

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 GL (nadir)
Nom. 3" Round Deep Adjustable A-Spec, Xtra Narrow Beam

Test Number

SP-01425_3

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	1303
Efficacy	61.76 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.27
Two luminaires, plane 90°	0.27
Four luminaires	0.29

Full Beam Angle

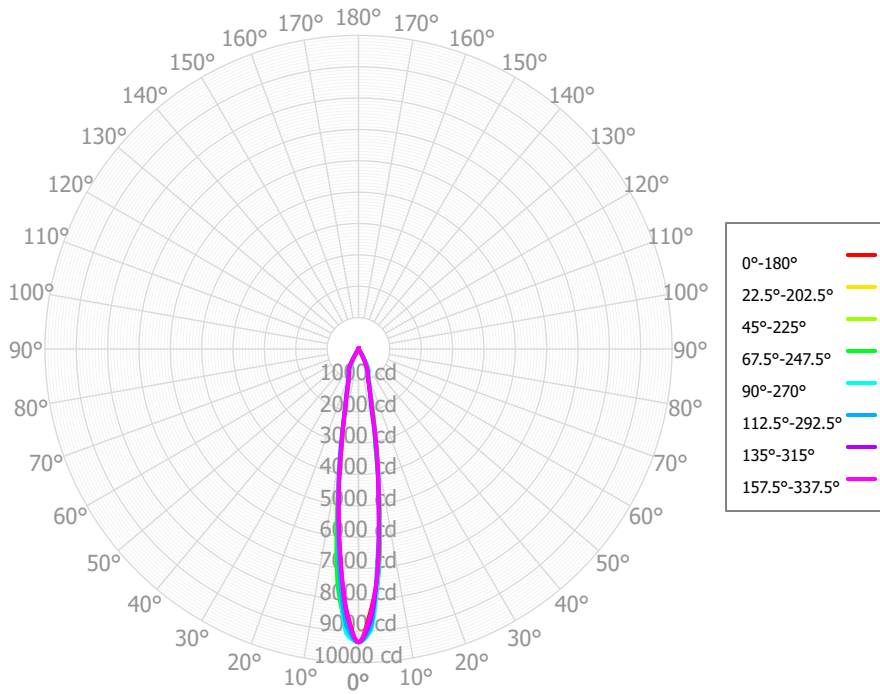
0° - 180°	16°
90° - 270°	16°

IES File Header Contents

Keyword	Value
TEST	SP-01425_3
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 GL (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Xtra Narrow Beam
OTHER	Matte White Trim, Clear Glass Lens
OTHER	16 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 GL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	542.95	41.66%	90.00° - 100.00°	1.84	0.14%
10.00° - 20.00°	425.37	32.64%	100.00° - 110.00°	1.81	0.14%
20.00° - 30.00°	273.16	20.96%	100.00° - 120.00°	3.68	0.28%
30.00° - 40.00°	31.05	2.38%	120.00° - 130.00°	1.86	0.14%
40.00° - 50.00°	3.26	0.25%	130.00° - 140.00°	2.43	0.19%
50.00° - 60.00°	2.89	0.22%	140.00° - 150.00°	2.59	0.20%
60.00° - 70.00°	2.86	0.22%	150.00° - 160.00°	3.37	0.26%
70.00° - 80.00°	2.19	0.17%	160.00° - 170.00°	1.59	0.12%
80.00° - 90.00°	1.89	0.15%	170.00° - 180.00°	0.19	0.01%
0.00° - 90.00°	1285.63	98.65%	0.00° - 180.00°	1303.19	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°	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04	9351.04
2.50°	8434.86	8567.79	8634.48	8720.47	9000.14	8853.94	8502.11	8438.80	8413.07	8605.06	8768.47	8858.19	9068.12	8890.92	8687.16	8552.27	8434.86
5.00°	7163.48	7247.77	7232.33	7298.04	7210.21	7025.35	6631.69	6658.87	6901.47	7062.20	7521.72	7596.18	7000.59	6858.20	7060.27	7056.73	7163.48
7.50°	5024.56	5087.33	5136.14	5172.15	5052.99	4923.12	4832.15	4884.17	5007.82	5082.65	5156.49	5191.30	5012.55	4901.21	4908.16	4942.92	5024.56
10.00°	3288.82	3338.71	3057.35	3061.20	3493.72	3414.32	3146.97	3115.60	2995.78	2964.62	3047.73	3055.03	3200.03	3167.57	3339.81	3370.00	3288.82
12.50°	2166.35	2205.67	2195.76	2206.92	2041.28	1969.06	1963.29	1961.83	2038.94	1994.48	2088.20	2099.24	1866.29	1823.89	1938.50	2032.54	2166.35
15.00°	1407.93	1432.40	1381.35	1400.53	1534.65	1519.96	1434.87	1388.55	1322.54	1286.96	1299.52	1309.99	1373.98	1357.33	1389.92	1422.00	1407.93
17.50°	1092.29	1095.61	1112.58	1142.80	1133.81	1116.97	1081.63	1046.91	1056.23	1029.62	1060.85	1058.87	1022.15	1007.46	1013.42	1052.11	1092.29
20.00°	886.07	879.91	869.70	908.45	980.82	969.76	912.12	880.81	859.91	840.52	865.91	853.24	866.56	862.98	873.42	890.68	886.07
22.50°	788.31	783.95	793.90	824.11	840.37	827.27	801.89	780.70	784.50	754.11	777.24	758.50	703.85	706.03	764.74	780.62	788.31
25.00°	636.29	658.82	698.08	724.04	766.52	754.43	742.33	721.05	719.61	676.70	620.00	596.72	533.17	531.35	564.79	600.95	636.29
