Project No: 6012-002586
Report No: 6012-002586-2
Issued Date: 2012-NOV-28
Revision:

Verification Services Test Report

Customer Company & Address
ARTEMIDE S.P.A. Via Bergamo 18 20010 Pregnana Milanese (MI)

Manufacturer:	Artemide S.P.A.
Country of Origin:	Italy
Country of Export:	N/A
Product Category:	TOLOMEO LED FARETTO
Product Description:	LED uminaire
Model Number(s):	TOLOMEO LED FARETTO
LED model:	CREE Xlamp XP-E HEW
Electrical Ratings:	100-240Vac 50-60Hz
Test Sample(s) Received Date:	2012-NOV-06
Test Period:	2012-NOV-19 to 2012-NOV-19
The Sample(s) is(are) tested in accordance with the following:	
IES LM-79-08	

Prepared By	Approved By
Giovanni Di Martino	Walter Parmiani
Name & Signatory	**Name & Signatory**

Verification Services Test Report

Statement of Results

Test Flow	Test Method	Sample ID	Test Result
1.	Goniophotometer	001876-S001	Evaluated by Customer
2.	Integrating Sphere	001876-S001	Evaluated by Customer

Measurement Uncertainty

N/A

Deviation from Test Method *(if any)*

N/A

Remarks *(if any)*

N/A

Notes *(if any)*

This report extends to the 230Vac version of this product.
This report extends to the following product also: TOLOMEO LED BRACCIO.

Verification Services Test Report

Test No. 1: Goniophotometer

Sample ID / Test Round Number

001876-S001 / 1

Environmental Conditions

Ambient Temperature
25 ºC

Test Equipment

Local ID	Description	Model
BURVS0063	Goniophotometer system	LSI 6440T
BURVS0066	AC PSU	ELGAR CW 1251
BURVS0065	Digital power meter	Yokogawa WT210
S541	CHRONOMETER	QUANTUM
BURVS0067	THERMOMETER	OMEGA MDSi8

Test Condition(s)

Input Voltage	Input Current	Input Power	Power Factor
119.95 V	0.15 A	10.36 W	0.58

Test Results

Result Name	Result
Test Date	2012-NOV-09 12:33:00 PM
Current THD	0.1 %
Luminous Flux	394.0 lm
Luminous Efficacy	38.0 lm/W
Luminous Opening Length	3.9 in.
Luminous Opening Width	0.0 "
Luminous Opening Height	0.0 "

Verification Services Test Report

Test No. 2: Integrating Sphere

Sample ID / Test Round Number

001876-S001 / 1

Environmental Conditions

Ambient Temperature
24.3 ºC

Test Equipment

Local ID	Description	Model
BURVS0053	INTEGRATING SPHERE	LABSPHERE 2m INTEGRATING SPHERE
BURVS0058	SPECTRORADIOMETER	LABSPHERE CDS-1100
BURVS0062	AC PSU	CHROMA 61603
BURVS0059	DIGITAL POWER METER	YOKOGAWA WT210
S541	DIGITAL CHRONOMETER	QUANTUM
BURVS0054	THERMOMETER	OMEGA MDSi8

Test Condition(s)

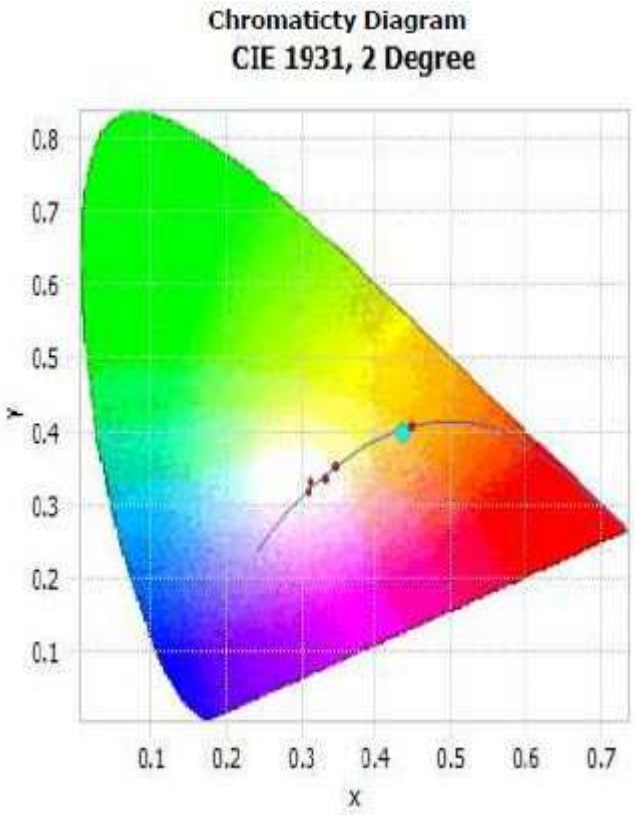
Base Orientation	Input Voltage	Input Current	Input Power	Power Factor
Base Up	120 V	0.15 A	10.36 W	0.58

