





Project No: 6012-002586
Report No: 6012-002586-3
Issued Date: 2012-NOV-30
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 MICRO LED
Product Description:	LED Luminaire
Model Number(s):	TOLOMEO MICRO LED
LED model:	Cree X-Lamp XP-E HEW
Electrical Ratings:	100-240Vac 50-60Hz
Test Sample(s) Received Date:	2012-NOV-06
Test Period:	2012-NOV-26 to 2012-NOV-30
The Sample(s) is(are) tested in accordance with the following:	
IES LM-79-08	

Prepared By	Approved By
Giovanni Di Martino 	Fausto Pedroni 
Name & Signatory	Name & Signatory

This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.





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Statement of Results

Test Flow	Test Method	Sample ID	Test Result
1.	Goniophotometer	001877-S001	Evaluated by Customer
2.	Integrating Sphere	001877-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 MIDI LED, TOLOMEO MICRO PINZA LED.



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Test No. 1: Goniophotometer

Sample ID / Test Round Number

001877-S001 / 1

Environmental Conditions

Ambient Temperature
25 °C

Test Equipment

Local ID	Description	Model
BURVS0074	Goniophotometer system	LSI 6440T
BURVS0078	AC PSU	ELGAR CW 1251
BURVS0077	Digital power meter	Yokogawa WT210
S541	CHRONOMETER	QUANTUM
BURVS0079	THERMOMETER	OMEGA MDSi8

Test Condition(s)

Input Voltage	Input Current	Input Power	Power Factor
120.04 V	0.18 A	9.61 W	0.45

Test Results

Result Name	Result
Test Date	2012-NOV-30 12:03:00 PM
Current THD	0.1 %
Luminous Flux	297.0 lm
Luminous Efficacy	30.9 lm/W
Luminous Opening Length	3.9 in.
Luminous Opening Width	0.0 "
Luminous Opening Height	0.0 "



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Test No. 2: Integrating Sphere

Sample ID / Test Round Number

001877-S001 / 2

Environmental Conditions

Ambient Temperature
24.2 °C

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	120.01 V	0.18 A	9.61 W	0.45

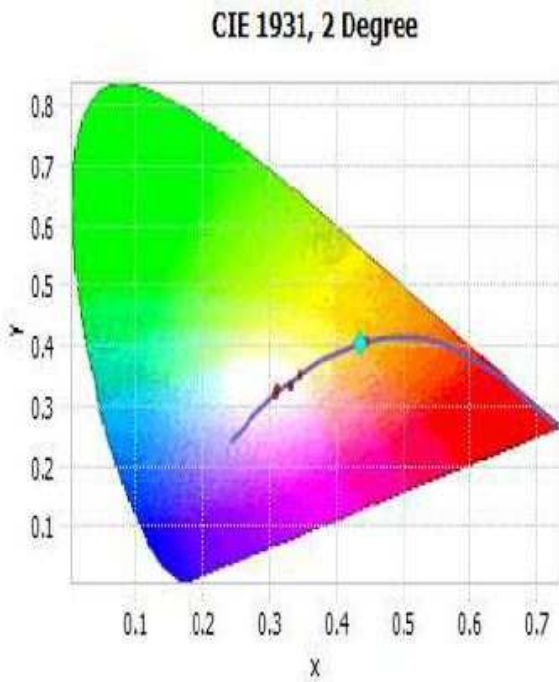
Test Results

Result Name	Result
Current THD	0.11 %
CCT	2993 K
CRI (Ra)	81.94
Duv	0.0001
x	0.4373
y	0.4042
u'	0.2507
v'	0.5215

