

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## Spectrum Lighting Photometric Lab

### Luminaire

SR3Mx 25L 35K EB1 xx xx RD3x 25L 35K EB1 MW xx  
3 inch A-Spec downlight, narrow beam, matte white finish, hallway optic, spread  
lens

### Test Number

SP-01247\_1

### Test Date

10/25/2022

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

SR3Mx 25L 35K EB1 xx xx RD3x 25L 35K EB1  
MW xx

### Summary of Results

#### Power

Input Watts	26.3 W
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#### Lumen Output

Output Lumens	2398
Efficacy	91.18 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.91
Two luminaires, plane 90°	0.48
Four luminaires	0.66

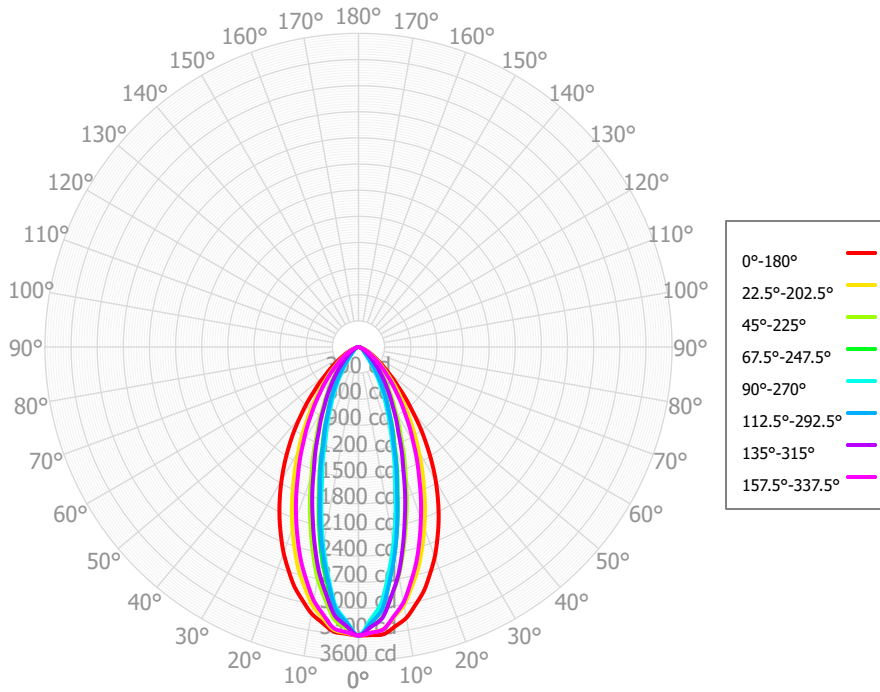
#### Full Beam Angle

0° - 180°	63°
90° - 270°	29°

### IES File Header Contents

Keyword	Value
TEST	SP-01247_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/25/2022
ISSUE DATE	12/19/2022
LUMCAT	SR3Mx 25L 35K EB1 xx xx RD3x 25L 35K EB1 MW xx
LUMINAIRE	3 inch A-Spec downlight, narrow beam, matte white finish, hallway optic, spread lens
OTHER	Asymmetric Beam Angle (Horiz Axis 0-180 × 90-270): 62.9 × 29.5 Deg
OTHER	Asymmetric Field Angle (Horiz Axis 0-180 × 90-270): 108 × 68.9 Deg
OTHER	Reference project SL167
LAMPCAT	N/A
LAMP	N/A, 19mm LES
OTHER	Total Luminaire Watts is approximate
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	This report prepared by Spectrum Lighting
_CRI	80

