Project No: 10195896
Report No: 10195896-2
Issued Date: 2014-JAN-29
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:	NEBULA PLAFONE/PARETE
Product Description:	Surface-mounting LED luminaire with white diffuser.
Model Number(s):	NEBULA PLAFONE/PARETE
LED model:	REFOND RF-INRA30DS-ED
Power supply:	Meanwell LPV-60-24 Input: 100-240VAC – 1,2A – 50/60Hz Output: 24Vdc – 2,5A
Electrical Ratings:	AC 120 V - 60 Hz
Test Sample(s) Received Date:	2014-JAN-25
Test Period:	2014-JAN-28 to 2014-JAN-29
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**

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.

Verification Services Test Report

Statement of Results

Test Flow	Test Method	Sample ID	Test Result
1.	Goniophotometer	024907-S001	Evaluated by Customer
2.	Integrating Sphere	024907-S001	Evaluated by Customer

Measurement Uncertainty

N/A

Deviation from Test Method *(if any)*

N/A

Remarks *(if any)*

This report extends to the AC 230 V-50 Hz version of this product. This report extends to the wall-mounted version of this product.

Verification Services Test Report

Test No. 1: Goniophotometer

Sample ID / Test Round Number

024907-S001 / 1

Environmental Conditions

Ambient Temperature
24.0 ºC

Test Equipment

Local ID	Description	Model	Last cal	Next cal
BURVS0074	Goniophotometer system	LSI 6440T	17/jan/2014	By evidence
BURVS0078	AC PSU	ELGAR CW 1251	Reference only	Reference only
BURVS0077	Digital power meter	Yokogawa WT210	16/jul/2013	28/jul/2014
BURVS0079	THERMOMETER	OMEGA MDSi8	19/aug/2013	28/aug/2014
BURVS0119	OMNIDIRECTIONAL CALIBRATION LAMP	STS STD-EHD 12C050	25/jun/2012	25/jun/2015

Test Condition(s)

Input Voltage	Input Current	Input Power	Power Factor
120.00 V	0.74 A	48.24 W	0.54

Test Results

Result Name	Result
Test Date	2014-JAN-29 10:30:00 AM
Luminous Flux	2101.0 lm
Luminous Efficacy	43.6 lm/W
Luminous Opening Length	27.6 mm
Luminous Opening Width	0.0 mm
Luminous Opening Height	0.0 mm

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Test No. 2: Integrating Sphere

Sample ID / Test Round Number

024907-S001 / 1

Environmental Conditions

Ambient Temperature
24.0 ºC

Test Equipment

Local ID	Description	Model	Last cal	Next cal
BURVS0053	INTEGRATING SPHERE	LABSPHERE 2m INTEGRATING SPHERE	17/jan/2014	By evidence
BURVS0058	SPECTRORADIOMETER	LABSPHERE CDS-1100	17/jan/2014	By evidence
BURVS0062	AC PSU	CHROMA 61603	Reference only	Reference only
BURVS0059	DIGITAL POWER METER	YOKOGAWA WT210	23/jul/2013	28/jul/2014
BURVS0054	THERMOMETER	OMEGA MDSi8	19/aug/2013	28/aug/2014
BURVS0060	75W OMNIDIRECTIONAL CALIBRATION LAMP	EYE LIGHTING SCL1400 (JDV28V75W)	11/apr/2012	11/apr/2015

Test Condition(s)

Base Orientation	Input Voltage	Input Current	Input Power	Power Factor
Base Up	120.00 V	0.75 A	48.25 W	0.54

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Test Results

Result Name	Result
Test Time Point	2014-JAN-28 04:00:00 PM Hrs
CCT	3032 K
CRI (Ra)	63.27
CRI (R9)	-57.2
Duv	0.0008
x	0.4358
y	0.4059
u'	0.2491
v'	0.5219

