

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 10L 35K XN xx xx RDA3F 10L 35K XN MW NL (nadir)
Nom. 3" Round Deep Adjustable A-Spec, Xtra Narrow Beam

Test Number

SP-01425_4

Test Date

10/10/2022

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

Summary of Results

Power

Input Watts	21.1 W
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Lumen Output

Output Lumens	1402
Efficacy	66.43 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.26
Two luminaires, plane 90°	0.27
Four luminaires	0.28

Full Beam Angle

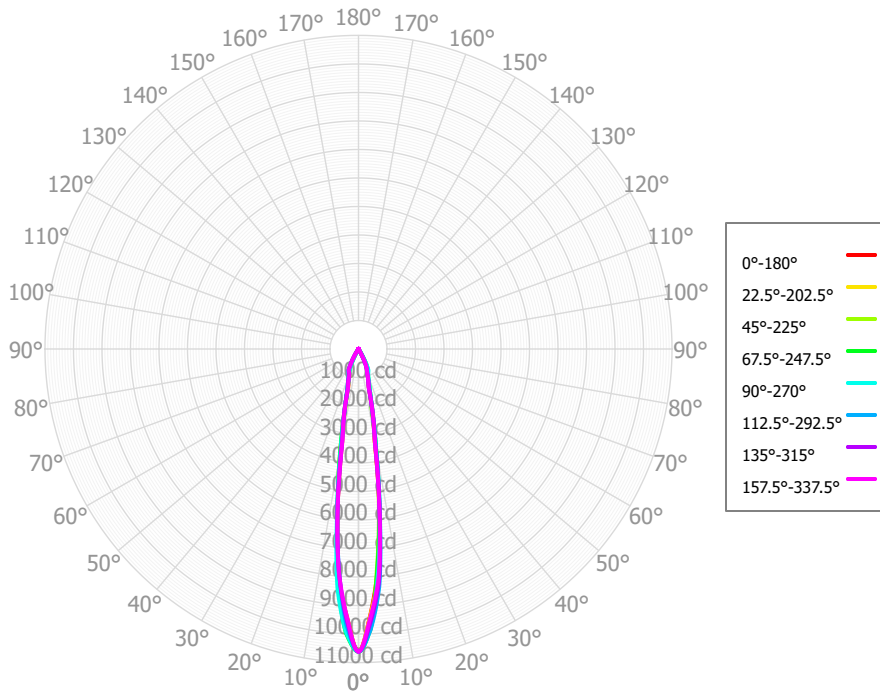
0° - 180°	16°
90° - 270°	16°

IES File Header Contents

Keyword	Value
TEST	SP-01425_4
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/10/2022
ISSUEDATE	10/25/2022
LUMCAT	SR3Mx 10L 35K XN xx xx RDA3F 10L 35K XN MW NL (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Xtra Narrow Beam
OTHER	Matte White Trim, No Lens
OTHER	15.8 Degree Beam Angle
LAMP	N/A, 9mm LES
LAMPCAT	N/A, Min. 80 CRI
OTHER	Reference project SL167
OTHER	No thermal protection required for 7L, 10L, and 15L (non-IC)
OTHER	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 10L 35K XN xx xx RDA3F 10L 35K XN
 MW NL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	604.77	43.15%	90.00° - 100.00°	1.90	0.14%
10.00° - 20.00°	460.01	32.82%	100.00° - 110.00°	1.81	0.13%
20.00° - 30.00°	281.59	20.09%	100.00° - 120.00°	3.64	0.26%
30.00° - 40.00°	28.91	2.06%	120.00° - 130.00°	2.04	0.15%
40.00° - 50.00°	2.61	0.19%	130.00° - 140.00°	2.47	0.18%
50.00° - 60.00°	2.41	0.17%	140.00° - 150.00°	2.34	0.17%
60.00° - 70.00°	2.62	0.19%	150.00° - 160.00°	1.31	0.09%
70.00° - 80.00°	2.14	0.15%	160.00° - 170.00°	0.65	0.05%
80.00° - 90.00°	1.95	0.14%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1387.01	98.96%	0.00° - 180.00°	1401.57	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°	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78	10616.78
2.50°	9371.11	9385.62	9752.75	9814.12	9808.60	9694.69	9512.09	9403.99	9395.64	9433.46	9920.12	9989.58	9951.03	9834.61	9606.14	9446.97	9371.11
5.00°	7772.27	7964.40	7565.30	7654.54	7886.08	7830.19	7871.31	7883.50	8030.88	8065.60	8052.29	8230.76	8438.20	8361.15	8216.30	8077.46	7772.27
7.50°	5577.61	5602.74	5470.79	5553.35	5709.16	5664.93	5619.62	5592.07	5591.42	5611.14	5549.30	5608.73	5737.17	5692.75	5636.43	5603.08	5577.61
10.00°	3273.92	3296.61	3558.85	3524.79	3425.12	3385.27	3283.93	3247.66	3452.53	3242.15	3735.39	3711.64	3579.32	3530.23	3350.98	3328.73	3273.92
12.50°	2245.83	2330.73	2124.65	2169.24	2278.94	2274.64	2310.97	2300.20	2345.44	2282.52	2167.11	2249.10	2343.14	2321.96	2277.62	2295.05	2245.83
15.00°	1406.05	1411.46	1540.65	1567.37	1561.87	1552.65	1486.85	1413.81	1445.20	1380.01	1503.40	1508.53	1475.57	1449.06	1381.23	1386.30	1406.05
17.50°	1128.81	1153.44	1116.63	1168.71	1219.32	1225.06	1208.21	1166.68	1160.07	1137.97	1125.92	1154.51	1168.17	1141.04	1120.26	1127.26	1128.81
20.00°	915.87	910.05	947.26	975.06	1002.56	1010.96	972.14	931.61	933.67	914.83	959.62	961.69	938.56	903.36	888.81	892.15	915.87
