

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTW6FX 50L 35K XX AR6923FX MW WF SK
Nom 6 inch dia downlight wall wash with matte white finish and Skytex lens

Test Number

SP-01235

Test Date

5/24/2021

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

Summary of Results

Power

Input Watts	38.3 W
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Lumen Output

Output Lumens	3756
Efficacy	98.08 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.3
Two luminaires, plane 90°	0.94
Four luminaires	0.94

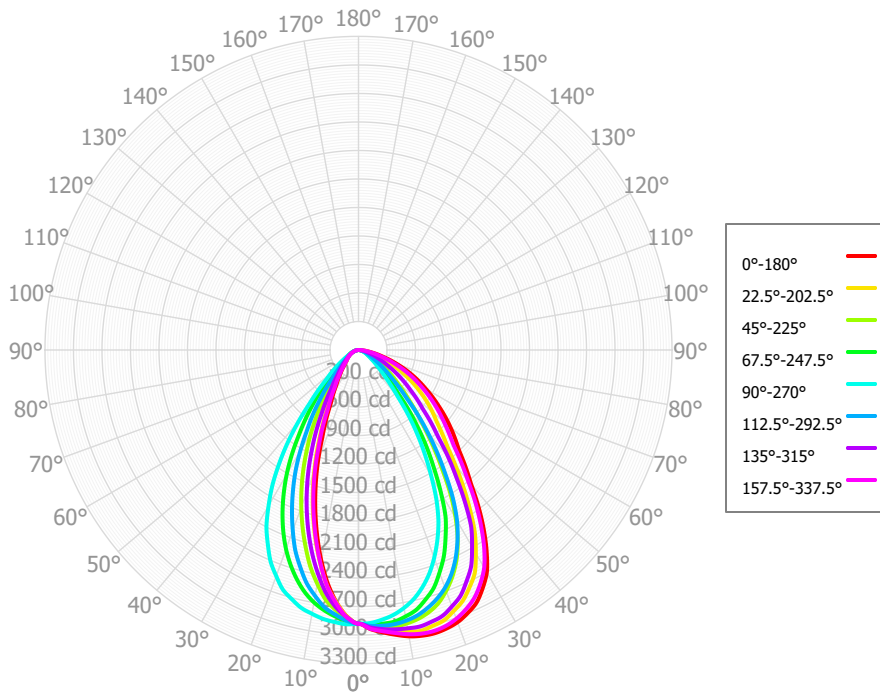
Full Beam Angle

0° - 180°	61°
90° - 270°	64°

IES File Header Contents

Keyword	Value
TEST	SP-01235
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	5/24/2021
ISSUEDATE	6/10/2021
LUMCAT	SGRTW6FX 50L 35K XX AR6923FX MW WF SK
LUMINAIRE	Nom 6 inch dia downlight wall wash with matte white finish and Skytex lens
OTHER	Beam Angle: 61 deg x 64 deg
LAMPCAT	N/A
LAMP	FX Gen2
OTHER	CCT Output Multipliers: 27HK x 0.764, 30K x 0.96, 40K x 1.03, 50K x 1.04
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80+
_CCTMULT	27HK x 0.77, 30K x 0.96, 40K x 1.03, 50K x 1.04
_LAMPMULT	10L x 0.18, 15L x 0.29, 20L x 0.39, 30L x 0.58, 40L x 0.78

