

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

WS2414GV 55L 35K TF2 MWI

Nom 24 inch 55L 35K GV Frosted plastic jar Matte white reflector interior

### **Test Number**

SP-01121

### **Test Date**

5/20/2020

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	39 W
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#### Lumen Output

Output Lumens	4565
Efficacy	117.06 lm/W

#### Luminous Dimensions

0° - 180° Size	-2
90° - 270° Size	-2
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.26
Two luminaires, plane 90°	1.26
Four luminaires	1.39

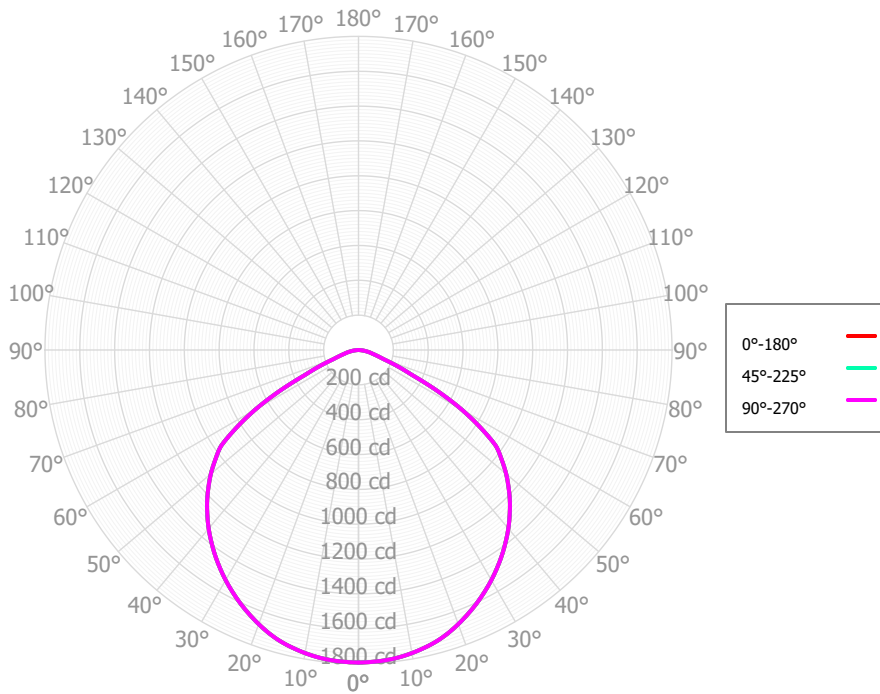
#### Full Beam Angle

0° - 180°	113°
90° - 270°	113°

### IES File Header Contents

Keyword	Value
TEST	SP-01121
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	5/20/2020
ISSUEDATE	5/21/2020
LUMCAT	WS2414GV 55L 35K TF2 MWI
LUMINAIRE	Nom 24 inch 55L 35K GV Frosted plastic jar Matte white reflector interior
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	83+
_CCTMULT	27K x 0.97, 30K x .99, 40K x 1.03
_LAMPMULT	15L x 0.27, 27L x 0.47, 37L x 0.68

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	177.05	3.87%	90.00° - 100.00°	0.07	0.00%
10.00° - 20.00°	487.95	10.68%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	739.45	16.18%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	898.28	19.66%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	946.57	20.71%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	832.26	18.21%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	371.03	8.12%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	96.31	2.11%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	20.73	0.45%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4,569.63	100.00%	0.00° - 180.00°	4,569.70	100.00%

### Candela Distribution

	0.00°	45.00°	90.00°
0.00°	1,794.33	1,794.33	1,794.33
2.50°	1,792.39	1,792.39	1,792.39
5.00°	1,788.09	1,788.09	1,788.09
7.50°	1,779.71	1,779.71	1,779.71
10.00°	1,767.03	1,767.03	1,767.03
12.50°	1,750.94	1,750.94	1,750.94
15.00°	1,731.61	1,731.61	1,731.61
17.50°	1,705.90	1,705.90	1,705.90
20.00°	1,674.90	1,674.90	1,674.90
22.50°	1,641.03	1,641.03	1,641.03
25.00°	1,605.09	1,605.09	1,605.09
27.50°	1,566.28	1,566.28	1,566.28
30.00°	1,525.62	1,525.62	1,525.62
32.50°	1,481.91	1,481.91	1,481.91
35.00°	1,436.50	1,436.50	1,436.50
37.50°	1,388.16	1,388.16	1,388.16
40.00°	1,338.43	1,338.43	1,338.43
42.50°	1,284.69	1,284.69	1,284.69
45.00°	1,229.30	1,229.30	1,229.30
47.50°	1,168.85	1,168.85	1,168.85
50.00°	1,106.59	1,106.59	1,106.59
52.50°	1,037.01	1,037.01	1,037.01
55.00°	965.26	965.26	965.26
57.50°	832.50	832.50	832.50
60.00°	684.89	684.89	684.89
62.50°	514.48	514.48	514.48
65.00°	339.43	339.43	339.43
67.50°	239.35	239.35	239.35
70.00°	152.79	152.79	152.79
72.50°	113.33	113.33	113.33
75.00°	84.43	84.43	84.43
77.50°	67.39	67.39	67.39
80.00°	49.00	49.00	49.00
82.50°	31.39	31.39	31.39
85.00°	15.54	15.54	15.54
87.50°	4.65	4.65	4.65
90.00°	0.51	0.51	0.51
92.50°	0.00	0.00	0.00
95.00°	0.00	0.00	0.00
97.50°	0.00	0.00	0.00
100.00°	0.00	0.00	0.00
102.50°	0.00	0.00	0.00
105.00°	0.00	0.00	0.00
107.50°	0.00	0.00	0.00
110.00°	0.00	0.00	0.00
112.50°	0.00	0.00	0.00