22.50°	771.78	811.27	803.00	841.51	895.48	907.08	889.98	868.56	862.82	851.64	850.94	846.93	816.69	773.43	748.87	760.84	771.78
25.00°	633.70	689.94	694.60	763.40	820.31	830.93	815.30	799.94	749.37	758.36	650.89	617.25	608.76	568.60	566.62	594.07	633.70
27.50°	352.80	393.81	504.79	558.40	582.22	600.97	589.29	566.64	536.55	466.79	429.66	338.27	293.65	260.76	270.00	296.59	352.80
30.00°	63.73	129.85	208.91	248.01	303.57	337.56	359.68	336.76	330.32	203.58	231.76	168.97	97.59	71.35	51.71	61.60	63.73
32.50°	30.24	62.94	39.00	83.79	151.18	173.14	182.87	165.59	137.67	95.98	38.49	41.86	37.01	28.40	22.99	29.14	30.24
35.00°	5.11	6.70	16.73	28.80	25.91	26.55	10.31	8.12	10.89	7.16	7.25	8.04	5.84	5.20	3.24	4.98	5.11
37.50°	4.08	5.36	4.84	6.03	6.38	6.46	6.95	5.85	7.20	5.97	3.14	5.62	4.83	4.29	2.98	4.69	4.08
40.00°	3.20	4.18	4.05	5.23	5.62	4.70	3.74	3.82	4.75	4.79	3.12	4.65	4.02	3.92	2.78	4.29	3.20
42.50°	3.45	3.72	3.58	4.37	4.53	4.00	3.53	3.67	4.39	3.68	3.65	4.11	3.40	4.11	2.71	3.59	3.45
45.00°	3.64	3.36	3.41	3.47	3.38	3.42	3.34	3.52	3.83	2.89	3.25	3.36	3.09	3.61	2.55	3.08	3.64
47.50°	2.84	3.43	3.21	2.97	3.26	3.08	3.48	3.34	2.95	3.15	2.75	2.56	3.02	2.48	2.22	2.99	2.84
50.00°	2.10	3.40	3.00	2.69	3.25	2.76	3.60	3.11	2.57	3.28	2.50	2.77	2.80	1.97	2.09	2.87	2.10
52.50°	2.23	3.10	2.80	2.96	3.06	2.72	3.53	2.58	2.86	2.96	2.27	3.20	2.45	1.99	2.27	2.67	2.23
55.00°	2.37	2.78	2.63	3.50	2.85	2.70	3.37	2.21	2.91	2.77	2.68	2.75	2.20	2.15	2.45	2.49	2.37
57.50°	2.68	2.42	2.65	3.35	2.81	2.57	2.61	2.59	2.65	2.87	3.11	2.14	2.01	2.42	2.62	2.38	2.68
60.00°	3.00	2.23	2.82	2.87	2.78	2.42	2.00	2.89	2.52	2.89	3.69	2.43	1.99	2.48	2.74	2.38	3.00
62.50°	3.38	2.44	2.87	2.73	2.94	2.26	2.27	2.90	2.53	2.68	4.25	2.85	2.07	2.41	2.81	2.55	3.38
65.00°	3.66	2.56	2.84	2.73	3.10	2.11	2.52	2.94	2.60	2.49	3.38	2.38	2.05	2.39	2.77	2.63	3.66
67.50°	3.27	2.49	2.71	2.90	2.72	2.46	2.60	3.04	2.73	2.33	2.52	1.80	1.96	2.40	2.63	2.55	3.27
70.00°	2.89	2.34	2.53	3.14	2.34	2.79	2.58	2.94	2.55	2.18	2.26	1.86	2.07	2.08	2.60	2.35	2.89
72.50°	2.55	2.04	2.24	2.54	1.98	2.65	2.14	2.26	2.09	2.03	1.99	1.97	2.28	1.56	2.70	1.98	2.55
75.00°	2.26	1.90	1.90	1.68	1.63	2.49	1.80	1.80	1.99	1.97	1.66	1.87	2.29	1.74	2.30	1.71	2.26
77.50°	2.20	2.02	1.80	1.48	1.52	1.99	1.79	1.90	2.18	2.06	1.37	1.75	2.21	2.26	1.44	1.55	2.20
80.00°	2.08	2.01	1.83	1.46	1.42	1.55	1.80	2.01	2.26	2.11	1.58	1.47	1.97	2.23	1.23	1.72	2.08
82.50°	1.75	1.76	2.12	1.50	1.47	1.62	1.87	2.13	2.26	2.09	1.77	1.19	1.67	1.94	1.59	2.24	1.75
85.00°	1.51	1.70	2.54	1.55	1.51	1.70	1.87	2.23	2.08	1.94	1.78	1.37	1.72	1.60	1.58	2.46	1.51
87.50°	1.54	1.90	2.34	1.70	1.52	1.82	1.72	2.30	1.78	1.61	1.79	1.55	1.91	1.24	1.29	2.38	1.54
90.00°	1.71	1.84	1.91	1.86	1.60	1.90	1.65	2.21	1.61	1.54	1.80	1.29	1.84	1.45	1.33	2.11	1.71
92.50°	2.24	1.46	1.82	1.87	2.18	1.76	1.79	1.84	1.52	1.78	1.78	1.06	1.70	1.86	1.60	1.67	2.24
95.00°	2.42	1.41	1.83	1.86	2.58	1.62	1.78	1.67	1.47	1.87	1.56	1.40	1.72	1.98	1.90	1.46	2.42
97.50°	1.74	1.75	1.86	1.95	1.84	1.49	1.45	1.82	1.43	1.81	1.40	1.72	1.79	2.01	2.21	1.43	1.74
100.00°	1.41	1.87	1.90	2.06	1.27	1.43	1.34	1.88	1.42	1.75	1.49	1.70	1.63	1.84	2.10	1.59	1.41

