch
- ☒ PR45 - Loop antenna 2m

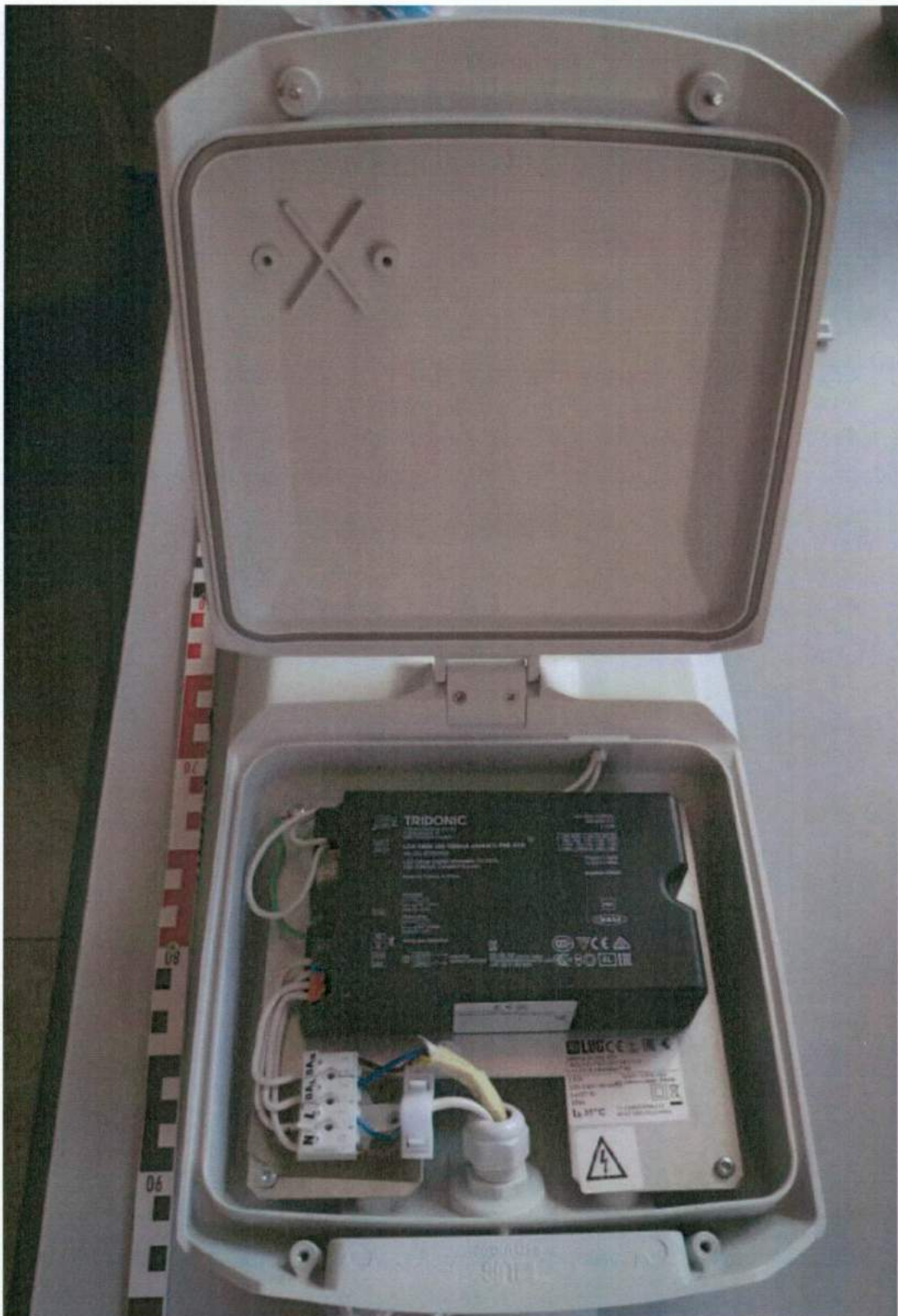
Photo-documentation

Product: Fixed general purpose luminaires, street lighting

Type: URBINO PREMIUM LED (variants: class II)

