Product Environmental Profile of luminaires for outdoor lighting – Alley Tesata family

Reference product: UC86

Registration number	IGUZ-00002-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 14
		Supplemented by	PSR-0014-ed1.0-EN2018 07 18
Verifier accreditation number	VH23	Information and reference documents	www.pep-ecopassport.org
Date of issue	06-2022	Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025: 2006

Internal		External	x	

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are compliant with XP C08-100-1:2016 or EN 50693:2019

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14025 : 2006 « Environmental labels and declarations. Type III environmental declarations»

General information

Company information:

iGuzzini illuminazione S.p.A via Mariano Guzzini, 37 62019, Recanati, Italy

Web Site available at: https://www.iguzzini.com/it/

Legal contact: Cristiano Venturini (info.hq@iguzzini.com)

Reference product:

"Alley Tesata UC86 (14x3)"

The assessed products range covers outdoor lighting luminaires from the "Alley Tesata" family. The luminaires are used for professional lighting of outdoor environments, mainly for street and urban applications.

The main technical features of the reference product UC86 are described in the table below.

	Unit	Alley Tesata family
Product code	-	UC86
Light source	-	Integrated LED module
LED module code	-	W/W BIN1 CEM /CONN
Power supply	-	40W PRE 87500830
Color temperature	K	3000
Protection index for water and dust (IP)	-	IP66
Impact resistance index (IK)	-	IK08
Nominal operating voltage	V	220-240
Assigned lifetime	Hours	100.000
Declaration lifetime of the LED module	Hours	100.000
Useful output flux	Lumen	4115
Electrical power	W	40
Luminous efficiency	Lumen/W	102,8
Dimension	mm	438 (diameter)

Functional unit:

"Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 35,000 hours".

The reference flow is calculated as:

(1,000/outgoing luminous flux of the analyzed product in lumens) x (35,000/declared product lifetime of the analyzed product in hours)

The outgoing luminous flux is calculated taking in account the variation of the power (and therefore of the lumens, due to the light management system) during the use of the luminaries.

Consequentially, the reference flow factor for the reference product Alley Tesata UC86 corresponds to:

(1,000/3222,5) x (35,000/100,000) = 0,109

Homogeneous environmental family:

The reference product represents the "Alley Tesata" luminaires family, which differs in terms of power and useful output flux (lumen) of the integrated LED installed in the luminaries.

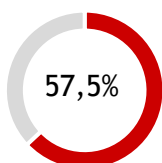The range of variations for the products in the same family are the following:

Alley Tesata family	Unit	Value for the reference product	Minimum value in product range	Maximum value in product range
Electrical power	W	40	13,9	60
Useful output flux	Lumen	4115	2132	8103
Weight	Kg	7,21	7,02	7,26

The present PEP declaration is valid for all the products in the described homogenous environmental family. The spreadsheet provided as annex shall be used by the PEP user to extrapolate the impact of the other products from the Alley Tesata family, based on the technical parameters of the considered product, as requested by the PSR.
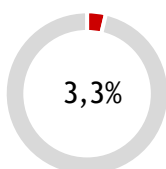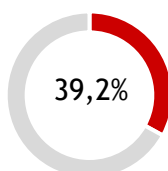
Constituent materials

METALS

	kg	%
Aluminum	3,81	47,6
Steel	0,76	9,5
Brass	0,03	0,4

57,5%

PLASTICS

	kg	%
Polymethyl methacrylate (PMMA)	0,113	1,4
Silicon product	0,105	1,3
Polycarbonate (PC)	0,018	0,2
Other (PA, PPS, PE …)	0,029	0,4

3,3%

OTHER MATERIALS

	kg	%
Electronical components	1,19	14,9
Glass	0,89	11,0
Chemicals	0,209	2,6
Others	0,045	0,6
Cardboard - Packaging	0,8088	10,0
Plastic (PE) – Packaging	0,0011	<0,1

39,2%

	kg	%
Total reference product	7,216	90%
Total packaging	0,809	10%
TOTAL	**8,025**	**100%**

The list above includes also materials with a certain amount of recycled content, in order to reduce the impacts linked to production of virgin materials. In particular:

- The main body of the luminaire is made of 100% of recycled diecast aluminum;
- The paperboard box of packaging is made of 100% of recycled content;
- The plastic used for packaging is made of 100% of recycled content;
- The amount of recycled content of the paper adhesive tape is equal to 100%.

