Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

ALDDH12GV 55L 35K XX AL12MWI NL MW

Nom 12 inch diam, high bay, mid bay, low bay application

Test Number

SP-00456_13

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

Lumen Output

Output Lumens	4769
Efficacy	122.27 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.17
Two luminaires, plane 90°	1.17
Four luminaires	1.1

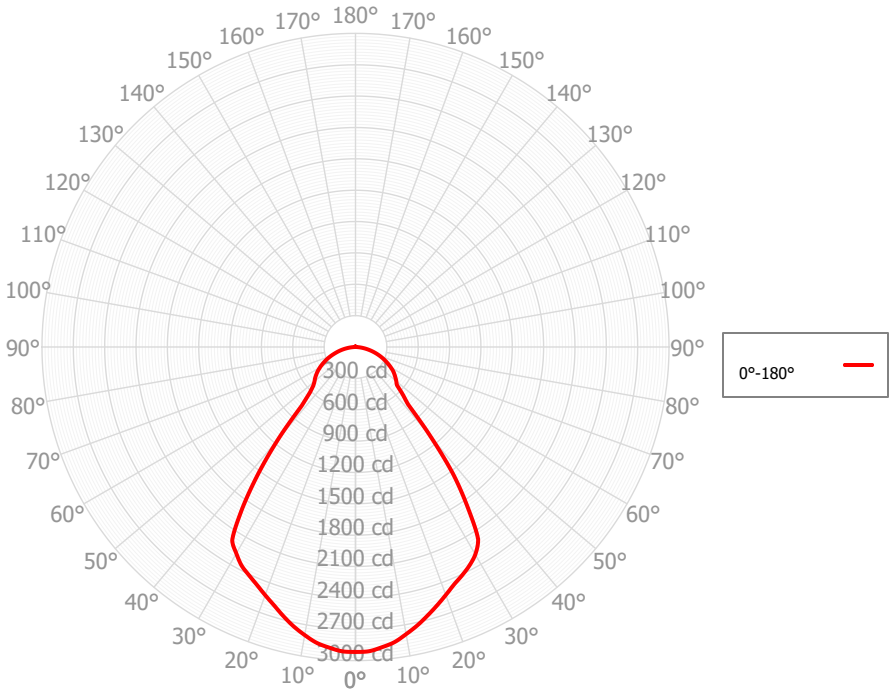
Full Beam Angle

0° - 180°	76°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00456_13
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 NL MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Aluminum reflector, matte white interior finish, no lens
OTHER	Beam angle: 76 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°	276.74	5.80%	90.00° - 100.00°	2.76	0.06%
10.00° - 20.00°	749.85	15.73%	100.00° - 110.00°	1.96	0.04%
20.00° - 30.00°	1111.52	23.31%	100.00° - 120.00°	3.92	0.08%
30.00° - 40.00°	1130.97	23.72%	120.00° - 130.00°	1.89	0.04%
40.00° - 50.00°	523.76	10.98%	130.00° - 140.00°	1.65	0.03%
50.00° - 60.00°	406.52	8.53%	140.00° - 150.00°	1.49	0.03%
60.00° - 70.00°	316.99	6.65%	150.00° - 160.00°	1.14	0.02%
70.00° - 80.00°	185.86	3.90%	160.00° - 170.00°	0.69	0.01%
80.00° - 90.00°	52.53	1.10%	170.00° - 180.00°	0.25	0.01%
0.00° - 90.00°	4754.73	99.71%	0.00° - 180.00°	4768.52	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2917.84	2917.84
2.50°	2914.43	2914.86
5.00°	2884.67	2887.77
7.50°	2849.23	2854.77
10.00°	2790.20	2799.16
12.50°	2729.45	2737.70
15.00°	2661.30	2666.12
17.50°	2593.27	2591.91
20.00°	2525.72	2526.92
22.50°	2461.43	2464.35
25.00°	2411.78	2410.56
27.50°	2359.19	2359.19
30.00°	2292.92	2281.09
32.50°	2184.34	2195.51
35.00°	1871.57	1892.72
37.50°	1539.89	1528.62
40.00°	1115.91	1147.05
42.50°	744.82	760.30
45.00°	634.51	617.63
47.50°	537.39	548.03
50.00°	509.65	512.14
52.50°	481.98	486.43
55.00°	454.67	457.43
57.50°	426.00	427.39
60.00°	389.98	393.66
62.50°	354.00	358.75
65.00°	318.22	323.26
67.50°	282.36	287.59
70.00°	246.08	250.21
72.50°	209.85	212.25
75.00°	173.83	177.46
77.50°	138.14	143.75
80.00°	104.49	110.16
82.50°	71.43	76.61
85.00°	42.12	46.91
87.50°	15.69	18.60
90.00°	8.06	7.60
92.50°	1.40	2.86
95.00°	1.56	1.58
97.50°	1.72	1.55
100.00°	1.90	1.45
102.50°	2.08	1.31
105.00°	2.27	1.44
107.50°	2.41	1.67
110.00°	2.21	1.75
112.50°	2.04	1.79