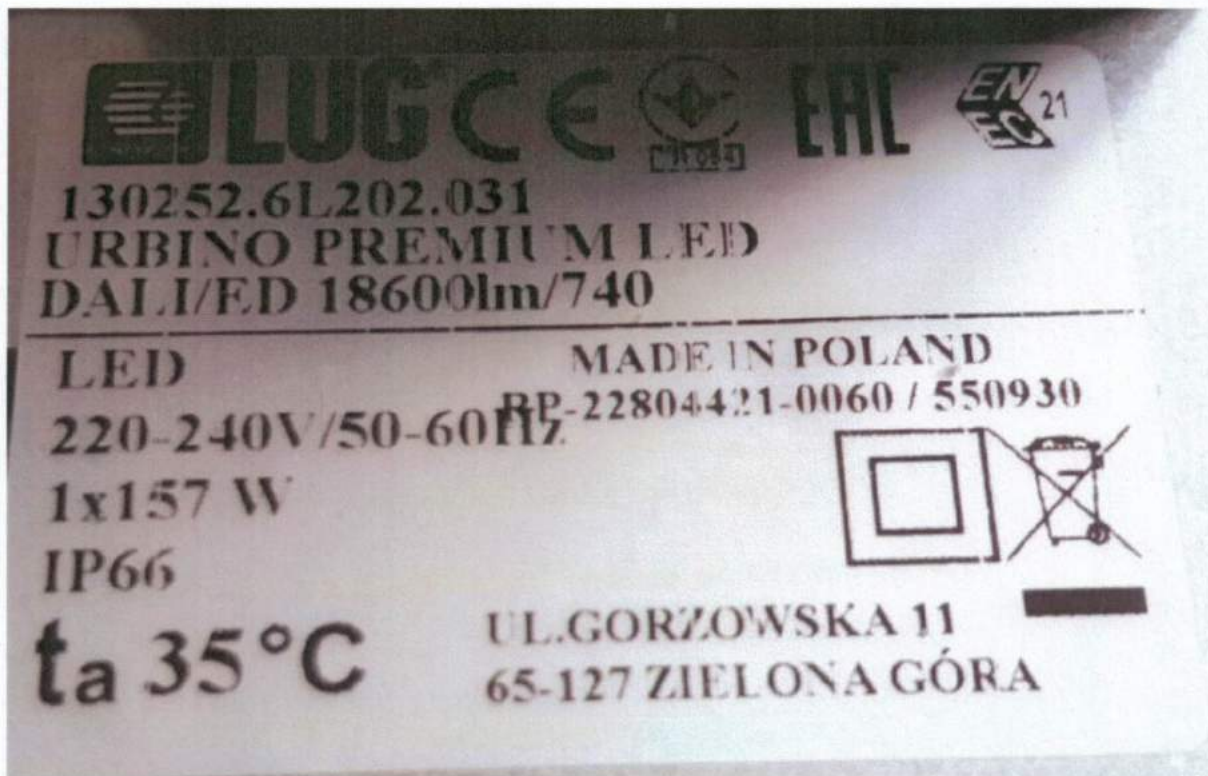


Celkový pohled - Overview: 130252.6L202.031



Předřadník - Ballast : TRIDONIC LCA 160W 350-1050mA one4all C PRE OTD

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Výrobní štítek – Name plate

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Ref. Certif. No.

CZ-2871IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE)
CB SCHEMESYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC**CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC**Product
Produit

Luminaires for road and street lighting

Name and address of the applicant
Nom et adresse du demandeurLUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, PolandName and address of the manufacturer
Nom et adresse du fabricantLUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, PolandName and address of the factory
Nom et adresse de l'usineLUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, PolandRatings and principal characteristics
Valeurs nominales et caractéristiques principales220-240 V, 50-60 Hz, IP 66, protection class II max 99 W
13050 lm ta +55°C
220-240 V, 50-60 Hz, IP 66, protection class II max 128 W
14700 lm ta +40°C
220-240 V, 50-60 Hz, IP 66, protection class II max 157 W
18600 lm ta +35°CTrademark (if any)
Marque de fabrique (si elle existe)Model / Type Ref.
Ref. De type

URBINO PREMIUM LED

Additional information (if necessary)
Information complémentaire (si nécessaire)**PUBLICATION****EDITION**A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à laIEC 60598-1 2014
IEC 60598-2-3 2002
IEC 62471 2006As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

801442-01/01 of: 24.10.2018

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de CertificationElektrotechnický zkušební ústav, s.p.
Pod lisem 129/2, 171 02 Praha 8 – Troja
Czech RepublicSignature: Miroslav Sedláček
Certification and Inspection Manager

Date: 26.10.2018



ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV



ELECTROTECHNICAL TESTING INSTITUTE - CZECH REPUBLIC
ELEKTROTECHNISCHE PRÜFANSTALT - TSCHHECHISCHE REPUBLIK
INSTITUT ELECTROTECHNIQUE D'ESSAIS - RÉPUBLIQUE TCHÈQUE
ЭЛЕКТРОТЕХНИЧЕСКИЙ ИСПЫТАТЕЛЬНЫЙ ИНСТИТУТ - ЧЕШСКАЯ РЕСПУБЛИКА

Pod lisem 129/2, 171 02 Praha 8 - Troja

CERTIFIKÁT/CERTIFICATE

č./No.: 5180016

Objednatel/Ordering firm:

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Polsko/Poland

Výrobce/Držitel licence//Manufacturer/Licence holder:

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Polsko/Poland

Výrobní místo/Factory:

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Polsko/Poland

Výrobek/Name of product:

Svitidla pro osvětlení cest a ulic/Luminaires for road and street lighting

Obchodní značka/Trade mark:

Typ/Type of product: URBINO PREMIUM LED

Přesná specifikace výrobku je uvedena v příloze 1, která tvoří nedílnou součást tohoto certifikátu./Specification of the product is in the annex 1 that forms an integral part of this certificate.