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	286.88	11.96%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	598.52	24.96%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	589.49	24.58%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	437.40	18.24%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	259.30	10.81%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	137.05	5.72%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	65.83	2.75%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	19.74	0.82%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.78	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2398.00	100.00%	0.00° - 180.00°	2398.00	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°	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43	3313.43
2.50°	3311.86	3283.20	3215.32	3169.30	3136.73	3166.69	3206.62	3278.15	3295.97	3285.98	3229.34	3187.72	3153.22	3176.83	3219.58	3284.78	3311.86
5.00°	3310.29	3252.97	3117.21	3025.18	2960.04	3019.95	3099.80	3242.86	3278.51	3258.54	3145.25	3062.02	2993.00	3040.23	3125.73	3256.13	3310.29
7.50°	3234.81	3130.03	2890.67	2711.05	2630.47	2699.29	2858.66	3099.44	3192.97	3138.98	2923.94	2748.89	2658.56	2720.10	2887.12	3117.13	3234.81
10.00°	3159.33	3007.09	2664.13	2396.92	2300.90	2378.64	2617.52	2956.01	3107.42	3019.41	2702.62	2435.75	2324.11	2399.97	2648.51	2978.13	3159.33
12.50°	3029.68	2823.21	2384.25	2064.43	1960.96	2040.77	2324.84	2751.72	2976.81	2835.85	2415.39	2091.51	1972.62	2055.47	2350.26	2770.22	3029.68
15.00°	2900.04	2639.32	2104.37	1731.95	1621.03	1702.90	2032.15	2547.43	2846.20	2652.29	2128.15	1747.27	1621.13	1710.98	2052.01	2562.31	2900.04
17.50°	2731.04	2424.46	1842.56	1470.94	1365.20	1440.67	1765.49	2320.14	2680.36	2434.94	1854.27	1477.14	1360.14	1444.64	1779.56	2328.84	2731.04
20.00°	2562.04	2209.59	1580.75	1209.94	1109.37	1178.43	1498.83	2092.84	2514.52	2217.60	1580.40	1207.01	1099.16	1178.30	1507.12	2095.38	2562.04
22.50°	2370.03	1993.32	1369.84	1028.05	934.06	998.37	1291.30	1871.60	2330.52	1998.57	1361.07	1022.10	925.26	999.42	1296.93	1870.87	2370.03
25.00°	2178.02	1777.05	1158.93	846.16	758.74	818.31	1083.77	1650.36	2146.53	1779.55	1141.75	837.19	751.37	820.53	1086.75	1646.37	2178.02
27.50°	1975.91	1578.70	1002.31	714.78	627.41	688.90	933.48	1458.30	1956.52	1579.63	981.80	708.96	623.87	693.04	936.46	1450.64	1975.91
30.00°	1773.80	1380.35	845.69	583.40	496.07	559.49	783.18	1266.24	1766.51	1379.71	821.85	580.73	496.37	565.55	786.18	1254.92	1773.80
32.50°	1565.22	1209.63	730.21	480.03	396.39	457.28	672.77	1106.31	1578.33	1207.53	707.77	480.57	398.47	463.34	676.67	1093.05	1565.22
35.00°	1356.63	1038.91	614.73	376.66	296.71	355.06	562.36	946.39	1390.15	1035.35	593.69	380.40	300.58	361.13	567.17	931.19	1356.63
37.50°	1160.73	896.21	524.90	299.99	233.06	281.85	476.95	816.80	1212.51	893.92	508.98	305.53	236.71	287.59	481.67	801.49	1160.73
40.00°	964.82	753.52	435.08	223.33	169.41	208.63	391.54	687.20	1034.88	752.49	424.27	230.66	172.84	214.04	396.17	671.79	964.82
42.50°	805.52	640.36	364.01	178.18	137.81	167.63	325.65	587.80	879.61	640.58	357.92	184.72	139.86	170.21	329.18	572.77	805.52
45.00°	646.21	527.21	292.94	133.03	106.20	126.63	259.75	488.40	724.34	528.67	291.57	138.77	106.88	126.37	262.19	473.75	646.21
47.50°	535.30	443.00	241.25	110.10	92.63	106.50	212.64	412.87	604.64	446.55	242.38	113.33	92.38	105.71	214.72	399.46	535.30
50.00°	424.40	358.79	189.56	87.18	79.05	86.37	165.52	337.33	484.93	364.44	193.20	87.89	77.88	85.04	167.24	325.17	424.40
52.50°	350.40	299.16	155.08	77.30	72.04	75.84	136.02	281.99	400.67	304.72	158.81	77.14	70.94	75.04	136.77	271.02	350.40
55.00°	276.41	239.54	120.60	67.42	65.03	65.31	106.51	226.65	316.41	245.00	124.42	66.40	63.99	65.04	106.31	216.88	276.41
57.50°	229.11	197.98	98.40	60.76	59.22	58.82	87.78	188.58	260.58	202.44	101.78	59.25	59.47	59.69	87.42	179.26	229.11
60.00°	181.81	156.42	76.19	54.10	53.41	52.32	69.04	150.51	204.74	159.87	79.14	52.10	54.95	54.35	68.53	141.64	181.81
62.50°	146.35	126.14	62.83	47.90	47.67	47.49	57.30	121.73	164.50	128.36	64.51	45.91	49.31	47.72	57.06	114.31	146.35
65.00°	110.89	95.87	49.47	41.69	41.93	42.66	45.57	92.96	124.25	96.84	49.87	39.72	43.68	41.09	45.59	86.98	110.89
67.50°	80.34	72.54	40.30	36.34	35.36	35.23	36.85	68.41	90.22	68.29	39.51	33.51	36.59	35.44	36.79	63.73	80.34
70.00°	49.79	49.21	31.12	30.99	28.79	27.80	28.14	43.86	56.20	39.74	29.14	27.30	29.50	29.79	27.99	40.48	49.79
72.50°	33.81	34.15	24.43	24.04	22.14	22.06	21.03	29.20	37.38	27.29	22.10	21.76	23.04	23.91	21.44	27.41	33.81
75.00°	17.84	19.09	17.73	17.09	15.50	16.33	13.93	14.55	18.56	14.83	15.05	16.22	16.59	18.04	14.88	14.34	17.84
77.50°	12.28	13.91	12.87	12.49	11.39	11.71	10.03	10.63	12.90	10.24	10.75	11.30	11.79	13.01	10.77	10.20	12.28
80.00°	6.71	8.73	8.01	7.89	7.28	7.10	6.12	6.72	7.25	5.65	6.44	6.38	6.99	7.99	6.66	6.06	6.71
82.50°	4.63	5.78	5.52	5.39	5.26	4.90	4.21	4.54	4.82	3.96	4.50	4.29	4.75	5.29	4.58	3.87	4.63
85.00°	2.54	2.82	3.02	2.88	3.24	2.70	2.30	2.36	2.40	2.26	2.55	2.19	2.51	2.59	2.50	1.68	2.54
87.50°	2.31	2.52	2.52	2.24	2.61	2.23	1.80	2.24	1.94	2.02	2.23	1.93	2.18	2.27	2.06	1.78	2.31
90.00°	2.08	2.22	2.02	1.60	1.98	1.77	1.30	2.13	1.49	1.78	1.92	1.68	1.86	1.95	1.62	1.88	2.08

