

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

Luminaire

SWFO4PC50L35KWDE1-SW4FPCSGMFSKX  
4" Square aperture recessed LED wall wash

Test Number

SP-R251

Test Date

8/7/2025

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

## Summary of Results

### Power

Input Watts	35.51 W
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### Lumen Output

Output Lumens	2723
Efficacy	76.68 lm/W

### Luminous Dimensions

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

### Spacing Criterion

Two luminaires, plane 0°	0.73
Two luminaires, plane 90°	0.62
Four luminaires	0.69

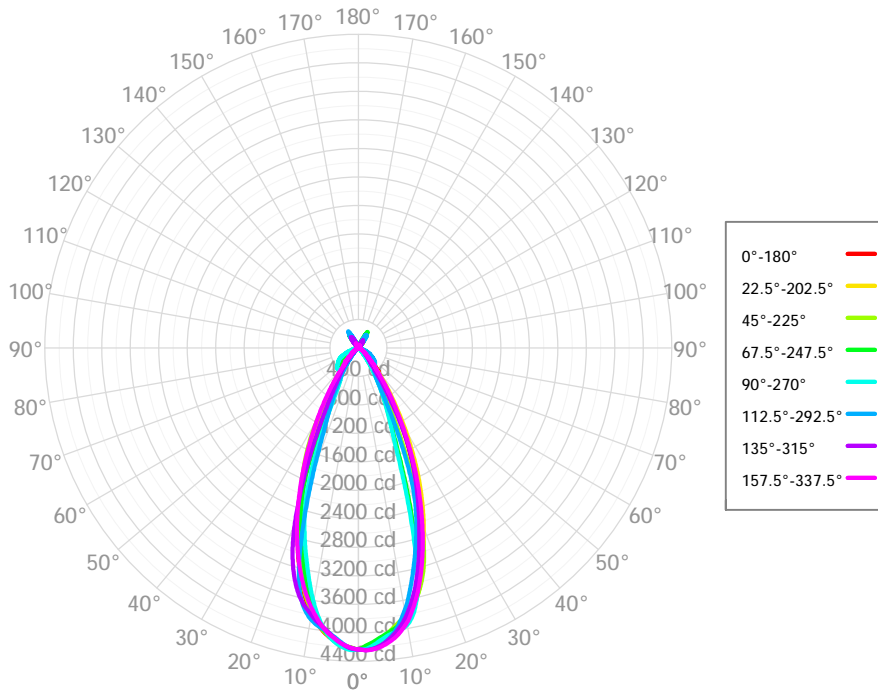
### Full Beam Angle

0° - 180°	45°
90° - 270°	38°

## IES File Header Contents

Keyword	Value
TEST	SP-R251
TESTLAB	Spectrum Lighting Photometric Lab. VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	8/7/2025
ISSUEDATE	8/7/2025
LUMCAT	SWFO4PC50L35KWDE1-SW4FPCSGMFSKX
LUMINAIRE	4" Square aperture recessed LED wall wash
DISTRIBUTION	Beam Angle 43
OTHER	CCT 3506 CRI 81.9 R9 -1.2
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°	383.95	14.10%	90.00° - 100.00°	1.71	0.06%
10.00° - 20.00°	796.08	29.24%	100.00° - 110.00°	1.48	0.05%
20.00° - 30.00°	769.14	28.25%	100.00° - 120.00°	3.37	0.12%
30.00° - 40.00°	319.39	11.73%	120.00° - 130.00°	4.16	0.15%
40.00° - 50.00°	141.22	5.19%	130.00° - 140.00°	18.36	0.67%
50.00° - 60.00°	115.87	4.26%	140.00° - 150.00°	62.28	2.29%
60.00° - 70.00°	58.95	2.16%	150.00° - 160.00°	30.25	1.11%
70.00° - 80.00°	16.32	0.60%	160.00° - 170.00°	2.42	0.09%
80.00° - 90.00°	4.80	0.18%	170.00° - 180.00°	0.37	0.01%
0.00° - 90.00°	2601.97	95.56%	0.00° - 180.00°	2723.00	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°	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02	4231.02
1.50°	4235.96	4224.40	4185.44	4179.75	4226.48	4212.60	4216.96	4208.09	4217.84	4211.79	4203.50	4208.76	4240.21	4239.69	4244.25	4245.48	4235.96
3.00°	4220.61	4207.24	4147.24	4130.00	4173.14	4155.13	4167.52	4164.52	4180.98	4176.20	4179.01	4179.52	4206.31	4222.74	4226.09	4233.20	4220.61
4.50°	4187.11	4171.78	4085.07	4071.45	4110.34	4080.16	4099.09	4098.49	4131.78	4120.54	4132.07	4132.74	4146.95	4178.41	4180.95	4202.53	4187.11
6.00°	4129.34	4108.18	4018.12	4019.83	4055.24	4016.77	4014.32	4028.49	4065.76	4053.10	4058.97	4053.06	4053.99	4103.88	4115.59	4150.01	4129.34
7.50°	4052.59	4025.88	3939.14	3968.30	4021.24	3967.91	3933.65	3933.38	3980.35	3963.46	3974.97	3944.44	3920.04	3996.60	4028.64	4085.73	4052.59
9.00°	3951.19	3922.57	3862.42	3922.60	3988.80	3912.85	3864.59	3812.74	3872.81	3840.09	3868.14	3800.47	3750.33	3850.61	3922.82	3990.33	3951.19
10.50°	3823.10	3811.32	3784.94	3852.87	3918.60	3833.13	3771.72	3681.38	3735.21	3699.84	3716.83	3628.99	3547.97	3687.67	3783.93	3878.29	3823.10
12.00°	3672.23	3664.88	3691.10	3731.34	3776.68	3707.86	3684.93	3531.37	3583.03	3535.17	3558.55	3434.75	3323.02	3480.68	3619.73	3720.66	3672.23
13.50°	3494.90	3512.15	3571.13	3551.39	3549.54	3523.21	3568.62	3362.64	3393.65	3344.24	3370.26	3223.10	3097.24	3267.46	3434.96	3550.10	3494.90
15.00°	3299.24	3334.82	3412.84	3233.56	3158.27	3225.01	3411.31	3181.67	3197.28	3140.58	3168.78	3008.01	2880.30	3052.15	3222.58	3352.78	3299.24
16.50°	3089.55	3140.55	3225.87	2815.48	2704.05	2826.68	3220.58	2987.06	2981.82	2929.49	2952.98	2800.29	2661.77	2845.68	2997.98	3144.78	3089.55
18.00°	2870.03	2953.46	2976.45	2372.56	2225.98	2387.48	2988.77	2783.04	2750.92	2705.75	2721.76	2594.54	2436.64	2637.32	2772.66	2924.80	2870.03
19.50°	2641.97	2752.76	2660.90	1936.83	1785.76	1956.43	2705.05	2572.08	2517.23	2479.06	2514.09	2394.96	2165.37	2418.91	2556.18	2697.44	2641.97
