

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

DDS16GV 55L 35K EX TF2 DF16 NL
Nom 16 inch diam round high bay luminaire with diffuse refractor

Test Number

SP-00856_5

Test Date

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	4636
Efficacy	118.88 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.19
Two luminaires, plane 90°	1.2
Four luminaires	1.06

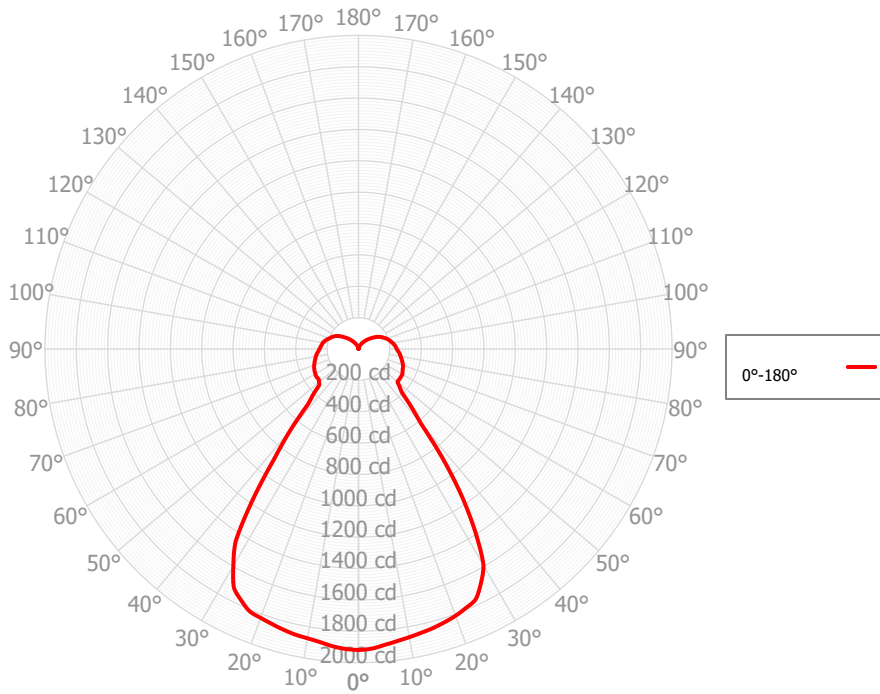
Full Beam Angle

0° - 180°	74°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00856_5
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	5/20/2019
UPDATE	1/21/2022
LUMCAT	DDS16GV 55L 35K EX TF2 DF16 NL
LUMINAIRE	Nom 16 inch diam round high bay luminaire with diffuse refractor
OTHER	No lens, Open aperture, regressed 6 inch domed diffuser
OTHER	Beam Angle: 73.6 degrees
OTHER	19.5% uplight
OTHER	81.5% downlight
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03, 50K
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	183.03	3.95%	90.00° - 100.00°	257.82	5.56%
10.00° - 20.00°	522.35	11.27%	100.00° - 110.00°	223.04	4.81%
20.00° - 30.00°	803.95	17.34%	100.00° - 120.00°	399.81	8.62%
30.00° - 40.00°	707.67	15.26%	120.00° - 130.00°	123.09	2.65%
40.00° - 50.00°	328.42	7.08%	130.00° - 140.00°	71.39	1.54%
50.00° - 60.00°	289.28	6.24%	140.00° - 150.00°	35.65	0.77%
60.00° - 70.00°	308.54	6.65%	150.00° - 160.00°	14.14	0.30%
70.00° - 80.00°	304.30	6.56%	160.00° - 170.00°	2.48	0.05%
80.00° - 90.00°	284.32	6.13%	170.00° - 180.00°	0.17	0.00%
0.00° - 90.00°	3731.86	80.49%	0.00° - 180.00°	4636.42	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1919.65	1919.65
2.50°	1913.49	1915.24
5.00°	1895.52	1903.23
7.50°	1879.99	1885.71
10.00°	1866.68	1874.12
12.50°	1854.16	1866.06
15.00°	1842.24	1853.58
17.50°	1827.47	1839.02
20.00°	1810.97	1825.33
22.50°	1789.01	1811.96
25.00°	1764.43	1769.78
27.50°	1689.32	1719.35
30.00°	1594.70	1597.15
32.50°	1390.49	1460.24
35.00°	1154.30	1180.62
37.50°	889.31	882.02
40.00°	618.29	675.31
42.50°	493.73	475.34
45.00°	390.60	405.19
47.50°	355.23	339.49
50.00°	325.35	329.11
52.50°	324.37	319.69
55.00°	324.04	320.57
57.50°	323.47	320.93
60.00°	322.50	317.90
62.50°	316.67	314.71
65.00°	311.07	310.82
67.50°	307.00	306.46
70.00°	302.33	300.54
72.50°	294.80	294.46
75.00°	287.36	287.93
77.50°	280.20	281.75
80.00°	273.22	276.25
82.50°	266.71	269.87
85.00°	259.53	262.12
87.50°	250.94	255.12
90.00°	243.89	249.11
92.50°	239.37	243.74
95.00°	234.07	239.06
97.50°	227.72	234.57
100.00°	220.96	230.24

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
RCR	0	5304	5304	5304	5304	5076	5076	5076	5076	4649	4649	4649	4259	4259	4259	3900	3900	3900	3732
	1	4791	4555	4343	4152	4571	4361	4171	4000	3998	3847	3709	3664	3545	3436	3356	3265	3179	3117
	2	4388	4014	3704	3444	4183	3849	3570	3333	3540	3315	3120	3255	3075	2916	2991	2849	2722	2720
	3	4043	3581	3223	2939	3854	3440	3116	2855	3176	2910	2691	2932	2715	2533	2705	2530	2381	2418
	4	3741	3225	2847	2559	3569	3105	2760	2493	2878	2591	2363	2667	2430	2238	2471	2276	2115	2178
	5	3475	2927	2543	2261	3318	2823	2471	2207	2627	2330	2103	2444	2195	2001	2273	2066	1901	1980
	6	3239	2672	2292	2020	3096	2582	2231	1976	2411	2113	1890	2252	1999	1805	2103	1889	1722	1814
	7	3027	2453	2081	1821	2897	2375	2029	1784	2225	1928	1712	2085	1831	1641	1953	1737	1571	1670
	8	2837	2263	1902	1653	2718	2193	1857	1622	2062	1770	1561	1938	1685	1501	1821	1604	1441	1545
	9	2666	2096	1747	1511	2558	2035	1708	1484	1918	1632	1432	1808	1559	1380	1704	1487	1329	1435
	10	2511	1949	1612	1388	2412	1894	1578	1365	1790	1512	1320	1691	1447	1275	1598	1385	1230	1338

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	63.5 fc	8.2 ft
6.5 ft	45.4 fc	9.7 ft
7.5 ft	34.1 fc	11.2 ft
8.0 ft	30.0 fc	12.0 ft
10.0 ft	19.2 fc	15.0 ft
12.0 ft	13.3 fc	18.0 ft
14.0 ft	9.8 fc	21.0 ft
16.0 ft	7.5 fc	24.0 ft
20.0 ft	4.8 fc	30.0 ft
24.0 ft	3.3 fc	36.0 ft
28.0 ft	2.4 fc	42.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	14873	14873	14873
45.00°	2187	2207	2227
55.00°	1849	1844	1839
65.00°	1868	1868	1867
75.00°	1881	1882	1883
85.00°	1932	1937	1942

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