

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CR2 835 15 xx xx RD2FL RB2BS xx xx

Nom 2.5 inch dia cylinder with flood optic and standard black bezel

Test Number

SP-01273

Test Date

9/23/2021

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

Summary of Results

Power

Input Watts	19.5 W
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Lumen Output

Output Lumens	1842
Efficacy	94.45 lm/W

Luminous Dimensions

0° - 180° Size	-0.21
90° - 270° Size	-0.21
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.57
Two luminaires, plane 90°	0.57
Four luminaires	0.53

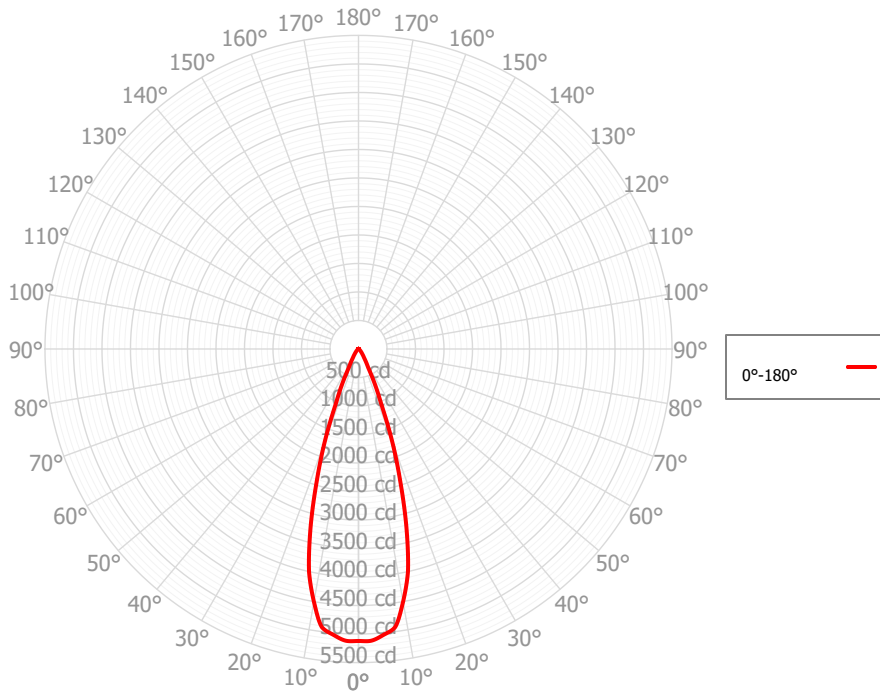
Full Beam Angle

0° - 180°	34°
90° - 270°	34°

IES File Header Contents

Keyword	Value
TEST	SP-01273
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/23/2021
ISSUEDATE	10/1/2021
LUMCAT	CR2 835 15 xx xx RD2FL RB2BS xx xx
LUMINAIRE	Nom 2.5 inch dia cylinder with flood optic and standard black bezel
OTHER	Beam Angle: 34 deg
LAMPCAT	N/A
LAMP	N/A, 6mm LES
OTHER	80 CRI, 3500K tested
OTHER	LER (luminaire efficacy) = 94 lms / watt
OTHER	CCT Output Multipliers: 822 x 0.75, 827 x 0.93, 830 x 1.0, 840 x 1.0
OTHER	CCT Output Multipliers: 927 x 0.81, 930 x 0.81, 935 x 0.81, 940 x 0.87
OTHER	Total luminaire wattages are 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°	472.53	25.66%	90.00° - 100.00°	1.61	0.09%
10.00° - 20.00°	857.97	46.59%	100.00° - 110.00°	1.54	0.08%
20.00° - 30.00°	333.49	18.11%	100.00° - 120.00°	2.93	0.16%
30.00° - 40.00°	92.98	5.05%	120.00° - 130.00°	1.40	0.08%
40.00° - 50.00°	42.68	2.32%	130.00° - 140.00°	1.38	0.08%
50.00° - 60.00°	21.05	1.14%	140.00° - 150.00°	1.33	0.07%
60.00° - 70.00°	7.02	0.38%	150.00° - 160.00°	1.00	0.05%
70.00° - 80.00°	2.02	0.11%	160.00° - 170.00°	0.58	0.03%
80.00° - 90.00°	1.53	0.08%	170.00° - 180.00°	0.18	0.01%
0.00° - 90.00°	1831.28	99.43%	0.00° - 180.00°	1841.69	100.00%