Manufacture

The product components are manufactured or assembled by iGuzzini S.p.A. in Shanghai (China) manufacturing site. iGuzzini applies an environmental management system, certified according to ISO 14001:2015 (the certificate is available at: https://www.iguzzini.com/it/certificazioni/).

In 2021 iGuzzini gained the silver medal in the EcoVadis platform. In the same year, iGuzzini disclosed its sustainability performances within the Fagerhult Group Sustainability Report.

All lighting products manufactured by iGuzzini comply to the European directive "2011/65/EU ROHS 2 - Restriction of dangerous substances in electrical and electronical equipment"

Distribution

After the manufacturing phase in the Shanghai plant, the products are sent to the iGuzzini S.p.A. Italy plant (Recanati) from where they are delivered directly to the final clients. The distribution of the final destinations is the following:

Destination	Share (%)	Type transport considered
Italy	45%	Local
Spain	2%	Intracontinental
France	3%	Intracontinental
Germany	20%	Intracontinental
Great Britain	20%	Intracontinental
Ivory Coast	3%	Intercontinental
Kenya	2%	Intercontinental
China	5%	Intercontinental

Installation

The luminaires are provided to the client with the power supply, the fixing elements and the assembly elements, fittings and other electrical connectors needed for installation. The installation of the luminaire require the use of a lifting platform. In this phase the end of life (EoL) of the packaging of the final product is considered as well.

Use

Energy efficient light sources (LED lighting) are integrated in the luminaries. The use phase consists of electricity use during the whole lifetime of the product. The assigned lifetime of the luminaire is the same as for the integrated LED module: 100,000 hours.

The Alley Tesata family luminaries are equipped with a light management system (named "Midnight profile") capable of reducing electricity consumption by switching the power (from P_{max} to 70% of P_{max}) during the use.
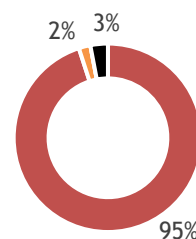
End of life

The company is affiliated to a WEEE (Waste Electrical and Electronic Equipment) Italian consortium (Ecolight, https://ecolight.it/). The product at its end of life is managed as prescribed by the current legislation about EEE waste (Directive 2012/19/EU) and the waste treatment scenarios of the Countries in which the product is distributed. According to the most recent data available, waste treatment scenarios are the following:
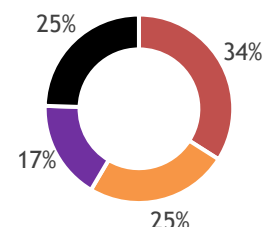
Italy:

WEEE	Value	Modelling assumptions
Recycling	**95%**	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	2%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	0%	Transport (150km) and treatment of waste based on materials contained in the components
Landfill	3%	Transport (150km) and treatment of waste based on materials contained in the components

Spain:

WEEE	Value	Modelling assumptions
Recycling	**34%**	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	24,5%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	17%	Transport (150km) and treatment of waste based on materials contained in the components
Landfill	24,5%	Transport (150km) and treatment of waste based on materials contained in the components

France:

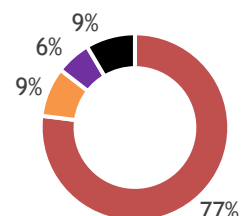| WEEE	Value	Modelling assumptions
Recycling	77%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	8,5%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	6%	Transport (150km) and treatment of waste based on materials contained in the components
Landfill	8,5%	Transport (150km) and treatment of waste based on materials contained in the components

Germany:

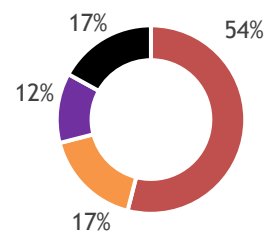| WEEE	Value	Modelling assumptions
Recycling	54%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	17%	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	12%	Transport (150km) and treatment of waste based on materials contained in the components
Landfill	17%	Transport (150km) and treatment of waste based on materials contained in the components

Great Britain:

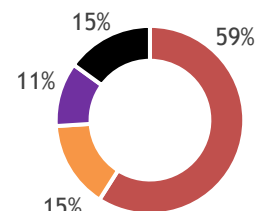| WEEE	Value	Modelling assumptions
Recycling	**59%**	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	**15%**	Transport (150km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	**11%**	Transport (150km) and treatment of waste based on materials contained in the components
Landfill	**15%**	Transport (150km) and treatment of waste based on materials contained in the components

Ivory Coast:

