Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

DDS16GV 55L 35K EX TF2 AL16 MWI NL

Nom 16 inch diam round high bay luminaire with aluminum reflector, matte white interior

Test Number

SP-00860_5

Test Date

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

Summary of Results

Power

Input Watts	39 W

Lumen Output

Output Lumens	4313
Efficacy	110.6 lm/W

Luminous Dimensions

0° - 180° Size	-1.33
90° - 270° Size	-1.33
Height	1

Spacing Criterion

Two luminaires, plane 0°	1.17
Two luminaires, plane 90°	1.17
Four luminaires	1.11

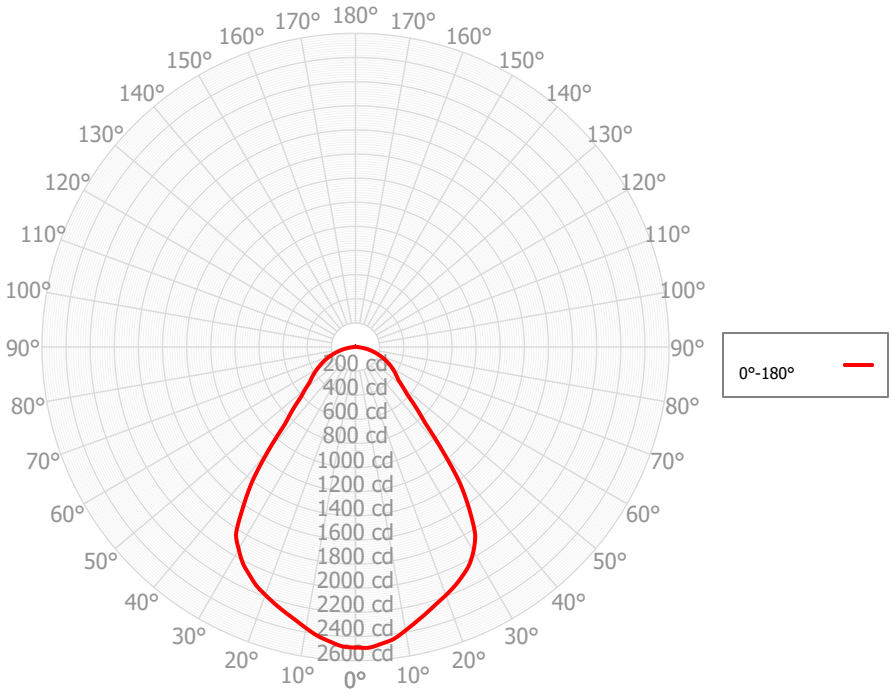
Full Beam Angle

0° - 180°	78°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00860_5
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	5/22/2019
UPDATE	1/21/2022
LUMCAT	DDS16GV 55L 35K EX TF2 AL16 MWI NL
LUMINAIRE	Nom 16 inch diam round high bay luminaire with aluminum reflector, matte white interior
OTHER	No lens, Open aperture, regressed 6 inch domed diffuser
OTHER	Beam Angle: 78 degrees
OTHER	0% uplight
OTHER	100% downlight
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	235.78	5.47%
10.00° - 20.00°	642.79	14.90%
20.00° - 30.00°	960.33	22.26%
30.00° - 40.00°	998.16	23.14%
40.00° - 50.00°	574.75	13.32%
50.00° - 60.00°	386.40	8.96%
60.00° - 70.00°	289.70	6.72%
70.00° - 80.00°	167.43	3.88%
80.00° - 90.00°	45.61	1.06%
0.00° - 90.00°	4300.95	99.71%