Test Results

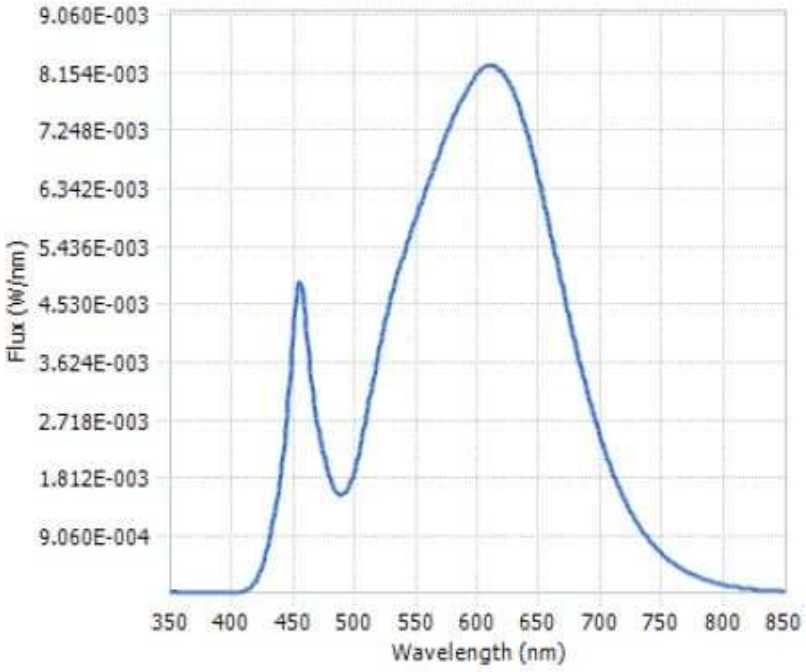
Result Name	Result
Current THD	0.12 %
CCT	2993 K
CRI (Ra)	84.10
Duv	0.0018
x	0.4348
y	0.3991
u'	0.2513
v'	0.5191

Verification Services Test Report

Chromaticity diagram



Spectral power distribution



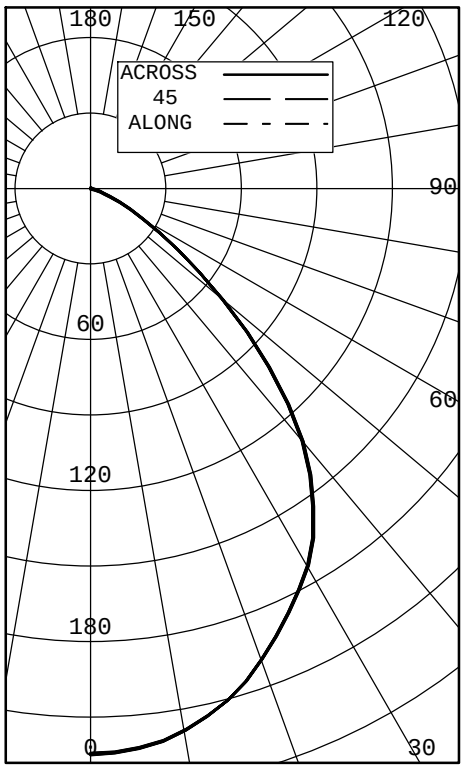
Verification Services Test Report

Photo of Sample(s)

TEST REPORT No. 001876

ARTEMIDE SPA,CAT# TOLOMEO FARETTO LED

LED. LUMINAIRE OUTPUT = 394 LMS.
OPERATING AT 120VAC 60Hz 10.36 W



INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	MEAN CP	LUMENS
0	225	
5	223	21
10	218	
15	211	59
20	199	
25	186	86
30	173	
35	154	96
40	131	
45	100	77
50	69	
55	43	39
60	24	
65	13	13
70	6	
75	3	3
80	1	
85	0	0
90	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	166	42.14
0-40	262	66.43
0-60	378	95.78
0-90	394	100.00
40-90	132	33.57
60-90	17	4.22
90-180	0	0.00
0-180	394	100.00

EFFICACY (LUMENS PER WATT): 37.9

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS DIAMETER: 3.900 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	MEAN CD/SQ M
45	18463
55	9665
65	3987
75	1302
85	242

CERTIFIED BY:

DATE:
NOV 29, 2012

PREPARED FOR:

TESTED IN ACCORDANCE WITH IES PROCEDURES.