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	5,440	5,440	5,440	5,440	5,314	5,314	5,314	5,314	5,077	5,077	5,077	4,861	4,861	4,861	4,663	4,663	4,570
	<b>1</b>	5,047	4,862	4,695	4,546	4,927	4,760	4,609	4,472	4,569	4,445	4,332	4,393	4,293	4,201	4,231	4,151	4,077
	<b>2</b>	4,637	4,305	4,030	3,799	4,522	4,220	3,968	3,754	4,062	3,850	3,668	3,916	3,740	3,586	3,781	3,636	3,507
	<b>3</b>	4,255	3,819	3,481	3,211	4,147	3,748	3,435	3,183	3,616	3,348	3,128	3,493	3,266	3,075	3,379	3,187	3,023
	<b>4</b>	3,911	3,404	3,032	2,749	3,810	3,345	2,998	2,730	3,233	2,932	2,694	3,129	2,869	2,658	3,033	2,809	2,623
	<b>5</b>	3,603	3,052	2,666	2,381	3,511	3,002	2,639	2,369	2,907	2,588	2,343	2,819	2,539	2,319	2,737	2,492	2,295
	<b>6</b>	3,331	2,753	2,364	2,086	3,246	2,710	2,343	2,077	2,630	2,303	2,059	2,554	2,264	2,042	2,484	2,226	2,025
	<b>7</b>	3,090	2,498	2,114	1,845	3,013	2,462	2,098	1,839	2,393	2,065	1,826	2,328	2,033	1,813	2,268	2,003	1,801
	<b>8</b>	2,876	2,280	1,905	1,648	2,806	2,249	1,892	1,643	2,190	1,865	1,633	2,134	1,839	1,624	2,082	1,814	1,614
	<b>9</b>	2,687	2,093	1,729	1,483	2,623	2,066	1,718	1,479	2,015	1,696	1,472	1,966	1,674	1,465	1,921	1,654	1,457
	<b>10</b>	2,518	1,931	1,579	1,345	2,461	1,907	1,569	1,342	1,863	1,551	1,336	1,821	1,533	1,330	1,781	1,516	1,325

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	59.3 fc	16.5 ft
6.5 ft	42.5 fc	19.5 ft
7.5 ft	31.9 fc	22.5 ft
8.0 ft	28.0 fc	24.0 ft
10.0 ft	17.9 fc	30.0 ft
12.0 ft	12.5 fc	36.0 ft
14.0 ft	9.2 fc	42.0 ft
16.0 ft	7.0 fc	47.9 ft
20.0 ft	4.5 fc	59.9 ft
24.0 ft	3.1 fc	71.9 ft
28.0 ft	2.3 fc	83.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	6,148	6,148	6,148
<b>45.00°</b>	5,957	5,957	5,957
<b>55.00°</b>	5,766	5,766	5,766
<b>65.00°</b>	2,752	2,752	2,752
<b>75.00°</b>	1,118	1,118	1,118
<b>85.00°</b>	611	611	611

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	17.5	19.1	17.9	19.4	19.7	17.5	19.1	17.9	19.4	19.7
	<b>3H</b>	17.8	19.2	18.2	19.5	19.9	17.8	19.2	18.2	19.5	19.9
	<b>4H</b>	17.8	19.1	18.2	19.5	19.8	17.8	19.1	18.2	19.5	19.8
	<b>6H</b>	17.8	19.0	18.3	19.4	19.8	17.8	19.0	18.3	19.4	19.8
	<b>8H</b>	17.8	19.0	18.3	19.3	19.8	17.8	19.0	18.3	19.3	19.8
	<b>12H</b>	17.8	18.9	18.2	19.3	19.7	17.8	18.9	18.2	19.3	19.7
<b>4H</b>	<b>2H</b>	17.7	18.9	18.1	19.3	19.7	17.7	18.9	18.1	19.3	19.7
	<b>3H</b>	18.0	19.0	18.4	19.4	19.9	18.0	19.0	18.4	19.4	19.9
	<b>4H</b>	18.1	19.0	18.5	19.4	19.8	18.1	19.0	18.5	19.4	19.8
	<b>6H</b>	18.1	18.9	18.6	19.4	19.8	18.1	18.9	18.6	19.4	19.8
	<b>8H</b>	18.1	18.9	18.6	19.3	19.8	18.1	18.9	18.6	19.3	19.8
	<b>12H</b>	18.1	18.8	18.6	19.2	19.7	18.1	18.8	18.6	19.2	19.7
<b>8H</b>	<b>4H</b>	18.0	18.8	18.5	19.2	19.7	18.0	18.8	18.5	19.2	19.7
	<b>6H</b>	18.1	18.7	18.6	19.2	19.7	18.1	18.7	18.6	19.2	19.7
	<b>8H</b>	18.1	18.6	18.6	19.2	19.6	18.1	18.6	18.6	19.2	19.6
	<b>12H</b>	18.1	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6
<b>12H</b>	<b>4H</b>	18.0	18.7	18.5	19.2	19.6	18.0	18.7	18.5	19.2	19.6
	<b>6H</b>	18.1	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6
	<b>8H</b>	18.1	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6

Corrected UGR values based on total output lumens

SHR = 1.0