WEEE	Value	Modelling assumptions
Recycling	**4%**	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	**35,5%**	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	**25%**	Transport (1000km) and treatment of waste based on materials contained in the components
Landfill	**35,5%**	Transport (1000km) and treatment of waste based on materials contained in the components

Kenya:

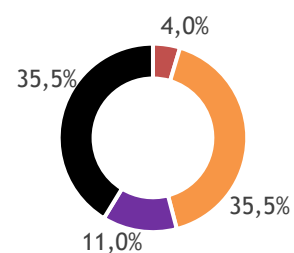| WEEE	Value	Modelling assumptions
Recycling	<1%	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	37%	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	26%	Transport (1000km) and treatment of waste based on materials contained in the components
Landfill	37%	Transport (1000km) and treatment of waste based on materials contained in the components

China:

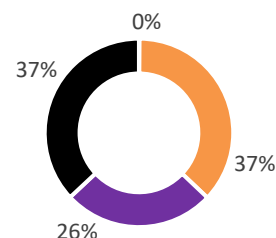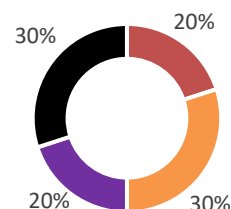| WEEE	Value	Modelling assumptions
Recycling	20%	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (with energy recovery)	30%	Transport (1000km) and treatment of waste based on materials contained in the components
Incineration (without energy recovery)	20%	Transport (1000km) and treatment of waste based on materials contained in the components
Landfill	30%	Transport (1000km) and treatment of waste based on materials contained in the components

✍ Environmental impacts

The evaluation of environmental impacts examines the manufacturing, distribution, installation, use and end-of-life stages of the Reference Product life cycle.

The environmental impacts assessment of the reference product has been performed using Simapro 9.2.0.2 software. Background datasets have been retrieved from Ecoinvent 3.7.1 libraries. The impact indicators and impact models used are the ones indicated by the PCR-ed4-EN-2021 09 14. This environmental declaration has been developed considering an outgoing artificial luminous flux of 1,000 lumens over a reference lifetime of 35,000 hours (Functional Unit).

Results of mandatory indicators per F.U. (for 1,000 lumens during 35,000 hours) of Alley Tesata UC86 luminaire:

Impact category	Unit	Total	Manufacturing	Distribution	Installation	Use	EoL
Climate change	kg CO_2 eq	2,02E+02	1,26E+01	2,14E+00	7,68E-02	1,86E+02	5,59E-01
Ozone depletion	kg CFC-11 eq	1,46E-04	1,33E-04	4,92E-07	2,54E-09	1,28E-05	4,92E-08
Photochemical ozone formation	kg NMVOC eq	4,58E-01	3,07E-02	1,22E-02	4,44E-05	4,14E-01	7,82E-04
Acidification	mol H^+ eq	1,50E+00	6,50E-02	1,37E-02	3,93E-05	1,43E+00	1,10E-03
Eutrophication, freshwater	kg P eq	1,17E-01	7,02E-03	6,56E-05	5,64E-07	1,10E-01	1,45E-04
Eutrophication, marine	kg N eq	1,88E-01	1,01E-02	4,08E-03	4,01E-05	1,73E-01	3,95E-04
Eutrophication, terrestrial	mol N eq	4,17E+00	1,04E-01	4,49E-02	1,12E-04	4,02E+00	2,37E-03
Water use	m^3 depriv.	6,80E+01	2,12E+00	1,50E-01	1,83E-03	6,56E+01	6,40E-02
Abiotic resource depletion, fossils	MJ	2,88E+03	8,87E+01	3,10E+01	1,63E-01	2,76E+03	2,68E+00
Abiotic resource depletion, minerals and metals	kg Sb eq	5,53E-04	3,00E-04	6,40E-07	8,57E-09	2,52E-04	4,68E-07
Climate change - Fossil	kg CO_2 eq	1,93E+02	1,25E+01	2,14E+00	4,68E-03	1,78E+02	4,76E-01
Climate change - Biogenic	kg CO_2 eq	8,96E+00	1,22E-01	6,23E-04	7,21E-02	8,68E+00	8,30E-02
Climate change - Land use and LU change	kg CO_2 eq	1,48E-01	7,41E-03	2,31E-04	1,65E-06	1,40E-01	1,27E-04

Results of mandatory indicators per unit of product (declared unit, 4115 lumen during 100,000 hours) of Alley Tesata UC86 luminaire:

Impact category	Unit	Total	Manufacturing	Distribution	Installation	Use	EoL
Climate change	kg CO_2 eq	1,85E+03	1,16E+02	1,97E+01	7,05E-01	1,71E+03	5,12E+00
Ozone depletion	kg CFC-11 eq	1,34E-03	1,22E-03	4,51E-06	2,33E-08	1,18E-04	4,52E-07
Photochemical ozone formation	kg NMVOC eq	4,20E+00	2,82E-01	1,12E-01	4,07E-04	3,80E+00	7,18E-03
Acidification	mol H^+ eq	1,38E+01	5,96E-01	1,26E-01	3,61E-04	1,31E+01	1,01E-02
Eutrophication, freshwater	kg P eq	1,08E+00	6,44E-02	6,02E-04	5,17E-06	1,01E+00	1,33E-03
Eutrophication, marine	kg N eq	1,73E+00	9,27E-02	3,74E-02	3,68E-04	1,59E+00	3,63E-03
Eutrophication, terrestrial	mol N eq	3,83E+01	9,54E-01	4,12E-01	1,03E-03	3,69E+01	2,17E-02
Water use	m^3 depriv.	6,23E+02	1,94E+01	1,38E+00	1,68E-02	6,02E+02	5,87E-01
Abiotic resource depletion, fossils	MJ	2,64E+04	8,14E+02	2,85E+02	1,50E+00	2,53E+04	2,46E+01
Abiotic resource depletion, minerals and metals	kg Sb eq	5,07E-03	2,75E-03	5,87E-06	7,86E-08	2,31E-03	4,29E-06
Climate change - Fossil	kg CO_2 eq	1,77E+03	1,15E+02	1,97E+01	4,29E-02	1,63E+03	4,36E+00
Climate change - Biogenic	kg CO_2 eq	8,22E+01	1,12E+00	5,72E-03	6,62E-01	7,96E+01	7,61E-01
Climate change - Land use and LU change	kg CO_2 eq	1,36E+00	6,80E-02	2,12E-03	1,52E-05	1,29E+00	1,16E-03

Results of mandatory indicators per unit of product (of Alley Tesata UC86 luminaire) – Detail of the use phase with the decomposition of module B (B1-B7) according to EN 15978 and EN 15804

Impact category	Unit	Total	B1	B2	B3	B4	B5	B6	B7
Climate change	kg CO_2 eq	1,71E+03	-	-	-	-	-	1,71E+03	-
Ozone depletion	kg CFC-11 eq	1,18E-04	-	-	-	-	-	1,18E-04	-
Photochemical ozone formation	kg NMVOC eq	3,80E+00	-	-	-	-	-	3,80E+00	-
Acidification	mol H^+ eq	1,31E+01	-	-	-	-	-	1,31E+01	-
Eutrophication, freshwater	kg P eq	1,01E+00	-	-	-	-	-	1,01E+00	-
Eutrophication, marine	kg N eq	1,59E+00	-	-	-	-	-	1,59E+00	-
Eutrophication, terrestrial	mol N eq	3,69E+01	-	-	-	-	-	3,69E+01	-
Water use	m^3 depriv.	6,02E+02	-	-	-	-	-	6,02E+02	-
Abiotic resource depletion, fossils	MJ	2,53E+04	-	-	-	-	-	2,53E+04	-
Abiotic resource depletion, minerals and metals	kg Sb eq	2,31E-03	-	-	-	-	-	2,31E-03	-
Climate change - Fossil	kg CO_2 eq	1,63E+03	-	-	-	-	-	1,63E+03	-
Climate change - Biogenic	kg CO_2 eq	7,96E+01	-	-	-	-	-	7,96E+01	-
Climate change - Land use and LU change	kg CO_2 eq	1,29E+00	-	-	-	-	-	1,29E+00	-

Within the determination of the impacts of the manufacturing, installation, use and end of life the choice of the dataset relating to electricity consumption fell on low voltage energy (230 V) for all the geographical areas considered in the study. Furthermore, energy mixes were used for each country.

