

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD MW SO (nadir)  
Nom. 3" Round Deep Adjustable A-Spec, Wide Beam

### Test Number

SP-01398\_4

### Test Date

9/12/2022

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

### Summary of Results

#### Power

Input Watts	26.3 W
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#### Lumen Output

Output Lumens	1927
Efficacy	73.26 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.25
90° - 270° Size	-0.25
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.78
Two luminaires, plane 90°	0.78
Four luminaires	0.73

#### Full Beam Angle

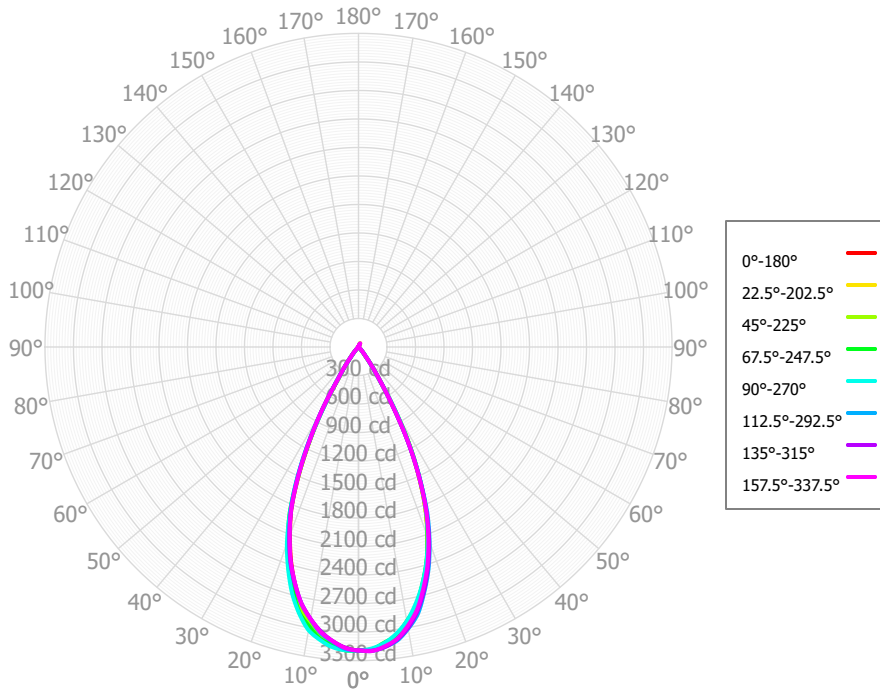
0° - 180°	48°
90° - 270°	49°

### IES File Header Contents

Keyword	Value
TEST	SP-01398_4
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/12/2022
ISSUDATE	12/19/2022
LUMCAT	SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD MW SO (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Wide Beam
OTHER	Matte White Trim, Solite Lens
OTHER	49 Degree Beam Angle
LAMP	N/A, 19mm LES
LAMPCAT	N/A, Min. 80 CRI
OTHER	Reference project SL167
OTHER	minus 2W, no thermal protection required for 7L, 10L, and 15L (non-IC)
OTHER	minus 2W, no thermal protection required for all (including 20L and 25L) IC luminaires
OTHER	Total Luminaire Watts is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80

SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD  
 MW SO (nadir)

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	298.00	15.47%	90.00° - 100.00°	2.05	0.11%
10.00° - 20.00°	721.29	37.44%	100.00° - 110.00°	2.00	0.10%
20.00° - 30.00°	666.15	34.58%	100.00° - 120.00°	4.24	0.22%
30.00° - 40.00°	178.96	9.29%	120.00° - 130.00°	2.41	0.12%
40.00° - 50.00°	20.41	1.06%	130.00° - 140.00°	2.93	0.15%
50.00° - 60.00°	6.93	0.36%	140.00° - 150.00°	3.77	0.20%
60.00° - 70.00°	5.94	0.31%	150.00° - 160.00°	5.65	0.29%
70.00° - 80.00°	3.42	0.18%	160.00° - 170.00°	1.90	0.10%
80.00° - 90.00°	2.37	0.12%	170.00° - 180.00°	0.25	0.01%
0.00° - 90.00°	1903.47	98.80%	0.00° - 180.00°	1926.66	100.00%

SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD  
MW SO (nadir)

