LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Test #: L111604102
Date: 11/21/2016

NVLAP LAB CODE 200927-0

Report No: L111604102

Prepared For: Cerno
1751 Mc gaw Ave Irvine, CA 92614

Model Number: 08-100-36W

Test: Photometric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:
ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Catalog number is 08-100-36W. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 11/17/16

Date of Tests: 11/17/16 - 11/21/16

Seasoning of Sample: No seasoning was performed.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

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Test Summary	
Manufacturer:	Cerno
Model Number:	08-100-36W
Driver/Ballast Model Number:	N/A
Total Lumens:	4034.57
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	1.04
Input Power (W):	70.65
Input Power Factor:	0.56
Current ATHD @ 120V(%):	131%
Current ATHD @ 277V(%):	N/A
Efficacy:	57
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:15
Total Operating Time (Hours):	2:25
Off State Power(W):	0.00

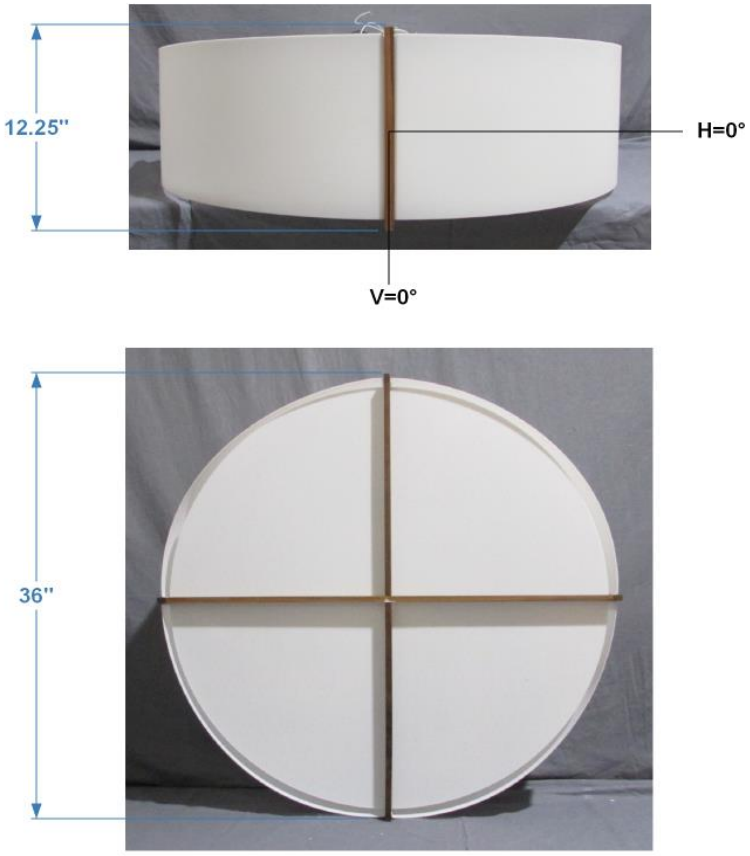

FIG.1 LUMINAIRE

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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Keyur Patel

Test Report Released by:

Jeff Ahn
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 8*

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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L111604102.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L111604102
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 11/21/2016
[MANUFAC] CERNO
[LUMCAT] 08-100-36W
[LUMINAIRE] PLURA FLUSH MOUNT CEILING LIGHT, 36", WALNUT, 4X GU-24 18W CFL
[BALLASTCAT] N/A
[LAMPPOSITION] 0,0
[LAMPCAT] TCP 33118SP 2700K
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 70.65W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4035
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	70.65
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	2.98 ft (Diameter)
Luminous Width (90-270)	2.98 ft (Diameter)
Luminous Height	0.83 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	597	597	597
55	572	572	572
65	555	555	555
75	532	532	532
85	538	538	538

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L111604102.IES

CANDELA TABULATION

	0
0	468.31
5	456.76
10	453.90
15	455.01
20	450.11
25	440.78
30	427.36
35	411.65
40	392.67
45	370.86
50	350.29
55	320.35
60	294.86
65	267.90
70	237.97
75	207.31
80	177.75
85	153.54
90	153.75
95	194.20
100	227.77
105	245.98
110	281.82
115	320.53
120	356.17
125	389.77
130	420.33
135	443.12
140	462.45
145	474.39
150	471.83
155	472.48
160	468.63
165	458.78
170	445.53
175	429.29
180	421.96

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L111604102.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	172.15	N.A.	4.30
0-30	375.45	N.A.	9.30
0-40	633.19	N.A.	15.70
0-60	1208.31	N.A.	29.90
0-80	1692.63	N.A.	42.00
0-90	1866.79	N.A.	46.30
10-90	1823.15	N.A.	45.20
20-40	461.05	N.A.	11.40
20-50	748.14	N.A.	18.50
40-70	840.01	N.A.	20.80
60-80	484.32	N.A.	12.00
70-80	219.42	N.A.	5.40
80-90	174.16	N.A.	4.30
90-110	474.65	N.A.	11.80
90-120	791.68	N.A.	19.60
90-130	1140.24	N.A.	28.30
90-150	1778.03	N.A.	44.10
90-180	2167.79	N.A.	53.70
110-180	1693.13	N.A.	42.00
0-180	4034.57	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	43.64
10-20	128.51
20-30	203.30
30-40	257.74
40-50	287.09
50-60	288.02
60-70	264.90
70-80	219.42
80-90	174.16
90-100	209.93
100-110	264.72
110-120	317.03
120-130	348.56
130-140	342.15
140-150	295.64
150-160	218.21
160-170	130.07
170-180	41.47

