

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01406_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
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Lumen Output

Output Lumens	1828
Efficacy	69.49 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.99
Two luminaires, plane 90°	0.98
Four luminaires	0.92

Full Beam Angle

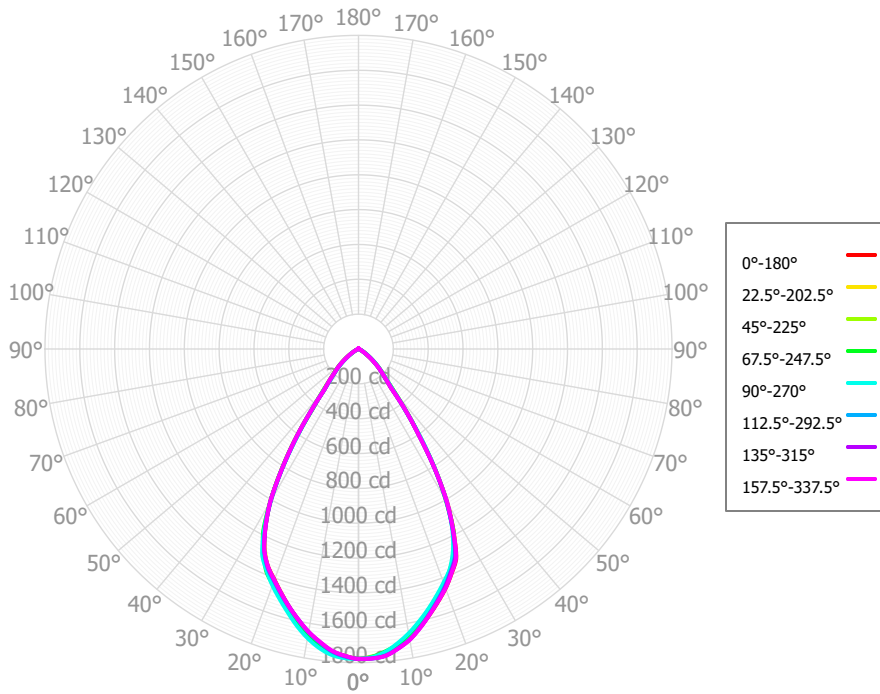
0° - 180°	63°
90° - 270°	63°

IES File Header Contents

Keyword	Value
TEST	SP-01406_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/19/2022
ISSUE DATE	10/25/2022
LUMCAT	SR3Mx 25L 35HK XW xx xx RDD3F 25L 35HK XW MW GL
LUMINAIRE	Nom. 3" Round Deep Downlight A-Spec, Xtra Wide Beam
OTHER	Matte White Trim, Clear Glass lens
OTHER	63 Degree Beam Angle
LAMP	N/A, 19mm LES
LAMPCAT	N/A, Min. 90 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	90

