

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K ND xx xx RH3F 25L 35K ND MW SO
Nom. 3" Round Pinhole A-Spec, Narrow Beam

Test Number

SP-01414_1

Test Date

9/21/2022

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	1642
Efficacy	62.43 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.42
Two luminaires, plane 90°	0.42
Four luminaires	0.49

Full Beam Angle

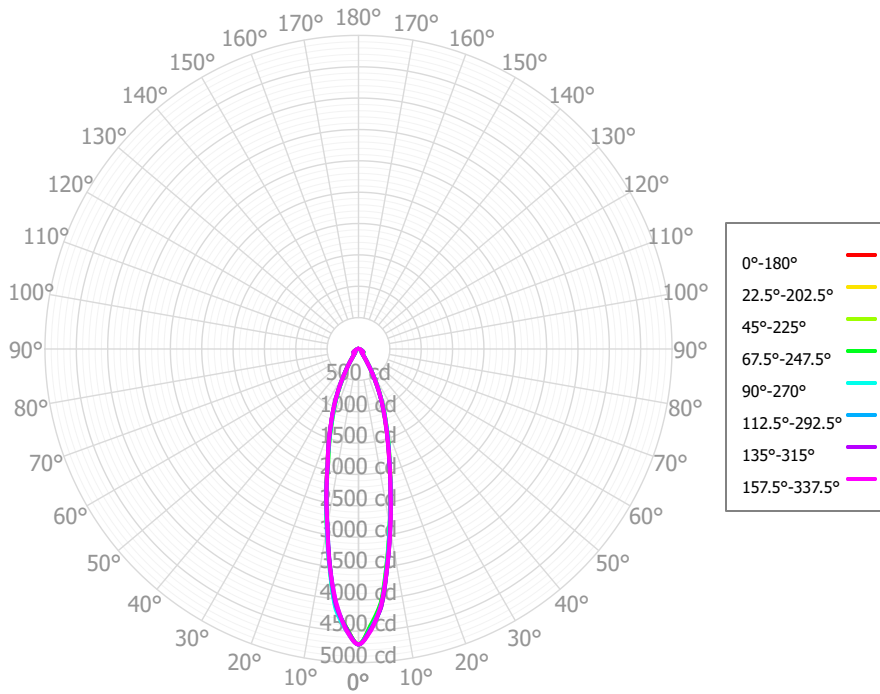
0° - 180°	25°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-01414_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/21/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35K ND xx xx RH3F 25L 35K ND MW SO
LUMINAIRE	Nom. 3" Round Pinhole A-Spec, Narrow Beam
OTHER	Matte White Trim, Solite lens
OTHER	25 Degree Beam Angle
LAMP	N/A, 19mm LES
LAMPCAT	N/A, Min. 80 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	80