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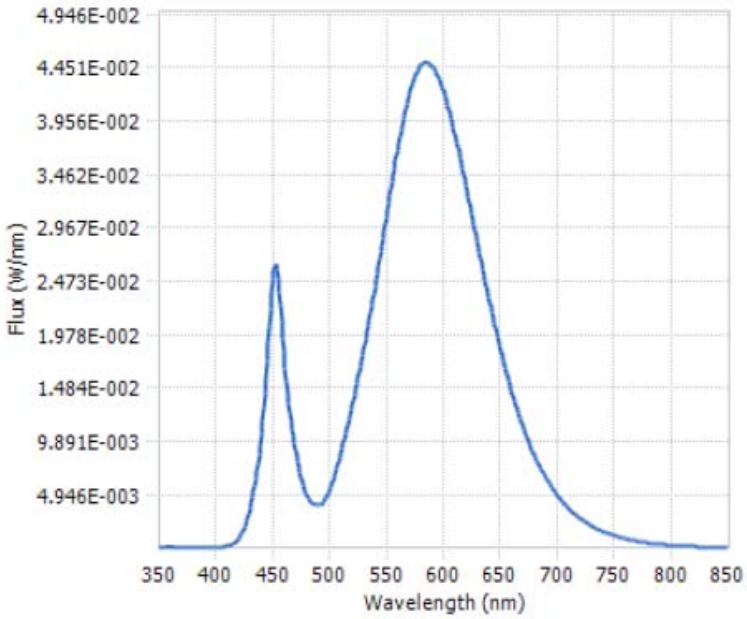
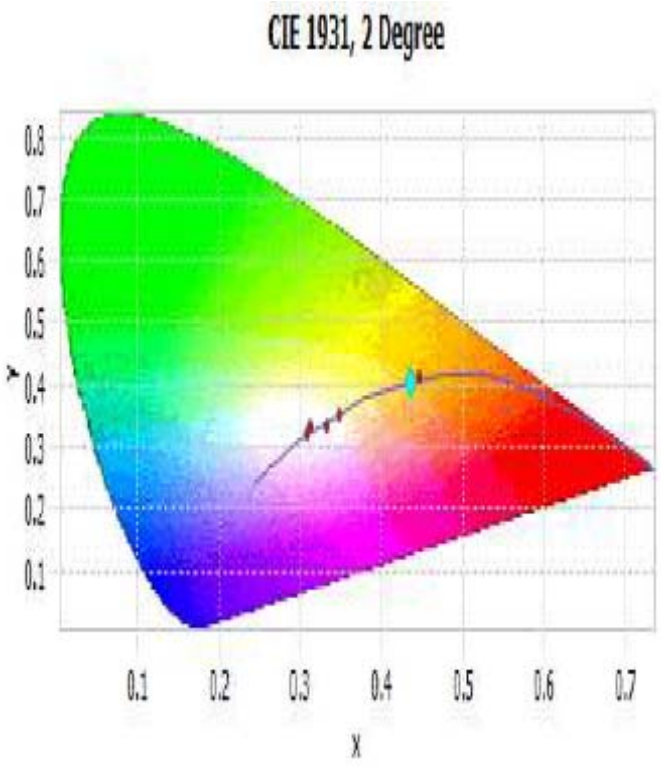
Spectral power distribution



Chromaticity diagram



Verification Services Test Report

Photo of Sample(s)

Sample

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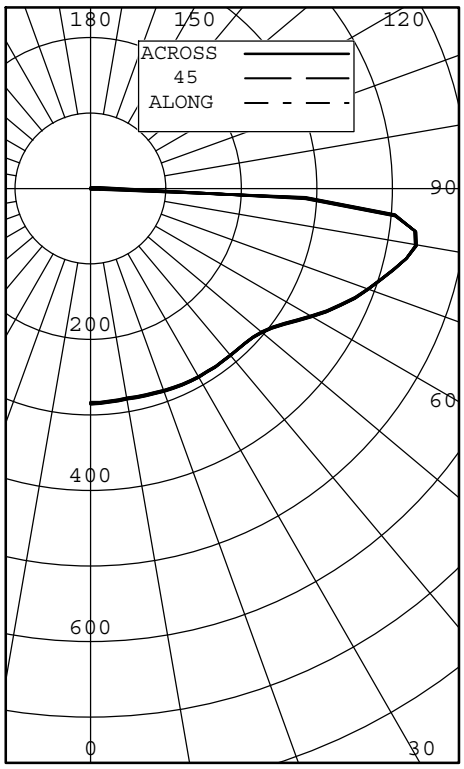
ARTEMIDE SPA,CAT# NEBULA PLAFONE-PARETE
NEBULA PLAFONE-PARETE
LED,CAT# REFOND RF-INRA30DS-ED. LUMINAIRE OUTPUT = 2101 LMS
OPERATING AT AC 120 V - 60 Hz - 48.24 W



INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	MEAN CP	LMS.	ANGLE	MEAN CP	LMS.
0	285		90	13	
5	284	27	95	0	2
10	283		100	0	
15	284	80	105	0	0
20	285		110	0	
25	287	133	115	0	0
30	288		120	0	
35	288	181	125	0	0
40	289		130	0	
45	290	225	135	0	0
50	296		140	0	
55	313	283	145	0	0
60	338		150	0	
65	366	363	155	0	0
70	391		160	0	
75	416	439	165	0	0
80	437		170	0	
85	405	367	175	0	0
90	13		180	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	241	11.45
0-40	421	20.06
0-60	929	44.23
0-90	2098	99.88
40-90	1677	79.82
60-90	1169	55.65
90-180	2	0.12
0-180	2101	100.00

