

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 RH3F 25L 35K XW MW NL
Nom. 3" Round Pinhole A-Spec, Xtra Wide Beam

Test Number

SP-01412_3

Test Date

9/21/2022

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	1645
Efficacy	62.54 lm/W

Luminous Dimensions

0° - 180° Size	-0.15
90° - 270° Size	-0.15
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.92
Two luminaires, plane 90°	0.92
Four luminaires	0.82

Full Beam Angle

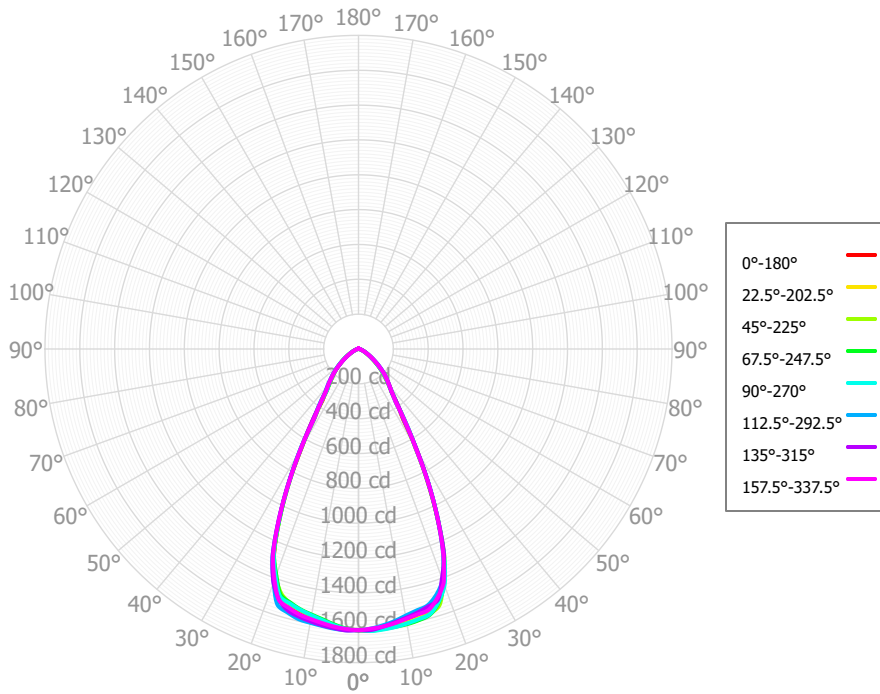
0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01412_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/21/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35K XW xx xx RH3F 25L 35K XW MW NL
LUMINAIRE	Nom. 3" Round Pinhole A-Spec, Xtra Wide Beam
OTHER	Matte White Trim, Clear Glass lens
OTHER	56 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 RH3F 25L 35K XW
MW NL