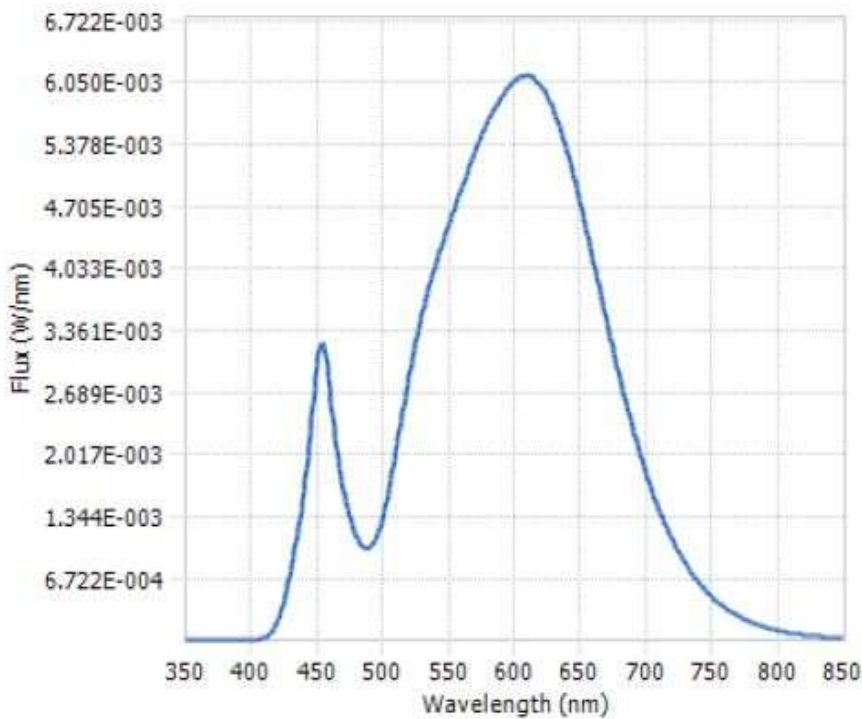


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Chromaticity diagram



Spectral power distribution





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Photo of Sample(s)



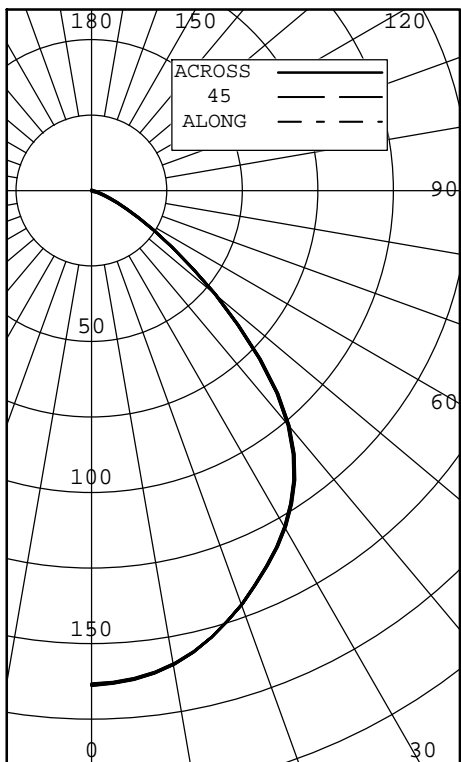
TEST REPORT No.

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ARTEMIDE SPA, CAT# TOLOMEO TAVOLO MICRO LED

LED. LUMINAIRE OUTPUT = 297 LMS.
OPERATING AT 120VAC 9.61W

INTENSITY (CANDLEPOWER) SUMMARY



ANGLE	MEAN CP	LUMENS
0	164	
5	162	16
10	159	
15	153	43
20	146	
25	137	63
30	128	
35	117	73
40	101	
45	79	60
50	53	
55	33	30
60	18	
65	9	10
70	4	
75	2	2
80	1	
85	0	0
90	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	122	41.06
0-40	194	65.51
0-60	284	95.80
0-90	297	100.00
40-90	102	34.49
60-90	12	4.20
90-180	0	0.00
0-180	297	100.00

EFFICACY (LUMENS PER WATT): 30.9

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS DIAMETER: 3.900 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	MEAN CD/SQ M
45	14499
55	7395
65	2925
75	1003
85	0

CERTIFIED BY:

DATE:
NOV 30, 2012

PREPARED FOR:

TESTED IN ACCORDANCE WITH IES PROCEDURES.