### 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°	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08	3194.08
2.50°	3195.14	3194.60	3183.10	3184.97	3176.58	3182.29	3167.93	3172.25	3170.46	3177.27	3177.98	3196.66	3195.36	3202.58	3198.85	3204.03	3195.14
5.00°	3156.12	3147.22	3134.36	3123.02	3128.19	3116.38	3107.69	3107.50	3111.63	3116.07	3126.98	3149.56	3170.86	3167.72	3171.83	3162.88	3156.12
7.50°	3088.96	3088.53	3067.13	3060.07	3044.36	3039.54	3021.28	3029.84	3037.56	3049.57	3064.63	3098.91	3109.44	3117.43	3107.31	3099.89	3088.96
10.00°	2965.17	2958.99	2945.73	2929.11	2929.47	2909.99	2905.34	2906.17	2918.06	2928.86	2952.90	2987.68	3027.09	3011.49	3004.21	2981.56	2965.17
12.50°	2813.49	2816.57	2801.70	2796.44	2772.07	2770.64	2766.89	2769.32	2781.62	2803.43	2829.29	2869.05	2877.37	2881.35	2854.70	2837.52	2813.49
15.00°	2609.89	2605.49	2597.86	2589.68	2589.60	2582.06	2586.73	2577.15	2582.58	2599.01	2626.06	2659.86	2692.71	2673.45	2661.18	2634.42	2609.89
17.50°	2386.91	2385.42	2377.62	2380.80	2375.50	2385.69	2377.30	2370.93	2362.52	2389.56	2406.07	2444.99	2459.44	2451.32	2433.02	2412.54	2386.91
20.00°	2130.88	2123.84	2118.15	2124.56	2132.94	2134.37	2127.36	2118.29	2109.58	2130.21	2140.83	2176.50	2203.16	2188.12	2174.21	2151.40	2130.88
22.50°	1842.50	1846.17	1837.24	1862.78	1856.95	1875.81	1850.98	1855.31	1846.74	1868.81	1867.37	1894.43	1883.27	1894.02	1865.70	1859.37	1842.50
25.00°	1503.50	1503.39	1509.70	1518.39	1528.32	1521.82	1507.97	1502.33	1491.34	1493.60	1493.04	1508.69	1535.97	1519.54	1516.62	1507.62	1503.50
27.50°	1138.65	1150.09	1157.91	1169.81	1142.64	1157.35	1125.04	1131.93	1111.19	1116.14	1103.18	1123.50	1137.21	1137.55	1131.96	1137.40	1138.65
30.00°	736.60	759.14	757.98	774.94	779.13	780.87	770.09	771.13	757.00	750.15	744.17	741.87	718.34	737.86	720.55	734.51	736.60
32.50°	426.65	420.38	433.46	404.70	437.80	403.36	430.52	411.92	408.94	389.00	389.11	396.82	452.21	413.46	435.80	418.06	426.65
35.00°	238.73	250.77	245.80	248.45	224.16	253.06	244.69	258.61	254.05	255.95	246.69	253.64	239.99	250.57	238.69	241.95	238.73
37.50°	114.68	113.11	112.04	106.72	128.28	116.91	136.08	133.84	138.94	126.34	126.82	126.75	138.47	125.27	127.33	117.33	114.68
40.00°	68.62	68.31	69.00	68.21	67.78	74.77	77.02	81.96	83.23	77.04	75.44	77.40	72.04	73.58	70.52	69.53	68.62
