



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

Report No: L052110501



Report No: L052110501

Issue Date: 6/8/2021

Report Prepared For: Graypants, Inc.
3220 1st Ave S Suite #400, Seattle, WA, 98134

Model Number: DASH48

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: 6/7/21

Date of Tests: 6/7/21 - 6/8/21

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:	Graypants, Inc.
Model Number:	DASH48
Driver Model Number:	ERP PSB30W-0700-42(2 DRIVERS)

Test Summary

Total Lumens:	5511.54
Efficacy:	116.87
Input Voltage (VAC/60Hz):	277.00
Input Current (Amp):	0.1828
Input Power (W):	47.16
Input Power Factor:	0.9315
Current ATHD (%):	16.8%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:05

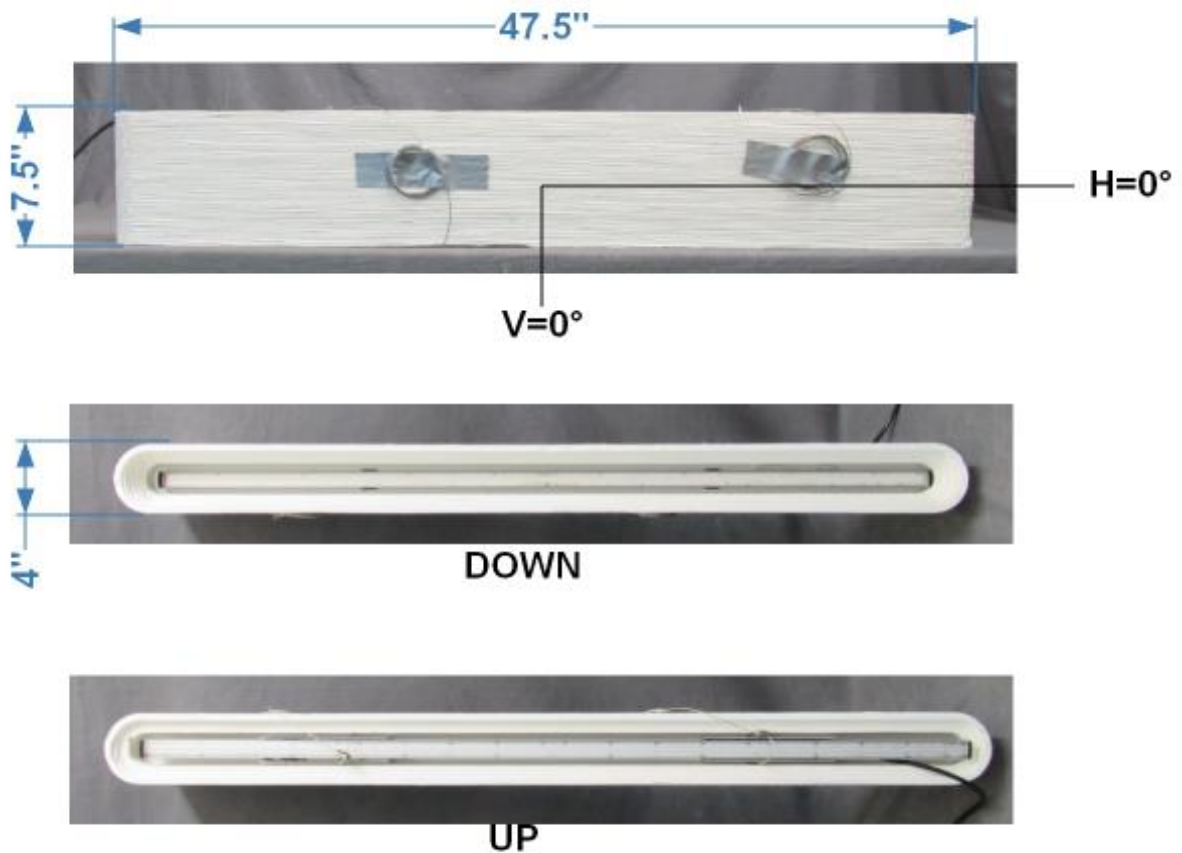


FIG. 1 LUMINAIRE



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

Report No: L052110501



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: 10*



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

Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L052110501.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L052110501
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 6/8/2021
[MANUFAC] Graypants, Inc.
[LUMCAT] DASH48
[LUMINAIRE] LED LUMINAIRE
[BALLASTCAT] ERP PSB30W-0700-42(2 DRIVERS)
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 277.0VAC, 47.16W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5512
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	47.16
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	Rectangular
Luminous Length (0-180)	3.88 ft
Luminous Width (90-270)	0.27 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	12006	8710	1742
55	9145	1825	1718
65	7578	1749	1700
75	6505	1705	1626
85	4005	1649	1413