SR3Mx 25L 35K ND xx xx RH3F 25L 35K ND
 MW SO

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	352.32	21.46%	90.00° - 100.00°	2.24	0.14%
10.00° - 20.00°	533.46	32.49%	100.00° - 110.00°	2.06	0.13%
20.00° - 30.00°	368.58	22.45%	100.00° - 120.00°	4.13	0.25%
30.00° - 40.00°	128.78	7.84%	120.00° - 130.00°	1.94	0.12%
40.00° - 50.00°	60.56	3.69%	130.00° - 140.00°	1.77	0.11%
50.00° - 60.00°	81.67	4.97%	140.00° - 150.00°	1.57	0.10%
60.00° - 70.00°	62.12	3.78%	150.00° - 160.00°	1.26	0.08%
70.00° - 80.00°	31.80	1.94%	160.00° - 170.00°	0.72	0.04%
80.00° - 90.00°	8.65	0.53%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	1627.94	99.16%	0.00° - 180.00°	1641.81	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°	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82	4710.82
2.50°	4460.40	4453.16	4426.08	4411.65	4461.81	4472.41	4461.14	4491.43	4458.78	4472.76	4449.19	4447.15	4493.62	4486.54	4472.21	4499.29	4460.40
5.00°	4133.44	4088.95	4092.20	4065.34	4112.72	4077.62	4112.44	4063.55	4127.60	4100.60	4131.20	4140.21	416715	4128.58	4133.28	4105.44	4133.44
7.50°	3503.48	3485.22	3468.92	3443.24	3479.50	3486.62	3486.90	3502.03	3496.34	3515.12	3503.50	3505.19	3530.20	3508.37	3502.01	3503.57	3503.48
10.00°	2890.63	2911.02	2860.64	2854.22	2854.37	2852.13	2851.98	2863.74	2886.29	2874.81	2897.60	2872.14	2916.37	2917.45	2899.34	2922.72	2890.63
12.50°	2371.72	2371.77	2368.33	2354.04	2370.31	2367.04	2364.90	2356.65	2371.79	2371.43	2368.46	2353.76	2367.80	2364.55	2363.20	2355.03	2371.72
15.00°	1896.34	1930.42	1911.24	1915.16	1912.69	1898.41	1898.55	1900.35	1908.50	188713	1897.03	1864.46	1892.54	1915.73	1902.47	1923.30	1896.34
17.50°	1561.61	1572.38	1594.84	1588.34	1593.72	1587.27	1588.16	1580.89	1585.52	1572.28	1558.05	1539.68	1555.15	1562.69	1561.46	1549.66	1561.61
20.00°	1260.48	1284.16	1299.43	1297.88	1294.13	1283.59	1292.90	1294.98	1288.92	1267.88	1259.22	1237.73	1260.31	1273.49	1266.69	1276.25	1260.48
22.50°	1030.09	1037.66	1057.37	1053.84	1055.14	1051.75	1057.06	1052.80	1041.38	1033.84	1023.38	1009.68	1022.04	1026.34	1024.35	1030.08	1030.09
25.00°	809.56	813.64	826.66	825.50	827.52	824.51	829.11	816.10	810.39	804.29	802.13	790.22	798.90	802.91	800.04	813.69	809.56
27.50°	603.59	598.71	615.40	611.56	623.21	622.41	620.92	612.61	600.87	604.41	597.23	589.17	590.21	590.39	590.22	601.81	603.59
30.00°	426.14	427.72	432.26	435.13	442.62	435.51	436.74	414.48	423.94	418.95	424.66	414.10	418.12	418.83	416.54	429.61	426.14
32.50°	278.37	268.13	283.42	282.97	296.15	297.65	293.29	288.91	277.40	286.57	277.78	277.96	270.72	259.45	263.20	262.85	278.37
35.00°	182.41	188.95	183.62	191.42	193.65	187.44	189.26	174.94	184.19	179.30	187.64	181.76	182.92	179.35	177.06	185.73	182.41
37.50°	125.20	121.14	126.28	127.19	135.84	135.41	132.81	132.85	126.06	131.83	129.52	127.80	122.78	112.54	116.78	115.33	125.20
40.00°	94.07	97.00	94.56	97.79	99.67	98.16	97.50	96.89	96.47	96.47	99.19	94.92	94.28	91.50	90.38	93.29	94.07
42.50°	76.52	75.55	78.67	78.50	79.28	82.66	80.27	82.10	79.98	80.74	79.40	77.82	75.49	73.78	72.22	74.94	76.52
45.00°	72.09	73.17	74.39	74.66	73.37	75.38	74.31	73.23	75.89	73.52	74.47	72.58	71.30	71.73	69.08	71.00	72.09
47.50°	72.18	72.45	75.00	73.39	74.81	76.67	75.21	77.74	75.50	76.02	73.01	73.62	69.73	70.78	67.79	71.25	72.18
50.00°	80.80	82.80	83.18	82.93	84.91	83.96	83.94	85.04	84.45	83.26	82.94	82.03	79.51	79.00	77.97	81.92	80.80
52.50°	91.20	91.88	93.42	92.87	97.97	95.73	95.93	96.68	95.00	94.38	94.23	93.08	89.89	86.13	87.92	89.71	91.20
55.00°	93.15	96.19	95.56	93.21	97.83	98.78	98.15	100.38	96.32	97.58	95.49	92.72	88.45	88.69	89.61	92.65	93.15
57.50°	94.23	96.18	96.52	92.43	95.02	97.29	97.76	95.29	96.80	96.23	95.75	89.89	86.35	88.55	89.72	89.84	94.23
60.00°	82.10	85.95	85.60	82.71	83.58	85.77	86.97	86.05	86.33	87.49	84.43	79.94	78.19	81.29	80.15	80.20	82.10
62.50°	70.17	74.57	74.17	72.92	71.33	70.74	74.69	73.56	75.75	75.85	73.06	69.25	69.95	73.05	70.66	71.28	70.17
65.00°	61.47	61.33	63.31	62.83	62.84	60.95	63.74	62.42	64.17	64.02	61.37	60.38	61.35	63.07	61.43	62.96	61.47
67.50°	52.87	50.76	52.90	53.33	54.33	52.27	52.95	52.03	53.16	52.15	50.61	51.62	53.18	53.46	52.44	54.08	52.87
70.00°	44.79	43.26	45.75	45.37	45.67	45.31	44.32	44.39	44.58	43.26	42.99	43.90	46.16	44.33	43.95	44.85	44.79
72.50°	36.93	36.51	38.48	37.62	37.19	38.51	36.07	37.77	36.66	34.77	35.60	36.06	38.67	36.64	36.03	37.33	36.93
75.00°	29.75	30.37	30.77	30.25	29.64	31.22	30.50	30.91	30.46	27.78	28.73	27.62	30.29	30.24	29.00	30.51	29.75
77.50°	23.20	24.09	23.43	23.16	22.51	24.07	24.73	23.98	24.08	20.95	22.34	20.34	22.66	23.30	22.73	23.86	23.20
80.00°	17.96	17.73	16.99	16.42	16.66	18.75	18.23	17.41	17.41	16.35	16.70	16.71	15.98	16.00	17.30	17.26	17.96
82.50°	12.44	12.21	11.33	10.94	11.20	13.44	12.11	10.88	11.73	11.72	11.38	12.39	10.42	10.50	12.08	11.42	12.44
85.00°	6.56	7.02	6.96	6.59	6.54	8.17	6.89	7.17	7.28	6.93	6.43	6.62	5.89	5.80	7.03	5.70	6.56
87.50°	3.32	4.37	3.87	3.97	3.44	3.85	3.40	3.71	4.29	3.07	3.50	2.92	3.41	3.76	4.24	3.68	3.32
90.00°	2.75	2.35	2.31	2.43	2.50	2.43	2.75	3.08	2.61	2.50	2.15	2.17	2.26	2.49	2.68	1.90	2.75
92.50°	2.28	1.99	1.58	1.98	2.22	1.58	2.23	2.51	1.93	2.09	1.83	1.83	1.97	2.18	2.15	1.96	2.28
95.00°	1.88	1.84	1.55	2.01	2.58	1.87	1.86	2.30	1.91	2.05	2.06	1.91	2.07	2.04	2.01	2.02	1.88
97.50°	1.84	1.75	1.61	1.99	2.52	2.19	1.69	2.11	1.76	1.97	2.14	2.01	2.05	1.96	2.00	2.11	1.84
100.00°	1.99	1.67	1.72	1.96	2.17	2.54	1.67	1.94	1.57	1.83	2.16	2.14	1.99	1.89	2.03	2.17	1.99

