

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 NL (nadir)
Nom. 3" Round Deep Adjustable, Wide Beam

Test Number

SP-01396_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	2042
Efficacy	77.63 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°	0.79
Four luminaires	0.73

Full Beam Angle

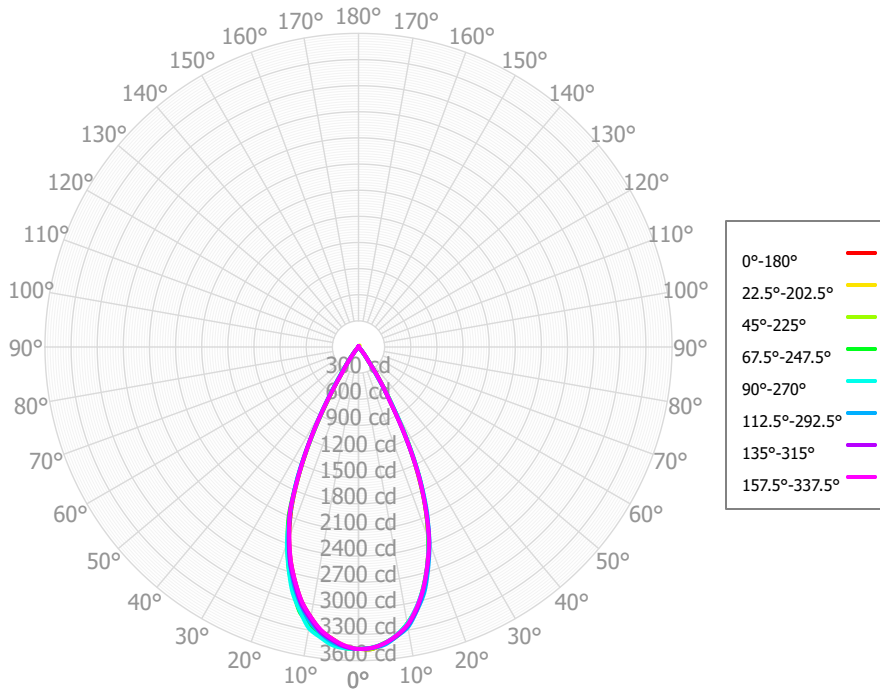
0° - 180°	49°
90° - 270°	49°

IES File Header Contents

Keyword	Value
TEST	SP-01396_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 NL (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable, Wide Beam
OTHER	Matte White Trim, No 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 NL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	323.48	15.84%	90.00° - 100.00°	2.01	0.10%
10.00° - 20.00°	788.26	38.61%	100.00° - 110.00°	1.93	0.09%
20.00° - 30.00°	717.16	35.12%	100.00° - 120.00°	4.12	0.20%
30.00° - 40.00°	167.70	8.21%	120.00° - 130.00°	2.38	0.12%
40.00° - 50.00°	13.05	0.64%	130.00° - 140.00°	3.05	0.15%
50.00° - 60.00°	4.70	0.23%	140.00° - 150.00°	2.95	0.14%
60.00° - 70.00°	4.90	0.24%	150.00° - 160.00°	1.57	0.08%
70.00° - 80.00°	3.10	0.15%	160.00° - 170.00°	0.81	0.04%
80.00° - 90.00°	2.27	0.11%	170.00° - 180.00°	0.24	0.01%
0.00° - 90.00°	2024.63	99.16%	0.00° - 180.00°	2041.76	100.00%