42.50°	36.62	32.50	37.03	33.62	37.36	36.40	40.67	38.33	38.06	30.08	29.67	34.90	39.72	34.97	37.72	35.60	36.62
45.00°	20.62	20.27	22.16	22.29	20.21	23.18	23.61	23.58	23.10	18.89	18.53	20.87	17.05	19.79	18.93	20.69	20.62
47.50°	11.18	11.09	12.54	12.31	13.47	10.46	14.58	11.40	12.68	8.59	9.43	9.65	10.46	9.93	11.47	11.54	11.18
50.00°	8.61	9.12	10.38	9.18	10.05	9.31	10.54	10.28	10.13	8.21	8.29	8.77	7.88	8.79	10.07	9.69	8.61
52.50°	7.43	7.77	8.76	6.77	9.07	8.17	8.38	9.92	8.56	7.77	7.45	8.01	7.50	7.70	8.94	8.14	7.43
55.00°	7.60	7.75	7.84	7.53	8.23	7.90	7.77	8.37	7.48	6.84	7.25	7.65	7.61	6.71	7.94	6.94	7.60
57.50°	7.53	7.66	7.23	8.06	7.49	7.63	7.68	6.77	6.45	6.06	7.05	7.27	7.41	6.22	7.27	6.43	7.53
60.00°	7.25	7.43	7.02	7.73	7.12	7.25	7.23	7.29	6.11	6.39	6.87	6.82	7.14	6.44	6.74	6.66	7.25
62.50°	6.95	7.13	6.68	7.34	6.97	6.87	6.67	7.87	5.82	6.61	6.67	6.09	6.12	6.15	6.62	6.83	6.95
65.00°	6.64	6.68	6.21	6.73	6.19	6.31	6.27	6.87	5.44	6.15	6.21	4.57	4.97	5.19	6.66	6.94	6.64
67.50°	5.95	5.95	5.53	6.01	5.05	5.71	5.91	5.86	5.06	5.56	5.72	3.52	4.59	4.72	5.84	6.18	5.95
70.00°	4.98	4.76	4.65	4.91	4.35	4.61	4.72	4.46	4.22	4.24	4.54	3.56	4.32	4.81	4.69	4.61	4.98
72.50°	4.36	3.76	3.90	4.02	3.86	3.57	3.33	3.11	3.37	3.13	3.41	3.41	3.61	4.29	4.01	3.56	4.36
75.00°	3.99	3.07	3.29	3.74	3.38	3.09	2.77	2.93	2.74	2.99	2.92	2.85	2.85	3.09	3.47	2.97	3.99
77.50°	3.31	2.56	2.79	3.41	2.89	2.68	2.38	2.74	2.11	2.81	2.44	2.49	2.49	2.47	2.91	2.59	3.31
80.00°	2.44	2.28	2.39	2.94	2.58	2.76	2.20	2.46	2.14	2.51	2.09	2.54	2.17	2.42	2.35	2.38	2.44
82.50°	2.00	2.16	2.22	2.57	2.33	2.76	2.05	2.18	2.16	2.25	1.79	2.52	2.32	2.45	2.37	2.24	2.00
85.00°	1.81	2.23	2.24	2.44	2.09	2.23	1.93	1.88	2.07	2.15	1.92	2.42	2.50	2.56	2.54	2.17	1.81
87.50°	1.94	2.09	2.07	2.30	1.86	1.81	1.80	1.63	1.99	2.06	2.01	2.26	2.33	2.41	2.41	1.96	1.94
90.00°	2.23	1.68	1.75	2.14	1.68	1.96	1.78	1.78	2.00	2.00	1.92	2.02	2.15	2.03	2.20	1.64	2.23
92.50°	2.26	1.52	1.66	1.93	1.51	2.08	1.77	1.90	2.00	1.98	1.85	1.97	2.35	1.74	2.13	1.50	2.26
95.00°	2.17	1.62	1.73	1.64	1.57	2.05	1.79	1.77	1.93	2.12	1.88	2.20	2.56	1.54	2.10	1.48	2.17
97.50°	2.04	1.77	1.72	1.51	1.70	2.00	1.82	1.66	1.90	2.21	1.88	2.23	2.09	1.59	2.02	1.53	2.04
100.00°	1.90	1.97	1.67	1.64	1.66	1.87	1.90	1.63	2.21	2.21	1.74	1.96	1.62	1.85	1.94	1.64	1.90

SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD  
 MW SO (nadir)

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	2288	2288	2288	2288	2232	2232	2232	2232	2128	2128	2128	2032	2032	2032	1945	1945	1903
	<b>1</b>	2192	2143	2100	2060	2143	2100	2061	2026	2018	1987	1959	1943	1919	1897	1874	1856	1817
	<b>2</b>	2099	2015	1945	1887	2055	1980	1918	1864	1915	1864	1820	1855	1814	1778	1800	1767	1731
	<b>3</b>	2010	1900	1816	1748	1971	1872	1795	1733	1820	1755	1702	1771	1718	1673	1726	1682	1649
	<b>4</b>	1925	1797	1704	1632	1891	1774	1688	1621	1731	1658	1600	1692	1629	1579	1654	1602	1572
	<b>5</b>	1845	1704	1605	1532	1814	1685	1593	1525	1649	1570	1509	1616	1548	1494	1585	1527	1499
	<b>6</b>	1768	1618	1517	1445	1741	1603	1508	1439	1573	1490	1428	1545	1472	1417	1519	1456	1430
	<b>7</b>	1696	1540	1439	1368	1671	1527	1431	1363	1501	1417	1355	1478	1403	1346	1456	1389	1366
	<b>8</b>	1628	1468	1367	1298	1606	1457	1361	1294	1435	1349	1288	1415	1338	1282	1396	1327	1305
	<b>9</b>	1564	1401	1302	1234	1544	1392	1297	1232	1373	1287	1227	1356	1278	1222	1339	1269	1249
	<b>10</b>	1504	1340	1242	1176	1485	1331	1238	1174	1315	1230	1170	1300	1222	1166	1286	1214	1196

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	105.6 fc	5.0 ft
6.5 ft	75.6 fc	5.9 ft
7.5 ft	56.8 fc	6.8 ft
8.0 ft	49.9 fc	7.2 ft
10.0 ft	31.9 fc	9.0 ft
12.0 ft	22.2 fc	10.8 ft
14.0 ft	16.3 fc	12.6 ft
16.0 ft	12.5 fc	14.4 ft
20.0 ft	8.0 fc	18.0 ft
24.0 ft	5.5 fc	21.6 ft
28.0 ft	4.1 fc	25.2 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	700399	700399	700399
<b>45.00°</b>	6395	6872	6269
<b>55.00°</b>	2904	2996	3146
<b>65.00°</b>	3444	3220	3211
<b>75.00°</b>	3381	2784	2862
<b>85.00°</b>	4561	5632	5262

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	2.8	3.7	3.2	4.0	4.3	3.0	3.9	3.4	4.3	4.6
	<b>3H</b>	5.2	6.0	5.6	6.3	6.7	4.7	5.5	5.1	5.8	6.2
	<b>4H</b>	6.0	6.7	6.4	7.1	7.5	5.4	6.1	5.8	6.5	6.9
	<b>6H</b>	6.6	7.3	7.1	7.7	8.1	6.0	6.7	6.5	7.1	7.5
	<b>8H</b>	6.9	7.6	7.4	8.0	8.4	6.5	7.1	6.9	7.5	7.9
	<b>12H</b>	7.3	7.9	7.7	8.3	8.7	7.1	7.7	7.5	8.1	8.5
<b>4H</b>	<b>2H</b>	3.6	4.3	4.0	4.7	5.1	3.7	4.4	4.1	4.8	5.2
	<b>3H</b>	6.0	6.6	6.4	7.0	7.4	5.5	6.1	5.9	6.5	7.0
	<b>4H</b>	6.8	7.3	7.2	7.8	8.2	6.2	6.8	6.7	7.2	7.7
	<b>6H</b>	7.6	8.0	8.1	8.5	9.0	7.1	7.6	7.6	8.0	8.5
	<b>8H</b>	7.9	8.4	8.4	8.8	9.3	7.7	8.1	8.2	8.6	9.1
	<b>12H</b>	8.4	8.8	8.9	9.3	9.8	8.4	8.8	8.9	9.3	9.8
<b>8H</b>	<b>4H</b>	7.0	7.5	7.5	7.9	8.4	6.5	6.9	7.0	7.3	7.9
	<b>6H</b>	8.0	8.3	8.5	8.9	9.4	7.6	7.9	8.1	8.4	8.9
	<b>8H</b>	8.5	8.8	9.1	9.4	9.9	8.4	8.7	8.9	9.2	9.7
	<b>12H</b>	9.3	9.5	9.8	10.1	10.7	9.4	9.6	9.9	10.2	10.8
<b>12H</b>	<b>4H</b>	7.1	7.4	7.6	7.9	8.4	6.5	6.8	7.0	7.4	7.9
	<b>6H</b>	8.1	8.4	8.7	8.9	9.5	7.7	8.0	8.2	8.5	9.0
	<b>8H</b>	8.8	9.0	9.3	9.6	10.2	8.6	8.8	9.1	9.4	10.0

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0