

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35HK XW xx xx RH3F 25L 35HK XW MW GL
Nom. 3" Round Pinhole A-Spec, Xtra Wide Beam

Test Number

SP-01403_2

Test Date

9/14/2022

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

SR3Mx 25L 35HK XW xx xx RH3F 25L 35HK
XW MW GL

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Summary of Results

Power

Input Watts	26.3 W
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Lumen Output

Output Lumens	1398
Efficacy	53.15 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.93
Two luminaires, plane 90°	0.93
Four luminaires	0.83

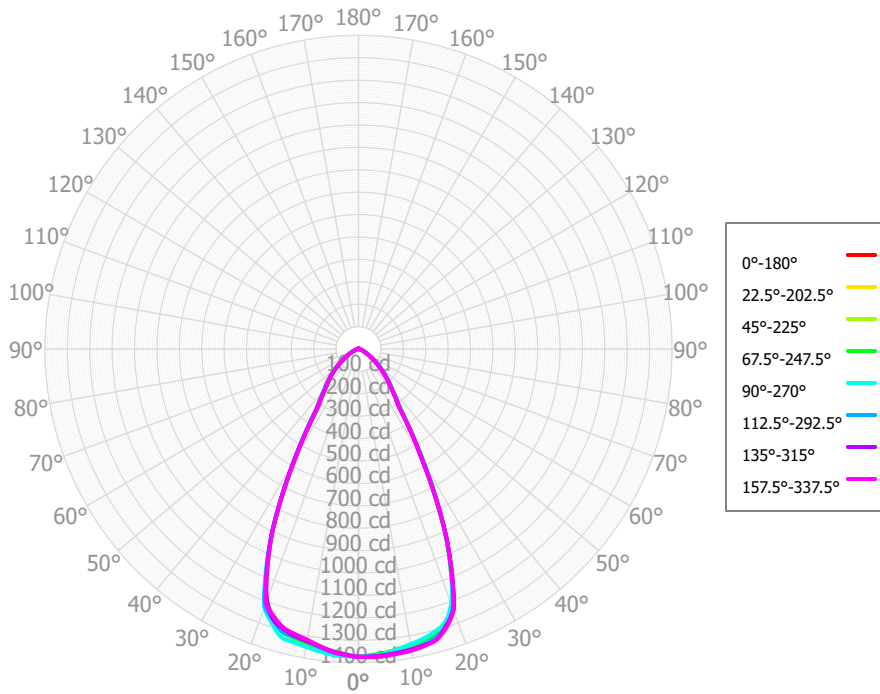
Full Beam Angle

0° - 180°	56°
90° - 270°	57°

IES File Header Contents

Keyword	Value
TEST	SP-01403_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/14/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35HK XW xx xx RH3F 25L 35HK XW MW GL
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. 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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	131.34	9.40%	90.00° - 100.00°	1.92	0.14%
10.00° - 20.00°	367.03	26.26%	100.00° - 110.00°	1.81	0.13%
20.00° - 30.00°	410.11	29.34%	100.00° - 120.00°	3.56	0.25%
30.00° - 40.00°	218.13	15.61%	120.00° - 130.00°	1.64	0.12%
40.00° - 50.00°	135.35	9.68%	130.00° - 140.00°	1.42	0.10%
50.00° - 60.00°	75.18	5.38%	140.00° - 150.00°	1.23	0.09%
60.00° - 70.00°	32.05	2.29%	150.00° - 160.00°	0.94	0.07%
70.00° - 80.00°	12.49	0.89%	160.00° - 170.00°	0.57	0.04%
80.00° - 90.00°	4.63	0.33%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1386.31	99.18%	0.00° - 180.00°	1397.77	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°	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42	1374.42
2.50°	1376.42	1373.75	1371.28	1367.35	1372.06	1367.90	1364.82	1367.48	1366.23	1365.51	1363.34	1365.31	1372.66	1374.34	1374.26	1376.51	1376.42
5.00°	1375.79	1371.07	1369.97	1361.73	1365.96	1359.45	1354.04	1356.68	1355.39	1353.41	1354.30	1357.64	1369.92	1372.72	1371.59	1375.34	1375.79
7.50°	1368.96	1363.52	1359.83	1351.03	1352.12	1342.72	1339.21	1338.32	1336.97	1337.65	1338.35	1345.15	1361.31	1366.86	1367.71	1371.74	1368.96
10.00°	1361.94	1356.31	1349.82	1340.46	1338.67	1324.47	1325.39	1319.63	1318.91	1320.98	1322.76	1332.83	1350.52	1360.01	1363.36	1367.33	1361.94
12.50°	1352.86	1349.81	1340.94	1331.22	1325.84	1315.67	1313.10	1305.79	1305.42	1307.08	1312.31	1322.76	1341.21	1350.56	1354.63	1358.63	1352.86
15.00°	1339.74	1334.29	1328.24	1318.26	1307.93	1308.13	1294.46	1291.05	1289.40	1293.69	1299.11	1309.76	1332.36	1333.93	1344.54	1343.81	1339.74
17.50°	1298.91	1302.58	1290.95	1281.03	1283.40	1266.82	1267.57	1254.62	1253.46	1252.89	1262.52	1272.21	1285.11	1301.98	1297.24	1304.51	1298.91
20.00°	1239.41	1226.87	1233.42	1224.89	1210.63	1222.75	1194.82	1209.43	1201.62	1208.42	1210.77	1218.32	1228.63	1230.34	1240.90	1238.70	1239.41
22.50°	1086.05	1085.16	1081.76	1077.59	1084.02	1074.08	1071.86	1066.04	1063.01	1065.20	1068.77	1071.05	1084.08	1087.35	1092.75	1088.49	1086.05
25.00°	925.70	924.01	923.47	923.39	929.17	921.36	920.45	918.27	916.35	913.48	919.80	918.35	923.78	928.42	927.56	927.89	925.70
27.50°	738.19	738.01	741.15	743.34	747.68	743.53	742.38	738.65	736.23	735.96	740.30	742.13	746.86	745.23	744.58	740.74	738.19
