

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

ALDDH12GV 55L 35K XX AL12MWI DR12A PP MW  
Nom 12 inch diam, high bay, mid bay, low bay application

### Test Number

SP-00456\_12

### Test Date

3/10/2021

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	3892
Efficacy	99.79 lm/W

#### Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.94
Two luminaires, plane 90°	0.94
Four luminaires	0.97

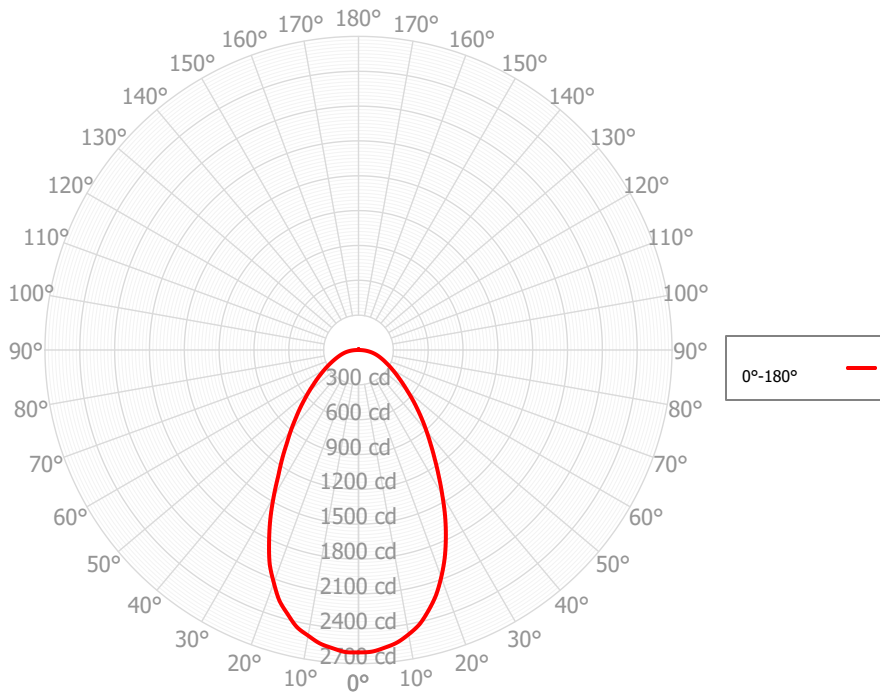
#### Full Beam Angle

0° - 180°	65°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00456_12
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	3/10/2021
ISSUEDATE	4/20/2021
LUMCAT	ALDDH12GV 55L 35K XX AL12MWI DR12A PP MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Aluminum reflector, matte white interior finish, door with prismatic polycarbonate lens
OTHER	Beam angle: 65 degrees
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multiplier: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	83
_CCTMULT	27K x 0.97, 30K x 0.99, 40K x 1.03
_CCTMULTA	50K x 1.06
_LAMPMULT	15L x 0.27, 27L x 0.46, 37L x 0.68

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	246.94	6.34%	90.00° - 100.00°	2.97	0.08%
10.00° - 20.00°	653.26	16.78%	100.00° - 110.00°	2.10	0.05%
20.00° - 30.00°	819.93	21.07%	100.00° - 120.00°	4.38	0.11%
30.00° - 40.00°	718.82	18.47%	120.00° - 130.00°	2.43	0.06%
40.00° - 50.00°	553.43	14.22%	130.00° - 140.00°	1.87	0.05%
50.00° - 60.00°	389.67	10.01%	140.00° - 150.00°	1.48	0.04%
60.00° - 70.00°	263.27	6.76%	150.00° - 160.00°	1.02	0.03%
70.00° - 80.00°	166.07	4.27%	160.00° - 170.00°	0.57	0.01%
80.00° - 90.00°	65.69	1.69%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	3877.09	99.62%	0.00° - 180.00°	3892.00	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	2604.27	2604.27
2.50°	2600.63	2603.38
5.00°	2574.04	2577.72
7.50°	2541.39	2548.89
10.00°	2486.73	2498.02
12.50°	2421.21	2445.53
15.00°	2324.83	2355.86
17.50°	2216.77	2264.14
20.00°	2082.94	2132.71
22.50°	1939.71	1997.82
25.00°	1780.01	1822.02
27.50°	1615.41	1645.23
30.00°	1443.69	1461.67
32.50°	1285.85	1286.11
35.00°	1144.40	1146.85
37.50°	1019.40	1014.50
40.00°	910.19	905.95
42.50°	809.46	802.84
45.00°	715.46	714.00
47.50°	630.47	630.22
50.00°	551.35	556.86
52.50°	486.50	489.94
55.00°	429.10	433.93
57.50°	381.17	382.83
60.00°	337.14	338.40
62.50°	299.52	297.89
65.00°	264.01	261.72
67.50°	235.14	229.70
70.00°	207.89	201.55
72.50°	183.55	176.72
75.00°	159.70	154.41
77.50°	135.71	132.86
80.00°	111.70	111.76
82.50°	85.37	88.45
85.00°	58.92	64.03
87.50°	30.62	37.27
90.00°	3.60	9.58
92.50°	2.85	2.62
95.00°	2.14	1.91
97.50°	1.91	1.86
100.00°	1.74	1.96
102.50°	1.89	2.03
105.00°	2.00	2.09
107.50°	1.97	2.08
110.00°	1.97	2.06
112.50°	2.05	2.30