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	2855	2855	2855	2855	2788	2788	2788	2788	2664	2664	2664	2551	2551	2551	2447	2447	2398
	<b>1</b>	2704	2630	2564	2504	2644	2578	2518	2464	2480	2432	2388	2390	2352	2316	2307	2277	2231
	<b>2</b>	2550	2420	2312	2221	2496	2378	2279	2196	2299	2218	2147	2226	2159	2101	2159	2105	2063
	<b>3</b>	2405	2233	2101	1995	2355	2199	2077	1979	2135	2031	1946	2075	1988	1915	2020	1947	1909
	<b>4</b>	2269	2069	1922	1811	2224	2041	1905	1799	1988	1870	1778	1938	1838	1756	1892	1806	1772
	<b>5</b>	2144	1924	1771	1657	2102	1901	1757	1650	1856	1731	1634	1815	1705	1619	1776	1681	1650
	<b>6</b>	2028	1796	1640	1528	1991	1776	1629	1522	1739	1609	1511	1704	1589	1501	1671	1570	1542
	<b>7</b>	1922	1682	1526	1417	1889	1665	1518	1413	1634	1501	1405	1604	1486	1397	1576	1470	1445
	<b>8</b>	1825	1581	1427	1321	1795	1567	1420	1318	1539	1407	1312	1514	1394	1306	1490	1382	1359
	<b>9</b>	1736	1490	1339	1237	1709	1478	1334	1235	1454	1323	1231	1432	1312	1226	1412	1302	1282
	<b>10</b>	1655	1409	1261	1163	1629	1398	1257	1162	1378	1248	1158	1359	1239	1155	1340	1231	1212