SR3Mx 25L 35HK XW xx xx RDD3F 25L 35HK
 XW MW GL

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	166.88	9.13%	90.00° - 100.00°	2.07	0.11%
10.00° - 20.00°	436.38	23.88%	100.00° - 110.00°	2.02	0.11%
20.00° - 30.00°	579.33	31.70%	100.00° - 120.00°	3.94	0.22%
30.00° - 40.00°	388.46	21.26%	120.00° - 130.00°	1.77	0.10%
40.00° - 50.00°	154.46	8.45%	130.00° - 140.00°	1.67	0.09%
50.00° - 60.00°	64.85	3.55%	140.00° - 150.00°	1.39	0.08%
60.00° - 70.00°	17.25	0.94%	150.00° - 160.00°	1.08	0.06%
70.00° - 80.00°	4.67	0.26%	160.00° - 170.00°	0.64	0.03%
80.00° - 90.00°	2.48	0.14%	170.00° - 180.00°	0.22	0.01%
0.00° - 90.00°	1814.76	99.30%	0.00° - 180.00°	1827.54	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°	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12	1779.12
2.50°	1775.43	1777.18	1767.14	1769.78	1771.00	1768.57	1764.87	1763.34	1764.15	1768.85	1766.44	1768.74	1776.98	1779.17	1777.92	1778.85	1775.43
5.00°	1766.22	1758.61	1749.42	1743.92	1747.15	1744.59	1740.63	1738.80	1742.93	1742.75	1747.13	1746.72	1763.41	1767.08	1767.79	1769.17	1766.22
7.50°	1732.16	1728.73	1716.29	1711.50	1705.45	1700.71	1696.85	1695.69	1701.28	1705.96	1709.55	1718.86	1731.26	1733.82	1735.54	1735.87	1732.16
10.00°	1691.86	1683.43	1675.37	1661.42	1657.81	1652.33	1648.78	1649.11	1655.19	1656.29	1663.44	1668.61	1685.54	1691.17	1694.61	1695.70	1691.86
12.50°	1637.02	1631.40	1622.47	1608.90	1602.92	1595.34	1591.52	1592.72	1594.79	1598.25	1602.98	1611.50	1629.66	1634.80	1638.56	1639.08	1637.02
15.00°	1578.87	1570.71	1563.89	1550.09	1545.92	1537.19	1533.33	1534.74	1533.80	1536.72	1542.93	1553.42	1566.79	1572.56	1577.00	1577.87	1578.87
17.50°	1520.56	1511.96	1505.63	1491.72	1486.50	1476.94	1473.21	1472.62	1470.96	1473.07	1483.54	1495.07	1505.39	1511.25	1516.00	1519.42	1520.56
20.00°	1462.22	1455.55	1447.53	1434.43	1427.49	1418.45	1414.26	1412.10	1409.95	1414.47	1424.72	1438.62	1444.93	1450.31	1455.20	1461.67	1462.22
22.50°	1395.74	1388.71	1380.82	1370.88	1368.93	1363.01	1357.60	1355.62	1354.14	1358.77	1366.77	1382.68	1378.25	1382.05	1387.29	1394.51	1395.74
25.00°	1327.66	1309.60	1310.43	1293.27	1282.57	1282.29	1278.34	1279.71	1280.01	1271.97	1283.06	1289.39	1307.66	1311.08	1317.09	1325.18	1327.66
27.50°	1180.70	1184.64	1173.78	1183.80	1167.01	1160.45	1157.99	1158.16	1157.27	1167.92	1162.21	1186.89	1175.33	1172.23	1175.14	1179.57	1180.70
30.00°	1019.90	1008.85	1010.73	1005.10	1012.58	1011.08	1011.51	1014.19	1015.22	1010.66	1012.99	1012.67	1006.65	1009.10	1011.73	1017.08	1019.90
32.50°	817.49	817.61	819.55	818.13	819.65	819.62	819.00	821.05	823.80	825.72	824.06	822.38	815.85	814.24	812.52	814.58	817.49
35.00°	608.21	610.22	617.55	614.36	626.94	629.09	629.24	631.21	634.59	634.65	634.93	624.96	612.83	608.87	603.04	604.09	608.21
