

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

DLD22GZ 300L 35K DX AL22 MWI MW  
Nom 22" diam round High Bay luminaire

### **Test Number**

SP-00959\_3

### **Test Date**

11/19/2019

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

### Summary of Results

#### Power

Input Watts	221 W
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#### Lumen Output

Output Lumens	28380
Efficacy	128.41 lm/W

#### Luminous Dimensions

0° - 180° Size	-1.83
90° - 270° Size	-1.83
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.21
Four luminaires	1.34

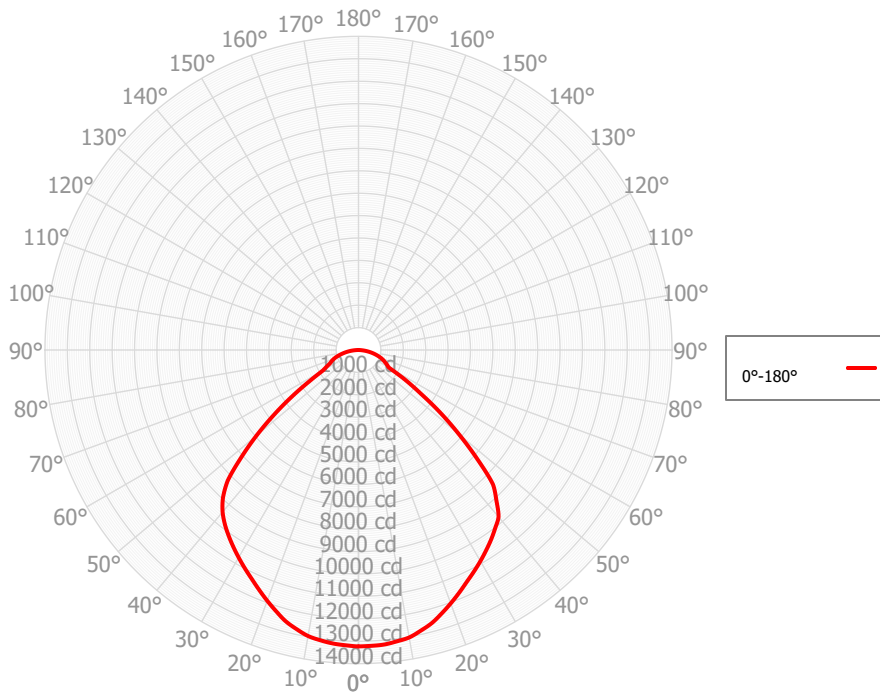
#### Full Beam Angle

0° - 180°	97°
90° - 270°	0°

### IES File Header Contents

Keyword	Value
TEST	SP-00959_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/19/2019
ISSUEDATE	2/12/2020
LUMCAT	DLD22GZ 300L 35K DX AL22 MWI MW
LUMINAIRE	Nom 22" diam round High Bay luminaire
OTHER	Reflector: Matte white interior
LAMPCAT	N/A
LAMP	N/A
OTHER	Beam Angle: 99.2 deg
OTHER	Uplight: 0%
OTHER	Downlight: 100%
OTHER	CCT Output Multipliers: 27K x 0.95, 30K x 0.97, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	27K x 0.95, 30K x 0.97, 40K x 1.03
_LAMPMULT	N/A, 300L only

**Candela Polar Plot**



**Zonal Lumen Summary**

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1,270.79	4.48%	90.00° - 100.00°	0.43	0.00%
10.00° - 20.00°	3,536.68	12.46%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	5,242.55	18.47%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	6,394.30	22.53%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	6,205.68	21.87%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	3,214.20	11.33%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	1,371.82	4.83%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	885.26	3.12%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	257.97	0.91%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	28,379.26	100.00%	0.00° - 180.00°	28,379.68	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	13,234.78	13,234.78
2.50°	13,222.90	13,199.23
5.00°	13,202.35	13,155.62
7.50°	13,123.39	13,073.71
10.00°	13,035.02	12,968.95
12.50°	12,839.70	12,768.88
15.00°	12,629.88	12,545.18
17.50°	12,340.30	12,232.19
20.00°	12,041.87	11,916.91
22.50°	11,736.99	11,593.89
25.00°	11,431.52	11,279.43
27.50°	11,158.17	10,990.89
30.00°	10,887.03	10,701.88
32.50°	10,607.72	10,411.53
35.00°	10,328.02	10,115.22
37.50°	10,028.65	9,803.81
40.00°	9,728.68	9,441.07
42.50°	9,116.40	8,960.07
45.00°	8,494.39	8,263.95
47.50°	7,175.89	7,107.56
50.00°	5,859.30	5,943.38
52.50°	4,616.75	4,763.93
55.00°	3,387.82	3,634.48
57.50°	2,451.36	2,594.94
60.00°	1,566.64	1,848.18
62.50°	1,439.34	1,593.21
65.00°	1,314.60	1,399.03
67.50°	1,207.30	1,298.40
70.00°	1,087.89	1,179.85
72.50°	945.40	1,041.79
75.00°	798.57	886.33
77.50°	649.34	725.80
80.00°	498.01	573.95
82.50°	344.01	415.99
85.00°	186.53	257.72
87.50°	48.53	106.74
90.00°	0.00	6.21
92.50°	0.00	0.00
95.00°	0.00	0.00
97.50°	0.00	0.00
100.00°	0.00	0.00
102.50°	0.00	0.00
105.00°	0.00	0.00
107.50°	0.00	0.00
110.00°	0.00	0.00
112.50°	0.00	0.00

