

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SR3Mx 25L 35K EB2 xx xx RD3x 25L 35K EB2 MW xx  
3 inch A-Spec downlight, medium beam, matte white finish, hallway optic, spread  
lens

### Test Number

SP-01427

### Test Date

10/26/2022

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

SR3Mx 25L 35K EB2 xx xx RD3x 25L 35K EB2  
MW xx

### Summary of Results

#### Power

Input Watts	26.3 W
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#### Lumen Output

Output Lumens	2444
Efficacy	92.92 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.92
Two luminaires, plane 90°	0.52
Four luminaires	0.69

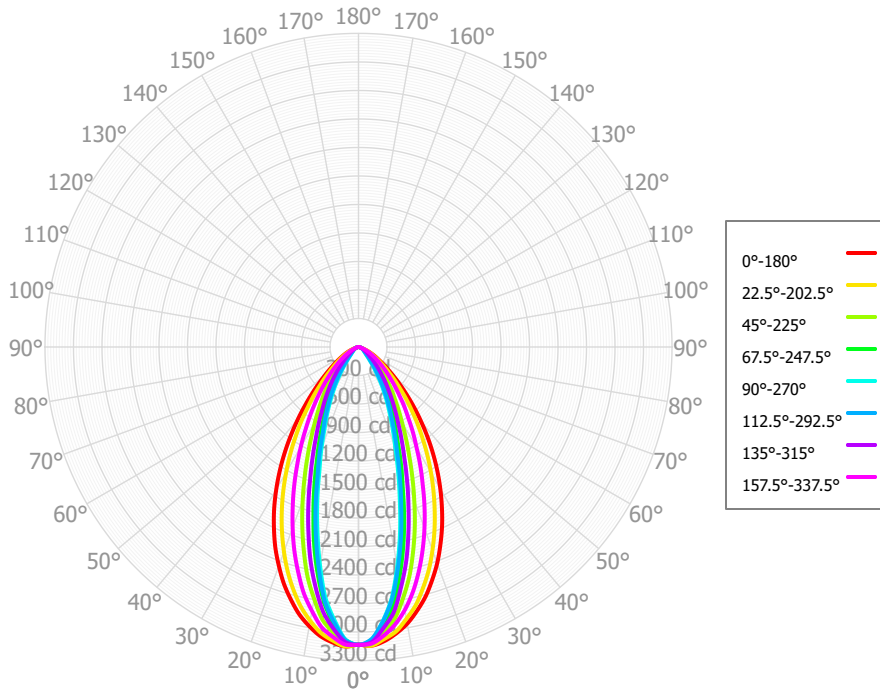
#### Full Beam Angle

0° - 180°	64°
90° - 270°	32°

### IES File Header Contents

Keyword	Value
TEST	SP-01427
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/26/2022
ISSUE DATE	12/19/2022
LUMCAT	SR3Mx 25L 35K EB2 xx xx RD3x 25L 35K EB2 MW xx
LUMINAIRE	3 inch A-Spec downlight, medium beam, matte white finish, hallway optic, spread lens
OTHER	Asymmetric Beam Angle (Horiz Axis 0-180 × 90-270): 64.1 × 32.1 Deg
OTHER	Asymmetric Field Angle (Horiz Axis 0-180 × 90-270): 110.2 × 71.6 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°	278.92	11.41%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	598.38	24.49%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	598.72	24.50%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	451.20	18.46%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	272.20	11.14%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	146.43	5.99%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	71.89	2.94%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	22.22	0.91%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.82	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2443.79	100.00%	0.00° - 180.00°	2443.79	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°	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26	3134.26
2.50°	3147.29	3146.02	3130.07	3102.29	3086.24	3090.77	3111.28	3135.42	3155.67	3154.65	3137.52	3090.04	3084.31	3080.56	3112.02	3125.09	3147.29
5.00°	3108.00	3086.08	3021.59	2946.76	2902.37	2914.80	2981.81	3065.02	3121.95	3102.47	3022.32	2934.61	2889.02	2908.45	2974.64	3049.63	3108.00
7.50°	3040.78	3021.03	2892.07	2759.89	2670.38	2706.71	2820.87	2975.65	3069.68	3035.27	2897.38	2729.89	2665.03	2685.33	2823.78	2946.96	3040.78
10.00°	2956.44	2905.39	2690.52	2469.51	2346.42	2390.54	2581.38	2821.53	2984.03	2926.32	2691.52	2448.78	2333.11	2378.05	2571.61	2809.92	2956.44
12.50°	2844.62	2783.74	2473.04	2168.57	2017.02	2065.52	2322.67	2656.79	2882.23	2800.87	2477.25	2149.50	1997.33	2062.32	2315.63	2642.50	2844.62
15.00°	2722.26	2624.98	2223.00	1854.17	1680.89	1744.41	2033.74	2452.57	2751.45	2646.12	2222.07	1831.13	1675.85	1737.16	2028.92	2448.96	2722.26
17.50°	2574.84	2460.29	1970.68	1547.72	1390.05	1434.05	1756.16	2245.88	2612.32	2477.83	1967.97	1546.36	1369.10	1451.78	1748.91	2242.98	2574.84
20.00°	2422.12	2276.30	1715.25	1303.00	1137.53	1201.19	1490.65	2026.11	2451.13	2293.83	1716.73	1284.89	1142.14	1195.71	1493.63	2030.01	2422.12
22.50°	2252.42	2089.52	1479.52	1074.46	943.60	985.91	1264.24	1808.03	2286.91	2104.30	1480.01	1077.73	934.88	997.25	1259.50	1815.08	2252.42