SR3Mx 25L 35K WD xx xx RDA3F 25L 35K WD
MW NL (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°	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21	3467.21
2.50°	3471.99	3457.98	3472.05	3457.43	3454.99	3447.52	3446.72	3433.73	3441.65	3435.31	3453.26	3460.26	3463.60	3458.53	3460.81	3457.23	3471.99
5.00°	3414.74	3418.51	3415.64	3412.74	3414.60	3405.73	3383.51	3369.34	3367.55	3372.91	3387.27	3410.16	3437.88	3432.94	3415.83	3416.55	3414.74
7.50°	3350.62	3342.68	3352.34	3339.78	3335.88	3316.79	3305.01	3280.08	3284.39	3288.70	3313.13	3346.69	3362.62	3353.62	3347.37	3340.14	3350.62
10.00°	3230.66	3236.97	3225.83	3225.64	3225.31	3206.48	3171.69	3149.13	3149.13	3162.72	3194.71	3236.39	3279.94	3267.84	3247.22	3238.41	3230.66
12.50°	3090.69	3076.80	3082.88	3070.79	3064.49	3041.98	3027.32	2997.52	2998.88	3019.56	3055.56	3117.63	3105.20	3100.43	3089.77	3071.92	3090.69
15.00°	2866.97	2884.98	2867.75	2874.24	2865.98	2850.32	2821.05	2798.03	2798.93	2815.24	2851.68	2895.77	2923.20	2919.90	2877.06	2873.87	2866.97
17.50°	2627.08	2631.16	2632.53	2628.97	2625.84	2611.71	2608.92	2583.06	2582.00	2594.86	2630.07	2665.76	2669.13	2662.26	2635.84	2627.25	2627.08
20.00°	2345.58	2353.18	2343.68	2348.05	2354.58	2344.41	2340.65	2323.14	2328.19	2335.00	2371.87	2386.68	2402.50	2384.77	2375.00	2364.93	2345.58
22.50°	2020.61	2006.65	2019.84	2015.27	2058.73	2042.54	2058.58	2054.61	2017.40	2069.70	2046.12	2089.29	2046.76	2040.37	2030.06	2013.12	2020.61
25.00°	1620.64	1643.31	1632.70	1656.30	1671.16	1658.92	1636.43	1626.02	1621.95	1618.50	1623.08	1635.20	1662.80	1655.75	1645.47	1644.64	1620.64
27.50°	1201.13	1208.44	1221.14	1225.99	1233.26	1204.80	1207.70	1184.68	1182.49	1161.25	1171.86	1183.31	1173.08	1183.97	1193.81	1193.43	1201.13
30.00°	757.78	764.75	778.44	771.65	809.22	785.81	747.60	743.01	697.12	726.62	692.10	740.89	737.78	767.59	721.73	738.07	757.78
32.50°	439.82	467.01	450.86	463.41	390.32	387.99	365.62	331.74	383.51	334.13	389.10	379.26	433.10	434.54	446.99	458.92	439.82
35.00°	231.31	186.86	226.80	184.00	216.79	200.92	209.83	204.05	197.99	207.86	212.10	230.39	210.90	217.72	207.04	199.51	231.31
37.50°	116.40	117.90	108.24	107.33	98.51	100.99	93.54	92.25	101.26	99.19	112.29	114.55	124.61	123.62	123.99	123.74	116.40