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
RCR	0	5674	5674	5674	5674	5540	5540	5540	5540	5291	5291	5291	5063	5063	5063	4853	4853	4853	4755
	1	5282	5096	4930	4779	5156	4989	4838	4701	4788	4664	4552	4603	4503	4411	4433	4354	4280	4262
	2	4901	4578	4312	4088	4783	4490	4246	4039	4325	4121	3945	4173	4004	3856	4032	3894	3770	3811
	3	4553	4136	3814	3557	4444	4064	3766	3526	3927	3673	3464	3800	3585	3405	3683	3502	3348	3429
	4	4240	3760	3409	3140	4139	3699	3372	3119	3585	3302	3078	3479	3235	3037	3380	3171	2998	3106
	5	3957	3436	3073	2804	3865	3386	3045	2790	3290	2990	2761	3200	2938	2732	3117	2888	2705	2830
	6	3702	3156	2790	2528	3618	3113	2768	2517	3032	2725	2496	2956	2684	2476	2885	2644	2456	2593
	7	3471	2912	2550	2295	3396	2876	2532	2288	2806	2497	2272	2741	2464	2257	2680	2432	2242	2387
	8	3262	2698	2342	2098	3194	2666	2328	2092	2607	2300	2081	2551	2272	2069	2498	2246	2058	2206
	9	3073	2508	2162	1928	3011	2481	2150	1924	2430	2127	1915	2381	2104	1906	2335	2083	1897	2047
	10	2901	2340	2004	1780	2845	2317	1994	1777	2272	1975	1770	2229	1956	1763	2189	1938	1756	1906

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	96.5 fc	4.3 ft
6.5 ft	69.1 fc	5.1 ft
7.5 ft	51.9 fc	5.9 ft
8.0 ft	45.6 fc	6.2 ft
10.0 ft	29.2 fc	7.8 ft
12.0 ft	20.3 fc	9.4 ft
14.0 ft	14.9 fc	10.9 ft
16.0 ft	11.4 fc	12.5 ft
20.0 ft	7.3 fc	15.6 ft
24.0 ft	5.1 fc	18.7 ft
28.0 ft	3.7 fc	21.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	39989	39989	39989
45.00°	12298	12216	12134
55.00°	10864	10880	10897
65.00°	10319	10360	10401
75.00°	9205	9253	9301
85.00°	6623	6811	7000

UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	17.9	19.2	18.2	19.5	19.8	17.9	19.2	18.2	19.5	19.8
	3H	19.7	20.9	20.1	21.2	21.6	19.7	20.9	20.1	21.2	21.6
	4H	20.3	21.5	20.8	21.8	22.2	20.4	21.5	20.8	21.9	22.2
	6H	20.8	21.9	21.3	22.2	22.6	20.9	21.9	21.3	22.3	22.7
	8H	21.0	22.0	21.4	22.4	22.8	21.0	22.0	21.5	22.4	22.8
	12H	21.1	22.0	21.5	22.4	22.8	21.1	22.1	21.6	22.5	22.9
4H	2H	18.5	19.6	18.9	19.9	20.3	18.5	19.6	18.9	20.0	20.3
	3H	20.5	21.4	20.9	21.8	22.2	20.5	21.4	20.9	21.9	22.3
	4H	21.3	22.1	21.7	22.5	23.0	21.3	22.2	21.8	22.6	23.0
	6H	21.9	22.6	22.4	23.1	23.5	22.0	22.7	22.4	23.1	23.6
	8H	22.1	22.8	22.6	23.2	23.7	22.2	22.8	22.6	23.3	23.8
	12H	22.2	22.8	22.7	23.3	23.8	22.3	22.9	22.8	23.4	23.9
8H	4H	21.6	22.2	22.0	22.7	23.2	21.6	22.3	22.1	22.7	23.2
	6H	22.3	22.9	22.8	23.4	23.8	22.4	22.9	22.9	23.4	23.9
	8H	22.6	23.1	23.1	23.6	24.1	22.6	23.1	23.2	23.7	24.2
	12H	22.8	23.2	23.3	23.7	24.3	22.9	23.3	23.4	23.8	24.4
12H	4H	21.6	22.2	22.1	22.7	23.1	21.6	22.2	22.1	22.7	23.2
	6H	22.4	22.8	22.9	23.3	23.9	22.4	22.9	23.0	23.4	23.9
	8H	22.7	23.1	23.2	23.6	24.2	22.8	23.2	23.3	23.7	24.3

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0