Results of mandatory inventory flows indicators per F.U. (for 1,000 lumens during 35,000 hours) of Alley Tesata UC86 luminaire:

Indicators	Unit	Value
Renewable primary energy (without raw material)	MJ	7,18E+02
Renewable primary energy (raw material)	MJ	5,88E+00
Total use of renewable primary energy	MJ	7,23E+02
Non renewable primary energy (without raw material)	MJ	3,79E+03
Non renewable primary energy (raw material)	MJ	5,54E+01
Total use of non-renewable primary energy	MJ	3,84E+03
Use of secondary materials	kg	4,60E-01
Use of renewable secondary fuels	MJ	-
Use of non-renewable secondary fuels	MJ	-
Net use of fresh water	m^3	1,09E-02
Hazardous waste disposed	kg	8,83E-02
Non-hazardous waste disposed	kg	2,62E-02
Radioactive waste disposed	kg	-
Components for reuse	kg	-
Materials for recycling	kg	*
Materials for energy recovery	kg	*
Exported energy	MJ	-
Biogenic carbon content of the product	kg	-
Biogenic carbon content of the associated packaging	kg	-

*The use of the symbol * indicates that the value depends on the country where the WEEE is disposed*

Results of mandatory inventory flows indicators per unit of product (declared unit, 4115 lumen during 100,000 hours) of Alley Tesata UC86 luminaire:

Indicators	Unit	Value
Renewable primary energy (without raw material)	MJ	6,58E+03
Renewable primary energy (raw material)	MJ	5,39E+01
Total use of renewable primary energy	MJ	6,64E+03
Non renewable primary energy (without raw material)	MJ	3,47E+04
Non renewable primary energy (raw material)	MJ	5,08E+02
Total use of non-renewable primary energy	MJ	3,53E+04
Use of secondary materials	kg	4,22E+00
Use of renewable secondary fuels	MJ	-
Use of non-renewable secondary fuels	MJ	-
Net use of fresh water	m³	1,00E-01
Hazardous waste disposed	kg	8,10E-01
Non-hazardous waste disposed	kg	2,40E-01
Radioactive waste disposed	kg	-
Components for reuse	kg	-
Materials for recycling	kg	*
Materials for energy recovery	kg	*
Exported energy	MJ	-
Biogenic carbon content of the product	kg	-
Biogenic carbon content of the associated packaging	kg	-

*The use of the symbol * indicates that the value depends on the country where the WEEE is disposed*

Extrapolation rules

Extrapolations rules have been calculated following PCR-ed4-EN-2021 09 14 and PSR-0014-ed1.0-EN-2018 07 18. The defined rules shall be applied using the Extrapolation rules file provided in the following tables.

Parameter	Value for reference product (Alley Tesata UC86)
Lighting output [lumens]	4115
Weight of light source [kg]	0,051
Weight of luminaire structure [kg]	7,59
Weight of power equipment [kg]	0,294
Weight of light management system [kg]	0,078
Weight of product including its light source [kg]	7,21
Weight of product including its packaging [kg]	8,02
Power [W]	40

The extrapolation coefficients calculation at the functional unit level shall be taken into account with the following formula:

$$Estrapolatuion\ coefficent\ at\ the\ product\ level\ x\ \frac{Lighting\ output\ of\ reference\ product\ (lumen)}{Lighting\ output\ of\ concerned\ product\ (lumens)}$$

Extrapolation coefficients

The reported extrapolation coefficients are intended at product level (declared unit) and not at functional unit.

Product code	Manufacturing	Distribution	Installation	Use	EoL
UC83	0,976	0,976	1	0,350	0,974
UC62	0,974	0,974	1	0,368	0,971
UC79	0,976	0,976	1	0,425	0,974
UC58	0,974	0,974	1	0,438	0,971
UC92	1,000	1,000	1	0,395	1,000
UC93	1,000	1,000	1	0,480	1,000
UC94	1,000	1,000	1	0,658	1,000
UC71	0,998	0,998	1	0,395	0,997
UC72	0,998	0,998	1	0,478	0,997
UC73	0,998	0,998	1	0,405	0,997
UC84	1,000	1,000	1	0,418	1,000
UC85	1,000	1,000	1	0,500	1,000
UC86	**1,000**	**1,000**	**1**	**1,000**	**1,000**
UC63	0,998	0,998	1	0,415	0,997
UC64	0,998	0,998	1	0,498	0,997
UC65	0,998	0,998	1	0,675	0,997
UC80	1,000	1,000	1	0,480	1,000
UC81	1,000	1,000	1	0,583	1,000
UC82	1,000	1,000	1	0,803	1,000
UC59	0,998	0,998	1	0,480	0,997
UC60	0,998	0,998	1	0,580	0,997
UC61	0,998	0,998	1	0,798	0,997
UC87	1,006	1,006	1	0,823	1,007
UC88	1,006	1,006	1	0,993	1,007
UC89	1,006	1,006	1	1,178	1,007
UC90	1,006	1,006	1	1,500	1,007
UC66	1,004	1,004	1	0,818	1,004
UC67	1,004	1,004	1	0,993	1,004
UC68	1,004	1,004	1	1,175	1,004
UC69	1,004	1,004	1	1,348	1,004
UC95	1,006	1,006	1	0,783	1,007
UC96	1,006	1,006	1	0,953	1,007
UC97	1,006	1,006	1	1,103	1,007
UC98	1,006	1,006	1	1,283	1,007
UC74	1,004	1,004	1	0,763	1,004
UC75	1,004	1,004	1	0,925	1,004
UC77	1,004	1,004	1	1,090	1,004
UC78	1,004	1,004	1	1,260	1,004
UC91	0,976	0,976	1	0,353	0,974
UC70	0,974	0,974	1	0,348	0,971