40.00°	58.60	55.22	56.11	47.99	55.37	54.08	52.64	52.70	51.03	52.83	50.95	57.76	61.07	60.79	53.08	56.69	58.60
42.50°	29.16	29.88	28.12	27.25	20.61	20.87	24.15	21.37	25.33	18.15	24.03	21.30	23.73	21.22	29.28	28.30	29.16
45.00°	11.41	9.80	10.62	8.24	13.11	11.67	12.08	12.56	8.10	10.27	8.52	10.10	6.61	6.96	7.89	7.30	11.41
47.50°	6.87	7.24	6.15	6.87	6.48	5.80	6.02	6.40	4.93	5.20	5.89	4.86	5.91	5.91	6.39	6.20	6.87
50.00°	5.81	5.49	5.35	5.79	6.60	5.81	5.63	5.14	4.63	4.49	5.75	4.92	5.12	5.33	5.14	5.36	5.81
52.50°	5.78	5.51	5.18	6.12	6.58	6.00	5.46	4.49	4.82	4.19	5.87	4.99	4.26	4.91	4.86	5.00	5.78
55.00°	5.89	5.36	5.10	6.30	5.81	5.27	5.44	4.63	5.05	4.34	6.01	5.07	4.18	5.07	4.82	5.07	5.89
57.50°	5.47	4.94	5.27	6.03	5.21	4.68	5.89	5.00	4.92	4.67	5.41	4.77	4.41	5.35	5.41	5.69	5.47
60.00°	5.02	4.87	5.43	5.71	5.19	5.05	6.56	5.58	4.84	5.15	4.92	4.31	4.61	5.31	5.66	5.78	5.02
62.50°	4.67	5.19	5.15	5.28	5.00	5.29	6.62	5.81	5.19	5.22	5.52	4.35	4.80	5.25	5.32	5.40	4.67
65.00°	4.39	5.23	4.98	4.97	4.45	5.11	6.50	5.83	5.29	5.07	5.86	4.53	4.52	4.75	5.04	5.31	4.39
67.50°	4.63	5.05	5.62	4.81	3.98	4.80	5.59	5.21	4.25	4.12	4.96	4.23	4.19	4.26	4.86	5.40	4.63
70.00°	4.60	4.39	5.84	4.27	3.65	4.20	4.54	4.31	3.36	2.89	4.03	3.86	3.38	3.71	4.16	4.68	4.60
72.50°	3.65	3.46	4.48	3.37	3.35	3.42	3.57	3.40	2.90	2.61	3.05	2.88	2.61	3.22	3.01	3.62	3.65
75.00°	2.84	3.06	3.41	3.01	3.09	2.37	2.62	2.50	2.52	2.54	2.41	1.93	2.47	2.92	2.82	3.05	2.84
77.50°	2.36	2.82	3.02	3.00	2.55	1.99	2.53	2.29	2.30	2.18	2.41	1.96	2.37	2.59	3.22	2.62	2.36
80.00°	2.23	2.79	2.67	2.72	1.83	2.36	2.45	2.19	2.12	1.79	2.20	1.99	2.52	2.15	3.06	2.41	2.23
82.50°	2.66	2.81	2.41	2.34	1.73	2.43	2.41	1.80	2.02	1.79	1.71	1.96	2.60	1.89	2.66	2.24	2.66
85.00°	2.70	2.42	2.13	1.88	1.93	2.27	2.34	1.43	1.99	1.79	1.54	1.90	2.44	2.00	2.30	2.18	2.70
87.50°	2.29	2.00	1.83	1.41	2.12	1.96	2.10	1.63	2.03	1.75	1.68	1.67	2.27	2.01	1.94	2.13	2.29
90.00°	1.92	1.82	1.71	1.35	2.29	1.57	1.98	1.84	2.03	1.72	1.79	1.56	2.07	1.85	1.85	2.27	1.92
92.50°	1.58	1.65	1.76	1.36	2.08	1.67	2.18	2.08	1.99	1.77	1.89	1.70	1.96	1.80	1.79	2.35	1.58
95.00°	1.43	1.61	1.84	1.55	1.78	1.94	2.21	2.26	1.84	1.80	1.70	1.87	1.99	1.84	1.92	1.95	1.43
97.50°	1.37	1.57	1.95	1.75	1.96	2.02	1.97	2.19	1.64	1.73	1.40	2.09	2.07	1.78	2.03	1.60	1.37
100.00°	1.59	1.50	1.99	1.89	2.17	2.05	1.84	2.06	1.74	1.74	1.65	2.14	2.21	1.65	1.72	1.44	1.59