SR3Mx 10L 35K XN xx xx RDA3F 10L 35K XN
 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%	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	1665	1665	1665	1665	1625	1625	1625	1625	1549	1549	1549	1480	1480	1480	1417	1417	1387
	1	1609	1580	1553	1529	1574	1549	1525	1504	1490	1472	1455	1437	1423	1410	1387	1377	1349
	2	1558	1508	1467	1432	1528	1484	1447	1416	1438	1408	1383	1396	1372	1352	1356	1338	1312
	3	1510	1447	1397	1358	1484	1427	1382	1346	1391	1354	1324	1357	1327	1302	1326	1302	1277
	4	1466	1393	1339	1298	1443	1377	1328	1290	1348	1306	1274	1320	1286	1258	1295	1267	1243
	5	1425	1345	1289	1248	1405	1332	1281	1242	1308	1264	1230	1286	1249	1219	1265	1234	1212
	6	1386	1302	1245	1205	1368	1292	1239	1201	1272	1226	1192	1253	1214	1184	1236	1202	1182
	7	1350	1263	1207	1167	1334	1254	1201	1164	1238	1191	1157	1222	1182	1151	1208	1172	1153
	8	1316	1227	1172	1133	1302	1220	1168	1131	1206	1159	1126	1193	1152	1121	1181	1144	1126
	9	1284	1195	1140	1103	1271	1188	1136	1101	1177	1130	1097	1165	1123	1093	1155	1117	1101
	10	1254	1164	1111	1075	1243	1159	1108	1074	1149	1103	1071	1139	1097	1068	1130	1092	1077

