

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SWFO4PC50L35KXWE1-SW4FPCSGMFSKX
4" Square aperture recessed LED wall wash

Test Number

SP-R252

Test Date

8/7/2025

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

Summary of Results

Power

Input Watts	35.39 W
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Lumen Output

Output Lumens	2705
Efficacy	76.43 lm/W

Luminous Dimensions

0° - 180° Size	0.33
90° - 270° Size	0.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.77
Two luminaires, plane 90°	0.66
Four luminaires	0.74

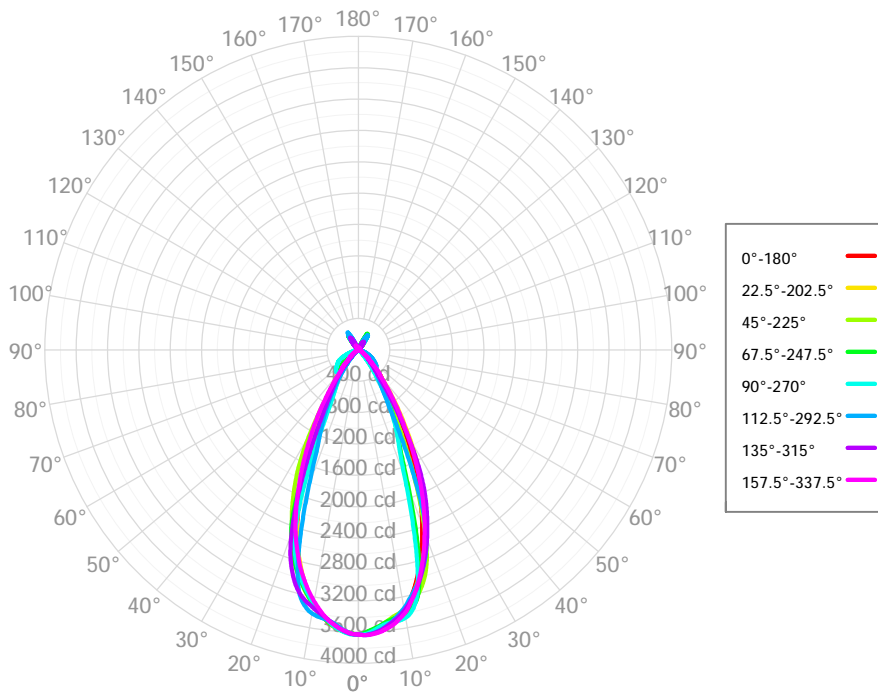
Full Beam Angle

0° - 180°	48°
90° - 270°	41°

IES File Header Contents

Keyword	Value
TEST	SP-R252
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	8/7/2025
ISSUEDATE	8/7/2025
LUMCAT	SWFO4PC50L35KXWE1-SW4FPCSGMFSKX
LUMINAIRE	4" Square aperture recessed LED wall wash
DISTRIBUTION	Beam Angle 46.9
OTHER	CCT 3511 CRI 81.8 R9 -1.6
OTHER	Total Luminaire wattage is approximate
OTHER	This report is prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	333.29	12.32%	90.00° - 100.00°	1.61	0.06%
10.00° - 20.00°	746.39	27.59%	100.00° - 110.00°	1.55	0.06%
20.00° - 30.00°	801.75	29.64%	100.00° - 120.00°	3.23	0.12%
30.00° - 40.00°	364.07	13.46%	120.00° - 130.00°	4.21	0.16%
40.00° - 50.00°	154.87	5.73%	130.00° - 140.00°	18.01	0.67%
50.00° - 60.00°	117.04	4.33%	140.00° - 150.00°	61.12	2.26%
60.00° - 70.00°	57.79	2.14%	150.00° - 160.00°	29.14	1.08%
70.00° - 80.00°	16.45	0.61%	160.00° - 170.00°	2.19	0.08%
80.00° - 90.00°	4.64	0.17%	170.00° - 180.00°	0.34	0.01%
0.00° - 90.00°	2587.11	95.64%	0.00° - 180.00°	2705.00	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53	3632.53
1.50°	3636.80	3634.09	3612.07	3603.90	3626.77	3617.51	3623.33	3618.14	3622.04	3620.48	3614.44	3616.44	3631.12	3638.79	3639.28	3641.26	3636.80
3.00°	3623.73	3619.09	3582.27	3566.98	3589.26	3577.88	3587.96	3583.37	3596.85	3595.26	3595.10	3594.60	3602.68	3619.20	3621.97	3630.82	3623.73
4.50°	3600.13	3592.96	3533.87	3529.24	3542.78	3522.85	3539.56	3540.22	3558.90	3556.03	3561.37	3557.07	3559.04	3584.10	3590.58	3608.21	3600.13
6.00°	3564.99	3553.04	3483.06	3485.83	3509.84	3479.56	3477.20	3485.58	3511.79	3504.35	3508.59	3504.94	3498.14	3535.30	3541.72	3570.96	3564.99
7.50°	3514.52	3499.87	3432.26	3458.06	3500.69	3455.14	3423.19	3408.92	3440.48	3432.42	3437.51	3437.28	3426.12	3471.60	3486.67	3526.02	3514.52
9.00°	3443.78	3425.02	3396.40	3441.59	3488.02	3435.47	3375.16	3319.14	3363.29	3346.46	3373.77	3356.80	3345.19	3398.24	3428.05	3459.65	3443.78
10.50°	3351.63	3353.64	3353.20	3417.70	3456.62	3399.12	3319.45	3220.82	3263.71	3247.03	3268.45	3268.91	3251.85	3319.28	3348.43	3384.58	3351.63
12.00°	3230.04	3241.69	3299.40	3350.72	3374.57	3324.53	3268.17	3112.39	3154.32	3130.75	3182.43	3171.67	3155.90	3217.69	3256.42	3271.60	3230.04
13.50°	3095.80	3126.98	3226.69	3244.96	3220.44	3210.13	3196.21	2991.94	3022.39	2997.40	3074.34	3070.15	3050.36	3122.99	3153.36	3152.10	3095.80
15.00°	2948.25	2994.72	3124.94	3018.98	2928.96	2990.82	3097.67	2865.50	2867.92	2848.60	2955.80	2968.12	2937.83	3020.63	3032.57	3012.75	2948.25
16.50°	2791.56	2852.47	2997.67	2701.61	2562.60	2675.94	2963.28	2718.23	2708.29	2691.42	2822.09	2851.31	2802.48	2905.11	2900.41	2859.06	2791.56
18.00°	2622.97	2711.71	2827.79	2342.86	2179.72	2311.98	2800.43	2566.98	2521.32	2518.47	2675.60	2718.95	2634.05	2773.01	2758.27	2704.59	2622.97
19.50°	2443.64	2562.26	2587.87	1985.82	1831.84	1952.75	2580.88	2403.91	2330.29	2340.28	2529.78	2566.40	2392.08	2605.17	2613.80	2528.47	2443.64
21.00°	2261.73	2401.82	2301.75	1666.19	1552.82	1630.47	2298.74	2218.44	2126.92	2143.49	2371.43	2375.55	2053.29	2379.73	2457.88	2359.45	2261.73
