

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K XW xx xx RDD3F 25L 35K XW MW NL
Nom. 3" Round Deep Downlight A-Spec, Xtra Wide Beam

Test Number

SP-01410_3

Test Date

9/19/2022

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

Summary of Results

Power

Input Watts	26.3 W
-------------	--------

Lumen Output

Output Lumens	2354
Efficacy	89.5 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1
Two luminaires, plane 90°	0.99
Four luminaires	0.94

Full Beam Angle

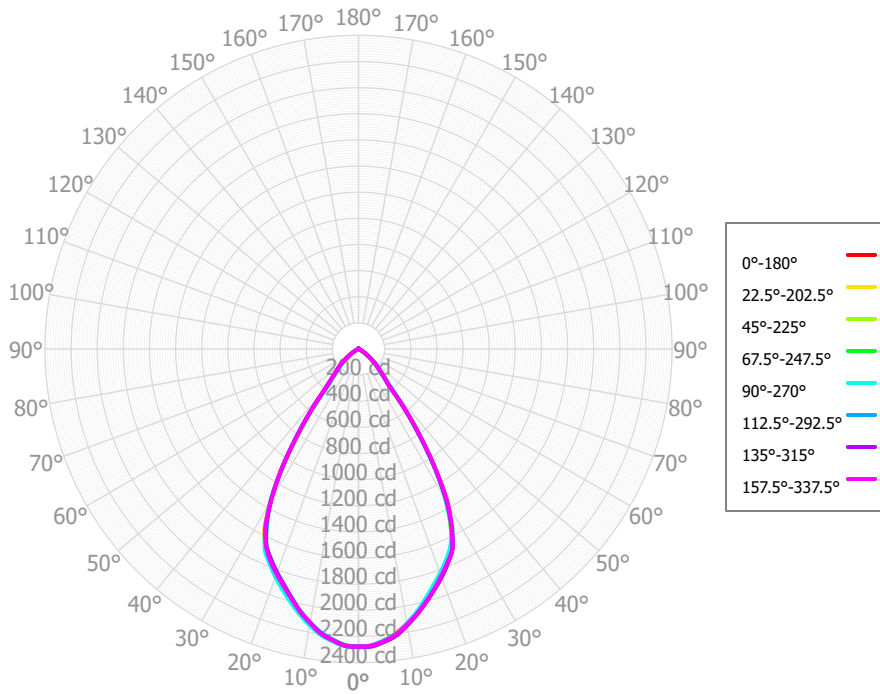
0° - 180°	64°
90° - 270°	64°

IES File Header Contents

Keyword	Value
TEST	SP-01410_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/19/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35K XW xx xx RDD3F 25L 35K XW MW NL
LUMINAIRE	Nom. 3" Round Deep Downlight A-Spec, Xtra Wide Beam
OTHER	Matte White Trim, No lens
OTHER	64 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 XW xx xx RDD3F 25L 35K XW
 MW NL

