



8165 E Kaiser Blvd.
Anaheim, CA 92808
www.lightlaboratory.com

Report No: L042110205



Report No: L042110205

Issue Date: 5/28/2021

Report Prepared For: LightArt
4770 Ohio Ave S, Suite B Seattle, WA 98134

Model Number: Shade M (Narrow Flood, uses 5deg lens)

Test: Photometric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 5/21/21

Date of Tests: 5/24/21 - 5/28/21

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
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

General Information

Manufacturer:	LightArt
Model Number:	Shade M 5 Deg
Driver Model Number:	ERP PHB30W-0700-42

Test Summary

Total Lumens:	2678.01
Efficacy:	107.03
Input Voltage (VAC/60Hz):	120.03
Input Current (Amp):	0.2119
Input Power (W):	25.02
Input Power Factor:	0.9835
Current ATHD (%):	11.4%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:10
Total Operating Time (Hours):	1:50

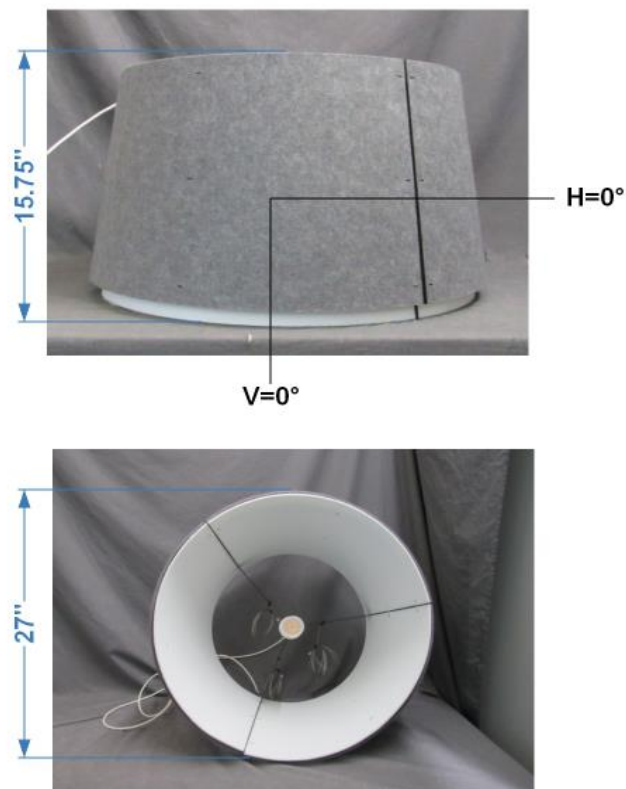


FIG. 1 LUMINAIRE



8165 E Kaiser Blvd.
Anaheim, CA 92808
www.lightlaboratory.com

Report No: L042110205



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.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

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 Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 9*



8165 E. Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L042110205.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L042110205
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 5/28/2021
[MANUFAC] LightArt
[LUMCAT] Shade M 5 Deg
[LUMINAIRE] Acoustic Pendant Light
[BALLASTCAT] ERP PHB30W-0700-42
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.03VAC, 25.02W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2678
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	25.02
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.50
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.54
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	2.08 ft (Diameter)
Luminous Width (90-270)	2.08 ft (Diameter)
Luminous Height	1.31 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	566	566	566
55	576	576	576
65	157	157	157
75	92	92	92
85	32	32	32

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L042110205.IES

CANDELA TABULATION

	0
0.0	5589
1.0	5580
3.0	5463
5.0	5224
7.0	4875
9.0	4423
11.0	3892
13.0	3324
15.0	2772
17.0	2291
19.5	1814
22.5	1390
25.5	1087
29.0	827
33.0	606
37.5	326
42.5	232
47.5	224
55.0	224
65.0	57
75.0	30
85.0	9
90.0	2
95.0	3
100.0	6
105.0	8
110.0	11
115.0	15
120.0	19
125.0	23
130.0	27
135.0	45
140.0	43
145.0	41
150.0	38
155.0	33
160.0	26
165.0	22
170.0	19
175.0	16
180.0	15