The following table reports the informations of the products included in the homogeneous environmental family.

Product code	Wattage (W)	Lumen (lm)	Product weight (kg)	Packaging weight (kg)	Structure weight (kg)	Weight of power equipment (kg)	Weight of light source (kg)	Weight of light management system (kg)
UC83	14	2132	7,83	0,809	6,642	0,234	0,066	0,078
UC62	14,7	2132	7,81	0,809	6,708	0,148	0,066	0,078
UC79	17	2167	7,83	0,809	6,582	0,294	0,066	0,078
UC58	17,5	2167	7,81	0,809	6,646	0,21	0,066	0,078
UC92	15,8	2532	8,02	0,809	6,802	0,294	0,036	0,078
UC93	19,2	3045	8,02	0,809	6,802	0,294	0,036	0,078
UC94	26,3	4056	8,02	0,809	6,802	0,294	0,036	0,078
UC71	15,8	2532	8	0,809	6,872	0,204	0,036	0,078
UC72	19,1	3045	8	0,809	6,872	0,204	0,036	0,078
UC73	16,2	4056	8	0,809	6,872	0,204	0,036	0,078
UC84	16,7	2578	8,02	0,809	6,847	0,234	0,051	0,078
UC85	20	3090	8,02	0,809	6,787	0,294	0,051	0,078
UC86	**40**	**4115**	**8,02**	**0,809**	**6,787**	**0,294**	**0,051**	**0,078**
UC63	16,6	2578	8	0,809	6,857	0,204	0,051	0,078
UC64	19,9	3090	8	0,809	6,857	0,204	0,051	0,078
UC65	27	4115	8	0,809	6,857	0,204	0,051	0,078
UC80	19,2	2583	8,02	0,809	6,787	0,294	0,051	0,078
UC81	23,3	3099	8,02	0,809	6,787	0,294	0,051	0,078
UC82	32,1	4133	8,02	0,809	6,787	0,294	0,051	0,078
UC59	19,2	2583	8	0,809	6,857	0,204	0,051	0,078
UC60	23,2	3099	8	0,809	6,857	0,204	0,051	0,078
UC61	31,9	4133	8	0,809	6,857	0,204	0,051	0,078
UC87	32,9	5133	8,07	0,809	6,768	0,303	0,111	0,078
UC88	39,7	6149	8,07	0,809	6,768	0,303	0,111	0,078
UC89	47,1	7164	8,07	0,809	6,768	0,303	0,111	0,078
UC90	60	8103	8,07	0,809	6,768	0,303	0,111	0,078
UC66	32,7	5133	8,05	0,809	6,819	0,232	0,111	0,078
UC67	39,7	6149	8,05	0,809	6,819	0,232	0,111	0,078
UC68	47	7164	8,05	0,809	6,819	0,232	0,111	0,078
UC69	53,9	8103	8,05	0,809	6,819	0,232	0,111	0,078
UC95	31,3	5100	8,07	0,809	6,817	0,303	0,062	0,078
UC96	38,1	6114	8,07	0,809	6,817	0,303	0,062	0,078
UC97	44,1	7083	8,07	0,809	6,817	0,303	0,062	0,078
UC98	51,3	8057	8,07	0,809	6,817	0,303	0,062	0,078
UC74	30,5	5100	8,05	0,809	6,868	0,232	0,062	0,078
UC75	37	6114	8,05	0,809	6,868	0,232	0,062	0,078
UC77	43,6	7083	8,05	0,809	6,868	0,232	0,062	0,078
UC78	50,4	8057	8,05	0,809	6,868	0,232	0,062	0,078
UC91	14,1	2134	7,83	0,809	6,687	0,234	0,021	0,078
UC70	13,9	2134	7,81	0,809	6,753	0,148	0,021	0,078