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	213.81	9.08%	90.00° - 100.00°	2.05	0.09%
10.00° - 20.00°	559.18	23.76%	100.00° - 110.00°	2.02	0.09%
20.00° - 30.00°	754.12	32.04%	100.00° - 120.00°	3.94	0.17%
30.00° - 40.00°	519.81	22.08%	120.00° - 130.00°	1.84	0.08%
40.00° - 50.00°	187.07	7.95%	130.00° - 140.00°	1.64	0.07%
50.00° - 60.00°	78.87	3.35%	140.00° - 150.00°	1.40	0.06%
60.00° - 70.00°	20.11	0.85%	150.00° - 160.00°	1.12	0.05%
70.00° - 80.00°	5.40	0.23%	160.00° - 170.00°	0.66	0.03%
80.00° - 90.00°	2.60	0.11%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	2340.97	99.45%	0.00° - 180.00°	2353.84	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°	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47	2278.47
2.50°	2275.34	2272.08	2271.94	2274.79	2269.99	2269.61	2274.49	2274.76	2273.93	2270.24	2267.28	2274.88	2277.42	2278.26	2279.05	2271.73	2275.34
5.00°	2240.58	2244.23	2241.47	2241.68	2237.13	2233.66	2237.47	2240.06	2241.60	2241.11	2236.82	2239.81	2248.88	2247.84	2251.25	2244.15	2240.58
7.50°	2194.86	2200.64	2197.55	2202.29	2200.03	2188.38	2197.26	2198.49	2202.25	2202.71	2198.36	2201.34	2208.86	2212.55	2213.21	2203.28	2194.86
10.00°	2134.29	2142.52	2139.33	2135.51	2131.27	2125.08	2130.16	2129.63	2138.03	2140.47	2140.80	2138.40	2148.32	2146.49	2148.12	2140.69	2134.29
12.50°	2066.34	2071.95	2068.22	2065.00	2060.23	2053.39	2060.73	2058.46	2070.31	2071.85	2079.16	2073.14	2081.35	2079.00	2079.22	2073.60	2066.34
15.00°	1991.84	1993.69	1988.16	1985.41	1978.63	1971.33	1976.06	1980.78	1990.24	1993.47	1999.54	1999.67	2006.76	2006.44	2004.11	2001.73	1991.84
17.50°	1917.61	1917.60	1911.59	1907.46	1898.35	1893.90	1894.54	1904.09	1910.68	1913.94	1918.67	1926.49	1932.00	1933.71	1930.52	1926.52	1917.61
20.00°	1843.52	1842.33	1836.58	1831.98	1825.36	1820.35	1823.10	1833.87	1838.89	1845.84	1846.86	1853.92	1857.12	1860.07	1858.52	1848.92	1843.52
22.50°	1770.72	1768.21	1761.54	1754.70	1749.35	1744.29	1748.15	1759.84	1764.18	1775.00	1772.06	1775.26	1778.53	1782.14	1780.56	1773.63	1770.72
25.00°	1698.37	1694.33	1686.48	1675.60	1664.68	1666.87	1666.29	1673.58	1676.64	1678.59	1677.80	1688.33	1698.10	1692.97	1698.35	1699.38	1698.37
27.50°	1542.20	1534.13	1527.11	1529.91	1536.35	1517.80	1533.78	1547.11	1553.56	1557.46	1554.85	1541.73	1537.85	1556.72	1543.59	1543.88	1542.20
30.00°	1369.95	1364.21	1358.26	1340.02	1331.89	1344.64	1337.18	1341.26	1343.94	1339.35	1336.58	1342.06	1353.18	1341.91	1356.05	1366.40	1369.95
32.50°	1111.10	1107.15	1103.07	1100.88	1101.10	1101.06	1105.50	1109.53	1110.35	1105.24	1100.84	1099.91	1100.96	1098.17	1104.45	1109.27	1111.10
35.00°	847.57	849.45	847.49	840.91	839.74	845.41	844.74	845.06	840.24	834.07	830.67	833.28	838.74	823.11	836.23	842.54	847.57
37.50°	593.25	587.53	590.72	603.33	606.80	600.34	610.07	611.52	604.04	595.98	593.04	593.23	584.68	585.42	589.96	592.24	593.25
40.00°	366.15	370.09	370.80	371.18	395.47	365.80	389.74	403.62	402.46	406.15	396.51	362.86	345.00	374.18	346.33	359.57	366.15
42.50°	295.80	296.71	297.58	295.21	291.17	297.25	293.01	297.49	293.34	288.71	280.44	277.94	280.52	273.02	284.06	292.63	295.80
45.00°	233.07	234.44	234.67	234.86	238.76	233.82	237.38	247.35	245.87	240.24	232.84	221.11	220.18	222.78	224.32	231.04	233.07
47.50°	193.68	193.65	195.12	194.87	196.89	196.77	197.81	205.57	203.37	197.16	189.72	182.09	178.72	179.88	184.39	190.68	193.68
50.00°	155.08	154.16	156.05	155.27	158.12	159.62	160.95	166.57	162.96	157.53	149.08	144.30	139.56	138.94	145.25	151.03	155.08
52.50°	117.93	116.34	117.67	118.75	122.91	122.17	124.64	129.74	126.11	121.20	113.79	109.94	106.38	105.68	109.29	112.99	117.93
55.00°	85.66	84.19	85.45	85.15	88.19	89.36	89.04	93.28	90.13	86.18	80.34	77.43	76.51	73.32	77.32	80.42	85.66
57.50°	59.20	56.76	59.14	61.94	64.03	64.56	64.13	67.39	64.93	60.98	58.17	55.68	51.96	54.21	54.37	55.88	59.20
60.00°	40.45	38.25	39.89	41.84	41.08	44.29	41.33	42.75	40.89	37.93	38.01	36.70	34.48	36.03	36.18	37.93	40.45
62.50°	27.90	24.55	25.07	28.42	28.99	29.10	29.72	29.76	29.36	27.67	27.09	26.24	24.40	25.61	24.97	26.31	27.90
65.00°	19.62	17.12	17.10	18.29	18.17	18.74	19.67	18.08	18.55	18.64	16.94	17.62	17.41	16.42	17.02	18.28	19.62
67.50°	13.53	11.81	11.80	12.67	12.95	12.03	14.00	13.38	13.46	13.43	12.84	12.38	12.61	12.33	12.21	12.49	13.53
70.00°	9.48	8.86	8.54	8.54	8.54	8.47	9.33	9.30	8.89	8.52	9.00	8.74	9.35	8.82	8.66	9.11	9.48
72.50°	6.05	6.32	5.74	5.74	6.18	6.43	6.36	6.96	6.22	5.78	6.56	7.01	6.78	6.67	5.91	6.70	6.05
75.00°	4.66	4.57	4.61	4.35	4.43	4.73	4.51	5.00	4.15	3.64	4.56	5.26	4.96	4.91	4.60	5.15	4.66
77.50°	3.61	2.96	3.64	3.80	3.65	3.14	3.94	3.71	3.39	3.54	3.81	3.49	3.34	3.74	3.88	3.80	3.61
80.00°	3.17	2.91	3.14	3.25	2.95	2.70	3.35	3.00	2.84	3.25	3.21	2.76	2.99	2.93	3.21	2.88	3.17
82.50°	2.75	2.82	2.68	2.69	2.32	2.43	2.73	2.96	2.56	2.60	2.90	2.58	2.77	2.48	2.56	2.03	2.75
85.00°	2.27	2.52	2.44	2.22	2.08	2.39	2.59	2.72	2.34	2.12	2.41	2.38	2.34	2.13	2.18	2.18	2.27
87.50°	1.91	2.28	2.19	1.76	2.10	2.33	2.67	2.32	2.18	1.84	1.74	2.17	1.93	1.85	1.84	2.26	1.91
90.00°	2.11	2.20	1.90	1.75	2.19	2.03	2.38	2.08	2.03	1.79	1.62	1.99	1.82	1.75	1.81	1.88	2.11
92.50°	2.18	2.13	1.81	1.76	2.33	1.82	1.97	1.90	1.88	1.95	1.93	1.82	1.74	1.74	1.76	1.61	2.18
95.00°	1.87	2.06	2.12	1.76	2.01	1.95	1.75	1.78	1.82	1.97	1.91	1.92	1.78	1.90	1.60	1.72	1.87
97.50°	1.73	2.02	2.24	1.74	1.58	2.01	1.56	1.69	1.79	1.91	1.74	2.02	1.81	2.10	1.55	1.78	1.73
100.00°	1.87	2.01	2.13	1.61	1.74	1.90	1.71	2.03	1.79	1.89	1.71	2.04	1.78	2.15	1.86	1.73	1.87