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L042110205.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1200.81	N.A.	44.80
0-30	1723.53	N.A.	64.40
0-40	2018.05	N.A.	75.40
0-60	2348.3	N.A.	87.70
0-80	2526.34	N.A.	94.30
0-90	2550.38	N.A.	95.20
10-90	2163.37	N.A.	80.80
20-40	817.24	N.A.	30.50
20-50	1003.91	N.A.	37.50
40-70	463.51	N.A.	17.30
60-80	178.03	N.A.	6.60
70-80	44.77	N.A.	1.70
80-90	24.04	N.A.	0.90
90-110	12.53	N.A.	0.50
90-120	27.38	N.A.	1.00
90-130	47.96	N.A.	1.80
90-150	104.45	N.A.	3.90
90-180	127.63	N.A.	4.80
110-180	115.10	N.A.	4.30
0-180	2678.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	387.01
10-20	813.80
20-30	522.71
30-40	294.53
40-50	186.67
50-60	143.58
60-70	133.26
70-80	44.77
80-90	24.04
90-100	3.81
100-110	8.71
110-120	14.85
120-130	20.58
130-140	30.84
140-150	25.65
150-160	15.17
160-170	6.39
170-180	1.62

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L042110205.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	118	118	118	118	115	115	115	115	108	108	108	103	103	103	98	98	98	95
1	111	108	105	102	108	105	103	100	100	98	96	96	94	93	92	90	89	87
2	105	99	95	91	102	97	93	89	93	90	87	89	86	84	86	84	82	80
3	99	92	86	82	96	90	85	81	87	82	79	83	80	77	81	78	75	73
4	94	85	79	74	91	84	78	74	81	76	72	78	74	71	76	73	70	68
5	89	80	73	69	87	78	73	68	76	71	67	74	70	66	72	68	65	63
6	84	75	68	64	82	74	68	64	72	67	63	70	65	62	68	64	61	59
7	80	71	64	60	79	70	64	60	68	63	59	66	62	58	65	61	58	56
8	77	67	61	56	75	66	60	56	64	59	56	63	58	55	62	58	55	53
9	73	63	57	53	72	63	57	53	61	56	53	60	56	52	59	55	52	50
10	70	60	55	51	69	60	54	50	59	54	50	58	53	50	57	52	49	48

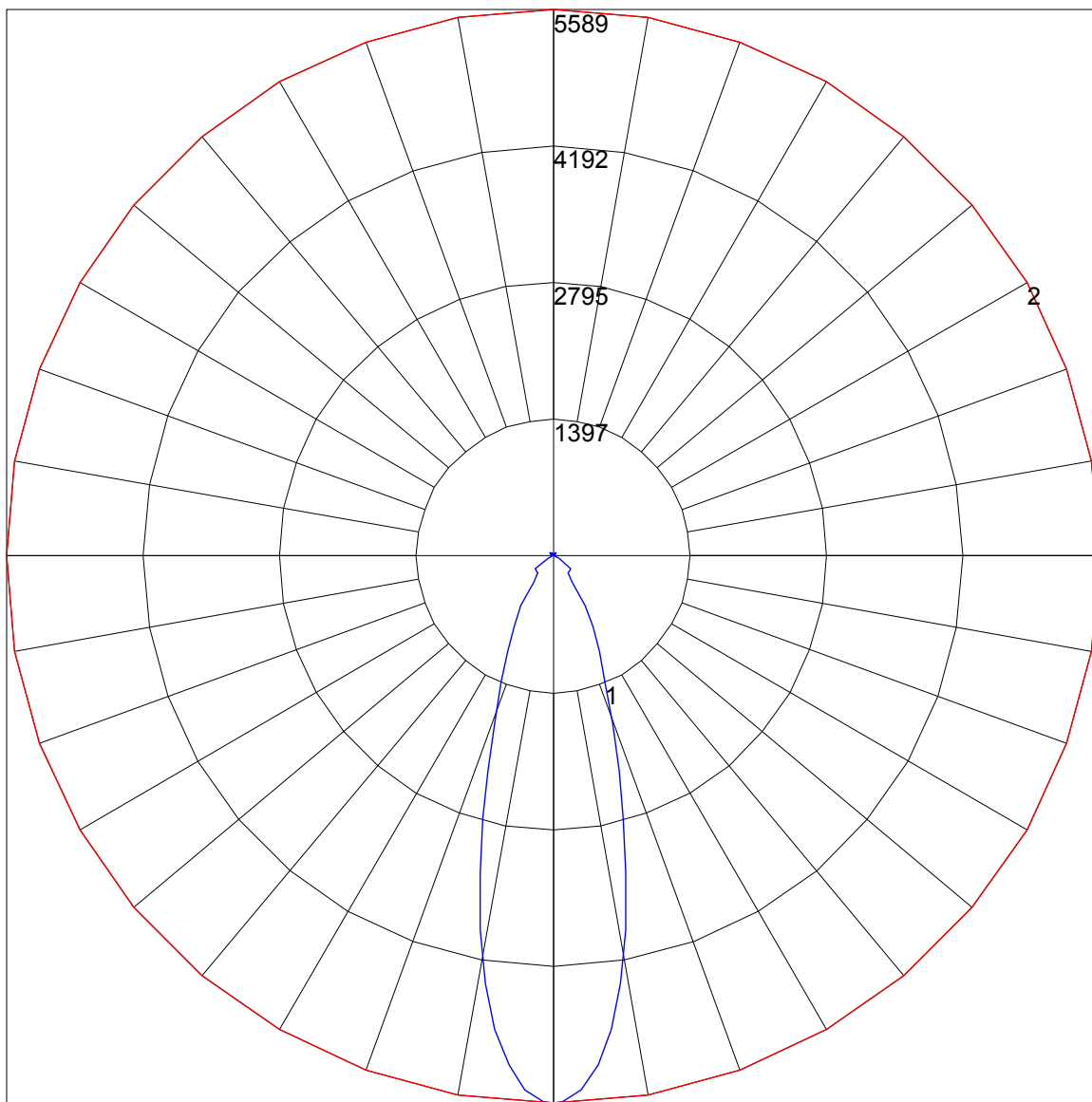
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L042110205.IES