27.50°	441.05	510.54	516.12	555.01	679.18	655.09	549.93	504.91	434.88	389.24	331.13	307.90	336.91	338.80	358.77	409.65	441.05
30.00°	255.36	317.77	333.40	376.54	378.48	357.63	266.59	213.23	149.93	101.45	126.26	108.46	117.29	125.60	183.20	215.97	255.36
32.50°	75.82	96.80	148.27	167.60	106.04	101.55	113.78	86.42	76.19	52.25	50.83	45.10	19.05	18.46	15.32	22.05	75.82
35.00°	11.93	16.51	15.72	17.49	53.17	49.04	31.83	20.90	8.21	6.88	8.35	9.43	10.98	9.66	10.30	10.22	11.93
37.50°	7.01	7.78	9.29	10.47	8.94	7.99	6.24	5.93	6.28	5.97	6.45	7.46	6.68	5.72	5.63	5.56	7.01
40.00°	5.13	4.89	4.83	5.69	7.36	6.72	4.90	5.23	4.58	5.16	5.05	5.84	4.59	5.39	4.39	4.89	5.13
42.50°	4.45	4.31	4.09	5.13	5.81	5.56	4.70	4.77	4.34	5.01	4.14	4.56	3.64	5.03	3.35	4.25	4.45
45.00°	4.07	4.22	3.64	4.65	4.38	4.65	4.88	4.35	4.11	4.79	3.38	3.59	3.21	4.65	3.47	4.00	4.07
47.50°	3.79	4.28	3.62	4.28	3.53	4.05	4.09	4.42	3.98	4.23	2.73	2.88	3.22	4.32	3.44	3.77	3.79
50.00°	3.78	3.72	3.57	3.98	4.22	4.11	3.07	4.56	3.84	3.84	2.44	2.71	3.39	4.01	2.79	3.64	3.78
52.50°	3.83	3.03	3.51	3.77	4.32	3.99	3.04	3.75	3.67	4.04	2.37	2.89	2.86	3.49	2.50	3.51	3.83
55.00°	3.52	2.92	3.36	3.81	3.20	3.57	3.17	2.89	3.44	4.08	2.47	2.84	2.15	2.89	3.27	3.38	3.52
57.50°	3.17	2.90	3.11	4.12	2.57	3.05	3.26	2.63	3.07	3.71	2.67	2.68	2.37	2.55	3.55	3.45	3.17
60.00°	3.19	3.43	3.21	3.77	2.72	2.41	3.34	2.40	2.74	3.27	2.65	2.58	2.77	2.27	2.72	4.19	3.19
62.50°	3.24	3.99	3.58	2.89	2.85	2.33	3.18	2.68	2.52	2.70	2.54	2.52	3.13	2.88	2.28	4.38	3.24
65.00°	3.20	4.06	3.33	2.66	2.95	2.85	3.02	2.90	2.38	2.33	2.51	2.77	3.49	3.66	2.55	3.13	3.20
67.50°	3.16	4.09	2.70	2.84	2.75	2.94	3.01	2.60	2.38	2.24	2.51	3.12	2.74	3.01	2.80	2.31	3.16
70.00°	3.31	3.56	2.60	2.63	2.23	2.66	2.97	2.34	2.24	2.03	2.18	2.57	1.92	2.17	3.04	2.32	3.31
72.50°	3.35	3.03	2.77	2.23	2.04	2.40	2.33	2.24	1.91	1.67	1.79	1.84	1.85	2.29	2.92	2.28	3.35
75.00°	2.26	2.40	2.35	1.99	2.13	2.15	1.75	2.06	1.81	1.60	1.73	1.59	1.80	2.46	2.38	2.13	2.26
77.50°	1.41	1.89	1.69	1.82	1.96	1.97	1.67	1.61	1.93	1.83	1.72	1.41	1.97	2.14	1.90	1.97	1.41
80.00°	1.99	2.03	1.63	1.90	1.61	1.82	1.62	1.30	1.79	2.13	1.61	1.49	2.07	1.85	1.45	1.79	1.99
82.50°	2.36	2.09	1.73	2.05	1.63	1.78	1.70	1.41	1.43	2.48	1.48	1.60	1.64	2.08	1.45	1.51	2.36
85.00°	1.79	1.83	1.84	1.92	1.86	1.78	1.76	1.47	1.48	2.28	1.60	1.79	1.30	2.25	1.77	1.13	1.79
87.50°	1.36	1.70	1.96	1.73	1.77	1.67	1.75	1.46	1.79	1.73	1.72	1.96	1.42	1.94	1.78	1.48	1.36
90.00°	1.34	2.01	1.92	1.73	1.55	1.51	1.69	1.41	1.89	1.46	1.55	1.61	1.54	1.73	1.62	2.43	1.34
92.50°	1.42	2.09	1.86	1.76	1.54	1.63	1.51	1.29	1.87	1.34	1.40	1.31	1.63	2.01	1.77	2.47	1.42
95.00°	1.71	1.64	1.62	1.81	1.60	1.81	1.41	1.26	1.83	1.33	1.49	1.55	1.63	2.24	2.07	1.90	1.71
97.50°	1.91	1.42	1.38	1.87	1.74	1.84	1.48	1.34	1.78	1.37	1.55	1.73	1.42	2.23	1.93	1.91	1.91
100.00°	1.92	1.61	1.86	1.77	1.89	1.85	1.47	1.45	1.87	1.76	1.41	1.57	1.29	2.16	1.63	2.24	1.92