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L052110501.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	1429	1429	1429	1429	1429	1429	1429	1429	1429	1429
5	1422	1421	1427	1422	1419	1422	1426	1432	1435	1434
10	1405	1404	1412	1407	1407	1411	1418	1427	1431	1433
15	1377	1378	1386	1383	1387	1393	1404	1416	1420	1427
20	1336	1338	1348	1349	1355	1365	1381	1396	1402	1411
25	1279	1284	1295	1301	1311	1326	1346	1360	1366	1374
30	1206	1213	1226	1238	1249	1267	1284	1293	1297	1297
35	1109	1118	1133	1146	1155	1167	1174	1170	1164	1156
40	982	990	1003	1009	1007	1007	994	977	961	928
45	827	831	835	830	819	804	783	752	704	600
50	657	659	658	647	635	617	582	513	309	150
55	511	512	508	496	485	452	366	166	114	102
60	399	399	394	382	359	272	120	94	83	86
65	312	312	306	294	220	95	74	74	74	72
70	235	236	232	185	73	59	60	58	58	57
75	164	165	151	53	46	45	44	45	43	43
80	96	98	34	31	31	30	31	29	29	29
85	34	17	17	16	16	16	16	15	15	14
90	5	5	5	4	4	4	3	3	3	2
95	23	26	32	42	56	72	89	101	109	114
100	57	60	68	82	102	128	158	186	212	233
105	101	104	113	130	154	186	225	263	298	327
110	150	153	163	181	210	248	299	345	387	426
115	206	209	219	238	270	311	368	422	474	522
120	262	265	275	295	326	368	422	477	535	592
125	317	320	330	349	377	415	466	516	571	630
130	372	375	384	401	426	459	498	539	587	641
135	425	427	435	448	469	493	522	556	594	642
140	450	453	468	481	499	522	550	577	605	635
145	499	501	506	514	527	546	571	592	614	637
150	544	545	550	555	564	578	597	614	630	647
155	582	584	587	591	597	607	621	634	645	657
160	617	619	620	622	625	631	641	649	656	665
165	643	644	645	646	647	650	657	663	667	671
170	663	664	665	665	665	667	669	674	675	676
175	676	677	677	676	675	676	677	680	681	680
180	678	678	678	678	678	678	678	678	678	678

Vert. Horizontal Angles

Angles	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0	1429	1429	1429	1429	1429	1429	1429	1429	1429
5	1433	1431	1430	1432	1433	1430	1431	1432	1436
10	1433	1434	1434	1440	1442	1439	1441	1447	1414
15	1429	1433	1437	1443	1448	1447	1446	1449	1426
20	1414	1421	1426	1435	1438	1437	1437	1432	1469
25	1377	1383	1386	1393	1395	1393	1394	1389	1412
30	1297	1298	1299	1301	1296	1287	1283	1276	1282
35	1147	1130	1109	1086	1062	1029	990	959	933
40	885	819	653	447	291	212	181	168	165
45	364	182	141	130	125	122	121	120	120
50	122	114	109	104	105	106	107	107	107
55	94	96	98	99	99	98	97	97	96
60	87	85	84	83	83	84	83	83	83

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L052110501.IES

CANDELA TABULATION - (Cont.)

65	71	71	70	69	69	69	70	70	70
70	57	58	56	55	55	55	56	56	56
75	44	43	42	41	41	41	41	41	41
80	29	28	28	27	27	27	27	27	27
85	13	13	12	12	12	12	12	12	12
90	2	2	2	2	2	1	1	1	1
95	116	115	112	108	103	100	97	94	93
100	250	260	264	262	259	254	248	245	242
105	351	367	376	380	379	376	371	366	364
110	459	480	494	502	504	504	500	494	493
115	564	596	618	633	639	643	642	637	639
120	650	693	729	753	771	781	785	784	780
125	694	749	796	837	866	886	899	906	911
130	700	756	807	858	896	926	946	959	962
135	688	733	779	826	864	895	919	933	938
140	670	703	738	773	803	828	847	860	862
145	662	686	709	732	752	768	781	790	799
150	663	680	695	710	723	733	738	745	749
155	668	678	688	700	708	714	716	721	714
160	672	679	687	695	700	702	703	704	712
165	675	678	683	687	691	692	693	693	690
170	677	678	679	681	683	682	682	681	681
175	679	678	677	677	678	676	675	674	681
180	678	678	678	678	678	678	678	678	678

