

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE6LEDOS 30L 35K DS101 AR6223OS FAI CAO MW SO  
Nom 6" diam illumitech decorative trim recessed downlight

### Test Number

SP-00921

### Test Date

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

### Summary of Results

#### Power

Input Watts	29.6 W
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#### Lumen Output

Output Lumens	2253
Efficacy	76.12 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.86
Two luminaires, plane 90°	0.86
Four luminaires	0.78

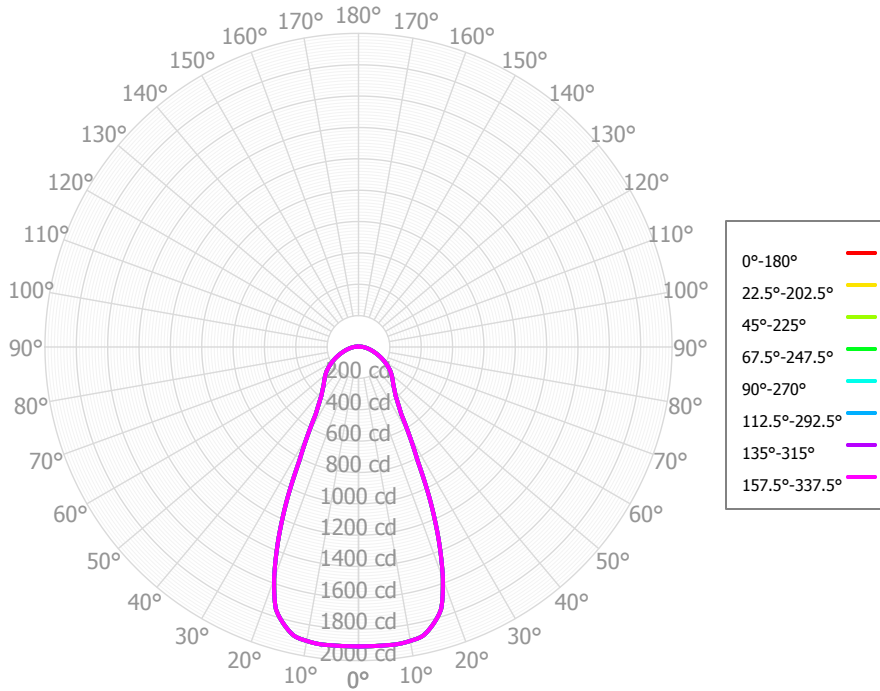
#### Full Beam Angle

0° - 180°	52°
90° - 270°	52°

### IES File Header Contents

Keyword	Value
TEST	SP-00921
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	10/9/2018
UPDATE	8/19/2019
LUMCAT	SGE6LEDOS 30L 35K DS101 AR6223OS FAI CAO MW SO
LUMINAIRE	Nom 6" diam illumitech decorative trim recessed downlight
OTHER	Solite lens, Frosted Acrylic inside / clear acrylic outside
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.89, 30K x 0.95, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	27K x 0.89, 30K x 0.95, 40K x 1.03
_LAMPMULT	10L x 0.41, 15L x 0.52, 20L x 0.67

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	185.08	8.21%	90.00° - 100.00°	22.90	1.02%
10.00° - 20.00°	505.68	22.44%	100.00° - 110.00°	9.02	0.40%
20.00° - 30.00°	487.66	21.64%	100.00° - 120.00°	12.26	0.54%
30.00° - 40.00°	284.20	12.61%	120.00° - 130.00°	1.62	0.07%
40.00° - 50.00°	240.35	10.67%	130.00° - 140.00°	1.10	0.05%
50.00° - 60.00°	211.47	9.39%	140.00° - 150.00°	0.88	0.04%
60.00° - 70.00°	155.33	6.89%	150.00° - 160.00°	0.63	0.03%
70.00° - 80.00°	94.60	4.20%	160.00° - 170.00°	0.38	0.02%
80.00° - 90.00°	48.90	2.17%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	2,213.26	98.23%	0.00° - 180.00°	2,253.15	100.00%