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	2799	2799	2799	2799	2733	2733	2733	2733	2608	2608	2608	2494	2494	2494	2390	2390	2341
	1	2659	2590	2528	2472	2600	2538	2482	2432	2440	2395	2355	2350	2315	2282	2267	2239	2193
	2	2517	2395	2294	2209	2463	2353	2261	2183	2274	2198	2133	2201	2140	2085	2134	2084	2042
	3	2379	2218	2094	1995	2330	2184	2070	1977	2120	2023	1944	2060	1979	1911	2005	1938	1899
	4	2248	2059	1921	1815	2204	2031	1903	1804	1978	1868	1781	1929	1834	1758	1883	1803	1768
	5	2126	1917	1771	1663	2085	1893	1757	1655	1849	1730	1639	1807	1704	1623	1769	1679	1648
	6	2011	1789	1639	1532	1974	1769	1628	1526	1731	1607	1514	1696	1587	1503	1663	1567	1539
	7	1904	1673	1523	1418	1871	1656	1514	1414	1624	1497	1405	1594	1481	1396	1566	1465	1440
	8	1805	1569	1420	1318	1775	1554	1413	1314	1527	1399	1308	1501	1386	1301	1477	1373	1350
	9	1714	1474	1328	1229	1686	1462	1322	1226	1438	1311	1221	1416	1300	1216	1395	1289	1268
	10	1629	1389	1245	1150	1604	1378	1240	1148	1357	1231	1144	1338	1222	1140	1319	1213	1194