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	1951	1951	1951	1951	1904	1904	1904	1904	1817	1817	1817	1736	1736	1736	1663	1663	1663	1628
	1	1853	1805	1761	1722	1811	1768	1729	1693	1698	1667	1638	1635	1610	1587	1576	1557	1539	1524
	2	1759	1676	1607	1549	1721	1646	1584	1531	1591	1539	1495	1539	1498	1461	1492	1458	1428	1428
	3	1674	1566	1484	1418	1639	1542	1466	1405	1497	1433	1381	1456	1402	1357	1417	1373	1335	1345
	4	1596	1473	1382	1314	1565	1453	1370	1305	1416	1345	1288	1382	1321	1272	1350	1298	1256	1273
	5	1525	1391	1298	1229	1497	1375	1288	1223	1344	1269	1211	1316	1250	1199	1289	1233	1187	1210
	6	1460	1320	1226	1158	1436	1306	1218	1154	1281	1203	1145	1257	1188	1136	1234	1174	1128	1154
	7	1401	1257	1163	1098	1379	1245	1157	1095	1224	1145	1088	1203	1133	1081	1184	1122	1075	1103
	8	1346	1200	1108	1045	1326	1191	1103	1043	1172	1094	1038	1155	1084	1033	1138	1075	1028	1058
	9	1296	1149	1060	999	1278	1141	1055	997	1125	1047	993	1110	1040	989	1096	1032	985	1016
	10	1249	1103	1016	957	1233	1096	1012	956	1082	1006	953	1069	999	950	1057	993	947	978