UL INTERNATIONAL ITALIA SRL
VIA XXV APRILE 3/B
BURAGO DI MOLGORA, ITALY, ITALY 20875

TEST REPORT No. 001877

ARTEMIDE SPA,CAT# TOLOMEO TAVOLO MICRO LED

LED. LUMINAIRE OUTPUT = 297 LMS.
OPERATING AT 120VAC 9.61W

INTENSITY(CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	INTENSITY (CANDLEPOWER)	LUMENS
0.0	164	
2.5	163	
5.0	162	16
7.5	161	
10.0	159	
12.5	156	
15.0	153	43
17.5	150	
20.0	146	
22.5	141	
25.0	137	63
27.5	133	
30.0	128	
32.5	123	
35.0	117	73
37.5	110	
40.0	101	
42.5	91	
45.0	79	60
47.5	66	
50.0	53	
52.5	42	
55.0	33	30
57.5	25	
60.0	18	
62.5	13	
65.0	9	10
67.5	7	
70.0	4	
72.5	3	
75.0	2	2
77.5	1	
80.0	1	
82.5	0	
85.0	0	0
87.5	0	
90.0	0	

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LED. LUMINAIRE OUTPUT = 297 LMS.
OPERATING AT 120VAC 9.61W

AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	LUMINANCE
0	21228 (6195)
30	19227 (5611)
40	17189 (5017)
45	14499 (4231)
50	10777 (3145)
55	7395 (2158)
60	4765 (1390)
65	2925 (853)
70	1688 (492)
75	1003 (292)
80	476 (139)
85	0 (0)

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LED. LUMINAIRE OUTPUT = 297 LMS.
OPERATING AT 120VAC 9.61W

COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
RCR																									
0	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.111	.11	1.061	.061	.061	.06	1.021	.021	.02	1.00	
1	1.151	.111	.081	.06	1.131	.091	.071	.04	1.101	.071	.051	.02	1.031	.010	.99	0.990	.980	.96	0.960	.950	.93	0.92			
2	1.081	.020	.980	.93	1.061	.010	.960	.92	1.040	.990	.940	.91	0.950	.920	.89	0.920	.900	.87	0.900	.870	.85	0.83			
3	1.010	.930	.870	.82	0.990	.920	.860	.82	0.970	.900	.850	.81	0.880	.830	.80	0.850	.820	.78	0.830	.800	.77	0.75			
4	0.950	.860	.790	.74	0.930	.850	.780	.73	0.910	.830	.780	.73	0.810	.760	.72	0.790	.750	.71	0.770	.730	.70	0.68			
5	0.890	.790	.710	.66	0.870	.780	.710	.66	0.850	.760	.700	.65	0.740	.690	.65	0.730	.680	.64	0.710	.670	.63	0.62			
6	0.830	.720	.640	.59	0.810	.710	.640	.59	0.800	.700	.630	.59	0.680	.630	.58	0.670	.620	.58	0.660	.610	.57	0.56			
7	0.770	.650	.580	.53	0.760	.650	.570	.53	0.740	.640	.570	.52	0.620	.560	.52	0.610	.560	.51	0.600	.550	.51	0.50			
8	0.720	.600	.530	.47	0.710	.590	.520	.47	0.690	.580	.520	.47	0.570	.510	.47	0.560	.510	.46	0.550	.500	.46	0.45			
9	0.670	.550	.470	.42	0.660	.540	.470	.42	0.640	.540	.470	.42	0.520	.460	.42	0.510	.460	.42	0.500	.450	.41	0.40			
10	0.620	.500	.420	.38	0.610	.500	.420	.38	0.600	.490	.420	.38	0.480	.420	.38	0.470	.410	.37	0.460	.410	.37	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 9.6

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	164.0	16.4	2.3	82.0	1.2
2	41.0	4.1	4.6	20.5	2.3
3	18.2	1.8	6.9	9.1	3.5
4	10.2	1.0	9.2	5.1	4.7
5	6.6	0.7	11.5	3.3	5.8
6	4.6	0.5	13.8	2.3	7.0
7	3.3	0.3	16.1	1.7	8.2
8	2.6	0.3	18.5	1.3	9.4

10% CONE ANGLE: 98.1 DEGREES
 50% CONE ANGLE: 60.6 DEGREES