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L111604102.IES

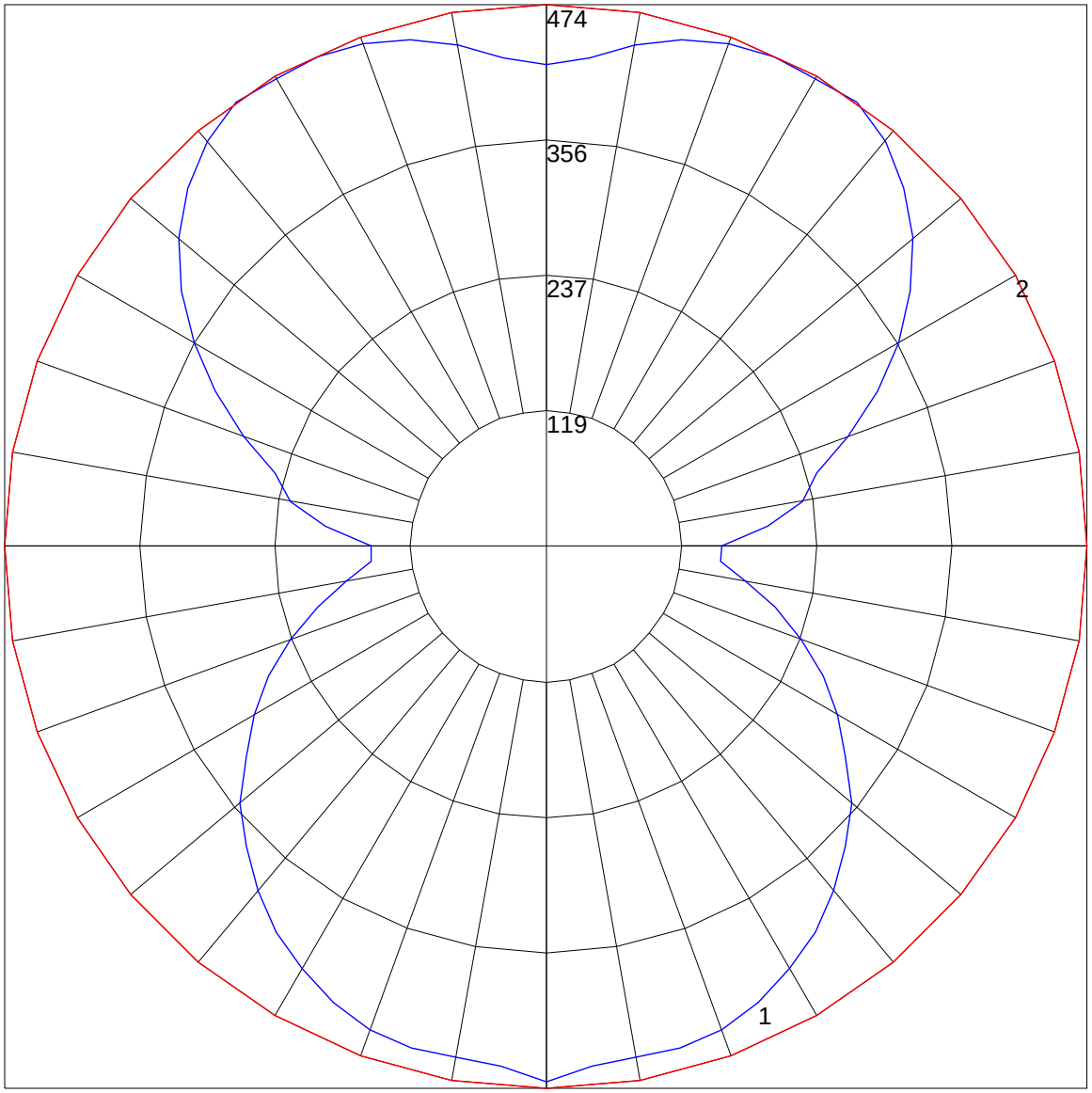
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	95	90	85	81	87	82	78	75	68	65	63	55	53	51	43	42	41	35
2	86	77	70	65	78	71	65	60	59	54	50	47	44	41	37	35	33	28
3	78	67	59	53	71	62	55	49	51	46	41	41	37	34	32	29	27	23
4	71	59	51	44	64	54	47	41	45	39	35	36	32	29	28	25	23	19
5	65	52	44	37	59	48	40	35	40	34	30	32	28	24	25	22	19	16
6	59	47	38	32	54	43	35	30	36	30	25	29	25	21	23	19	17	14
7	55	42	34	28	50	39	31	26	32	26	22	26	22	18	21	17	15	12
8	51	38	30	24	46	35	28	23	29	24	20	24	20	16	19	16	13	11
9	47	35	27	22	43	32	25	20	27	21	17	22	18	14	17	14	12	9
10	44	32	24	19	40	29	22	18	25	19	15	20	16	13	16	13	11	9

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L111604102.IES

POLAR GRAPH



Maximum Candela = 474.39 Located At Horizontal Angle = 0, Vertical Angle = 145
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (145) (Through Max. Cd.)