30.00°	563.19	570.18	569.93	572.82	581.32	567.71	578.18	566.19	565.59	557.55	570.22	574.94	567.82	577.88	559.29	567.99	563.19
32.50°	426.35	422.20	431.18	430.46	427.18	435.10	425.10	431.41	425.70	430.08	432.65	438.01	442.34	430.81	433.36	425.85	426.35
35.00°	315.20	323.27	319.22	316.08	328.44	310.08	329.24	314.86	312.18	306.21	319.56	325.85	321.14	328.33	312.29	317.06	315.20
37.50°	268.21	269.62	270.71	269.63	267.83	268.67	271.96	270.45	268.27	267.22	274.84	281.09	278.47	274.65	268.08	267.85	268.21
40.00°	226.36	228.46	228.96	229.20	228.19	229.02	232.75	230.32	229.64	229.40	235.97	241.51	238.46	233.30	226.86	226.60	226.36
42.50°	195.21	197.17	200.58	200.95	200.63	201.97	203.86	203.68	202.60	204.56	210.39	213.58	210.26	203.49	197.87	197.27	195.21
45.00°	165.54	168.03	172.52	173.42	174.45	175.30	177.94	177.84	177.06	179.91	185.17	186.66	182.13	175.12	168.99	168.49	165.54
47.50°	138.44	140.31	144.99	147.07	148.95	150.51	153.44	154.08	154.25	156.73	160.65	161.63	155.34	147.86	142.29	140.42	138.44
50.00°	113.29	115.86	119.12	122.36	125.05	126.19	129.40	130.84	131.50	133.65	136.29	136.69	128.93	123.13	116.08	115.36	113.29
52.50°	91.01	93.23	95.60	99.99	101.80	103.75	105.54	108.71	108.84	111.06	112.20	111.90	106.40	100.08	95.13	93.60	91.01
55.00°	72.35	74.66	75.86	80.05	82.35	82.75	86.16	88.58	88.27	89.60	90.77	89.89	84.52	80.99	75.07	74.77	72.35
57.50°	58.23	58.01	60.65	63.05	64.12	66.26	68.23	72.00	70.46	72.58	72.96	71.61	67.07	64.15	61.11	58.65	58.23
60.00°	46.28	45.96	47.55	48.67	51.01	51.38	54.74	57.24	55.25	56.99	57.67	56.57	50.89	50.61	47.76	45.69	46.28
62.50°	36.64	35.72	36.61	36.97	39.23	40.56	42.39	45.24	42.92	45.89	45.30	45.19	41.15	38.64	37.44	35.21	36.64
65.00°	28.31	27.82	27.60	28.68	30.96	31.07	33.02	34.93	33.31	35.63	34.68	35.07	31.84	30.12	28.00	27.60	28.31
67.50°	21.17	20.66	20.26	23.41	23.40	24.38	24.24	26.76	26.27	27.51	25.81	26.19	24.14	22.97	22.01	21.90	21.17
70.00°	16.47	16.55	15.37	18.57	18.27	18.81	19.36	19.98	20.58	20.64	19.21	19.71	17.45	17.99	16.80	17.11	16.47
72.50°	13.65	13.22	12.31	14.06	13.49	15.19	15.03	14.71	15.98	16.35	14.50	15.21	13.82	13.72	14.00	12.82	13.65
75.00°	10.78	11.12	10.28	11.25	10.69	12.11	12.09	11.38	12.62	12.73	11.41	11.58	10.64	10.79	11.21	10.38	10.78
77.50°	7.88	9.27	8.89	9.52	8.08	9.80	9.26	9.83	10.10	10.26	9.48	8.55	8.56	8.20	8.44	8.81	7.88
80.00°	6.16	7.27	7.06	7.64	6.83	7.80	7.77	8.35	8.07	8.04	7.76	6.70	6.80	6.66	6.12	7.25	6.16
82.50°	5.10	5.25	5.00	5.69	5.64	6.19	6.33	6.94	6.32	6.20	6.18	5.54	5.66	5.33	4.75	5.70	5.10
85.00°	3.67	3.72	3.41	4.04	3.79	4.60	4.58	5.08	4.57	4.47	4.45	4.02	4.38	3.75	3.54	4.02	3.67
87.50°	2.06	2.23	2.02	2.53	1.98	3.03	2.88	2.92	2.82	2.89	2.66	2.33	2.82	2.14	2.63	2.30	2.06
90.00°	1.73	1.91	1.56	1.97	1.78	2.26	2.34	2.06	2.11	2.00	1.98	1.78	1.85	1.88	2.07	1.92	1.73
92.50°	1.88	1.63	1.43	1.77	1.61	2.22	1.83	1.93	1.80	1.85	1.77	1.71	1.72	1.75	2.05	1.88	1.88
95.00°	1.77	1.62	1.57	1.76	1.90	2.01	1.79	1.92	1.64	1.80	1.59	1.59	1.56	1.58	1.99	1.86	1.77
97.50°	1.58	1.60	1.78	1.80	2.13	1.67	1.75	1.97	1.53	1.85	1.43	1.46	1.36	1.41	1.89	1.85	1.58
100.00°	1.52	1.56	1.74	1.73	1.90	1.53	1.73	1.88	1.73	1.86	1.46	1.57	1.39	1.54	1.74	1.76	1.52