EFFICACY (LUMENS PER WATT): 43.6

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS DIAMETER: 27.560 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	MEAN CD/SQ M
45	1069
55	1424
65	2255
75	4191
85	12115

CERTIFIED BY:

DATE:
JAN 29, 2014

PREPARED FOR:
ARTEMIDE
SPA

TESTED IN ACCORDANCE WITH IES PROCEDURES.

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

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INTENSITY(CANDLEPOWER) DATA

ANGLE	INTENSITY (CANDLEPOWER)	LUMENS
0	285	
5	284	27
10	283	
15	284	80
20	285	
25	287	133
30	288	
35	288	181
40	289	
45	290	225
50	296	
55	313	283
60	338	
65	366	363
70	391	
75	416	439
80	437	
85	405	367
90	13	
95	0	2
100	0	
105	0	0
110	0	
115	0	0
120	0	
125	0	0
130	0	
135	0	0
140	0	
145	0	0
150	0	
155	0	0
160	0	
165	0	0
170	0	
175	0	0
180	0	

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AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	LUMINANCE	
0	739	(215)
30	863	(251)
40	978	(285)
45	1069	(312)
50	1197	(349)
55	1424	(415)
60	1758	(513)
65	2255	(658)
70	2970	(866)
75	4191	(1223)
80	6545	(1910)
85	12115	(3536)

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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	1.04	0.95	0.87	0.80	1.01	0.92	0.85	0.78	0.97	0.90	0.83	0.77	0.85	0.79	0.74	0.81	0.76	0.72	0.77	0.73	0.69	0.67
2	0.91	0.78	0.67	0.57	0.88	0.76	0.65	0.56	0.85	0.73	0.64	0.56	0.69	0.61	0.54	0.66	0.59	0.53	0.62	0.57	0.51	0.49
3	0.81	0.65	0.53	0.43	0.78	0.63	0.52	0.43	0.75	0.61	0.51	0.42	0.58	0.49	0.41	0.55	0.47	0.40	0.52	0.45	0.39	0.37
4	0.73	0.56	0.44	0.35	0.71	0.55	0.43	0.35	0.68	0.53	0.43	0.34	0.51	0.41	0.34	0.48	0.40	0.33	0.46	0.38	0.33	0.30
5	0.67	0.49	0.37	0.28	0.64	0.48	0.37	0.28	0.61	0.47	0.36	0.28	0.44	0.35	0.28	0.42	0.34	0.27	0.40	0.33	0.27	0.24
6	0.61	0.43	0.32	0.24	0.59	0.42	0.31	0.24	0.56	0.41	0.31	0.23	0.39	0.30	0.23	0.37	0.29	0.23	0.35	0.28	0.22	0.20
7	0.55	0.38	0.27	0.20	0.53	0.37	0.27	0.20	0.52	0.36	0.27	0.19	0.35	0.26	0.19	0.33	0.25	0.19	0.32	0.24	0.19	0.16
8	0.51	0.34	0.24	0.17	0.50	0.34	0.24	0.17	0.48	0.33	0.23	0.17	0.31	0.23	0.17	0.30	0.22	0.16	0.29	0.22	0.16	0.14
9	0.48	0.32	0.21	0.15	0.46	0.31	0.21	0.15	0.44	0.30	0.21	0.15	0.29	0.20	0.14	0.27	0.20	0.14	0.26	0.19	0.14	0.12
10	0.44	0.29	0.19	0.13	0.43	0.28	0.19	0.13	0.42	0.27	0.19	0.13	0.26	0.18	0.13	0.25	0.18	0.12	0.24	0.17	0.12	0.10

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 48.2

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.

UL INTERNATIONAL ITALIA SRL
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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	285.0	28.5	4.2	142.5	1.6
2	71.2	7.1	8.5	35.6	3.1
3	31.7	3.2	12.7	15.8	4.7
4	17.8	1.8	16.9	8.9	6.2
5	11.4	1.1	21.1	5.7	7.8
6	7.9	0.8	25.4	4.0	9.3
7	5.8	0.6	29.6	2.9	10.9
8	4.5	0.4	33.8	2.2	12.4

10% CONE ANGLE: 129.4 DEGREES
50% CONE ANGLE: 75.6 DEGREES