### 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>	2,673	2,673	2,673	2,673	2,606	2,606	2,606	2,606	2,481	2,481	2,481	2,367	2,367	2,367	2,262	2,262	2,213
	<b>1</b>	2,482	2,392	2,311	2,238	2,419	2,337	2,264	2,198	2,236	2,176	2,122	2,143	2,095	2,050	2,057	2,019	1,983
	<b>2</b>	2,307	2,154	2,027	1,921	2,248	2,109	1,994	1,896	2,026	1,930	1,847	1,949	1,870	1,800	1,878	1,813	1,755
	<b>3</b>	2,149	1,955	1,804	1,684	2,095	1,918	1,779	1,667	1,849	1,731	1,634	1,785	1,685	1,602	1,725	1,642	1,571
	<b>4</b>	2,010	1,787	1,625	1,500	1,960	1,757	1,605	1,488	1,699	1,568	1,465	1,645	1,533	1,443	1,595	1,500	1,421
	<b>5</b>	1,885	1,645	1,478	1,354	1,840	1,619	1,463	1,346	1,571	1,434	1,329	1,526	1,406	1,313	1,483	1,380	1,296
	<b>6</b>	1,773	1,523	1,356	1,235	1,732	1,501	1,344	1,229	1,460	1,321	1,216	1,422	1,298	1,204	1,386	1,277	1,192
	<b>7</b>	1,672	1,417	1,252	1,136	1,635	1,399	1,242	1,131	1,364	1,224	1,122	1,331	1,206	1,112	1,300	1,188	1,103
	<b>8</b>	1,581	1,325	1,163	1,052	1,548	1,309	1,155	1,049	1,278	1,140	1,041	1,250	1,125	1,034	1,223	1,111	1,026
	<b>9</b>	1,499	1,243	1,086	980	1,469	1,229	1,080	977	1,203	1,067	971	1,178	1,054	965	1,155	1,042	960
	<b>10</b>	1,424	1,171	1,019	918	1,397	1,159	1,013	915	1,136	1,002	910	1,114	992	906	1,094	982	901

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	63.2 fc	5.4 ft
6.5 ft	45.2 fc	6.4 ft
7.5 ft	34.0 fc	7.4 ft
8.0 ft	29.8 fc	7.9 ft
10.0 ft	19.1 fc	9.8 ft
12.0 ft	13.3 fc	11.8 ft
14.0 ft	9.7 fc	13.8 ft
16.0 ft	7.5 fc	15.7 ft
20.0 ft	4.8 fc	19.7 ft
24.0 ft	3.3 fc	23.6 ft
28.0 ft	2.4 fc	27.6 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	104,724	104,724	104,724
<b>45.00°</b>	24,039	24,039	24,039
<b>55.00°</b>	22,655	22,655	22,655
<b>65.00°</b>	20,324	20,324	20,324
<b>75.00°</b>	18,811	18,811	18,811
<b>85.00°</b>	27,651	27,651	27,651

### 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>	20.5	21.8	20.9	22.2	22.5	20.5	21.8	20.9	22.2	22.5
	<b>3H</b>	22.1	23.3	22.6	23.7	24.1	22.1	23.3	22.6	23.7	24.1
	<b>4H</b>	22.8	24.0	23.3	24.4	24.8	22.8	24.0	23.3	24.4	24.8
	<b>6H</b>	23.5	24.5	23.9	24.9	25.4	23.5	24.5	23.9	24.9	25.4
	<b>8H</b>	23.8	24.8	24.2	25.2	25.6	23.8	24.8	24.2	25.2	25.6
	<b>12H</b>	24.1	25.0	24.6	25.5	25.9	24.1	25.0	24.6	25.5	25.9
<b>4H</b>	<b>2H</b>	21.0	22.1	21.4	22.5	23.0	21.0	22.1	21.4	22.5	23.0
	<b>3H</b>	22.9	23.9	23.4	24.3	24.7	22.9	23.9	23.4	24.3	24.7
	<b>4H</b>	23.8	24.6	24.2	25.1	25.5	23.8	24.6	24.2	25.1	25.5
	<b>6H</b>	24.6	25.3	25.0	25.8	26.3	24.6	25.3	25.0	25.8	26.3
	<b>8H</b>	24.9	25.6	25.4	26.1	26.6	24.9	25.6	25.4	26.1	26.6
	<b>12H</b>	25.4	26.0	25.9	26.5	27.0	25.4	26.0	25.9	26.5	27.0
<b>8H</b>	<b>4H</b>	24.1	24.8	24.6	25.2	25.8	24.1	24.8	24.6	25.2	25.8
	<b>6H</b>	25.1	25.6	25.6	26.2	26.7	25.1	25.6	25.6	26.2	26.7
	<b>8H</b>	25.6	26.1	26.1	26.6	27.2	25.6	26.1	26.1	26.6	27.2
	<b>12H</b>	26.2	26.6	26.7	27.1	27.7	26.2	26.6	26.7	27.1	27.7
<b>12H</b>	<b>4H</b>	24.1	24.7	24.6	25.2	25.8	24.1	24.7	24.6	25.2	25.8
	<b>6H</b>	25.2	25.7	25.7	26.2	26.8	25.2	25.7	25.7	26.2	26.8
	<b>8H</b>	25.8	26.2	26.3	26.7	27.4	25.8	26.2	26.3	26.7	27.4

Corrected UGR values based on total output lumens

SHR = 1.0