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	6.0	7.1	6.4	7.5	7.9	6.0	7.1	6.4	7.5	7.9
	3H	6.1	7.1	6.6	7.5	8.0	6.1	7.1	6.6	7.5	8.0
	4H	6.2	7.1	6.7	7.5	8.1	6.2	7.1	6.7	7.5	8.1
	6H	6.2	7.0	6.7	7.5	8.0	6.2	7.0	6.7	7.5	8.0
	8H	6.1	7.0	6.7	7.5	8.0	6.1	7.0	6.7	7.5	8.0
	12H	6.1	6.9	6.6	7.4	7.9	6.1	6.9	6.6	7.4	7.9
4H	2H	5.8	6.7	6.3	7.2	7.7	5.8	6.7	6.3	7.2	7.7
	3H	6.1	6.8	6.6	7.3	7.9	6.1	6.8	6.6	7.3	7.9
	4H	6.2	6.9	6.7	7.4	7.9	6.2	6.9	6.7	7.4	7.9
	6H	6.2	6.8	6.8	7.4	8.0	6.2	6.8	6.8	7.4	8.0
	8H	6.2	6.8	6.8	7.3	7.9	6.2	6.8	6.8	7.3	7.9
	12H	6.2	6.7	6.8	7.3	7.9	6.2	6.7	6.8	7.3	7.9
8H	4H	6.1	6.7	6.7	7.2	7.8	6.1	6.7	6.7	7.2	7.8
	6H	6.2	6.7	6.8	7.3	7.8	6.2	6.7	6.8	7.3	7.8
	8H	6.2	6.6	6.8	7.2	7.8	6.2	6.6	6.8	7.2	7.8
	12H	6.2	6.6	6.9	7.2	7.9	6.2	6.6	6.9	7.2	7.9
12H	4H	6.1	6.6	6.6	7.1	7.7	6.1	6.6	6.6	7.1	7.7
	6H	6.2	6.6	6.8	7.1	7.8	6.2	6.6	6.8	7.1	7.8
	8H	6.2	6.6	6.8	7.1	7.8	6.2	6.6	6.8	7.1	7.8

Maximum UGR = 8.1

POLAR GRAPH



Maximum Candela = 5589 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)