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	154.35	9.38%	90.00° - 100.00°	1.85	0.11%
10.00° - 20.00°	430.55	26.18%	100.00° - 110.00°	1.79	0.11%
20.00° - 30.00°	480.14	29.19%	100.00° - 120.00°	3.45	0.21%
30.00° - 40.00°	253.16	15.39%	120.00° - 130.00°	1.60	0.10%
40.00° - 50.00°	159.38	9.69%	130.00° - 140.00°	1.45	0.09%
50.00° - 60.00°	90.41	5.50%	140.00° - 150.00°	1.30	0.08%
60.00° - 70.00°	41.14	2.50%	150.00° - 160.00°	0.96	0.06%
70.00° - 80.00°	18.02	1.10%	160.00° - 170.00°	0.58	0.04%
80.00° - 90.00°	6.19	0.38%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1633.35	99.31%	0.00° - 180.00°	1644.74	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°	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55	1614.55
2.50°	1614.18	1613.15	1617.45	1618.80	1620.79	1616.51	1617.44	1608.63	1608.40	1609.62	1609.44	1606.58	1608.54	1606.86	1615.45	1607.48	1614.18
5.00°	1608.27	1608.17	1611.45	1613.70	1616.81	1611.88	1609.14	1600.52	1593.96	1594.62	1590.36	1588.36	1592.12	1593.11	1600.78	1599.98	1608.27
7.50°	1598.52	1602.06	1604.92	1608.79	1610.13	1603.78	1599.87	1587.57	1579.85	1573.46	1571.46	1566.35	1571.32	1576.18	1583.68	1588.35	1598.52
10.00°	1588.97	1594.60	1599.34	1604.17	1600.48	1596.15	1588.02	1574.80	1566.02	1555.00	1553.50	1548.68	1552.44	1555.05	1567.68	1573.29	1588.97
12.50°	1579.55	1583.16	1593.02	1595.08	1589.58	1588.69	1574.24	1562.15	1550.50	1537.62	1534.63	1532.24	1534.43	1538.08	1551.81	1561.38	1579.55
15.00°	1557.51	1567.88	1574.47	1580.46	1577.59	1567.47	1556.58	1539.94	1533.87	1517.73	1512.62	1508.27	1513.92	1525.42	1532.37	1551.59	1557.51
17.50°	1529.43	1515.22	1544.15	1527.74	1524.97	1542.54	1512.98	1513.27	1485.57	1497.08	1473.38	1482.79	1492.54	1481.80	1512.17	1501.24	1529.43
20.00°	1418.24	1434.07	1423.41	1436.62	1444.55	1425.18	1427.53	1410.84	1420.52	1395.42	1390.12	1380.64	1391.53	1412.76	1401.22	1429.66	1418.24
22.50°	1277.07	1276.91	1287.29	1281.28	1284.85	1291.16	1288.71	1281.80	1265.40	1276.20	1267.94	1269.11	1270.91	1268.39	1283.95	1270.97	1277.07
25.00°	1077.38	1074.34	1074.15	1074.81	1081.58	1083.46	1082.33	1083.17	1074.00	1074.36	1067.71	1068.82	1076.23	1073.94	1076.28	1076.33	1077.38
27.50°	862.46	864.69	863.39	866.52	872.44	867.47	873.30	866.20	864.83	861.31	864.68	863.83	868.87	870.50	869.58	868.04	862.46
30.00°	666.53	651.66	660.80	657.09	660.82	671.74	661.55	667.87	650.40	663.59	657.29	664.42	672.07	662.42	670.19	655.58	666.53
32.50°	474.09	501.73	488.31	506.12	512.23	477.91	501.12	472.82	498.64	466.86	490.83	471.49	476.27	507.40	489.21	507.47	474.09
35.00°	387.98	374.42	391.75	384.35	384.04	395.10	382.47	384.33	360.35	382.23	374.39	380.48	384.82	373.22	394.76	372.99	387.98
37.50°	313.20	313.92	314.05	318.90	321.34	315.28	311.77	307.46	305.60	301.02	297.27	295.70	297.75	312.86	314.23	318.41	313.20
40.00°	275.00	271.44	273.74	274.75	273.58	276.89	271.71	270.12	262.07	265.12	259.22	260.75	266.22	274.62	279.24	275.08	275.00
42.50°	238.61	236.77	236.68	238.19	239.59	239.52	237.48	234.53	232.17	230.13	227.93	227.29	235.06	244.53	245.81	243.81	238.61
45.00°	208.64	203.53	204.63	203.79	207.59	209.28	206.22	204.98	203.25	203.22	201.96	201.18	208.23	216.13	216.25	213.39	208.64
47.50°	178.64	173.28	173.36	173.31	175.90	179.02	175.75	175.55	175.31	176.17	175.62	175.13	181.41	187.76	186.22	182.89	178.64
50.00°	148.42	143.35	143.06	143.60	144.24	148.72	145.58	147.68	147.55	148.41	149.03	149.34	154.66	159.40	155.28	152.57	148.42
52.50°	119.23	118.63	116.03	117.59	119.40	120.39	120.78	120.59	123.03	121.88	124.40	124.67	128.69	132.37	127.13	125.97	119.23
55.00°	97.35	94.24	92.22	92.00	94.90	98.45	97.57	98.74	99.03	99.78	100.74	102.87	106.06	105.44	103.21	100.20	97.35
57.50°	76.90	76.16	73.78	74.73	76.55	78.40	79.57	78.13	79.65	79.64	82.70	82.74	84.97	86.11	82.91	81.42	76.90
60.00°	62.89	58.59	59.51	57.97	58.90	62.85	62.63	63.18	61.60	64.82	66.74	65.87	68.52	67.16	66.95	63.56	62.89
62.50°	49.85	47.35	48.44	47.82	48.01	49.10	50.99	49.33	50.51	51.27	53.39	51.71	53.80	55.07	53.40	50.69	49.85
65.00°	39.89	36.78	39.38	37.85	37.74	38.73	40.02	39.02	40.27	40.35	40.78	41.79	43.10	43.39	42.14	38.95	39.89
67.50°	31.12	30.85	31.97	30.70	30.93	30.15	31.89	30.19	33.09	31.33	33.50	33.03	33.75	35.11	32.87	31.37	31.12
70.00°	25.22	25.03	25.36	23.86	24.63	24.20	23.94	24.82	26.54	25.33	27.25	25.71	26.78	27.29	25.13	24.74	25.22
72.50°	20.28	19.65	20.32	19.31	20.33	19.63	19.90	20.08	21.69	20.73	21.38	20.29	21.12	21.91	19.96	20.62	20.28
75.00°	17.11	14.83	15.89	15.16	16.50	16.71	15.92	16.51	17.13	17.92	15.56	16.72	17.34	16.96	16.33	16.87	17.11
77.50°	13.74	11.77	13.11	12.93	13.98	14.05	12.96	13.65	13.19	15.04	12.96	13.52	13.75	13.51	13.31	13.90	13.74
80.00°	10.10	9.12	10.79	10.46	11.14	11.62	10.08	11.79	10.01	12.10	10.55	10.62	10.37	10.28	10.57	11.08	10.10
82.50°	7.07	7.41	8.23	7.14	7.59	8.57	7.88	9.10	8.08	8.88	8.48	7.81	7.31	7.59	7.83	8.52	7.07
85.00°	4.76	5.50	5.63	4.30	4.61	5.05	5.67	5.43	5.77	5.44	6.39	5.05	4.54	5.19	5.11	6.01	4.76
87.50°	3.06	3.22	3.92	2.66	2.60	3.06	3.41	3.12	2.96	3.45	3.84	3.23	2.93	3.37	3.28	3.57	3.06
90.00°	1.91	1.84	2.32	1.76	1.49	1.99	1.66	2.04	1.59	2.40	1.59	1.86	2.17	2.08	1.69	2.14	1.91
92.50°	1.64	1.77	2.01	2.27	1.59	1.46	1.69	1.49	1.66	1.78	1.60	1.57	1.79	1.62	1.51	1.73	1.64
95.00°	2.03	1.72	1.77	2.46	1.67	1.19	1.76	1.33	1.66	1.36	1.60	1.67	1.62	1.33	1.61	1.58	2.03
97.50°	1.95	1.70	1.69	2.16	1.75	1.41	1.92	1.41	1.61	1.38	1.53	1.69	1.64	1.27	1.48	1.64	1.95
100.00°	1.60	1.71	1.62	1.98	1.76	1.81	1.90	1.63	1.58	1.56	1.52	1.68	1.74	1.26	1.33	1.82	1.60