### 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>	4630	4630	4630	4630	4520	4520	4520	4520	4316	4316	4316	4129	4129	4129	3958	3958	3877
	<b>1</b>	4295	4137	3995	3868	4191	4049	3920	3804	3883	3778	3682	3731	3646	3568	3591	3523	3449
	<b>2</b>	3977	3705	3481	3292	3879	3633	3427	3253	3497	3325	3176	3371	3228	3103	3255	3138	3071
	<b>3</b>	3689	3340	3070	2855	3598	3280	3030	2829	3167	2954	2779	3062	2882	2731	2965	2814	2754
	<b>4</b>	3431	3031	2738	2514	3348	2981	2707	2496	2886	2650	2462	2799	2595	2429	2717	2542	2489
	<b>5</b>	3200	2767	2464	2241	3124	2725	2441	2229	2645	2396	2205	2571	2353	2182	2502	2312	2265
	<b>6</b>	2992	2540	2236	2018	2923	2504	2218	2010	2437	2182	1993	2374	2148	1976	2315	2116	2074
	<b>7</b>	2806	2343	2043	1833	2743	2313	2029	1827	2256	2000	1814	2202	1973	1802	2152	1946	1910
	<b>8</b>	2638	2172	1878	1677	2581	2146	1866	1672	2097	1843	1662	2050	1821	1653	2007	1799	1767
	<b>9</b>	2487	2021	1736	1543	2435	1999	1726	1540	1956	1707	1532	1916	1688	1525	1878	1670	1642
	<b>10</b>	2350	1888	1612	1428	2303	1869	1604	1425	1832	1588	1419	1797	1572	1414	1764	1557	1532

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	86.1 fc	3.5 ft
6.5 ft	61.6 fc	4.1 ft
7.5 ft	46.3 fc	4.7 ft
8.0 ft	40.7 fc	5.0 ft
10.0 ft	26.0 fc	6.3 ft
12.0 ft	18.1 fc	7.6 ft
14.0 ft	13.3 fc	8.8 ft
16.0 ft	10.2 fc	10.1 ft
20.0 ft	6.5 fc	12.6 ft
24.0 ft	4.5 fc	15.1 ft
28.0 ft	3.3 fc	17.7 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	35692	35692	35692
45.00°	13867	13860	13853
55.00°	10253	10282	10311
65.00°	8562	8543	8524
75.00°	8456	8386	8316
85.00°	9265	9466	9667

### 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>	17.7	19.1	18.1	19.4	19.7	17.7	19.1	18.1	19.4	19.7
	<b>3H</b>	19.3	20.6	19.7	20.9	21.3	19.3	20.5	19.7	20.9	21.2
	<b>4H</b>	20.0	21.2	20.5	21.6	22.0	20.0	21.2	20.4	21.5	21.9
	<b>6H</b>	20.7	21.8	21.1	22.2	22.6	20.7	21.7	21.1	22.1	22.5
	<b>8H</b>	21.0	22.0	21.4	22.4	22.8	20.9	22.0	21.4	22.4	22.8
	<b>12H</b>	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.5	23.0
<b>4H</b>	<b>2H</b>	18.2	19.4	18.6	19.7	20.1	18.2	19.4	18.6	19.7	20.1
	<b>3H</b>	20.1	21.1	20.5	21.5	21.9	20.0	21.0	20.5	21.4	21.8
	<b>4H</b>	21.0	21.9	21.4	22.3	22.7	20.9	21.8	21.3	22.2	22.7
	<b>6H</b>	21.8	22.6	22.3	23.0	23.5	21.7	22.5	22.2	23.0	23.4
	<b>8H</b>	22.1	22.9	22.6	23.3	23.8	22.1	22.8	22.6	23.3	23.7
	<b>12H</b>	22.4	23.1	22.9	23.5	24.0	22.4	23.0	22.9	23.5	24.0
<b>8H</b>	<b>4H</b>	21.3	22.0	21.8	22.5	23.0	21.2	22.0	21.7	22.4	22.9
	<b>6H</b>	22.3	22.9	22.8	23.4	23.9	22.3	22.8	22.8	23.3	23.8
	<b>8H</b>	22.8	23.3	23.3	23.8	24.3	22.7	23.3	23.2	23.8	24.3
	<b>12H</b>	23.2	23.6	23.7	24.1	24.7	23.2	23.6	23.7	24.1	24.7
<b>12H</b>	<b>4H</b>	21.4	22.0	21.8	22.5	23.0	21.3	21.9	21.8	22.4	22.9
	<b>6H</b>	22.4	22.9	22.9	23.4	24.0	22.4	22.9	22.9	23.4	23.9
	<b>8H</b>	22.9	23.4	23.4	23.9	24.5	22.9	23.4	23.4	23.9	24.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0