

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01425_5

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	1319
Efficacy	62.52 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

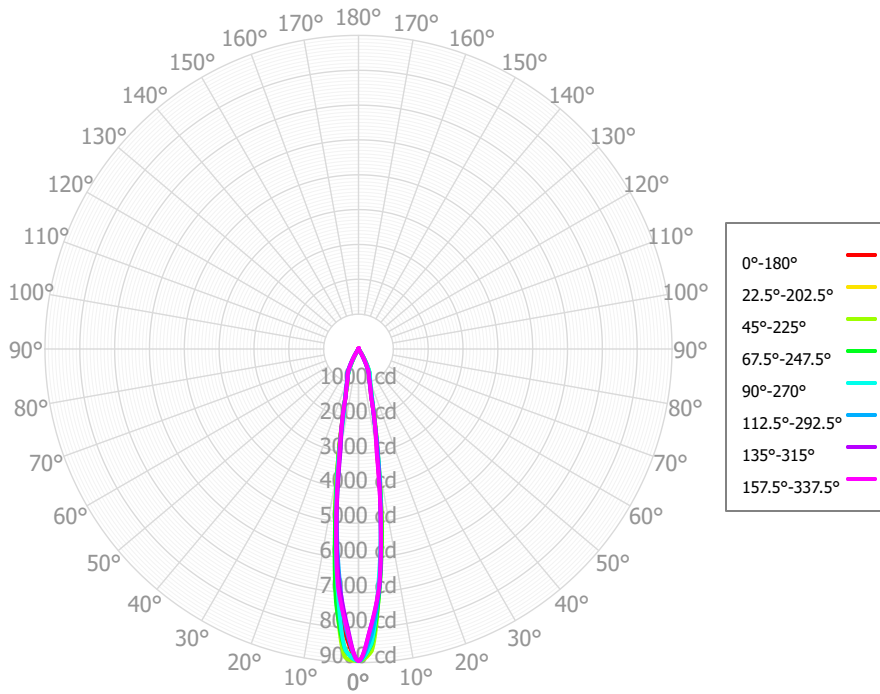
0° - 180°	16°
90° - 270°	16°

IES File Header Contents

Keyword	Value
TEST	SP-01425_5
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 SO (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Xtra Narrow Beam
OTHER	Matte White Trim, Solite Lens
OTHER	16.5 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 SO (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	532.98	40.40%	90.00° - 100.00°	1.99	0.15%
10.00° - 20.00°	443.57	33.62%	100.00° - 110.00°	1.80	0.14%
20.00° - 30.00°	275.76	20.90%	100.00° - 120.00°	3.64	0.28%
30.00° - 40.00°	35.70	2.71%	120.00° - 130.00°	1.89	0.14%
40.00° - 50.00°	3.72	0.28%	130.00° - 140.00°	2.30	0.17%
50.00° - 60.00°	3.18	0.24%	140.00° - 150.00°	2.67	0.20%
60.00° - 70.00°	3.11	0.24%	150.00° - 160.00°	2.77	0.21%
70.00° - 80.00°	2.39	0.18%	160.00° - 170.00°	1.38	0.10%
80.00° - 90.00°	1.96	0.15%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1302.37	98.72%	0.00° - 180.00°	1319.20	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°	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62	8951.62
2.50°	8224.90	8490.44	8680.31	8494.86	8471.75	8068.96	7871.46	7976.16	8259.13	8631.33	8857.37	8651.51	8648.21	8265.05	7990.77	8005.19	8224.90
5.00°	6771.41	6802.21	6873.69	6930.22	6656.63	6434.23	6564.76	6812.18	7015.47	7187.23	7220.78	7346.12	6900.71	6879.48	6861.64	6818.43	6771.41
7.50°	4984.16	5041.73	5087.87	5106.08	4904.74	4783.08	4803.27	4882.62	5006.70	5100.79	5123.50	5155.43	4894.77	4860.51	4841.93	4886.87	4984.16
10.00°	3086.31	3223.22	3330.55	3193.95	3296.75	3118.65	2994.13	3213.41	3400.95	3495.13	3522.44	3445.34	3386.70	3349.32	3166.03	2993.94	3086.31
12.50°	2148.94	2141.24	2144.03	2231.64	2099.28	2117.31	2181.42	2208.90	2199.83	2096.36	2021.86	2202.94	1940.96	2055.40	2132.99	2144.20	2148.94
15.00°	1398.91	1473.22	1518.80	1465.28	1550.78	1496.32	1420.79	1452.09	1481.46	1468.67	1493.22	1484.06	1494.33	1471.90	1411.87	1376.21	1398.91
17.50°	1122.25	1126.38	1138.00	1179.88	1174.85	1174.40	1158.90	1128.75	1105.94	1056.78	1056.28	1130.48	1081.52	1085.85	1103.16	1110.15	1122.25
20.00°	886.00	902.97	92712	939.39	991.04	968.10	923.70	908.78	913.60	908.71	923.62	919.95	925.80	913.42	891.61	881.23	886.00
22.50°	785.67	781.88	801.48	845.68	856.76	850.47	833.75	815.48	812.75	801.09	784.12	778.38	760.92	773.41	771.07	779.64	785.67
25.00°	674.13	685.63	716.77	744.24	762.15	754.06	713.15	664.49	634.82	606.66	569.62	559.09	559.08	568.43	590.60	63718	674.13
27.50°	449.72	485.34	528.36	556.93	572.36	532.88	496.03	462.65	431.55	407.52	359.45	315.33	358.95	361.45	370.53	402.86	449.72