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	270.88	7.21%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	702.33	18.70%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	889.11	23.67%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	768.84	20.47%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	500.99	13.34%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	322.56	8.59%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	192.28	5.12%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	88.80	2.36%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	20.60	0.55%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	3756.39	100.00%	0.00° - 180.00°	3756.39	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°	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86	2880.86
2.50°	2941.58	2926.32	2915.99	2893.38	2876.26	2852.21	2815.04	2816.44	2807.61	2807.30	2836.62	2856.53	2889.55	2907.23	2923.65	2938.56	2941.58
5.00°	2984.31	2960.11	2931.40	2892.13	2849.30	2796.38	2719.27	2678.71	2665.35	2668.72	2748.54	2815.37	2874.86	2913.02	2949.52	2971.68	2984.31
7.50°	3023.94	2991.54	2938.37	2884.07	2812.78	2732.74	2588.41	2512.92	2479.37	2513.29	2650.76	2763.92	2854.69	2910.72	2965.83	3004.77	3023.94
10.00°	3060.33	3010.31	2923.11	2848.37	2756.98	2629.09	2412.57	2293.90	2253.37	2294.85	2498.46	2698.07	2819.41	2892.66	2974.96	3037.81	3060.33
12.50°	3080.72	3028.26	2899.22	2802.67	2685.66	2516.20	2222.11	2058.30	2007.02	2071.91	2338.45	2611.44	2780.79	2861.68	2981.19	3058.30	3080.72
15.00°	3087.54	3007.69	2857.58	2720.81	2589.47	2366.92	2016.49	1819.38	1754.95	1836.42	2149.05	2501.35	2714.96	2810.62	2962.24	3062.43	3087.54
17.50°	3074.96	2985.06	2794.92	2629.15	2472.53	2211.96	1805.86	1579.69	1500.59	1600.44	1957.16	2373.90	2645.13	2745.76	2935.56	3046.85	3074.96
20.00°	3049.10	2924.99	2698.02	2493.18	2328.87	2022.28	1590.91	1336.31	1247.67	1363.43	1760.81	2230.57	2532.07	2663.11	2873.30	3010.49	3049.10
22.50°	2999.46	2861.23	2582.02	2348.28	2168.69	1829.18	1376.80	1092.37	995.20	1134.11	1564.34	2068.49	2415.12	2554.56	2802.75	2954.53	2999.46
25.00°	2936.40	2760.72	2440.29	2169.27	1990.82	1631.49	1163.26	892.63	805.54	918.35	1367.46	1892.15	2257.99	2419.03	2688.66	2881.85	2936.40
27.50°	2829.06	2649.36	2263.16	1985.84	1776.66	1433.43	967.61	697.09	630.22	737.89	1171.72	1704.97	2098.54	2257.34	2567.70	2775.84	2829.06
30.00°	2701.97	2469.43	2047.44	1735.96	1531.01	1222.97	781.94	580.18	526.96	607.28	990.30	1511.17	1893.07	2073.56	2390.56	2646.21	2701.97
32.50°	2510.07	2278.90	1805.44	1481.67	1298.75	1015.10	636.13	466.88	434.77	500.72	812.99	1305.98	1685.62	1848.38	2208.29	2461.13	2510.07
35.00°	2295.90	2042.94	1540.25	1253.91	1075.88	846.63	508.43	398.38	371.98	421.60	664.28	1095.27	1451.17	1594.19	1952.72	2244.58	2295.90
37.50°	2071.46	1810.63	1306.06	1027.18	860.64	681.51	420.29	331.23	312.02	355.84	527.03	915.36	1216.57	1358.49	1695.23	2019.94	2071.46
40.00°	1844.28	1589.75	1094.62	815.86	649.83	542.34	346.01	283.63	267.82	302.77	442.65	747.48	980.78	1133.15	1466.11	1791.68	1844.28
42.50°	1667.02	1390.69	919.08	612.65	505.98	413.56	294.98	237.85	224.47	256.73	365.47	598.87	758.55	921.90	1241.37	1597.66	1667.02
45.00°	1499.08	1245.66	764.68	492.78	392.73	336.68	250.01	205.80	197.36	216.09	312.77	455.95	600.67	716.89	1077.23	1415.68	1499.08
47.50°	1377.88	1116.32	642.49	379.95	314.94	267.21	213.58	176.40	171.11	187.44	263.71	369.97	459.31	574.51	918.60	1286.60	1377.88
50.00°	1262.15	1017.38	535.31	312.54	249.67	224.60	178.80	159.93	157.74	166.20	224.13	296.11	376.68	454.24	800.29	1171.67	1262.15
52.50°	1147.11	918.18	445.48	248.68	204.09	185.71	155.29	144.34	144.41	150.61	188.74	247.28	300.67	369.02	685.85	1065.40	1147.11
55.00°	1032.11	818.56	362.12	200.28	163.90	157.11	133.16	131.97	131.44	137.81	161.88	202.19	242.34	293.02	590.89	960.77	1032.11
57.50°	924.92	720.27	296.01	157.23	137.10	131.95	119.85	119.97	118.77	124.55	139.55	167.62	190.44	234.84	498.16	858.72	924.92
60.00°	818.26	623.69	234.74	131.17	112.90	114.18	107.06	108.98	107.60	111.11	124.55	133.93	151.87	179.93	413.47	756.98	818.26
62.50°	721.33	530.33	192.24	108.45	97.92	98.23	94.66	97.47	96.46	99.45	110.19	116.18	121.10	147.79	335.32	662.58	721.33
65.00°	624.29	440.30	153.50	94.09	84.09	85.38	82.35	84.85	85.37	88.34	96.70	98.93	103.60	118.37	274.75	568.65	624.29
67.50°	526.15	357.95	125.34	80.05	71.83	73.11	71.87	72.80	74.41	77.44	83.84	86.15	88.07	100.03	219.21	473.92	526.15
70.00°	429.40	282.02	98.60	66.61	59.69	61.67	61.47	61.73	63.78	66.58	71.66	73.47	75.22	82.36	174.52	379.86	429.40
72.50°	340.79	218.32	78.31	54.29	49.86	50.67	51.77	51.03	53.23	55.75	60.23	62.05	63.33	69.66	134.78	300.36	340.79
75.00°	256.90	163.14	58.50	43.69	40.02	40.15	41.88	40.84	42.87	44.93	49.45	50.83	52.49	56.99	103.47	223.11	256.90
77.50°	192.23	118.77	44.13	33.19	29.51	30.85	30.76	31.61	32.91	35.38	39.72	41.08	41.88	44.55	76.31	168.49	192.23
80.00°	132.39	80.43	29.97	22.82	19.24	22.66	20.44	23.47	23.62	25.94	30.76	31.27	31.47	32.48	54.83	116.19	132.39
82.50°	87.61	50.21	19.18	14.39	11.51	14.96	13.44	15.58	15.38	17.77	21.63	21.18	21.78	23.89	36.24	77.72	87.61
85.00°	48.08	23.55	8.98	7.98	4.64	7.64	7.39	7.93	8.59	9.71	12.41	12.19	12.62	15.59	20.92	42.55	48.08
87.50°	21.06	11.27	5.42	4.15	3.08	3.87	4.25	3.76	4.18	5.53	6.78	6.98	6.86	8.90	10.65	20.95	21.06
90.00°	3.12	3.84	2.30	2.51	1.83	2.27	2.01	2.22	2.48	1.65	2.82	2.99	3.10	3.44	5.02	4.22	3.12

