

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

ME0713UDGV 27LGL 27LTF1 35K EX MWI  
Direct/Indirect Mini Espresso

### **Test Number**

SP-00718\_7

### **Test Date**

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

### Summary of Results

#### Power

Input Watts	36 W
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#### Lumen Output

Output Lumens	3321
Efficacy	92.25 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.62
90° - 270° Size	-0.62
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.19
Two luminaires, plane 90°	1.18
Four luminaires	1.09

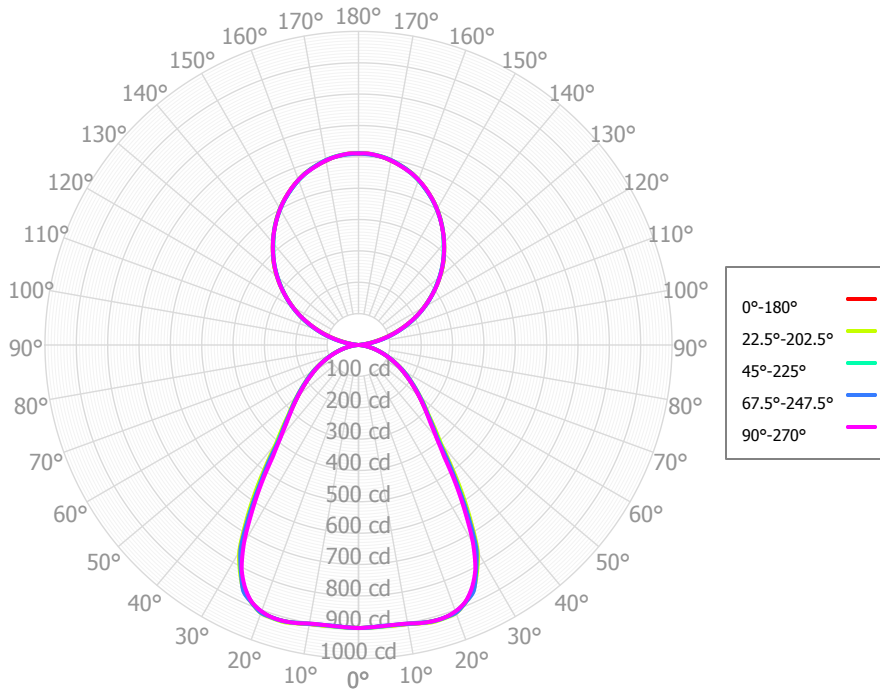
#### Full Beam Angle

0° - 180°	288°
90° - 270°	288°

### IES File Header Contents

Keyword	Value
TEST	SP-00718_7
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	5/6/2019
UPDATE	5/23/2019
LUMCAT	ME0713UDGV 27LGL 27LTF1 35K EX MWI
LUMINAIRE	Direct/Indirect Mini Espresso
LAMPCAT	N/A
LAMP	Direct and Indirect source: 27L GV board
OTHER	Uplight: 100 degree beam angle
OTHER	Uplight: Flush clear glass lens
OTHER	Downlight: 76 degree beam angle
OTHER	Downlight: regressed 3 inch domed diffuser
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.03
OTHER	Total luminaire watts is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	27K x 0.97, 30K x 0.98, 40K x 1.03
_LAMPMULT	15L x 0.57

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	90.34	2.72%	90.00° - 100.00°	13.12	0.39%
10.00° - 20.00°	257.92	7.75%	100.00° - 110.00°	94.71	2.85%
20.00° - 30.00°	389.97	11.72%	100.00° - 120.00°	284.61	8.56%
30.00° - 40.00°	348.89	10.49%	120.00° - 130.00°	259.80	7.81%
40.00° - 50.00°	244.15	7.34%	130.00° - 140.00°	294.79	8.86%
50.00° - 60.00°	183.98	5.53%	140.00° - 150.00°	289.91	8.72%
60.00° - 70.00°	123.21	3.70%	150.00° - 160.00°	244.85	7.36%
70.00° - 80.00°	61.85	1.86%	160.00° - 170.00°	163.89	4.93%
80.00° - 90.00°	14.05	0.42%	170.00° - 180.00°	60.62	1.82%
0.00° - 90.00°	1,714.37	51.54%	0.00° - 180.00°	3,325.97	100.00%

### Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	902.80	902.80	902.80	902.80	902.80
2.50°	901.42	902.14	901.98	901.04	901.29
5.00°	900.10	901.66	901.22	898.97	900.19
7.50°	901.39	902.39	900.12	900.36	899.84
10.00°	903.78	903.24	902.36	903.14	902.05
12.50°	908.70	909.40	908.63	907.63	908.63
15.00°	911.99	915.06	912.06	912.65	912.25
17.50°	912.25	913.63	912.73	911.55	911.82
20.00°	905.70	910.02	904.75	909.07	904.11
22.50°	889.06	890.24	889.75	889.82	888.11
25.00°	859.16	865.89	857.38	868.04	855.32
27.50°	813.40	818.17	813.66	811.97	807.00
30.00°	745.46	760.59	740.23	752.72	730.95
32.50°	655.46	667.32	651.32	654.18	634.17
35.00°	562.71	574.90	556.95	554.68	540.50
37.50°	467.75	484.78	460.27	471.65	448.75
40.00°	400.21	407.72	397.90	391.38	387.67
42.50°	350.44	359.10	346.61	350.24	341.67
45.00°	311.81	317.08	311.70	310.64	307.36
47.50°	279.10	286.39	280.66	282.47	277.53
50.00°	251.28	257.51	253.17	254.89	250.63
52.50°	225.50	231.13	226.27	230.13	224.61
55.00°	202.35	207.43	202.97	206.32	201.77
57.50°	180.05	186.81	180.04	185.94	179.63
60.00°	160.15	166.33	160.77	165.21	160.62
62.50°	140.83	145.98	141.67	143.51	142.06
65.00°	122.50	126.13	123.83	123.37	123.02
67.50°	104.34	106.64	105.95	106.34	104.01
70.00°	88.01	90.08	87.82	89.52	86.99
72.50°	72.27	74.71	71.35	72.92	70.78
75.00°	58.23	58.92	57.57	58.30	56.41
77.50°	43.72	44.85	44.22	44.51	42.73
80.00°	30.37	32.50	31.35	31.52	30.11
82.50°	19.90	20.30	20.01	19.63	19.01
85.00°	11.73	11.65	11.22	10.48	10.13
87.50°	4.51	4.68	4.24	5.08	4.44
90.00°	1.32	0.59	1.39	0.45	1.08
92.50°	1.20	1.51	0.86	1.57	1.31
95.00°	3.63	4.95	5.75	4.76	5.60
97.50°	15.02	20.53	21.83	22.47	21.03
100.00°	34.24	39.98	43.93	44.79	42.73
102.50°	56.60	63.50	65.41	68.96	64.61
105.00°	83.42	88.22	90.93	93.29	87.98
107.50°	109.84	113.37	116.12	117.40	114.59
110.00°	136.39	139.32	141.02	142.46	139.49
112.50°	164.38	165.47	167.64	167.70	164.00

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	<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>RCR</b>	<b>0</b>	3,576	3,576	3,576	3,576	3,305	3,305	3,305	3,305	2,800	2,800	2,800	2,338	2,338	2,338	1,914	1,914	1,714
	<b>1</b>	3,295	3,163	3,045	2,938	3,044	2,933	2,832	2,741	2,501	2,429	2,364	2,105	2,055	2,010	1,740	1,707	1,535
	<b>2</b>	3,028	2,801	2,614	2,457	2,797	2,603	2,442	2,305	2,232	2,113	2,011	1,889	1,805	1,731	1,572	1,515	1,464
	<b>3</b>	2,785	2,494	2,268	2,089	2,573	2,322	2,126	1,968	2,000	1,854	1,733	1,702	1,595	1,506	1,425	1,351	1,287
	<b>4</b>	2,567	2,232	1,987	1,800	2,372	2,083	1,868	1,702	1,802	1,639	1,510	1,541	1,421	1,323	1,299	1,212	1,100
	<b>5</b>	2,371	2,009	1,756	1,570	2,193	1,879	1,655	1,488	1,633	1,461	1,329	1,403	1,274	1,172	1,189	1,095	997
	<b>6</b>	2,197	1,818	1,564	1,382	2,034	1,704	1,478	1,314	1,487	1,311	1,179	1,284	1,150	1,047	1,094	995	918
	<b>7</b>	2,041	1,654	1,403	1,228	1,892	1,553	1,329	1,170	1,360	1,184	1,055	1,180	1,044	942	1,011	909	831
	<b>8</b>	1,902	1,512	1,267	1,099	1,765	1,422	1,202	1,049	1,251	1,076	951	1,090	953	854	938	835	758
	<b>9</b>	1,777	1,389	1,151	991	1,652	1,309	1,094	948	1,155	983	862	1,010	875	778	873	770	694
	<b>10</b>	1,666	1,282	1,052	899	1,550	1,209	1,001	861	1,071	902	786	940	806	712	816	713	639