30.00°	242.16	272.22	306.81	368.56	329.29	296.14	294.43	270.42	236.41	206.78	170.77	164.26	163.13	184.62	199.82	210.98	242.16
32.50°	113.45	141.04	160.34	174.96	170.21	154.69	125.38	84.14	42.87	28.79	27.02	30.50	33.91	27.46	51.90	84.48	113.45
35.00°	16.60	19.06	28.17	27.49	42.71	23.16	21.53	21.18	18.18	16.59	15.85	14.28	18.15	16.80	13.30	15.56	16.60
37.50°	11.29	13.29	12.34	15.50	13.94	15.10	11.93	11.21	8.09	6.65	7.93	7.68	8.23	8.00	7.38	9.18	11.29
40.00°	7.37	8.14	5.93	710	8.48	7.93	6.58	711	6.62	5.56	6.37	6.38	5.41	6.50	5.76	5.74	7.37
42.50°	6.14	6.66	5.72	5.82	5.98	6.15	5.55	4.61	5.21	4.98	5.38	5.11	3.99	5.29	4.87	4.57	6.14
45.00°	4.99	5.28	5.49	4.98	3.82	4.80	4.96	3.89	4.31	5.69	5.19	4.05	3.78	4.79	4.02	4.02	4.99
47.50°	3.95	4.22	4.97	4.76	3.51	4.94	4.70	3.42	3.55	5.59	4.72	3.21	3.59	4.26	3.18	3.80	3.95
50.00°	3.42	3.75	4.44	4.64	3.27	5.02	4.16	3.06	3.43	4.10	3.97	3.38	3.39	3.70	3.29	4.02	3.42
52.50°	3.36	4.59	3.89	4.62	3.39	4.95	3.48	2.72	3.32	3.13	3.47	3.44	3.02	3.44	3.43	4.41	3.36
55.00°	3.48	5.02	3.43	4.17	3.45	4.61	3.32	2.91	3.27	2.79	3.13	3.16	2.57	3.53	3.89	3.81	3.48
57.50°	3.71	4.80	3.18	3.42	3.13	3.87	3.35	3.05	3.09	2.98	3.18	3.13	2.85	3.59	4.12	2.99	3.71
60.00°	3.50	4.37	2.99	3.37	3.07	3.41	3.15	2.85	2.68	3.63	3.40	3.55	3.33	3.61	3.37	3.46	3.50
62.50°	3.09	3.71	2.89	3.67	3.90	3.25	2.92	2.73	2.40	3.55	3.22	3.70	3.93	3.72	2.92	4.08	3.09
65.00°	3.02	3.37	2.82	3.43	4.08	3.19	2.67	2.90	2.30	3.03	2.90	3.51	4.54	3.87	3.22	3.51	3.02
67.50°	3.05	3.28	2.80	3.02	2.83	3.20	2.41	2.83	2.20	2.83	2.80	3.01	3.19	3.69	3.19	2.96	3.05
70.00°	2.71	2.91	2.96	2.70	2.03	3.22	2.00	2.18	2.10	2.75	2.75	2.23	1.82	3.36	2.58	2.95	2.71
72.50°	2.32	2.38	3.29	2.38	1.89	3.23	1.65	1.70	1.98	2.56	2.50	2.25	1.92	2.71	2.24	2.85	2.32
75.00°	1.94	2.09	3.09	2.19	1.89	3.05	2.10	1.54	1.86	2.34	2.23	2.80	2.03	1.97	2.26	2.30	1.94
77.50°	1.58	1.87	2.56	2.01	2.03	2.81	2.51	1.47	1.89	2.44	2.21	2.65	2.27	1.69	2.20	1.90	1.58
80.00°	1.68	1.70	2.07	1.69	1.99	2.31	2.72	1.50	2.00	2.58	2.18	2.17	2.39	1.47	2.07	2.00	1.68
82.50°	1.79	1.53	1.60	1.43	1.83	1.75	2.72	1.62	1.94	1.90	2.07	1.92	2.01	1.42	2.01	1.99	1.79
85.00°	2.04	1.40	1.81	1.65	1.85	1.57	2.07	1.81	1.82	1.21	2.01	1.75	1.75	1.39	1.99	1.74	2.04
87.50°	2.17	1.27	2.22	1.83	1.98	1.43	1.70	1.82	1.51	1.25	2.17	1.82	1.73	1.55	1.79	1.59	2.17
90.00°	1.77	1.71	1.91	1.83	1.83	1.36	1.88	1.73	1.16	1.35	2.17	1.94	1.71	1.69	1.49	1.60	1.77
92.50°	1.50	2.14	1.46	1.82	1.59	1.31	2.03	1.71	1.43	1.79	1.75	1.95	1.66	1.65	2.03	1.63	1.50
95.00°	1.59	2.34	1.75	1.79	1.63	1.69	2.11	1.71	1.74	2.11	1.51	1.95	1.86	1.60	2.81	1.70	1.59
97.50°	1.65	2.46	2.08	1.76	1.73	1.98	1.99	1.98	1.97	2.01	1.63	1.84	2.34	1.46	2.31	1.66	1.65
100.00°	1.68	2.18	1.84	1.72	1.95	1.78	1.65	2.31	2.15	1.88	1.58	1.75	2.45	1.54	1.60	1.56	1.68