SR3Mx 25L 35HK XW xx xx RH3F 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%	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	1661	1661	1661	1661	1621	1621	1621	1621	1547	1547	1547	1478	1478	1478	1416	1416	1386
	1	1573	1529	1491	1456	1537	1498	1463	1431	1439	1411	1385	1384	1362	1341	1334	1317	1289
	2	1484	1408	1345	1292	1451	1383	1325	1277	1335	1287	1247	1291	1252	1218	1250	1219	1193
	3	1400	1300	1223	1162	1370	1279	1209	1151	1240	1180	1131	1204	1154	1112	1170	1129	1106
	4	1321	1205	1120	1055	1294	1188	1109	1048	1155	1088	1034	1125	1067	1020	1097	1048	1027
	5	1248	1121	1032	966	1224	1106	1023	961	1079	1007	951	1054	991	941	1031	976	957
	6	1181	1046	955	890	1159	1034	949	887	1011	936	879	990	923	872	970	911	894
	7	1119	979	889	825	1099	969	883	822	950	873	817	931	863	812	914	853	838
	8	1062	920	830	768	1044	911	826	766	894	817	762	878	809	758	864	801	788
	9	1009	866	778	719	993	858	774	717	844	767	714	830	761	711	817	754	742
	10	961	817	732	674	946	811	729	673	798	723	671	786	717	668	775	712	701

