

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CR2 835 20 xx xx RD2SP RB2BS xx xx

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

Test Number

SP-01274_9

Test Date

9/23/2021

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

Summary of Results

Power

Input Watts	27 W
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Lumen Output

Output Lumens	2135
Efficacy	79.07 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.36
Two luminaires, plane 90°	0.36
Four luminaires	0.34

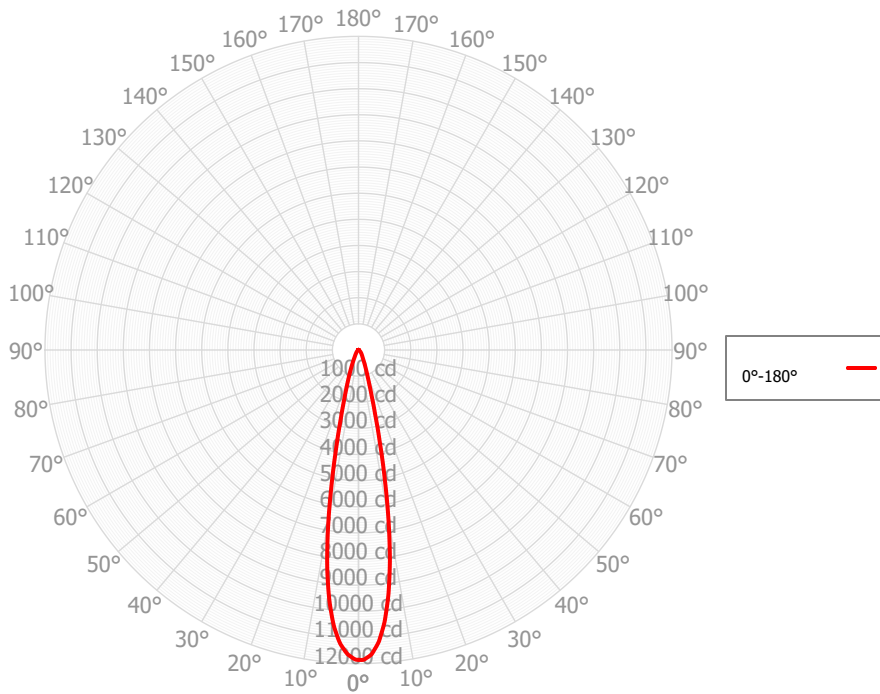
Full Beam Angle

0° - 180°	21°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01274_9
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/23/2021
ISSUEDATE	11/4/2021
LUMCAT	CR2 835 20 xx xx RD2SP RB2BS xx xx
LUMINAIRE	Nom 2.5 inch dia cylinder with spot optic and standard black bezel
OTHER	Beam Angle: xx deg
LAMPCAT	N/A
LAMP	N/A, 6mm LES
OTHER	80 CRI, 3500K tested
OTHER	LER (luminaire efficacy) = xx 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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	888.67	41.63%	90.00° - 100.00°	1.43	0.07%
10.00° - 20.00°	734.68	34.41%	100.00° - 110.00°	1.38	0.06%
20.00° - 30.00°	240.05	11.24%	100.00° - 120.00°	2.70	0.13%
30.00° - 40.00°	127.31	5.96%	120.00° - 130.00°	1.60	0.08%
40.00° - 50.00°	82.23	3.85%	130.00° - 140.00°	1.45	0.07%
50.00° - 60.00°	39.72	1.86%	140.00° - 150.00°	1.08	0.05%
60.00° - 70.00°	9.03	0.42%	150.00° - 160.00°	0.91	0.04%
70.00° - 80.00°	2.11	0.10%	160.00° - 170.00°	0.48	0.02%
80.00° - 90.00°	1.29	0.06%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	2125.09	99.54%	0.00° - 180.00°	2134.87	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	11858.48	11858.48
0.50°	11865.47	11851.48
1.00°	11854.22	11800.02
1.50°	11791.91	11730.31
2.00°	11729.60	11660.59
2.50°	11647.18	11547.85
3.00°	11499.60	11414.47
3.50°	11352.02	11281.10
4.00°	11185.18	11092.15
4.50°	10942.60	10873.07
5.00°	10700.01	10653.99
5.50°	10440.69	10374.31
6.00°	10102.52	10057.61
6.50°	9764.36	9740.91
7.00°	9413.39	9373.74
7.50°	8988.46	8971.16
8.00°	8563.53	8568.58
8.50°	8129.64	8115.99
9.00°	7626.50	7624.12
9.50°	7123.36	7132.24
10.00°	6618.39	6621.75
10.50°	6094.13	6094.91
11.00°	5569.88	5568.07
11.50°	5048.62	5069.03
12.00°	4574.89	4597.85
12.50°	4101.16	4126.67
13.00°	3630.33	3709.94
13.50°	3267.24	3354.17
14.00°	2904.15	2998.40
14.50°	2541.06	2694.47
15.00°	2302.63	2455.41
15.50°	2064.37	2216.34
16.00°	1826.11	2009.62
16.50°	1671.65	1849.21
17.00°	1519.69	1688.80
17.50°	1367.74	1546.00
18.00°	1266.93	1431.51
18.50°	1169.51	1317.02
19.00°	1072.08	1212.72
19.50°	1000.63	1126.89
20.00°	931.73	1041.05
20.50°	862.82	961.21
21.00°	809.80	893.92
21.50°	758.89	826.64
22.00°	707.97	764.10
22.50°	666.31	712.88