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	351.0 fc	1.5 ft
6.5 ft	251.3 fc	1.8 ft
7.5 ft	188.7 fc	2.1 ft
8.0 ft	165.9 fc	2.2 ft
10.0 ft	106.2 fc	2.7 ft
12.0 ft	73.7 fc	3.3 ft
14.0 ft	54.2 fc	3.8 ft
16.0 ft	41.5 fc	4.4 ft
20.0 ft	26.5 fc	5.5 ft
24.0 ft	18.4 fc	6.6 ft
28.0 ft	13.5 fc	7.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2328054	2328054	2328054
45.00°	1130	1056	1049
55.00°	904	1004	1089
65.00°	1897	1471	1609
75.00°	1915	1606	1378
85.00°	3790	6382	3802

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	-3.5	-2.7	-3.2	-2.3	-2.0	-3.7	-2.9	-3.4	-2.5	-2.2
	3H	0.6	1.3	1.0	1.7	2.1	-0.4	0.3	0.0	0.7	1.1
	4H	1.9	2.6	2.3	3.0	3.4	1.1	1.9	1.6	2.2	2.7
	6H	3.4	4.1	3.9	4.5	4.9	2.6	3.2	3.0	3.6	4.1
	8H	4.2	4.8	4.7	5.2	5.7	3.3	3.9	3.8	4.3	4.8
	12H	5.0	5.6	5.5	6.0	6.4	4.2	4.8	4.7	5.2	5.7
4H	2H	-2.2	-1.5	-1.8	-1.1	-0.7	-2.1	-1.4	-1.7	-1.0	-0.6
	3H	1.6	2.2	2.0	2.6	3.0	1.0	1.6	1.5	2.0	2.5
	4H	2.9	3.4	3.4	3.9	4.4	2.7	3.2	3.1	3.6	4.1
	6H	4.6	5.1	5.1	5.6	6.1	4.1	4.6	4.6	5.0	5.5
	8H	5.6	6.0	6.1	6.5	7.0	4.9	5.3	5.4	5.7	6.2
	12H	6.6	6.9	7.1	7.4	7.9	5.9	6.2	6.4	6.7	7.2
8H	4H	3.4	3.8	3.9	4.3	4.8	3.1	3.5	3.6	4.0	4.5
	6H	5.3	5.7	5.9	6.2	6.7	4.8	5.1	5.3	5.6	6.2
	8H	6.6	6.9	7.1	7.4	7.9	5.7	6.0	6.3	6.5	7.1
	12H	7.9	8.2	8.5	8.7	9.3	7.0	7.3	7.6	7.8	8.4
12H	4H	3.5	3.8	4.0	4.3	4.9	3.3	3.6	3.8	4.1	4.6
	6H	5.6	5.9	6.1	6.4	6.9	5.1	5.4	5.6	5.9	6.4
	8H	7.0	7.2	7.5	7.7	8.3	6.1	6.4	6.7	6.9	7.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0