SR3Mx 10L 35K XN xx xx RDA3F 10L 35K XN
 MW GL (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	1547	1547	1547	1547	1509	1509	1509	1509	1438	1438	1438	1373	1373	1373	1314	1314	1286
	1	1494	1466	1441	1419	1462	1437	1415	1395	1382	1365	1349	1331	1318	1306	1285	1275	1266
	2	1445	1398	1360	1327	1417	1375	1340	1311	1332	1304	1280	1292	1270	1251	1255	1238	1223
	3	1400	1340	1293	1256	1375	1321	1279	1245	1287	1252	1224	1255	1227	1203	1225	1202	1183
	4	1358	1288	1238	1199	1336	1274	1227	1191	1246	1207	1176	1220	1187	1161	1196	1169	1147
	5	1318	1243	1190	1151	1300	1231	1182	1145	1208	1166	1134	1187	1151	1123	1167	1137	1117
	6	1282	1202	1148	1110	1265	1192	1142	1106	1173	1130	1097	1155	1118	1089	1139	1107	1088
	7	1247	1165	1111	1074	1232	1156	1106	1071	1141	1097	1064	1126	1087	1058	1112	1078	1061
	8	1215	1131	1078	1042	1201	1124	1074	1039	1110	1066	1034	1098	1058	1030	1086	1051	1035
	9	1184	1099	1048	1012	1172	1093	1044	1011	1082	1038	1007	1071	1032	1003	1061	1026	1010
	10	1155	1071	1020	986	1145	1065	1017	984	1056	1012	981	1046	1007	978	1038	1002	987