25.00°	2081.05	1897.28	1261.48	906.83	782.00	831.33	1065.34	1598.73	2105.63	1910.41	1267.42	895.40	784.14	826.09	1071.19	1599.44	2081.05
27.50°	1901.15	1708.83	1077.94	754.61	648.12	688.69	905.69	1396.64	1923.14	1716.24	1079.50	755.55	643.79	690.39	904.73	1408.34	1901.15
30.00°	1721.42	1525.20	914.70	636.28	523.98	570.62	763.68	1214.77	1731.53	1521.92	919.25	627.06	522.39	565.03	769.54	1221.95	1721.42
32.50°	1542.94	1347.90	784.08	526.40	419.60	461.55	652.23	1044.19	1540.26	1337.45	783.92	522.63	412.87	459.82	651.44	1066.89	1542.94
35.00°	1365.66	1176.09	665.80	428.78	318.91	364.77	549.13	893.82	1350.50	1156.01	667.07	421.13	317.46	357.44	549.50	914.92	1365.66
37.50°	1192.56	1019.92	571.44	342.98	249.64	283.24	463.49	758.54	1165.10	992.64	568.51	340.24	242.83	284.14	460.21	792.66	1192.56
40.00°	1025.85	872.61	482.06	268.51	183.46	215.46	380.04	640.91	991.15	832.21	478.68	262.02	184.56	213.80	379.01	673.88	1025.85
42.50°	872.44	742.79	410.87	210.58	147.21	166.40	312.48	538.80	828.99	702.49	404.76	208.05	144.75	169.94	311.39	576.62	872.44
45.00°	730.24	619.09	341.55	163.07	113.83	128.75	246.91	448.71	686.19	576.13	335.53	158.66	114.66	130.11	249.25	485.29	730.24
47.50°	603.50	518.75	286.05	130.52	97.51	105.94	200.13	375.32	561.79	480.81	279.71	129.37	97.99	108.98	202.03	412.55	603.50
50.00°	494.07	422.96	232.49	104.10	83.23	88.79	156.40	310.57	457.83	390.24	225.80	103.47	85.62	90.77	158.19	345.17	494.07
52.50°	400.42	354.26	192.09	87.56	75.16	78.44	125.73	257.64	373.18	324.57	184.88	85.99	76.68	80.32	131.02	288.28	400.42
55.00°	325.31	287.87	154.51	73.32	68.37	69.52	99.00	208.39	302.70	263.67	145.22	72.11	68.30	71.03	105.58	238.35	325.31
57.50°	261.26	237.28	126.65	64.82	64.06	63.84	82.19	170.02	247.75	216.12	116.61	63.85	62.10	63.69	87.46	197.24	261.26
60.00°	211.75	188.82	101.38	56.90	59.09	58.40	67.37	133.45	200.13	173.20	90.32	56.49	56.03	57.64	70.22	161.22	211.75
62.50°	167.83	153.63	81.45	52.14	53.32	51.90	55.70	106.15	161.84	138.58	74.94	50.09	50.53	53.01	59.61	129.60	167.83
65.00°	126.91	118.81	63.90	47.07	46.97	45.28	45.30	79.54	126.26	106.01	59.89	43.58	45.08	47.40	49.37	102.01	126.91
67.50°	86.62	85.22	49.62	39.42	40.13	37.76	36.23	57.54	93.30	75.84	45.69	36.99	39.88	41.05	40.50	76.71	86.62
70.00°	58.70	55.99	37.27	31.97	33.45	30.57	28.03	37.21	60.72	52.30	33.61	30.90	34.06	33.39	32.22	55.13	58.70
72.50°	32.23	35.37	26.66	25.29	26.88	24.56	20.47	25.74	40.99	33.90	25.04	25.02	26.42	25.09	25.19	34.86	32.23
75.00°	21.40	20.64	18.74	18.81	20.38	18.49	14.74	16.02	22.41	21.92	17.78	18.91	19.26	19.07	18.84	22.79	21.40
77.50°	11.43	13.43	12.42	12.76	13.91	12.31	9.85	11.23	14.80	13.26	12.01	12.73	12.92	13.71	13.49	12.31	11.43
80.00°	7.38	8.09	8.07	7.94	9.13	7.39	6.40	7.08	8.06	8.34	7.80	8.35	7.87	9.37	8.87	8.81	7.38
82.50°	3.89	4.33	4.48	4.84	4.67	4.17	3.35	4.04	5.30	4.58	4.77	4.18	4.36	5.17	4.95	5.79	3.89
85.00°	2.40	2.59	2.99	2.81	2.95	2.38	2.47	2.14	3.04	3.09	3.17	2.87	2.44	3.29	2.86	3.66	2.40
87.50°	1.48	2.00	1.94	1.81	1.46	1.87	1.87	1.59	2.10	1.94	2.27	1.70	1.76	1.57	1.93	1.81	1.48
90.00°	1.71	1.91	1.86	1.51	1.58	1.70	1.87	1.44	1.65	1.71	1.92	1.72	1.58	1.24	1.70	1.72	1.71