Candela Distribution

	0.00°
0.00°	5122.64
2.50°	5122.64
5.00°	5034.86
7.50°	4922.37
10.00°	4503.77
12.50°	4008.05
15.00°	3252.76
17.50°	2439.85
20.00°	1728.98
22.50°	1037.97
25.00°	677.09
27.50°	371.60
30.00°	263.53
32.50°	183.17
35.00°	142.88
37.50°	107.25
40.00°	86.02
42.50°	66.13
45.00°	54.12
47.50°	42.65
50.00°	35.66
52.50°	28.88
55.00°	23.42
57.50°	18.00
60.00°	13.49
62.50°	9.01
65.00°	6.73
67.50°	4.49
70.00°	3.22
72.50°	2.00
75.00°	1.78
77.50°	1.56
80.00°	1.46
82.50°	1.37
85.00°	1.38
87.50°	1.40
90.00°	1.49
92.50°	1.56
95.00°	1.48
97.50°	1.41
100.00°	1.42

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2190	2190	2190	2190	2138	2138	2138	2138	2041	2041	2041	1951	1951	1951	1870	1870	1831
	1	2107	2064	2026	1991	2062	2024	1990	1959	1948	1922	1897	1879	1858	1839	1815	1799	1763
	2	2028	1954	1894	1843	1988	1923	1868	1822	1863	1819	1781	1808	1773	1742	1757	1729	1695
	3	1953	1858	1785	1726	1918	1833	1766	1712	1785	1729	1684	1741	1695	1657	1700	1663	1631
	4	1883	1773	1692	1630	1852	1752	1678	1620	1713	1651	1601	1678	1625	1582	1644	1600	1570
	5	1817	1696	1612	1549	1790	1679	1601	1542	1648	1580	1528	1618	1560	1514	1591	1541	1514
	6	1755	1627	1541	1479	1731	1613	1533	1474	1587	1516	1464	1562	1501	1454	1539	1486	1461
	7	1696	1564	1478	1418	1675	1552	1471	1414	1530	1458	1406	1510	1446	1399	1490	1434	1411
	8	1642	1506	1421	1362	1622	1496	1416	1359	1478	1405	1354	1460	1395	1348	1444	1386	1364
	9	1590	1453	1369	1312	1573	1445	1365	1310	1429	1357	1306	1414	1348	1301	1400	1341	1321
	10	1542	1404	1322	1267	1526	1397	1318	1265	1383	1311	1262	1370	1305	1258	1358	1298	1280

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	169.3 fc	3.4 ft
6.5 ft	121.2 fc	4.0 ft
7.5 ft	91.1 fc	4.6 ft
8.0 ft	80.0 fc	4.9 ft
10.0 ft	51.2 fc	6.2 ft
12.0 ft	35.6 fc	7.4 ft
14.0 ft	26.1 fc	8.6 ft
16.0 ft	20.0 fc	9.9 ft
20.0 ft	12.8 fc	12.3 ft
24.0 ft	8.9 fc	14.8 ft
28.0 ft	6.5 fc	17.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1591971	1591971	1591971
45.00°	23786	23786	23786
55.00°	12692	12692	12692
65.00°	4951	4951	4951
75.00°	2133	2133	2133
85.00°	4917	4917	4917

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	10.4	11.3	10.8	11.7	12.0	10.4	11.3	10.8	11.7	12.0
	3H	10.5	11.3	10.9	11.7	12.1	10.5	11.3	10.9	11.7	12.1
	4H	10.5	11.2	10.9	11.6	12.0	10.5	11.2	10.9	11.6	12.0
	6H	10.5	11.2	10.9	11.6	12.0	10.5	11.2	10.9	11.6	12.0
	8H	10.5	11.1	10.9	11.5	12.0	10.5	11.1	10.9	11.5	12.0
	12H	10.6	11.2	11.0	11.6	12.0	10.6	11.2	11.0	11.6	12.0
4H	2H	10.3	11.1	10.8	11.5	11.9	10.3	11.1	10.8	11.5	11.9
	3H	10.5	11.1	10.9	11.5	12.0	10.5	11.1	10.9	11.5	12.0
	4H	10.5	11.0	10.9	11.5	11.9	10.5	11.0	10.9	11.5	11.9
	6H	10.5	11.0	11.0	11.5	12.0	10.5	11.0	11.0	11.5	12.0
	8H	10.6	11.0	11.1	11.5	12.0	10.6	11.0	11.1	11.5	12.0
	12H	10.7	11.1	11.2	11.6	12.1	10.7	11.1	11.2	11.6	12.1
8H	4H	10.4	10.8	10.9	11.3	11.8	10.4	10.8	10.9	11.3	11.8
	6H	10.5	10.8	11.0	11.3	11.8	10.5	10.8	11.0	11.3	11.8
	8H	10.6	10.9	11.2	11.4	12.0	10.6	10.9	11.2	11.4	12.0
	12H	10.9	11.1	11.4	11.6	12.2	10.9	11.1	11.4	11.6	12.2
12H	4H	10.3	10.7	10.8	11.2	11.7	10.3	10.7	10.8	11.2	11.7
	6H	10.5	10.8	11.0	11.2	11.8	10.5	10.8	11.0	11.2	11.8
	8H	10.6	10.9	11.2	11.4	12.0	10.6	10.9	11.2	11.4	12.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0