21.00°	2413.04	2550.92	2316.07	1549.99	1431.38	1570.72	2370.38	2354.24	2274.10	2246.50	2300.37	2176.17	1820.71	2175.36	2344.43	2471.27	2413.04
22.50°	2185.37	2341.55	1973.08	1260.11	1203.37	1266.84	2020.69	2132.99	2035.80	2015.15	2104.42	1893.01	1446.53	1859.15	2143.38	2244.09	2185.37
24.00°	1956.59	2131.99	1643.09	1066.68	1038.09	1060.01	1685.77	1918.01	1805.89	1792.91	1910.76	1559.59	1095.69	1510.63	1946.08	2024.56	1956.59
25.50°	1733.45	1921.84	1345.53	917.84	892.74	908.89	1377.47	1703.63	1582.33	1574.05	1727.13	1222.58	807.53	1174.42	1753.73	1806.59	1733.45
27.00°	1531.76	1707.59	1086.83	788.35	761.37	779.13	1107.59	1496.98	1386.66	1370.88	1546.62	919.52	633.91	878.00	1546.62	1594.84	1531.76
28.50°	1339.86	1498.22	884.97	668.35	640.50	660.98	887.75	1309.11	1219.82	1195.22	1340.42	687.15	544.19	664.61	1318.25	1396.96	1339.86
30.00°	1150.63	1313.68	737.68	560.26	526.44	551.33	725.94	1142.22	1047.66	1035.53	1115.27	551.41	491.40	545.54	1085.58	1205.88	1150.63
31.50°	986.74	1129.46	626.94	463.16	427.88	455.40	608.08	976.79	886.59	878.52	898.27	483.03	451.63	480.48	869.50	1026.43	986.74
33.00°	848.76	960.80	536.12	376.46	342.45	372.31	518.53	822.29	753.72	744.15	717.61	439.43	426.65	435.62	687.48	875.02	848.76
34.50°	721.91	815.17	465.91	303.00	268.63	299.37	450.36	688.12	635.28	625.85	577.10	407.94	413.42	402.03	539.34	745.00	721.91
36.00°	605.18	684.70	401.49	239.39	208.00	236.98	395.84	567.78	524.96	517.09	450.78	386.09	407.13	378.53	415.70	628.40	605.18
37.50°	510.04	565.82	327.23	185.79	157.39	185.41	328.17	457.54	441.24	418.88	348.19	372.78	402.80	362.67	332.58	521.68	510.04
39.00°	448.24	458.50	266.24	142.43	117.45	142.27	262.59	363.43	400.41	352.30	286.32	363.90	401.94	353.78	279.18	432.69	448.24
40.50°	437.56	375.31	216.95	109.94	88.77	109.67	215.80	305.77	411.04	319.62	247.68	359.74	403.13	346.31	243.60	369.72	437.56
42.00°	371.70	325.08	177.93	85.21	68.08	86.23	176.74	283.43	367.24	320.72	218.35	356.40	409.53	338.39	216.38	341.40	371.70
43.50°	306.37	285.87	144.13	67.65	55.63	69.18	141.50	261.88	293.25	268.87	193.41	357.40	412.29	333.65	189.23	291.57	306.37
45.00°	263.84	236.57	116.44	55.04	46.03	55.70	112.74	203.12	251.47	215.83	171.07	351.15	412.41	332.12	166.35	235.62	263.84
46.50°	241.86	190.02	94.60	43.61	39.18	46.17	91.07	163.64	229.92	181.61	155.30	342.46	411.45	324.15	151.30	195.03	241.86
48.00°	228.43	160.18	74.19	36.92	34.14	37.80	74.03	139.88	222.01	161.57	142.65	334.21	403.90	316.84	136.30	170.26	228.43
49.50°	216.47	139.26	61.86	30.82	29.93	31.52	63.74	124.51	211.88	147.77	130.37	318.00	392.17	309.02	120.58	152.11	216.47
51.00°	202.09	121.82	47.85	25.99	29.46	29.51	51.96	114.02	197.33	138.87	116.42	305.06	376.32	293.39	111.89	136.80	202.09
52.50°	179.38	108.15	36.83	25.52	29.87	27.14	39.80	98.20	180.38	121.84	104.86	290.15	364.11	276.92	97.55	117.09	179.38
54.00°	157.90	93.72	27.72	23.79	30.04	26.63	31.32	84.54	165.92	103.15	95.60	275.54	352.13	260.89	88.80	98.09	157.90
55.50°	145.42	77.99	21.12	21.81	30.37	25.32	25.25	72.15	154.82	90.17	87.19	261.17	340.40	245.04	80.49	83.72	145.42
57.00°	136.31	62.57	16.00	22.48	31.37	23.62	20.74	60.55	148.68	79.13	79.48	246.86	328.68	229.61	72.50	74.73	136.31
58.50°	120.03	50.25	14.21	22.37	32.67	23.38	17.34	51.02	137.14	68.91	72.24	231.91	316.70	214.52	66.07	64.73	120.03
60.00°	104.52	41.37	12.73	21.71	34.28	23.05	14.75	41.79	121.56	59.81	65.50	216.28	302.26	199.64	59.77	54.45	104.52
61.50°	92.52	33.07	12.10	20.87	35.34	22.17	13.02	33.99	106.10	53.39	59.34	197.28	281.69	184.21	54.06	47.31	92.52
63.00°	80.51	25.41	11.40	19.92	35.80	21.28	11.87	26.29	90.72	47.02	53.77	178.27	260.52	168.46	48.35	40.78	80.51
64.50°	68.83	18.26	9.99	18.99	35.99	20.47	10.69	20.06	75.33	41.01	48.36	159.63	234.04	152.32	43.23	35.71	68.83