UL International Italia Srl
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Burago di Molgora, Italy 20875

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INTENSITY(CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	INTENSITY (CANDLEPOWER)	LUMENS
0.0	225	
2.5	224	
5.0	223	21
7.5	221	
10.0	218	
12.5	215	
15.0	211	59
17.5	205	
20.0	199	
22.5	193	
25.0	186	86
27.5	180	
30.0	173	
32.5	165	
35.0	154	96
37.5	143	
40.0	131	
42.5	116	
45.0	100	77
47.5	84	
50.0	69	
52.5	54	
55.0	43	39
57.5	33	
60.0	24	
62.5	18	
65.0	13	13
67.5	9	
70.0	6	
72.5	4	
75.0	3	3
77.5	1	
80.0	1	
82.5	0	
85.0	0	0
87.5	0	
90.0	0	

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AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	LUMINANCE	
0	29159	(8510)
30	25918	(7564)
40	22201	(6479)
45	18463	(5388)
50	13857	(4044)
55	9665	(2820)
60	6296	(1837)
65	3987	(1163)
70	2148	(626)
75	1302	(380)
80	700	(204)
85	242	(70)

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COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	90				80				70				50			30			10			0
WALL	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																						
0	1.22	1.22	1.22	1.22	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.15	1.11	1.08	1.06	1.13	1.09	1.06	1.04	1.10	1.07	1.05	1.02	1.03	1.01	0.99	0.99	0.98	0.96	0.96	0.94	0.93	0.91
2	1.08	1.02	0.98	0.93	1.06	1.01	0.96	0.92	1.04	0.99	0.94	0.91	0.95	0.92	0.89	0.92	0.90	0.87	0.90	0.87	0.85	0.83
3	1.01	0.93	0.87	0.82	0.99	0.92	0.86	0.82	0.97	0.91	0.85	0.81	0.88	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.77	0.76
4	0.95	0.86	0.79	0.74	0.93	0.85	0.78	0.74	0.92	0.84	0.78	0.73	0.81	0.76	0.72	0.79	0.75	0.71	0.77	0.74	0.70	0.69
5	0.89	0.79	0.71	0.66	0.87	0.78	0.71	0.66	0.85	0.77	0.70	0.66	0.75	0.69	0.65	0.73	0.68	0.64	0.71	0.67	0.64	0.62
6	0.83	0.72	0.65	0.60	0.82	0.71	0.64	0.59	0.80	0.70	0.64	0.59	0.69	0.63	0.59	0.67	0.62	0.58	0.66	0.61	0.58	0.56
7	0.77	0.66	0.58	0.54	0.76	0.65	0.58	0.53	0.75	0.64	0.58	0.53	0.63	0.57	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.50
8	0.72	0.60	0.53	0.48	0.71	0.60	0.53	0.48	0.70	0.59	0.52	0.47	0.58	0.52	0.47	0.57	0.51	0.47	0.56	0.51	0.47	0.45
9	0.67	0.55	0.48	0.43	0.66	0.55	0.48	0.43	0.65	0.54	0.47	0.43	0.53	0.47	0.42	0.52	0.46	0.42	0.51	0.46	0.42	0.40
10	0.63	0.51	0.43	0.39	0.62	0.50	0.43	0.38	0.61	0.50	0.43	0.38	0.49	0.42	0.38	0.48	0.42	0.38	0.47	0.42	0.38	0.36

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LUMINAIRE INPUT WATTS 10.4

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

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CONE OF LIGHT

MOUNTING HEIGHT ABOVE WORK PLANE (FT)	INITIAL FC AT NADIR -FCN (FC)	.1*FCN (FC)	10% LIGHTED DIAMETER (FT)	.5*FCN (FC)	50% LIGHTED DIAMETER (FT)
1	225.0	22.5	2.3	112.5	1.2
2	56.2	5.6	4.5	28.1	2.3
3	25.0	2.5	6.8	12.5	3.5
4	14.1	1.4	9.1	7.0	4.6
5	9.0	0.9	11.4	4.5	5.8
6	6.2	0.6	13.6	3.1	6.9
7	4.6	0.5	15.9	2.3	8.1
8	3.5	0.4	18.2	1.8	9.2

10% CONE ANGLE: 97.2 DEGREES
50% CONE ANGLE: 59.9 DEGREES