22.50°	2065.20	2236.09	2008.03	1427.22	1371.78	1379.85	1999.25	2035.55	1919.20	1944.70	2209.53	2087.34	1671.52	2071.83	2290.94	2178.60	2065.20
24.00°	1879.28	2062.22	1723.34	1265.74	1243.49	1221.30	1702.35	1840.40	1713.64	1743.66	2038.81	1744.63	1299.52	1720.93	2121.40	1996.67	1879.28
25.50°	1687.60	1880.66	1460.33	1139.57	1118.02	1091.76	1427.03	1660.69	1513.75	1547.11	1863.42	1392.50	989.12	1369.40	1937.11	1809.23	1687.60
27.00°	1495.51	1691.71	1223.16	1015.26	989.19	965.58	1185.44	1475.35	1335.50	1360.92	1677.69	1070.68	790.11	1055.09	1728.54	1621.64	1495.51
28.50°	1326.33	1502.43	1031.78	889.17	854.64	848.72	981.09	1292.05	1179.39	1196.89	1467.56	817.90	679.07	825.71	1490.96	1440.64	1326.33
30.00°	1153.19	1322.72	895.17	764.77	720.99	730.30	826.30	1142.74	1017.46	1058.76	1232.86	670.66	596.44	686.93	1247.27	1267.31	1153.19
31.50°	1000.96	1151.15	788.35	645.15	598.28	614.56	714.41	986.75	869.55	905.90	1009.74	585.25	533.74	594.19	1017.89	1100.60	1000.96
33.00°	867.73	998.24	692.02	536.70	483.59	509.75	622.53	833.55	746.59	777.78	819.58	524.55	484.87	522.69	826.42	952.54	867.73
34.50°	743.57	858.96	615.43	439.03	384.03	416.55	552.86	703.55	635.28	660.52	672.48	472.50	449.19	469.29	663.85	820.33	743.57
36.00°	632.31	726.43	544.19	351.81	305.69	334.15	497.38	589.44	533.32	559.72	533.88	434.82	422.06	429.66	522.63	702.44	632.31
37.50°	541.84	608.55	457.28	278.47	240.75	266.50	417.05	485.56	451.39	467.87	417.79	406.30	404.40	396.90	422.49	594.75	541.84
39.00°	482.71	505.09	381.08	222.98	185.26	210.24	339.24	394.91	406.25	396.82	348.97	385.64	397.15	370.99	356.22	500.10	482.71
40.50°	442.82	423.88	317.23	179.61	145.01	166.50	278.49	330.93	405.48	358.47	300.12	371.77	395.32	354.10	304.38	432.09	442.82
42.00°	385.10	363.25	263.24	140.78	112.68	130.92	228.72	303.18	353.04	346.42	258.49	362.46	394.50	345.45	267.28	397.29	385.10
43.50°	316.45	334.01	215.38	110.36	87.41	103.17	185.01	270.69	286.83	297.97	224.86	354.73	395.07	333.53	231.85	344.39	316.45
45.00°	271.03	266.43	174.32	90.63	70.00	84.52	146.86	218.43	244.18	239.59	197.64	346.76	397.46	328.60	201.05	275.20	271.03
46.50°	244.30	215.08	142.02	71.41	52.22	68.14	117.91	175.47	224.78	203.80	178.89	337.52	392.90	319.93	176.39	226.40	244.30
48.00°	227.01	181.37	114.61	56.95	41.60	56.30	94.36	149.88	212.83	183.67	163.86	326.35	385.49	312.02	157.95	192.86	227.01
49.50°	209.31	156.78	91.05	42.54	31.36	44.69	79.05	132.98	206.44	167.03	149.18	314.41	376.35	300.72	135.63	170.78	209.31
51.00°	192.61	133.97	69.83	33.99	28.57	33.60	63.47	119.71	188.12	150.69	128.30	299.65	361.78	285.52	119.53	153.81	192.61
52.50°	168.64	116.75	50.73	29.04	29.20	27.17	46.99	102.31	167.42	134.90	114.32	282.49	348.40	271.82	105.49	130.55	168.64
54.00°	148.46	101.39	38.27	25.99	30.94	28.18	37.17	88.97	148.64	113.32	102.65	268.06	336.00	256.47	93.72	110.43	148.46
55.50°	138.19	83.11	28.51	24.40	30.29	25.97	27.11	74.24	143.33	97.12	92.51	255.91	323.70	240.82	82.74	90.18	138.19
57.00°	125.08	66.36	20.17	24.66	31.19	27.56	21.25	62.80	136.24	87.81	84.04	238.87	315.84	223.80	76.19	76.55	125.08
58.50°	106.98	56.58	14.49	24.41	34.55	24.22	17.21	50.27	120.73	75.69	74.95	227.75	305.19	210.20	66.99	67.69	106.98
60.00°	95.27	43.74	13.28	24.49	35.51	24.43	13.03	40.55	106.17	65.53	67.12	210.35	291.30	196.02	59.64	57.97	95.27
61.50°	81.30	30.81	10.41	23.11	35.90	24.27	11.82	33.19	92.75	55.64	61.02	192.35	274.43	182.02	54.96	49.44	81.30
63.00°	70.76	24.49	10.21	20.88	36.18	22.62	11.57	26.47	82.64	51.12	55.67	175.53	255.87	169.25	48.91	43.13	70.76
64.50°	62.84	19.92	9.51	20.28	36.56	21.93	10.56	18.96	68.64	44.44	50.20	158.45	232.61	152.88	44.00	35.91	62.84