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	2539	2539	2539	2539	2479	2479	2479	2479	2367	2367	2367	2264	2264	2264	2169	2169	2125
	1	2449	2402	2360	2322	2397	2356	2318	2284	2269	2239	2212	2189	2166	2145	2115	2098	2056
	2	2363	2283	2216	2160	2318	2246	2186	2135	2178	2130	2088	2115	2076	2042	2057	2026	1987
	3	2283	2179	2099	2035	2243	2150	2077	2018	2096	2035	1985	2045	1996	1954	1999	1958	1921
	4	2209	2089	2001	1934	2174	2065	1985	1922	2022	1953	1899	1981	1924	1877	1943	1895	1861
	5	2140	2009	1918	1850	2109	1990	1905	1842	1955	1882	1826	1921	1859	1810	1890	1837	1805
	6	2076	1939	1846	1780	2049	1923	1837	1774	1894	1818	1762	1866	1800	1750	1840	1783	1754
	7	2017	1875	1783	1719	1994	1863	1776	1714	1838	1761	1706	1815	1747	1697	1794	1734	1706
	8	1963	1819	1728	1665	1942	1808	1722	1662	1787	1710	1655	1768	1699	1649	1750	1688	1662
	9	1912	1767	1678	1618	1893	1758	1673	1615	1740	1664	1610	1724	1655	1605	1708	1646	1622
	10	1865	1720	1633	1575	1848	1712	1629	1573	1697	1622	1569	1683	1614	1565	1670	1607	1584

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	392.0 fc	1.0 ft
6.5 ft	280.7 fc	1.2 ft
7.5 ft	210.8 fc	1.4 ft
8.0 ft	185.3 fc	1.5 ft
10.0 ft	118.6 fc	1.9 ft
12.0 ft	82.4 fc	2.3 ft
14.0 ft	60.5 fc	2.6 ft
16.0 ft	46.3 fc	3.0 ft
20.0 ft	29.6 fc	3.8 ft
24.0 ft	20.6 fc	4.5 ft
28.0 ft	15.1 fc	5.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3685280	3685280	3685280
45.00°	50910	48530	46150
55.00°	23277	23282	23287
65.00°	5064	5488	5913
75.00°	2199	2275	2351
85.00°	4983	4617	4250

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	13.5	14.5	13.9	14.8	15.1	13.6	14.6	14.0	14.9	15.2
	3H	13.4	14.3	13.8	14.6	15.0	13.5	14.4	13.9	14.7	15.1
	4H	13.3	14.1	13.8	14.5	14.9	13.5	14.3	13.9	14.6	15.0
	6H	13.3	14.0	13.7	14.4	14.8	13.4	14.1	13.8	14.5	14.9
	8H	13.2	13.9	13.7	14.3	14.7	13.4	14.0	13.8	14.4	14.8
	12H	13.2	13.9	13.7	14.3	14.7	13.3	14.0	13.8	14.4	14.8
4H	2H	13.3	14.1	13.7	14.5	14.9	13.4	14.2	13.8	14.6	15.0
	3H	13.2	13.9	13.7	14.3	14.7	13.4	14.0	13.8	14.4	14.9
	4H	13.2	13.7	13.6	14.2	14.6	13.3	13.9	13.8	14.3	14.8
	6H	13.1	13.6	13.6	14.1	14.5	13.3	13.7	13.7	14.2	14.7
	8H	13.1	13.5	13.6	14.0	14.5	13.2	13.7	13.7	14.1	14.6
	12H	13.1	13.5	13.6	14.0	14.5	13.2	13.6	13.7	14.1	14.6
8H	4H	13.0	13.5	13.5	13.9	14.4	13.2	13.6	13.7	14.1	14.6
	6H	13.0	13.3	13.5	13.8	14.3	13.1	13.5	13.6	14.0	14.5
	8H	13.0	13.3	13.5	13.8	14.3	13.1	13.4	13.6	13.9	14.5
	12H	13.1	13.3	13.6	13.8	14.4	13.1	13.4	13.7	13.9	14.5
12H	4H	13.0	13.3	13.5	13.8	14.3	13.1	13.5	13.6	14.0	14.5
	6H	12.9	13.2	13.5	13.7	14.3	13.1	13.4	13.6	13.9	14.4
	8H	12.9	13.2	13.5	13.7	14.3	13.1	13.3	13.6	13.8	14.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0