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	109.5 fc	6.7 ft
6.5 ft	78.4 fc	7.9 ft
7.5 ft	58.9 fc	9.2 ft
8.0 ft	51.8 fc	9.8 ft
10.0 ft	33.1 fc	12.2 ft
12.0 ft	23.0 fc	14.7 ft
14.0 ft	16.9 fc	17.1 ft
16.0 ft	12.9 fc	19.6 ft
20.0 ft	8.3 fc	24.4 ft
24.0 ft	5.8 fc	29.3 ft
28.0 ft	4.2 fc	34.2 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	726571	726571	726571
<b>45.00°</b>	200396	90844	32933
<b>55.00°</b>	105672	46106	24860
<b>65.00°</b>	57537	25670	21757
<b>75.00°</b>	15114	15025	13134
<b>85.00°</b>	6398	7593	8154

### 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	24.6	25.8	25.0	26.1	26.4	16.4	17.5	16.7	17.8	18.2
	3H	25.1	26.1	25.5	26.5	26.8	17.8	18.8	18.2	19.1	19.5
	4H	25.1	26.1	25.5	26.4	26.8	18.1	19.1	18.5	19.4	19.8
	6H	25.1	25.9	25.5	26.3	26.7	18.3	19.2	18.7	19.5	19.9
	8H	25.0	25.8	25.4	26.2	26.6	18.3	19.1	18.7	19.5	19.9
	12H	25.0	25.8	25.4	26.1	26.6	18.3	19.1	18.7	19.5	19.9
4H	2H	24.5	25.4	24.9	25.8	26.2	17.1	18.0	17.5	18.4	18.8
	3H	25.0	25.8	25.5	26.2	26.6	18.6	19.3	19.0	19.7	20.1
	4H	25.0	25.7	25.5	26.2	26.6	19.0	19.6	19.4	20.1	20.5
	6H	25.0	25.6	25.5	26.0	26.5	19.1	19.7	19.6	20.2	20.7
	8H	25.0	25.5	25.4	26.0	26.4	19.2	19.7	19.6	20.2	20.6
	12H	24.9	25.4	25.4	25.9	26.4	19.2	19.6	19.7	20.1	20.6
8H	4H	24.9	25.5	25.4	25.9	26.4	19.0	19.6	19.5	20.0	20.5
	6H	24.9	25.3	25.4	25.8	26.3	19.3	19.7	19.8	20.2	20.7
	8H	24.8	25.2	25.4	25.8	26.3	19.3	19.7	19.8	20.2	20.7
	12H	24.8	25.2	25.3	25.7	26.2	19.3	19.7	19.9	20.2	20.8
12H	4H	24.9	25.4	25.4	25.9	26.3	19.0	19.5	19.5	20.0	20.4
	6H	24.8	25.2	25.4	25.7	26.3	19.2	19.6	19.8	20.1	20.6
	8H	24.8	25.2	25.3	25.7	26.2	19.3	19.7	19.8	20.1	20.7

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0