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L052110501.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	537.22	N.A.	9.70
0-30	1159.25	N.A.	21.00
0-40	1815.97	N.A.	32.90
0-60	2425.72	N.A.	44.00
0-80	2617.06	N.A.	47.50
0-90	2635.19	N.A.	47.80
10-90	2498.9	N.A.	45.30
20-40	1278.76	N.A.	23.20
20-50	1669.16	N.A.	30.30
40-70	736.93	N.A.	13.40
60-80	191.34	N.A.	3.50
70-80	64.16	N.A.	1.20
80-90	18.13	N.A.	0.30
90-110	393.77	N.A.	7.10
90-120	855.33	N.A.	15.50
90-130	1406.51	N.A.	25.50
90-150	2319.85	N.A.	42.10
90-180	2876.35	N.A.	52.20
110-180	2482.58	N.A.	45.00
0-180	5511.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	136.29
10-20	400.92
20-30	622.04
30-40	656.72
40-50	390.40
50-60	219.35
60-70	127.18
70-80	64.16
80-90	18.13
90-100	99.17
100-110	294.60
110-120	461.56
120-130	551.18
130-140	508.86
140-150	404.48
150-160	302.44
160-170	189.50
170-180	64.55

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L052110501.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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	98	95	91	88	91	87	84	82	74	72	70	61	60	58	50	49	48	43
2	91	84	79	74	83	78	73	69	66	63	60	55	53	51	45	44	42	38
3	83	75	68	63	77	70	64	59	59	55	52	50	47	44	41	39	37	33
4	77	67	60	55	71	62	56	51	54	49	45	45	42	39	38	35	33	30
5	71	61	53	48	66	56	50	45	49	44	40	41	38	35	35	32	30	27
6	66	55	47	42	61	51	45	40	44	39	35	38	34	31	32	29	27	24
7	61	50	42	37	57	47	40	35	41	35	32	35	31	28	29	27	24	22
8	57	46	38	33	53	43	36	32	37	32	29	32	28	25	27	24	22	20
9	53	42	35	30	49	39	33	29	34	29	26	30	26	23	25	23	20	18
10	50	39	32	27	46	36	30	26	32	27	24	28	24	21	24	21	19	17