### 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%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	<b>0</b>	2909	2909	2909	2909	2842	2842	2842	2842	2715	2715	2715	2600	2600	2600	2494	2494	2494	2444
	<b>1</b>	2754	2677	2609	2547	2692	2624	2562	2507	2524	2475	2429	2432	2393	2356	2348	2317	2288	2270
	<b>2</b>	2595	2460	2349	2255	2539	2417	2315	2229	2336	2252	2180	2262	2193	2133	2194	2137	2087	2095
	<b>3</b>	2444	2267	2130	2021	2393	2232	2106	2004	2166	2060	1972	2105	2016	1940	2049	1974	1910	1935
	<b>4</b>	2304	2098	1946	1831	2257	2069	1928	1820	2014	1893	1797	1964	1860	1776	1917	1828	1755	1793
	<b>5</b>	2175	1948	1790	1673	2133	1924	1776	1665	1879	1749	1650	1836	1723	1635	1797	1699	1620	1667
	<b>6</b>	2056	1816	1655	1540	2018	1796	1645	1534	1758	1624	1523	1722	1603	1513	1689	1584	1502	1555
	<b>7</b>	1947	1699	1539	1426	1913	1682	1530	1422	1650	1514	1414	1619	1497	1406	1591	1482	1398	1456
	<b>8</b>	1847	1595	1437	1328	1816	1581	1430	1325	1553	1416	1319	1527	1403	1313	1502	1391	1307	1368
	<b>9</b>	1756	1502	1347	1242	1728	1490	1341	1240	1466	1330	1235	1443	1320	1231	1422	1309	1226	1289
	<b>10</b>	1672	1419	1267	1167	1646	1408	1263	1165	1387	1254	1161	1368	1245	1158	1349	1236	1154	1217