SR3Mx 10L 35K XN xx xx RDA3F 10L 35K XN
 MW SO (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	1566	1566	1566	1566	1528	1528	1528	1528	1456	1456	1456	1391	1391	1391	1331	1331	1302
	1	1512	1484	1458	1436	1479	1454	1432	1411	1399	1381	1365	1348	1334	1322	1301	1291	1264
	2	1462	1414	1375	1341	1434	1391	1355	1325	1347	1319	1294	1307	1284	1265	1270	1252	1227
	3	1416	1354	1307	1269	1391	1336	1293	1258	1301	1265	1236	1269	1240	1215	1239	1215	1192
	4	1373	1302	1250	1210	1351	1287	1239	1202	1259	1219	1187	1232	1199	1172	1208	1180	1159
	5	1332	1255	1201	1161	1313	1243	1193	1155	1220	1177	1144	1198	1162	1133	1178	1147	1127
	6	1294	1213	1158	1119	1277	1203	1152	1114	1184	1139	1106	1166	1127	1098	1149	1116	1097
	7	1259	1174	1120	1082	1244	1166	1115	1078	1150	1105	1072	1135	1096	1066	1121	1087	1069
	8	1225	1140	1085	1048	1212	1132	1081	1046	1119	1074	1041	1106	1066	1036	1095	1059	1042
	9	1194	1107	1054	1018	1182	1101	1051	1016	1090	1045	1013	1079	1038	1009	1069	1032	1017
	10	1165	1078	1026	991	1154	1072	1023	990	1063	1018	987	1053	1012	984	1044	1007	993

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	295.9 fc	1.6 ft
6.5 ft	211.9 fc	1.9 ft
7.5 ft	159.1 fc	2.2 ft
8.0 ft	139.9 fc	2.3 ft
10.0 ft	89.5 fc	2.9 ft
12.0 ft	62.2 fc	3.5 ft
14.0 ft	45.7 fc	4.1 ft
16.0 ft	35.0 fc	4.6 ft
20.0 ft	22.4 fc	5.8 ft
24.0 ft	15.5 fc	7.0 ft
28.0 ft	11.4 fc	8.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1962916	1962916	1962916
45.00°	1547	1702	1184
55.00°	1330	1310	1319
65.00°	1567	1466	2116
75.00°	1646	2622	1602
85.00°	5137	4554	4657

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	-0.1	0.8	0.3	1.1	1.5	-1.0	-0.1	-0.6	0.2	0.5
	3H	2.3	3.1	2.7	3.4	3.8	1.6	2.3	2.0	2.7	3.1
	4H	3.2	3.9	3.6	4.3	4.7	2.7	3.4	3.2	3.8	4.2
	6H	4.0	4.6	4.4	5.0	5.4	4.3	4.9	4.7	5.3	5.8
	8H	4.6	5.2	5.1	5.6	6.1	5.0	5.6	5.5	6.0	6.5
	12H	5.6	6.2	6.1	6.6	7.1	5.8	6.4	6.3	6.8	7.3
4H	2H	0.4	1.2	0.9	1.5	2.0	-0.4	0.3	0.0	0.7	1.1
	3H	3.1	3.7	3.6	4.2	4.6	2.5	3.0	2.9	3.5	3.9
	4H	4.2	4.7	4.7	5.2	5.6	4.1	4.7	4.6	5.1	5.6
	6H	5.2	5.7	5.7	6.1	6.7	5.9	6.3	6.4	6.8	7.3
	8H	6.0	6.4	6.5	6.9	7.4	6.6	7.0	7.1	7.5	8.0
	12H	7.1	7.4	7.6	7.9	8.5	7.5	7.9	8.0	8.4	8.9
8H	4H	4.7	5.2	5.3	5.6	6.1	4.7	5.1	5.2	5.6	6.1
	6H	6.1	6.4	6.6	6.9	7.4	6.7	7.0	7.2	7.6	8.1
	8H	7.0	7.3	7.5	7.8	8.4	7.6	7.9	8.2	8.5	9.0
	12H	8.3	8.5	8.8	9.0	9.7	8.7	8.9	9.2	9.4	10.1
12H	4H	4.8	5.2	5.3	5.7	6.2	4.8	5.2	5.3	5.7	6.2
	6H	6.3	6.6	6.8	7.1	7.6	7.0	7.3	7.5	7.8	8.4
	8H	7.3	7.6	7.9	8.1	8.7	8.0	8.3	8.6	8.8	9.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0