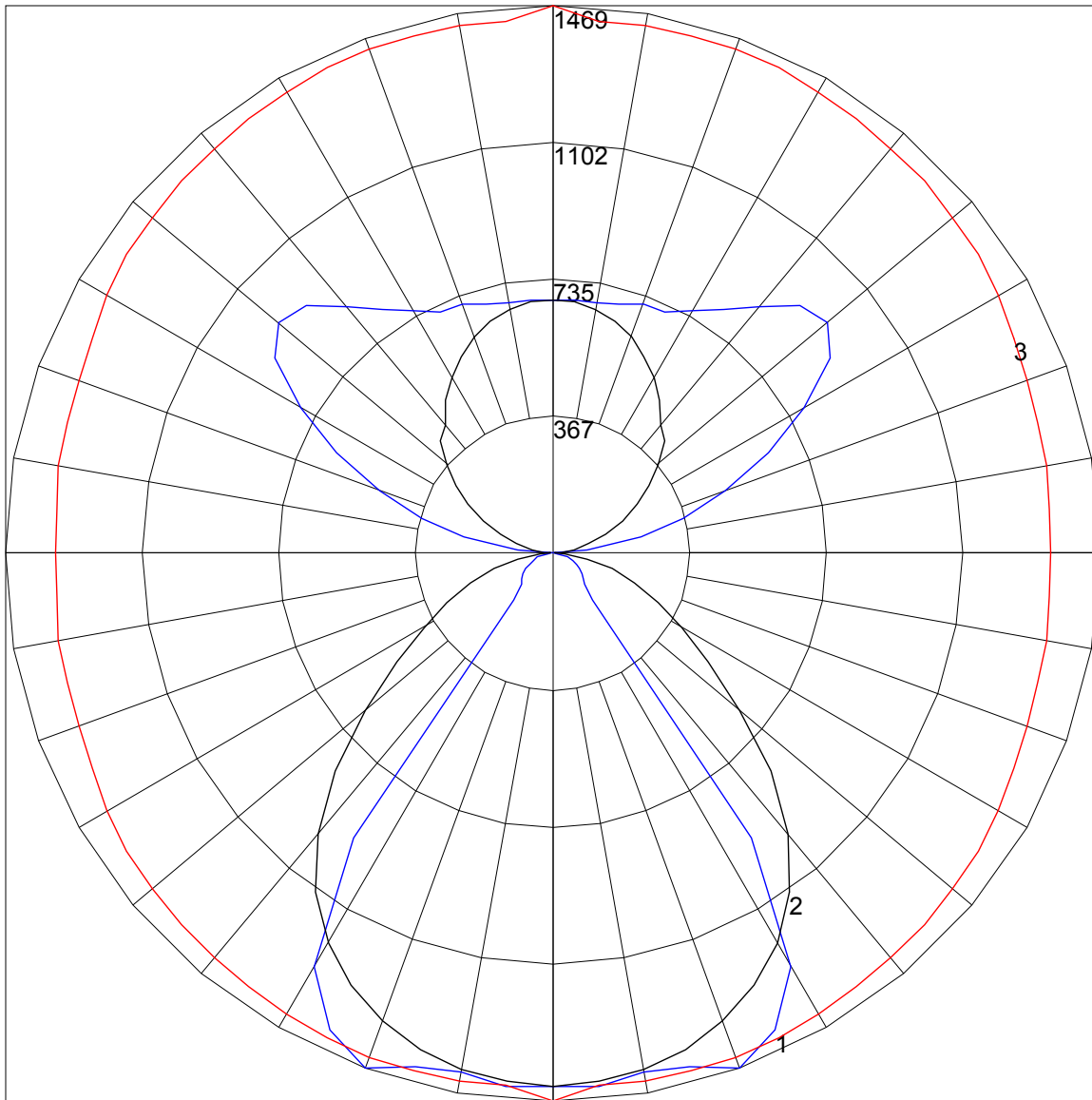
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L052110501.IES

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	15.5	16.2	16.5	17.2	18.5	5.9	5.9	5.9	6.5	7.8
	3H	17.0	17.7	18.0	18.7	20.0	6.7	7.3	7.7	8.3	9.7
	4H	17.6	18.2	18.6	19.2	20.5	7.4	8.1	8.5	9.1	10.4
	6H	18.0	18.5	19.0	19.6	20.9	8.0	8.6	9.1	9.6	11.0
	8H	18.1	18.6	19.1	19.6	21.0	8.2	8.8	9.3	9.8	11.2
	12H	18.1	18.6	19.1	19.6	21.0	8.4	8.9	9.4	9.9	11.3
4H	2H	15.2	15.9	16.2	16.9	18.2	5.9	6.0	6.4	7.0	8.4
	3H	16.8	17.3	17.8	18.3	19.7	7.5	8.0	8.5	9.1	10.4
	4H	17.4	17.8	18.4	18.9	20.2	8.4	8.9	9.4	9.9	11.3
	6H	17.8	18.2	18.8	19.2	20.6	9.1	9.6	10.2	10.6	12.0
	8H	17.9	18.3	18.9	19.3	20.7	9.4	9.8	10.4	10.8	12.2
	12H	17.9	18.3	19.0	19.3	20.7	9.6	9.9	10.6	11.0	12.4
8H	4H	17.2	17.6	18.3	18.7	20.0	8.7	9.1	9.8	10.2	11.6
	6H	17.7	18.0	18.7	19.1	20.5	9.7	10.0	10.7	11.1	12.4
	8H	17.8	18.1	18.9	19.2	20.6	10.0	10.3	11.1	11.4	12.8
	12H	17.9	18.1	18.9	19.2	20.6	10.3	10.5	11.3	11.6	13.0
12H	4H	17.2	17.5	18.2	18.6	20.0	8.8	9.1	9.8	10.2	11.6
	6H	17.6	17.9	18.7	19.0	20.4	9.7	10.0	10.8	11.1	12.5
	8H	17.8	18.0	18.9	19.1	20.5	10.2	10.4	11.2	11.5	12.9

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 1469 Located At Horizontal Angle = 90, Vertical Angle = 20

1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (0 - 180)

3 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)