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	4472	4472	4472	4472	4368	4368	4368	4368	4174	4174	4174	3996	3996	3996	3833	3833	3756
	1	4191	4057	3936	3827	4095	3974	3865	3766	3818	3730	3648	3676	3605	3539	3544	3488	3435
	2	3909	3672	3476	3312	3819	3605	3426	3274	3478	3329	3200	3361	3238	3130	3253	3152	3062
	3	3647	3338	3099	2908	3564	3282	3061	2883	3178	2990	2835	3081	2922	2789	2991	2858	2744
	4	3407	3049	2786	2586	3331	3002	2758	2569	2915	2704	2537	2835	2653	2505	2759	2604	2475
	5	3189	2798	2525	2323	3119	2759	2503	2312	2686	2462	2289	2618	2422	2267	2555	2383	2246
	6	2991	2580	2304	2105	2928	2547	2287	2097	2485	2254	2081	2428	2222	2066	2374	2192	2050
	7	2812	2389	2114	1922	2754	2361	2101	1916	2308	2075	1904	2259	2049	1893	2213	2025	1882
	8	2649	2220	1951	1766	2597	2197	1940	1761	2152	1919	1752	2109	1898	1744	2069	1878	1735
	9	2501	2072	1808	1631	2454	2051	1800	1627	2012	1782	1621	1976	1765	1614	1941	1749	1608
	10	2367	1939	1684	1513	2324	1922	1676	1511	1888	1662	1506	1856	1648	1501	1826	1634	1496

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	95.2 fc	8.5 ft
6.5 ft	68.2 fc	10.1 ft
7.5 ft	51.2 fc	11.6 ft
8.0 ft	45.0 fc	12.4 ft
10.0 ft	28.8 fc	15.5 ft
12.0 ft	20.0 fc	18.6 ft
14.0 ft	14.7 fc	21.7 ft
16.0 ft	11.3 fc	24.8 ft
20.0 ft	7.2 fc	31.0 ft
24.0 ft	5.0 fc	37.2 ft
28.0 ft	3.7 fc	43.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	157929	157929	157929
45.00°	116219	59283	30447
55.00°	98645	34610	15665
65.00°	80980	19911	10907
75.00°	54414	12391	8476
85.00°	30241	5649	2918

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	28.0	29.4	28.4	29.7	30.0	16.4	17.7	16.8	18.0	18.3
	3H	29.4	30.6	29.8	30.9	31.3	17.6	18.8	18.0	19.1	19.4
	4H	29.8	30.9	30.2	31.2	31.6	18.0	19.1	18.4	19.5	19.9
	6H	30.0	31.0	30.5	31.4	31.8	18.3	19.3	18.8	19.7	20.1
	8H	30.1	31.0	30.5	31.4	31.8	18.4	19.4	18.9	19.8	20.2
	12H	30.1	31.0	30.6	31.4	31.8	18.5	19.4	18.9	19.7	20.2
4H	2H	27.9	29.0	28.3	29.4	29.8	16.7	17.8	17.1	18.2	18.5
	3H	29.5	30.4	29.9	30.8	31.2	18.1	19.0	18.6	19.4	19.8
	4H	30.0	30.8	30.4	31.2	31.6	18.7	19.5	19.1	19.9	20.4
	6H	30.3	31.0	30.8	31.5	31.9	19.1	19.8	19.6	20.3	20.7
	8H	30.4	31.0	30.9	31.5	32.0	19.3	19.9	19.7	20.3	20.8
	12H	30.5	31.0	30.9	31.5	32.0	19.3	19.9	19.8	20.4	20.8
8H	4H	29.9	30.5	30.4	31.0	31.5	18.9	19.5	19.3	20.0	20.4
	6H	30.3	30.8	30.8	31.3	31.8	19.4	19.9	19.9	20.4	20.9
	8H	30.4	30.9	30.9	31.4	31.9	19.6	20.1	20.1	20.6	21.1
	12H	30.5	30.9	31.0	31.4	32.0	19.7	20.1	20.2	20.6	21.2
12H	4H	29.9	30.4	30.3	30.9	31.4	18.9	19.4	19.4	19.9	20.4
	6H	30.2	30.7	30.8	31.2	31.7	19.4	19.9	20.0	20.4	20.9
	8H	30.4	30.8	30.9	31.3	31.9	19.6	20.1	20.2	20.6	21.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0