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	3192	3192	3192	3192	3104	3104	3104	3104	2940	2940	2940	2790	2790	2790	2652	2652	2587
	1	3034	2956	2886	2823	2955	2886	2824	2767	2755	2706	2661	2634	2596	2560	2523	2494	2434
	2	2873	2735	2621	2525	2801	2678	2575	2487	2571	2487	2415	2472	2405	2346	2381	2327	2273
	3	2720	2539	2399	2287	2655	2492	2364	2261	2404	2297	2210	2322	2234	2160	2246	2174	2125
	4	2577	2366	2211	2093	2519	2327	2184	2074	2253	2132	2037	2185	2083	2000	2121	2036	1991
	5	2445	2213	2050	1931	2392	2180	2029	1916	2118	1988	1888	2060	1949	1861	2006	1911	1870
	6	2322	2076	1911	1792	2274	2048	1894	1782	1996	1861	1760	1946	1829	1739	1900	1798	1762
	7	2209	1954	1789	1673	2165	1930	1775	1665	1885	1748	1648	1843	1722	1631	1803	1696	1663
	8	2104	1845	1681	1569	2065	1824	1669	1562	1785	1647	1548	1748	1625	1535	1713	1604	1574
	9	2008	1746	1585	1477	1972	1728	1575	1471	1693	1556	1460	1661	1538	1449	1631	1520	1493
	10	1918	1656	1499	1394	1885	1640	1491	1390	1610	1474	1381	1582	1459	1372	1555	1443	1419