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

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	2427	2427	2427	2427	2368	2368	2368	2368	2259	2259	2259	2159	2159	2159	2068	2068	2068	2025
	1	2327	2276	2230	2189	2275	2230	2190	2153	2145	2113	2084	2067	2042	2019	1995	1976	1958	1935
	2	2230	2142	2070	2009	2185	2106	2041	1985	2039	1985	1940	1976	1933	1896	1919	1885	1854	1847
	3	2137	2023	1935	1864	2097	1994	1914	1848	1940	1873	1817	1889	1834	1787	1843	1797	1758	1762
	4	2049	1916	1818	1744	2014	1892	1802	1733	1848	1771	1711	1807	1742	1690	1768	1714	1669	1682
	5	1965	1819	1716	1640	1934	1799	1704	1632	1762	1680	1616	1728	1657	1601	1696	1635	1586	1606
	6	1886	1729	1624	1549	1857	1713	1615	1543	1683	1596	1532	1654	1578	1521	1627	1561	1510	1534
	7	1811	1648	1542	1468	1785	1634	1534	1464	1608	1520	1455	1584	1505	1447	1561	1492	1438	1467
	8	1740	1572	1467	1395	1716	1561	1461	1391	1539	1449	1385	1518	1437	1378	1498	1426	1372	1403
	9	1672	1502	1398	1328	1651	1492	1393	1325	1473	1383	1320	1456	1374	1315	1439	1365	1311	1344
	10	1609	1438	1335	1267	1590	1429	1331	1265	1413	1323	1261	1397	1315	1257	1382	1307	1253	1288

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	114.6 fc	5.0 ft
6.5 ft	82.1 fc	5.9 ft
7.5 ft	61.6 fc	6.8 ft
8.0 ft	54.2 fc	7.2 ft
10.0 ft	34.7 fc	9.0 ft
12.0 ft	24.1 fc	10.8 ft
14.0 ft	17.7 fc	12.6 ft
16.0 ft	13.5 fc	14.4 ft
20.0 ft	8.7 fc	18.0 ft
24.0 ft	6.0 fc	21.7 ft
28.0 ft	4.4 fc	25.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	760291	760291	760291
45.00°	3538	3292	4065
55.00°	2254	1950	2220
65.00°	2278	2584	2307
75.00°	2408	2889	2614
85.00°	6786	5347	4860

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	0.6	1.5	1.0	1.8	2.1	-0.3	0.6	0.1	1.0	1.3
	3H	3.6	4.4	4.0	4.7	5.1	2.6	3.4	3.0	3.7	4.1
	4H	4.4	5.1	4.8	5.5	5.9	3.4	4.1	3.8	4.5	4.9
	6H	5.1	5.8	5.6	6.2	6.6	4.3	4.9	4.7	5.3	5.8
	8H	5.8	6.4	6.2	6.8	7.2	4.9	5.5	5.3	5.9	6.3
	12H	6.6	7.2	7.1	7.6	8.1	5.7	6.2	6.1	6.6	7.1
4H	2H	1.5	2.2	1.9	2.6	3.0	1.5	2.2	1.9	2.6	3.0
	3H	4.6	5.1	5.0	5.6	6.0	4.0	4.5	4.4	5.0	5.4
	4H	5.5	6.0	5.9	6.4	6.9	4.7	5.2	5.1	5.6	6.1
	6H	6.4	6.9	6.9	7.3	7.8	5.6	6.1	6.1	6.5	7.0
	8H	7.1	7.5	7.6	8.0	8.5	6.3	6.7	6.8	7.2	7.7
	12H	8.1	8.5	8.6	9.0	9.5	7.2	7.5	7.7	8.0	8.5
8H	4H	5.9	6.3	6.4	6.8	7.3	5.0	5.4	5.5	5.9	6.4
	6H	7.1	7.5	7.7	8.0	8.5	6.2	6.5	6.7	7.0	7.5
	8H	8.0	8.3	8.6	8.9	9.4	7.1	7.4	7.6	7.9	8.4
	12H	9.3	9.5	9.8	10.0	10.6	8.2	8.5	8.8	9.0	9.6
12H	4H	5.9	6.3	6.5	6.8	7.3	5.0	5.4	5.5	5.9	6.4
	6H	7.3	7.6	7.9	8.1	8.7	6.4	6.6	6.9	7.1	7.7
	8H	8.3	8.6	8.9	9.1	9.7	7.4	7.6	7.9	8.1	8.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0