Zone	Lumens	% Fixture
90.00° - 100.00°	3.19	0.07%
100.00° - 110.00°	2.58	0.06%
100.00° - 120.00°	4.21	0.10%
120.00° - 130.00°	1.42	0.03%
130.00° - 140.00°	1.20	0.03%
140.00° - 150.00°	1.10	0.03%
150.00° - 160.00°	0.78	0.02%
160.00° - 170.00°	0.47	0.01%
170.00° - 180.00°	0.17	0.00%
0.00° - 180.00°	4313.50	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2492.19	2492.19
2.50°	2496.25	2485.06
5.00°	2470.58	2451.48
7.50°	2441.54	2415.90
10.00°	2387.04	2366.60
12.50°	2333.05	2316.51
15.00°	2282.41	2273.88
17.50°	2233.06	2231.48
20.00°	2190.67	2187.62
22.50°	2146.86	2143.61
25.00°	2096.56	2083.41
27.50°	2039.79	2022.42
30.00°	1956.36	1937.18
32.50°	1847.39	1844.76
35.00°	1647.17	1628.82
37.50°	1422.16	1408.44
40.00°	1119.51	1129.82
42.50°	857.25	865.27
45.00°	708.97	736.18
47.50°	581.79	614.01
50.00°	508.49	543.89
52.50°	447.85	478.25
55.00°	416.13	441.77
57.50°	384.57	405.20
60.00°	353.37	368.13
62.50°	321.58	331.59
65.00°	288.65	297.45
67.50°	255.57	263.07
70.00°	222.22	227.72
72.50°	189.47	192.70
75.00°	157.67	158.83
77.50°	126.48	125.59
80.00°	96.17	94.34
82.50°	66.37	63.87
85.00°	37.23	35.63
87.50°	16.90	13.43
90.00°	7.21	6.62
92.50°	2.14	1.99
95.00°	2.28	2.33
97.50°	2.46	2.58
100.00°	2.69	2.63

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%
	0	5132	5132	5132	5132	5011	5011	5011	5011	4786	4786	4786	4579	4579	4579	4390	4390	4390	4301
	1	4774	4604	4452	4315	4660	4507	4369	4244	4325	4212	4109	4158	4067	3983	4003	3931	3863	3849
	2	4423	4128	3884	3678	4316	4048	3824	3635	3898	3711	3550	3760	3605	3469	3633	3505	3392	3431
	3	4103	3721	3425	3189	4003	3655	3381	3161	3531	3298	3106	3416	3218	3052	3309	3143	3001	3077
	4	3814	3374	3051	2805	3722	3319	3018	2786	3215	2955	2749	3118	2894	2712	3029	2836	2677	2778
RCR	5	3554	3076	2742	2496	3470	3030	2717	2482	2942	2667	2456	2861	2620	2431	2785	2575	2406	2523
	6	3319	2819	2483	2241	3243	2780	2462	2232	2705	2423	2213	2636	2386	2195	2571	2350	2177	2304
	7	3108	2595	2262	2029	3039	2561	2246	2022	2498	2215	2008	2439	2184	1994	2383	2155	1981	2115
	8	2917	2399	2073	1848	2854	2370	2059	1843	2316	2034	1833	2265	2009	1823	2217	1985	1813	1950
	9	2744	2226	1908	1694	2687	2201	1898	1690	2154	1877	1682	2110	1856	1674	2068	1837	1666	1805
	10	2588	2073	1765	1560	2536	2052	1756	1557	2011	1739	1551	1972	1722	1545	1936	1705	1539	1677

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	82.4 fc	8.9 ft
6.5 ft	59.0 fc	10.5 ft
7.5 ft	44.3 fc	12.1 ft
8.0 ft	38.9 fc	12.9 ft
10.0 ft	24.9 fc	16.2 ft
12.0 ft	17.3 fc	19.4 ft
14.0 ft	12.7 fc	22.6 ft
16.0 ft	9.7 fc	25.9 ft
20.0 ft	6.2 fc	32.3 ft
24.0 ft	4.3 fc	38.8 ft
28.0 ft	3.2 fc	45.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	19309	19309	19309
45.00°	3969	4007	4045
55.00°	2375	2411	2448
65.00°	1733	1747	1760
75.00°	1032	1034	1036
85.00°	277	274	271

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	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
4H	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
8H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
12H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0