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	29.8 fc	0.0 ft
6.5 ft	21.4 fc	0.0 ft
7.5 ft	16.0 fc	0.0 ft
8.0 ft	14.1 fc	0.0 ft
10.0 ft	9.0 fc	0.0 ft
12.0 ft	6.3 fc	0.0 ft
14.0 ft	4.6 fc	0.0 ft
16.0 ft	3.5 fc	0.0 ft
20.0 ft	2.3 fc	0.0 ft
24.0 ft	1.6 fc	0.0 ft
28.0 ft	1.2 fc	0.0 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	32,187	32,187	32,187
<b>45.00°</b>	15,722	15,716	15,497
<b>55.00°</b>	12,578	12,616	12,542
<b>65.00°</b>	10,335	10,446	10,378
<b>75.00°</b>	8,021	7,930	7,770
<b>85.00°</b>	4,800	4,589	4,142

### 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>	15.0	15.8	16.0	16.8	18.0	15.0	15.8	16.0	16.8	18.0
	<b>3H</b>	16.4	17.1	17.3	18.0	19.3	16.3	17.0	17.3	18.0	19.3
	<b>4H</b>	16.8	17.5	17.8	18.5	19.7	16.8	17.4	17.7	18.4	19.7
	<b>6H</b>	17.1	17.7	18.1	18.7	20.0	17.0	17.6	18.0	18.6	19.9
	<b>8H</b>	17.1	17.7	18.1	18.7	20.0	17.1	17.6	18.1	18.6	19.9
	<b>12H</b>	17.1	17.7	18.1	18.7	20.0	17.1	17.6	18.1	18.6	19.9
<b>4H</b>	<b>2H</b>	15.4	16.1	16.4	17.1	18.4	15.4	16.1	16.4	17.1	18.3
	<b>3H</b>	17.0	17.5	18.0	18.5	19.8	16.9	17.5	17.9	18.5	19.8
	<b>4H</b>	17.5	18.0	18.5	19.0	20.4	17.5	18.0	18.5	19.0	20.3
	<b>6H</b>	17.9	18.3	18.9	19.4	20.7	17.8	18.3	18.9	19.3	20.6
	<b>8H</b>	18.0	18.4	19.0	19.4	20.7	17.9	18.3	18.9	19.3	20.7
	<b>12H</b>	18.0	18.4	19.0	19.4	20.7	17.9	18.3	19.0	19.3	20.7
<b>8H</b>	<b>4H</b>	17.7	18.1	18.7	19.1	20.4	17.6	18.0	18.6	19.1	20.4
	<b>6H</b>	18.1	18.5	19.2	19.5	20.9	18.1	18.4	19.1	19.5	20.8
	<b>8H</b>	18.3	18.6	19.3	19.6	21.0	18.2	18.5	19.3	19.6	20.9
	<b>12H</b>	18.4	18.6	19.4	19.7	21.1	18.3	18.5	19.3	19.6	21.0
<b>12H</b>	<b>4H</b>	17.6	18.0	18.7	19.0	20.4	17.6	18.0	18.6	19.0	20.3
	<b>6H</b>	18.1	18.4	19.2	19.5	20.8	18.1	18.4	19.1	19.4	20.8
	<b>8H</b>	18.3	18.6	19.4	19.6	21.0	18.2	18.5	19.3	19.5	20.9

Corrected UGR values based on total output lumens

SHR = 1.0