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	75.3 fc	6.9 ft
6.5 ft	53.9 fc	8.2 ft
7.5 ft	40.5 fc	9.4 ft
8.0 ft	35.6 fc	10.1 ft
10.0 ft	22.8 fc	12.6 ft
12.0 ft	15.8 fc	15.1 ft
14.0 ft	11.6 fc	17.6 ft
16.0 ft	8.9 fc	20.2 ft
20.0 ft	5.7 fc	25.2 ft
24.0 ft	4.0 fc	30.2 ft
28.0 ft	2.9 fc	35.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	499625	499625	499625
45.00°	72278	72774	74043
55.00°	32748	32667	33717
65.00°	10179	8875	9429
75.00°	3952	3906	3753
85.00°	5714	6131	5234

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	16.2	17.2	16.5	17.5	17.9	16.5	17.6	16.9	17.9	18.2
	3H	16.2	17.2	16.6	17.5	17.9	16.6	17.5	17.0	17.8	18.2
	4H	16.2	17.1	16.6	17.4	17.8	16.5	17.4	16.9	17.7	18.1
	6H	16.2	16.9	16.6	17.3	17.7	16.5	17.2	16.9	17.6	18.0
	8H	16.1	16.9	16.6	17.3	17.7	16.4	17.2	16.9	17.6	18.0
	12H	16.1	16.8	16.6	17.2	17.6	16.4	17.1	16.9	17.5	17.9
4H	2H	16.0	16.9	16.5	17.3	17.7	16.4	17.3	16.8	17.6	18.0
	3H	16.2	16.9	16.6	17.3	17.7	16.5	17.2	16.9	17.6	18.0
	4H	16.1	16.8	16.6	17.2	17.7	16.5	17.1	16.9	17.5	18.0
	6H	16.1	16.6	16.6	17.1	17.6	16.4	17.0	16.9	17.4	17.9
	8H	16.1	16.6	16.6	17.1	17.5	16.4	16.9	16.9	17.4	17.8
	12H	16.1	16.5	16.6	17.0	17.5	16.4	16.8	16.9	17.3	17.8
8H	4H	16.0	16.5	16.5	17.0	17.5	16.3	16.8	16.8	17.3	17.8
	6H	16.0	16.4	16.5	16.9	17.4	16.3	16.7	16.8	17.2	17.7
	8H	16.0	16.4	16.6	16.9	17.4	16.3	16.7	16.9	17.2	17.7
	12H	16.1	16.4	16.6	16.9	17.5	16.4	16.7	16.9	17.2	17.8
12H	4H	16.0	16.4	16.5	16.9	17.4	16.3	16.7	16.8	17.2	17.7
	6H	16.0	16.3	16.5	16.8	17.4	16.3	16.6	16.8	17.1	17.7
	8H	16.0	16.3	16.5	16.8	17.4	16.3	16.6	16.8	17.1	17.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0