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	120.1 fc	4.9 ft
6.5 ft	86.0 fc	5.7 ft
7.5 ft	64.6 fc	6.6 ft
8.0 ft	56.8 fc	7.1 ft
10.0 ft	36.3 fc	8.8 ft
12.0 ft	25.2 fc	10.6 ft
14.0 ft	18.5 fc	12.4 ft
16.0 ft	14.2 fc	14.1 ft
20.0 ft	9.1 fc	17.7 ft
24.0 ft	6.3 fc	21.2 ft
28.0 ft	4.6 fc	24.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°	135.00°	180.00°
0.00°	352607	352607	352607	352607	352607
45.00°	37206	23930	9610	20160	33521
55.00°	23966	5376	5163	5155	24556
65.00°	13644	2077	8356	2346	14792
75.00°	1319	1413	5968	1362	1470
85.00°	2713	2319	2274	2363	2047

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		Viewing C0-180					Viewing C90-270				
2H	2H	15.7	16.7	16.1	17.1	17.5	21.5	22.5	21.9	22.9	23.4
	3H	15.9	16.8	16.3	17.2	17.7	22.9	23.8	23.4	24.2	24.7
	4H	15.8	16.7	16.3	17.1	17.6	23.3	24.1	23.8	24.6	25.1
	6H	15.7	16.5	16.2	17.0	17.5	23.5	24.2	24.0	24.7	25.2
	8H	15.7	16.4	16.2	16.9	17.4	23.5	24.2	24.0	24.7	25.2
	12H	15.7	16.4	16.2	16.8	17.4	23.4	24.1	23.9	24.6	25.1
4H	2H	15.7	16.5	16.1	16.9	17.4	21.3	22.1	21.8	22.6	23.1
	3H	15.9	16.6	16.4	17.1	17.6	22.8	23.5	23.3	24.0	24.5
	4H	15.9	16.5	16.4	17.0	17.5	23.3	23.9	23.8	24.4	24.9
	6H	15.8	16.3	16.4	16.9	17.4	23.5	24.0	24.1	24.6	25.2
	8H	15.8	16.3	16.3	16.8	17.4	23.5	24.0	24.1	24.6	25.1
	12H	15.7	16.2	16.3	16.7	17.3	23.5	23.9	24.1	24.5	25.1
8H	4H	16.1	16.6	16.6	17.1	17.7	23.1	23.6	23.7	24.1	24.7
	6H	16.0	16.4	16.6	17.0	17.6	23.4	23.8	24.0	24.4	24.9
	8H	16.0	16.3	16.6	16.9	17.5	23.4	23.8	24.0	24.4	25.0
	12H	16.0	16.3	16.6	16.9	17.5	23.4	23.7	24.0	24.3	25.0
12H	4H	16.1	16.5	16.6	17.1	17.6	23.1	23.5	23.6	24.1	24.6
	6H	16.0	16.4	16.6	16.9	17.6	23.3	23.7	23.9	24.2	24.9
	8H	16.0	16.3	16.6	16.9	17.6	23.4	23.7	24.0	24.2	24.9

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0