37.50°	443.92	443.11	454.57	439.25	434.43	439.95	444.01	448.37	450.67	440.60	445.52	426.02	450.19	445.52	440.30	441.63	443.92
40.00°	286.18	316.91	305.50	318.68	307.41	304.19	306.73	307.19	304.82	326.49	313.31	324.63	309.16	295.01	289.85	287.76	286.18
42.50°	230.56	234.46	237.39	228.04	239.79	242.92	246.34	248.69	246.49	250.04	252.11	241.98	235.12	228.79	227.36	229.61	230.56
45.00°	187.89	193.91	196.01	192.58	191.15	194.30	197.16	198.86	196.50	203.46	203.60	200.24	194.65	187.30	185.97	187.62	187.89
47.50°	151.42	156.51	159.23	157.56	158.73	162.57	164.89	165.13	164.38	170.01	170.39	165.95	157.50	151.89	149.98	151.03	151.42
50.00°	115.67	122.04	123.91	123.33	127.55	131.37	133.00	132.66	133.17	137.08	136.92	130.97	121.95	118.10	115.22	115.25	115.67
52.50°	87.76	91.60	94.62	92.76	97.35	100.86	101.65	102.46	103.81	104.38	103.17	95.88	92.32	89.89	86.57	86.80	87.76
55.00°	60.63	64.70	67.09	68.15	71.43	74.42	75.01	75.37	76.97	78.46	74.78	71.07	65.36	63.10	59.19	59.37	60.63
57.50°	44.14	44.98	48.52	47.65	48.84	52.84	54.84	53.51	55.02	55.24	52.30	47.72	46.32	45.35	42.85	43.07	44.14
60.00°	28.61	31.21	32.46	33.63	33.59	36.30	38.30	35.74	37.11	39.22	35.30	34.21	30.62	29.73	28.68	28.12	28.61
62.50°	21.46	21.42	22.92	22.50	23.74	25.62	26.48	24.67	26.58	25.86	24.01	22.02	20.89	21.32	20.80	19.94	21.46
65.00°	14.93	14.83	15.05	15.64	16.62	17.53	17.58	16.26	17.85	17.67	16.18	15.92	13.60	14.44	14.03	12.45	14.93
67.50°	10.95	10.44	10.50	10.63	11.45	12.31	12.23	11.94	12.20	11.31	11.74	10.53	9.30	10.68	10.63	9.47	10.95
70.00°	7.11	7.70	6.72	8.26	8.17	8.40	8.35	8.29	7.78	7.81	8.26	7.70	6.13	7.55	7.77	6.92	7.11
72.50°	5.05	5.48	5.00	6.09	6.18	5.86	6.21	5.63	5.42	5.26	5.70	5.13	4.58	5.43	5.33	5.42	5.05
75.00°	3.08	3.63	3.74	4.19	4.64	4.05	4.61	3.86	3.66	4.05	4.17	4.02	3.59	3.49	2.97	3.99	3.08
77.50°	3.10	2.88	3.13	2.97	3.37	2.97	3.63	3.34	2.84	3.24	3.57	3.04	3.06	3.35	2.78	3.37	3.10
80.00°	3.19	2.88	2.65	2.61	2.64	2.51	2.95	2.96	2.42	2.93	3.03	2.64	2.68	3.49	2.88	2.80	3.19
82.50°	2.58	2.62	2.40	2.18	2.22	2.61	2.58	2.76	2.58	2.76	2.56	2.27	2.44	3.06	2.41	2.14	2.58
85.00°	1.96	2.18	2.19	1.65	2.15	2.58	2.35	2.50	2.47	2.43	2.26	2.00	2.24	2.54	1.88	1.48	1.96
87.50°	1.92	2.07	2.02	1.50	2.29	2.42	2.25	2.17	1.98	2.06	2.11	1.72	2.00	2.23	1.95	1.76	1.92
90.00°	1.89	2.16	1.86	1.79	2.13	2.29	2.08	2.04	1.67	1.98	1.95	1.81	1.74	1.96	2.08	2.07	1.89
92.50°	2.16	1.94	2.04	1.84	1.81	2.18	1.84	2.17	1.62	1.97	1.80	1.91	1.69	1.93	2.05	1.92	2.16
95.00°	2.40	1.53	2.28	1.63	1.78	2.05	1.75	2.13	1.66	1.97	1.75	1.90	1.70	1.93	2.02	1.75	2.40
97.50°	1.81	1.58	2.08	1.57	1.92	1.89	1.80	1.91	1.84	1.96	1.79	1.88	1.78	2.02	1.96	1.86	1.81
100.00°	1.25	1.87	1.83	1.67	1.98	1.88	1.85	1.75	1.96	1.94	1.83	1.82	1.89	2.11	1.91	1.97	1.25