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	1955	1955	1955	1955	1909	1909	1909	1909	1821	1821	1821	1741	1741	1741	1668	1668	1633
	1	1850	1798	1752	1710	1807	1761	1720	1682	1692	1659	1628	1628	1602	1577	1570	1549	1517
	2	1744	1654	1579	1517	1706	1624	1556	1499	1568	1512	1464	1517	1471	1430	1469	1432	1402
	3	1645	1527	1435	1362	1610	1502	1418	1350	1456	1385	1327	1414	1354	1304	1375	1325	1298
	4	1552	1414	1314	1237	1520	1394	1301	1228	1356	1276	1212	1321	1252	1197	1288	1230	1206
	5	1466	1315	1210	1132	1437	1298	1200	1126	1267	1181	1115	1237	1162	1103	1210	1145	1123
	6	1387	1227	1120	1043	1361	1213	1112	1039	1186	1097	1031	1161	1083	1022	1138	1069	1049
	7	1314	1149	1042	967	1290	1137	1036	964	1114	1024	957	1093	1012	951	1073	1001	983
	8	1247	1079	973	900	1225	1069	968	898	1049	958	893	1031	949	889	1013	939	924
	9	1185	1016	912	842	1166	1007	908	840	990	900	837	974	892	833	959	884	870
	10	1128	959	858	790	1111	951	854	789	937	848	786	923	841	783	910	835	822