Elektrotechnický zkušební ústav na základě splnění požadavků certifikačního schématu „ENEC“ uděluje licenci na užívání značky/Electrotechnical Testing Institute is granting according to the certification scheme „ENEC“ a licence for using the following mark



Touto značkou může být označován výrobek specifikovaný v tomto certifikátu po dobu platnosti níže uvedené smlouvy na užívání značky ENEC, při dodržení všech pravidel uvedených v této smlouvě./This mark may be used for the product specified in this certificate within validity of the Agreement on the use of the ENEC Mark by implementing all the rules stated in the Agreement.

Právo označovat výrobek výše uvedenou značkou je založeno na/The right to use the above mentioned mark for the product is based on:

- protokolu o zkouškách č./Test report No.: 801442-01/01 ze dne/of: 24.10.2018

Vzorek zkoušeného výrobku je ve shodě s požadavky/A sample of the product was tested and found to be in conformity with:
EN 60598-1:15, EN 60598-2-3:03+A1:11

- provedení inspekce v místě výroby – viz inspekční zpráva č./inspection in the place of manufacture – see inspection report No.: 704047-01 ze dne/of: 25.10.2017
- smlouvě na užívání značky ENEC mezi objednavatelem a Elektrotechnickým zkušebním ústavem č./the Agreement on the use of the ENEC Mark concluded between the ordering firm and the Electrotechnical Testing Institute No.: 801442

26.10.2018

V Praze dne/Prague

Mgr. Miroslav Sedláček
Vedoucí certifikačního orgánu/
Head of Certification Body



801442-01

Příloha licence č. 5180016 Annex to Licence No. 5180016	
Držitel licence Licensee	LUG Light Factory Sp.z o.o. Ul. Grozowska 11, 65-127 Żilena Góra, Poland
Výrobce Manufacturer	LUG Light Factory Sp.z o.o. Ul. Grozowska 11, 65-127 Żilena Góra, Poland
Druh svítidla Kind of luminaire	Svítidlo pro osvětlení cest a ulic Luminaire for road and street lightning
Typ svítidla Type reference	URBINO PREMIUM LED DALI/ED
Obchodní značka Trade mark	LUG Light Factory Sp.z o.o.
Protokol o zkoušce Test report	801442-01/01
Národní normy National standard(s)	EN 60598-2-3:2003 + A1:2011 ČSN EN 60598-1:2015
Evropské normy European standard(s)	EN 60598-2-3:2003 + A1:2011 EN 60598-1:2015
Jmenovité napětí Rated voltage	220 - 240 V
Jmenovitý příkon a počet zdrojů Rated wattage and number of lamps	99, 128, 157 W
Typ světelného zdroje Lamp identification	LED modul LED module
Stupeň krytí Degree of protection	IP 66
Připojení napájení Supply connection	Svorkovnice Terminal block
Podkladová plocha Supporting surface	Normálně hořlavý povrch Normally flammable surface
Druh ochrany Protection against electric shock	CI.II.

Příloha licence č. 5180016 Annex to Licence No. 5180016			
EN 60598-2-3:2003			
Clause	Requirement – Test	Result – Remark	Verdict
	ANNEX ZB, SPECIAL NATIONAL CONDITIONS ENEC-301 – AMENDMENT B RESTRICTIONS		
(2.2)	Class 0 not accepted		OK
(3.3)	DK: power supply cord with label		---
	IT: warning label on Class 0 luminaire		---
(4.5.1)	DK, FR: socket-outlets		---
(5.2.1)	DK, FI, SE, GB: type of plug		---
ZC	ANNEX ZC, NATIONAL CONDITIONS ENEC-301 – AMENDMENT B RESTRICTIONS		
(13.3)	DK: needle-flame or glow-wire test		---
(13.3.2 + 13.3.3)	FR: glow-wire test		---
IEC 598-1	COMMON MODIFICATIONS		
3.2.12	NL - cable without mains plug		---
3.3.3.c	fixed wiring		---
4.11.6	Electro-mechanical contact systems		---
5.2.2	Type of cable		---
5.2.15	Colour code low voltage		---



ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV



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Pod lisem 129/2, 171 02 Praha 8 - Troja

CERTIFICATE

No.: 1180713

Product: Luminaires for road and street lighting

Type: URBINO PREMIUM LED

Rating: 220-240 V, 50-60 Hz, IP 66, protection class II max 99 W 13050 lm ta +55°C
220-240 V, 50-60 Hz, IP 66, protection class II max 128 W 14700 lm ta +40°C
220-240 V, 50-60 Hz, IP 66, protection class II max 157 W 18600 lm ta +35°C

Ordering firm: LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Poland

Manufacturer: LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Poland

Factories: LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Poland

Trade mark:

The test results are stated in the test-report No.: 801442-01/01 of: 24.10.2018, 801442-01/02 of: 27.07.2018

A sample of the product was found to be in conformity with:

EN 60598-1:15, EN 60598-2-3:03+A1:11,

ČSN EN 62471:09, ČSN EN 55015 ed. 4:14, ČSN EN 61547: ed. 2:10, ČSN EN 61000-3-3 ed. 3 :14, ČSN EN 61000-3-2 ed. 4:15

Other data:

The validity of the certificate is limited to: 31.10.2021

26.10.2018

Prague

Mgr. Miroslav Sedláček
Head of Certification Body



801442-01