### 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%	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%
	0	3213	3213	3213	3213	3124	3124	3124	3124	2958	2958	2958	2807	2807	2807	2667	2667	2667	2602
	1	3055	2976	2906	2843	2975	2906	2843	2786	2773	2724	2679	2651	2613	2577	2539	2510	2482	2449
	2	2896	2759	2646	2550	2824	2702	2599	2512	2594	2511	2439	2494	2427	2369	2402	2349	2302	2294
	3	2747	2567	2428	2318	2681	2520	2393	2291	2431	2326	2239	2349	2262	2189	2272	2202	2141	2151
	4	2607	2398	2245	2129	2548	2359	2218	2109	2285	2166	2071	2216	2116	2035	2152	2068	1999	2023
	5	2478	2249	2089	1971	2425	2216	2068	1956	2154	2026	1928	2096	1986	1900	2041	1948	1873	1907
	6	2359	2116	1954	1837	2311	2088	1936	1826	2035	1903	1804	1986	1870	1782	1939	1839	1761	1802
	7	2248	1997	1835	1721	2205	1974	1821	1712	1928	1793	1695	1885	1767	1678	1846	1741	1661	1708
	8	2146	1891	1730	1620	2107	1870	1718	1613	1831	1695	1599	1794	1673	1585	1759	1652	1572	1622
	9	2052	1794	1637	1530	2016	1776	1627	1524	1742	1607	1513	1710	1589	1502	1679	1571	1491	1543
	10	1964	1707	1553	1450	1932	1691	1544	1445	1661	1528	1436	1633	1512	1427	1606	1496	1418	1471