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	155.7 fc	2.5 ft
6.5 ft	111.5 fc	2.9 ft
7.5 ft	83.7 fc	3.3 ft
8.0 ft	73.6 fc	3.6 ft
10.0 ft	47.1 fc	4.5 ft
12.0 ft	32.7 fc	5.4 ft
14.0 ft	24.0 fc	6.3 ft
16.0 ft	18.4 fc	7.1 ft
20.0 ft	11.8 fc	8.9 ft
24.0 ft	8.2 fc	10.7 ft
28.0 ft	6.0 fc	12.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2869420	2869420	2869420
45.00°	62097	64083	63205
55.00°	98916	101486	103890
65.00°	88592	91247	90567
75.00°	70014	72419	69757
85.00°	45850	48624	45716

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	24.4	25.5	24.8	25.9	26.2	24.4	25.5	24.8	25.8	26.2
	3H	25.7	26.7	26.1	27.1	27.5	25.8	26.7	26.2	27.1	27.5
	4H	26.2	27.1	26.6	27.5	27.9	26.2	27.1	26.6	27.5	27.9
	6H	26.5	27.4	27.0	27.8	28.2	26.5	27.3	26.9	27.7	28.2
	8H	26.6	27.4	27.1	27.8	28.3	26.6	27.4	27.0	27.8	28.2
	12H	26.7	27.4	27.1	27.8	28.3	26.6	27.4	27.1	27.8	28.2
4H	2H	24.8	25.7	25.3	26.1	26.5	24.8	25.7	25.3	26.1	26.5
	3H	26.3	27.1	26.8	27.5	27.9	26.4	27.1	26.8	27.5	28.0
	4H	26.9	27.6	27.4	28.0	28.5	26.9	27.6	27.4	28.0	28.5
	6H	27.4	28.0	27.9	28.4	28.9	27.3	27.9	27.8	28.4	28.9
	8H	27.5	28.0	28.0	28.5	29.0	27.4	28.0	27.9	28.4	28.9
	12H	27.6	28.0	28.1	28.5	29.0	27.5	28.0	28.0	28.5	29.0
8H	4H	27.1	27.6	27.6	28.1	28.6	27.1	27.6	27.6	28.1	28.6
	6H	27.6	28.1	28.2	28.6	29.1	27.6	28.0	28.1	28.5	29.1
	8H	27.8	28.2	28.4	28.8	29.3	27.8	28.2	28.3	28.7	29.2
	12H	28.0	28.3	28.5	28.8	29.4	27.9	28.3	28.5	28.8	29.4
12H	4H	27.1	27.6	27.6	28.1	28.6	27.1	27.5	27.6	28.0	28.5
	6H	27.7	28.0	28.2	28.5	29.1	27.6	28.0	28.2	28.5	29.1
	8H	27.9	28.2	28.4	28.7	29.3	27.9	28.2	28.4	28.7	29.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0