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
RCR	0	33,785	33,785	33,785	33,785	32,999	32,999	32,999	32,999	31,533	31,533	31,533	30,191	30,191	30,191	28,958	28,958	28,958
	1	31,424	30,303	29,299	28,395	30,680	29,671	28,761	27,936	28,487	27,744	27,062	27,400	26,799	26,243	26,398	25,919	25,472
	2	29,052	27,080	25,451	24,082	28,349	26,561	25,067	23,800	25,587	24,336	23,257	24,688	23,650	22,739	23,857	23,004	22,245
	3	26,848	24,277	22,287	20,702	26,192	23,846	22,005	20,522	23,035	21,464	20,171	22,285	20,952	19,833	21,589	20,467	19,507
	4	24,841	21,861	19,679	18,013	24,235	21,501	19,466	17,893	20,821	19,056	17,659	20,190	18,666	17,431	19,603	18,293	17,210
	5	23,027	19,779	17,510	15,835	22,471	19,476	17,346	15,753	18,902	17,028	15,592	18,368	16,724	15,434	17,869	16,433	15,280
	6	21,393	17,980	15,689	14,045	20,885	17,723	15,560	13,988	17,235	15,309	13,873	16,780	15,069	13,761	16,354	14,837	13,651
	7	19,925	16,421	14,149	12,557	19,463	16,202	14,046	12,515	15,785	13,845	12,432	15,394	13,651	12,350	15,028	13,464	12,270
	8	18,606	15,065	12,837	11,307	18,187	14,877	12,754	11,275	14,518	12,590	11,213	14,182	12,432	11,152	13,865	12,279	11,092
	9	17,423	13,882	11,712	10,247	17,042	13,719	11,643	10,223	13,409	11,508	10,176	13,117	11,378	10,129	12,841	11,251	10,083
	10	16,359	12,845	10,741	9,341	16,013	12,704	10,684	9,323	12,434	10,571	9,286	12,179	10,462	9,250	11,938	10,356	9,214

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	437.5 fc	12.5 ft
6.5 ft	313.2 fc	14.7 ft
7.5 ft	235.3 fc	17.0 ft
8.0 ft	206.8 fc	18.1 ft
10.0 ft	132.3 fc	22.7 ft
12.0 ft	91.9 fc	27.2 ft
14.0 ft	67.5 fc	31.7 ft
16.0 ft	51.7 fc	36.2 ft
20.0 ft	33.1 fc	45.3 ft
24.0 ft	23.0 fc	54.4 ft
28.0 ft	16.9 fc	63.4 ft

### Average Luminaire Luminance [cd/m

	0.00°	45.00°	90.00°
0.00°	54,162	54,162	54,162
45.00°	49,162	48,828	48,495
55.00°	24,172	24,612	25,052
65.00°	12,730	12,934	13,139
75.00°	12,627	12,974	13,321
85.00°	8,758	9,594	10,430

### 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>	19.4	20.8	19.7	21.1	21.5	19.6	21.1	20.0	21.4	21.7
	<b>3H</b>	20.5	21.8	20.9	22.2	22.5	20.8	22.1	21.2	22.4	22.8
	<b>4H</b>	21.1	22.3	21.5	22.6	23.0	21.3	22.6	21.7	22.9	23.3
	<b>6H</b>	21.5	22.6	21.9	23.0	23.4	21.8	22.9	22.2	23.3	23.7
	<b>8H</b>	21.7	22.7	22.1	23.1	23.5	22.0	23.0	22.4	23.4	23.8
	<b>12H</b>	21.7	22.7	22.2	23.1	23.6	22.1	23.1	22.5	23.5	23.9
<b>4H</b>	<b>2H</b>	19.7	20.9	20.1	21.2	21.6	19.9	21.1	20.3	21.4	21.8
	<b>3H</b>	21.1	22.1	21.6	22.5	22.9	21.4	22.4	21.8	22.8	23.2
	<b>4H</b>	21.8	22.7	22.3	23.1	23.6	22.1	23.0	22.5	23.4	23.9
	<b>6H</b>	22.4	23.2	22.9	23.6	24.1	22.7	23.5	23.2	23.9	24.4
	<b>8H</b>	22.6	23.3	23.1	23.8	24.3	22.9	23.7	23.4	24.1	24.6
	<b>12H</b>	22.7	23.4	23.2	23.9	24.3	23.1	23.7	23.6	24.2	24.7
<b>8H</b>	<b>4H</b>	22.1	22.8	22.6	23.3	23.7	22.4	23.1	22.9	23.6	24.0
	<b>6H</b>	22.8	23.4	23.3	23.9	24.4	23.1	23.7	23.6	24.2	24.7
	<b>8H</b>	23.1	23.6	23.6	24.1	24.6	23.4	24.0	23.9	24.5	25.0
	<b>12H</b>	23.3	23.7	23.8	24.2	24.8	23.6	24.1	24.2	24.6	25.2
<b>12H</b>	<b>4H</b>	22.1	22.8	22.6	23.3	23.7	22.4	23.1	22.9	23.5	24.0
	<b>6H</b>	22.9	23.4	23.4	23.9	24.4	23.2	23.7	23.7	24.2	24.8
	<b>8H</b>	23.2	23.7	23.7	24.2	24.7	23.5	24.0	24.1	24.5	25.1

Corrected UGR values based on total output lumens

SHR = 1.0