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	45.4 fc	5.9 ft
6.5 ft	32.5 fc	7.0 ft
7.5 ft	24.4 fc	8.0 ft
8.0 ft	21.5 fc	8.6 ft
10.0 ft	13.7 fc	10.7 ft
12.0 ft	9.5 fc	12.9 ft
14.0 ft	7.0 fc	15.0 ft
16.0 ft	5.4 fc	17.2 ft
20.0 ft	3.4 fc	21.5 ft
24.0 ft	2.4 fc	25.7 ft
28.0 ft	1.8 fc	30.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	837178	837178	837178
45.00°	142600	148610	150278
55.00°	76837	80559	87448
65.00°	40800	39782	44625
75.00°	25379	24183	25162
85.00°	25618	23840	26458

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	21.6	22.8	22.0	23.1	23.4	22.7	23.9	23.1	24.2	24.5
	3H	22.1	23.1	22.5	23.5	23.9	23.2	24.2	23.6	24.6	24.9
	4H	22.3	23.2	22.7	23.6	24.0	23.3	24.2	23.7	24.6	25.0
	6H	22.4	23.2	22.8	23.6	24.1	23.4	24.2	23.8	24.6	25.0
	8H	22.4	23.2	22.9	23.6	24.1	23.4	24.2	23.9	24.6	25.1
	12H	22.5	23.2	22.9	23.6	24.1	23.4	24.2	23.9	24.6	25.1
4H	2H	21.7	22.7	22.2	23.0	23.5	22.9	23.8	23.3	24.2	24.6
	3H	22.4	23.1	22.8	23.6	24.0	23.5	24.2	23.9	24.7	25.1
	4H	22.6	23.3	23.1	23.7	24.2	23.7	24.3	24.1	24.8	25.2
	6H	22.8	23.4	23.3	23.9	24.4	23.8	24.4	24.3	24.9	25.3
	8H	22.9	23.4	23.4	23.9	24.4	23.9	24.4	24.4	24.9	25.4
	12H	23.0	23.5	23.5	24.0	24.5	23.9	24.4	24.4	24.9	25.4
8H	4H	22.6	23.2	23.1	23.7	24.1	23.7	24.2	24.1	24.7	25.2
	6H	22.9	23.4	23.5	23.9	24.4	23.9	24.3	24.4	24.8	25.3
	8H	23.1	23.5	23.6	24.0	24.5	24.0	24.4	24.6	24.9	25.4
	12H	23.2	23.6	23.8	24.1	24.7	24.2	24.5	24.7	25.0	25.6
12H	4H	22.6	23.1	23.1	23.6	24.1	23.6	24.1	24.1	24.6	25.1
	6H	22.9	23.3	23.5	23.8	24.4	23.9	24.3	24.4	24.8	25.3
	8H	23.1	23.5	23.7	24.0	24.6	24.1	24.4	24.6	24.9	25.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0