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	309.1 fc	1.5 ft
6.5 ft	221.3 fc	1.8 ft
7.5 ft	166.2 fc	2.1 ft
8.0 ft	146.1 fc	2.2 ft
10.0 ft	93.5 fc	2.8 ft
12.0 ft	64.9 fc	3.4 ft
14.0 ft	47.7 fc	3.9 ft
16.0 ft	36.5 fc	4.5 ft
20.0 ft	23.4 fc	5.6 ft
24.0 ft	16.2 fc	6.7 ft
28.0 ft	11.9 fc	7.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2050501	2050501	2050501
45.00°	1263	1130	1359
55.00°	1347	1283	1225
65.00°	1658	1730	1531
75.00°	1916	1988	1805
85.00°	4516	4641	4686

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	-1.4	-0.5	-1.0	-0.2	0.2	-2.4	-1.6	-2.0	-1.2	-0.9
	3H	2.0	2.8	2.5	3.2	3.6	0.9	1.6	1.3	2.0	2.4
	4H	3.3	4.0	3.7	4.4	4.8	1.9	2.7	2.4	3.0	3.5
	6H	4.1	4.8	4.6	5.2	5.6	3.3	3.9	3.7	4.3	4.8
	8H	5.1	5.7	5.5	6.1	6.5	4.0	4.6	4.5	5.0	5.5
	12H	6.0	6.5	6.4	7.0	7.4	4.9	5.5	5.3	5.9	6.3
4H	2H	-0.6	0.2	-0.1	0.5	1.0	-1.4	-0.7	-1.0	-0.3	0.1
	3H	3.0	3.6	3.4	4.0	4.5	1.9	2.5	2.4	2.9	3.4
	4H	4.3	4.9	4.8	5.3	5.8	3.1	3.6	3.6	4.1	4.5
	6H	5.4	5.9	5.9	6.3	6.9	4.6	5.0	5.1	5.5	6.0
	8H	6.4	6.8	6.9	7.3	7.8	5.4	5.8	5.9	6.3	6.8
	12H	7.4	7.8	7.9	8.3	8.8	6.4	6.8	6.9	7.3	7.8
8H	4H	4.7	5.1	5.2	5.6	6.1	3.5	3.9	4.0	4.4	4.9
	6H	6.1	6.4	6.6	6.9	7.4	5.2	5.5	5.8	6.1	6.6
	8H	7.2	7.5	7.8	8.1	8.6	6.3	6.6	6.8	7.1	7.6
	12H	8.4	8.7	9.0	9.2	9.8	7.6	7.9	8.2	8.4	9.0
12H	4H	4.8	5.1	5.3	5.7	6.2	3.6	3.9	4.1	4.5	5.0
	6H	6.2	6.5	6.8	7.0	7.6	5.4	5.7	6.0	6.2	6.8
	8H	7.5	7.7	8.0	8.3	8.9	6.6	6.9	7.2	7.4	8.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0