SR3Mx 25L 35HK XW xx xx RDD3F 25L 35HK
 XW MW GL

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	2173	2173	2173	2173	2121	2121	2121	2121	2024	2024	2024	1935	1935	1935	1853	1853	1853	1815
	1	2063	2009	1961	1917	2017	1968	1925	1886	1892	1857	1825	1821	1794	1768	1757	1735	1715	1699
	2	1952	1857	1778	1712	1910	1824	1753	1692	1762	1703	1653	1705	1657	1615	1653	1614	1579	1581
	3	1845	1719	1622	1545	1806	1693	1603	1531	1642	1567	1505	1595	1532	1480	1552	1500	1455	1470
	4	1743	1596	1488	1406	1708	1574	1474	1396	1532	1446	1378	1493	1420	1360	1457	1395	1343	1368
	5	1648	1485	1371	1287	1616	1466	1360	1281	1432	1339	1268	1399	1319	1255	1369	1299	1243	1275
	6	1558	1385	1269	1186	1530	1370	1261	1181	1340	1244	1172	1313	1228	1163	1287	1212	1154	1190
	7	1476	1296	1179	1097	1450	1283	1172	1094	1257	1159	1087	1234	1146	1080	1212	1133	1073	1114
	8	1399	1215	1099	1020	1375	1204	1094	1017	1182	1083	1012	1162	1072	1007	1143	1062	1002	1044
	9	1328	1142	1028	951	1306	1132	1023	949	1114	1014	945	1096	1006	941	1079	997	937	981
	10	1263	1076	964	890	1243	1067	960	888	1051	953	885	1036	946	882	1021	939	879	924

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	58.8 fc	6.8 ft
6.5 ft	42.1 fc	8.0 ft
7.5 ft	31.6 fc	9.2 ft
8.0 ft	27.8 fc	9.9 ft
10.0 ft	17.8 fc	12.3 ft
12.0 ft	12.4 fc	14.8 ft
14.0 ft	9.1 fc	17.2 ft
16.0 ft	6.9 fc	19.7 ft
20.0 ft	4.4 fc	24.6 ft
24.0 ft	3.1 fc	29.6 ft
28.0 ft	2.3 fc	34.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	390126	390126	390126
45.00°	58268	60785	59278
55.00°	23179	25650	27307
65.00°	7747	7807	8623
75.00°	2610	3165	3927
85.00°	4923	5511	5414

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	15.2	16.3	15.6	16.6	17.0	16.1	17.2	16.5	17.5	17.8
	3H	15.3	16.3	15.7	16.6	17.0	16.2	17.1	16.6	17.4	17.8
	4H	15.3	16.2	15.7	16.5	16.9	16.1	17.0	16.6	17.4	17.8
	6H	15.3	16.1	15.7	16.4	16.9	16.1	16.9	16.5	17.3	17.7
	8H	15.3	16.0	15.7	16.4	16.8	16.1	16.8	16.5	17.2	17.6
	12H	15.3	16.0	15.7	16.4	16.8	16.1	16.8	16.5	17.2	17.6
4H	2H	15.2	16.0	15.6	16.4	16.8	16.0	16.9	16.5	17.3	17.7
	3H	15.3	16.0	15.7	16.4	16.9	16.2	16.9	16.6	17.3	17.7
	4H	15.3	15.9	15.7	16.3	16.8	16.1	16.7	16.6	17.2	17.7
	6H	15.3	15.8	15.8	16.3	16.8	16.1	16.6	16.6	17.1	17.6
	8H	15.3	15.8	15.8	16.3	16.8	16.1	16.6	16.6	17.0	17.5
	12H	15.3	15.8	15.8	16.3	16.8	16.1	16.5	16.6	17.0	17.5
8H	4H	15.2	15.7	15.7	16.1	16.6	16.0	16.5	16.5	17.0	17.5
	6H	15.2	15.6	15.7	16.1	16.6	16.0	16.4	16.5	16.9	17.4
	8H	15.3	15.6	15.8	16.2	16.7	16.0	16.4	16.6	16.9	17.4
	12H	15.3	15.7	15.9	16.2	16.8	16.1	16.4	16.6	16.9	17.5
12H	4H	15.1	15.6	15.6	16.1	16.5	16.0	16.4	16.5	16.9	17.4
	6H	15.2	15.5	15.7	16.0	16.6	16.0	16.3	16.5	16.8	17.4
	8H	15.3	15.6	15.8	16.1	16.7	16.0	16.3	16.5	16.8	17.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0