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	139.9 fc	4.5 ft
6.5 ft	100.1 fc	5.4 ft
7.5 ft	75.2 fc	6.2 ft
8.0 ft	66.1 fc	6.6 ft
10.0 ft	42.3 fc	8.3 ft
12.0 ft	29.4 fc	9.9 ft
14.0 ft	21.6 fc	11.6 ft
16.0 ft	16.5 fc	13.2 ft
20.0 ft	10.6 fc	16.5 ft
24.0 ft	7.3 fc	19.8 ft
28.0 ft	5.4 fc	23.1 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°	135.00°	180.00°
0.00°	410701	410701	410701	410701	410701
45.00°	36220	15984	6319	15477	34521
55.00°	25314	3947	5121	4616	26827
65.00°	14915	2187	8183	2361	16123
75.00°	1594	1277	6623	1501	1664
85.00°	2719	2288	2434	2080	2577

### 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	15.6	16.6	16.0	17.0	17.4	21.7	22.7	22.1	23.1	23.5
	3H	16.0	16.9	16.5	17.4	17.8	23.1	24.0	23.5	24.4	24.9
	4H	16.0	16.8	16.5	17.2	17.7	23.4	24.3	23.9	24.7	25.2
	6H	15.9	16.7	16.4	17.1	17.6	23.6	24.3	24.1	24.8	25.3
	8H	15.9	16.6	16.4	17.1	17.6	23.6	24.3	24.1	24.8	25.3
	12H	15.8	16.5	16.3	17.0	17.5	23.5	24.2	24.0	24.7	25.2
4H	2H	15.6	16.4	16.1	16.8	17.3	21.4	22.3	21.9	22.7	23.2
	3H	16.1	16.7	16.6	17.2	17.8	23.0	23.6	23.5	24.1	24.7
	4H	16.0	16.6	16.5	17.1	17.7	23.4	24.0	23.9	24.5	25.1
	6H	15.9	16.5	16.5	17.0	17.6	23.6	24.1	24.1	24.6	25.2
	8H	15.9	16.4	16.5	16.9	17.5	23.6	24.1	24.1	24.6	25.2
	12H	15.9	16.3	16.4	16.9	17.4	23.6	24.0	24.1	24.6	25.1
8H	4H	16.2	16.7	16.7	17.2	17.8	23.2	23.7	23.8	24.3	24.8
	6H	16.1	16.5	16.7	17.1	17.7	23.4	23.8	24.0	24.4	25.0
	8H	16.1	16.4	16.7	17.0	17.6	23.5	23.8	24.1	24.4	25.0
	12H	16.1	16.4	16.7	17.0	17.6	23.5	23.8	24.1	24.3	25.0
12H	4H	16.2	16.6	16.7	17.2	17.7	23.2	23.6	23.7	24.2	24.7
	6H	16.1	16.5	16.7	17.0	17.7	23.4	23.7	24.0	24.3	24.9
	8H	16.1	16.4	16.7	17.0	17.7	23.4	23.7	24.0	24.3	25.0

Corrected UGR values based on total output energy  
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0