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	53.4 fc	5.9 ft
6.5 ft	38.2 fc	7.0 ft
7.5 ft	28.7 fc	8.0 ft
8.0 ft	25.2 fc	8.6 ft
10.0 ft	16.1 fc	10.7 ft
12.0 ft	11.2 fc	12.8 ft
14.0 ft	8.2 fc	15.0 ft
16.0 ft	6.3 fc	17.1 ft
20.0 ft	4.0 fc	21.4 ft
24.0 ft	2.8 fc	25.7 ft
28.0 ft	2.1 fc	30.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	983446	983446	983446
45.00°	179723	176274	178821
55.00°	103379	97930	100776
65.00°	57496	56762	54391
75.00°	40265	37386	38825
85.00°	33253	39332	32249

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	23.1	24.3	23.5	24.6	24.9	23.3	24.5	23.7	24.8	25.1
	3H	23.8	24.8	24.1	25.1	25.5	23.9	25.0	24.3	25.3	25.7
	4H	24.0	24.9	24.4	25.3	25.7	24.2	25.1	24.6	25.5	25.9
	6H	24.1	25.0	24.6	25.4	25.8	24.3	25.2	24.8	25.6	26.0
	8H	24.2	25.0	24.6	25.4	25.8	24.4	25.2	24.8	25.6	26.0
	12H	24.2	25.0	24.7	25.4	25.8	24.4	25.2	24.9	25.6	26.0
4H	2H	23.3	24.2	23.7	24.6	25.0	23.5	24.4	23.9	24.8	25.2
	3H	24.1	24.9	24.5	25.3	25.7	24.2	25.0	24.7	25.4	25.9
	4H	24.4	25.1	24.8	25.5	26.0	24.5	25.2	25.0	25.7	26.1
	6H	24.7	25.3	25.1	25.7	26.2	24.8	25.4	25.3	25.9	26.4
	8H	24.7	25.3	25.2	25.8	26.2	24.9	25.5	25.4	25.9	26.4
	12H	24.8	25.3	25.3	25.8	26.3	25.0	25.5	25.5	26.0	26.5
8H	4H	24.4	25.0	24.9	25.5	25.9	24.6	25.1	25.1	25.6	26.1
	6H	24.8	25.2	25.3	25.8	26.3	25.0	25.4	25.5	25.9	26.4
	8H	25.0	25.4	25.5	25.9	26.4	25.2	25.5	25.7	26.1	26.6
	12H	25.1	25.5	25.6	26.0	26.6	25.3	25.6	25.8	26.1	26.7
12H	4H	24.4	24.9	24.9	25.4	25.9	24.6	25.1	25.1	25.6	26.0
	6H	24.8	25.2	25.4	25.7	26.3	25.0	25.4	25.5	25.9	26.4
	8H	25.0	25.4	25.5	25.9	26.5	25.2	25.6	25.7	26.1	26.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0