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	103.6 fc	6.9 ft
6.5 ft	74.2 fc	8.1 ft
7.5 ft	55.7 fc	9.4 ft
8.0 ft	49.0 fc	10.0 ft
10.0 ft	31.3 fc	12.5 ft
12.0 ft	21.8 fc	15.0 ft
14.0 ft	16.0 fc	17.5 ft
16.0 ft	12.2 fc	20.0 ft
20.0 ft	7.8 fc	25.0 ft
24.0 ft	5.4 fc	30.0 ft
28.0 ft	4.0 fc	35.0 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	687282	687282	687282
<b>45.00°</b>	226455	105919	35300
<b>55.00°</b>	124365	59069	26139
<b>65.00°</b>	65846	33157	24371
<b>75.00°</b>	18133	15876	17267
<b>85.00°</b>	6051	7525	7425

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	25.6	26.7	25.9	27.0	27.4	16.8	18.0	17.2	18.3	18.6
	<b>3H</b>	26.0	27.1	26.4	27.4	27.8	18.3	19.4	18.7	19.7	20.1
	<b>4H</b>	26.0	27.0	26.4	27.3	27.7	18.7	19.7	19.2	20.1	20.5
	<b>6H</b>	26.0	26.8	26.4	27.2	27.6	18.9	19.8	19.3	20.2	20.6
	<b>8H</b>	25.9	26.7	26.3	27.1	27.5	18.9	19.7	19.3	20.1	20.5
	<b>12H</b>	25.9	26.7	26.3	27.0	27.5	18.9	19.7	19.3	20.1	20.5
<b>4H</b>	<b>2H</b>	25.4	26.4	25.8	26.7	27.1	17.6	18.6	18.0	18.9	19.3
	<b>3H</b>	26.0	26.8	26.4	27.2	27.6	19.1	19.9	19.5	20.3	20.7
	<b>4H</b>	26.0	26.7	26.4	27.1	27.5	19.6	20.3	20.0	20.7	21.2
	<b>6H</b>	25.9	26.5	26.4	27.0	27.4	19.8	20.4	20.3	20.8	21.3
	<b>8H</b>	25.9	26.4	26.3	26.9	27.4	19.8	20.4	20.3	20.8	21.3
	<b>12H</b>	25.8	26.3	26.3	26.8	27.3	19.8	20.3	20.3	20.8	21.2
<b>8H</b>	<b>4H</b>	25.9	26.4	26.3	26.9	27.3	19.7	20.2	20.1	20.7	21.1
	<b>6H</b>	25.8	26.3	26.3	26.8	27.2	19.9	20.4	20.4	20.9	21.3
	<b>8H</b>	25.8	26.2	26.3	26.7	27.2	19.9	20.3	20.5	20.9	21.3
	<b>12H</b>	25.7	26.1	26.2	26.6	27.1	19.9	20.3	20.5	20.8	21.4
<b>12H</b>	<b>4H</b>	25.8	26.3	26.3	26.8	27.3	19.6	20.1	20.1	20.6	21.1
	<b>6H</b>	25.8	26.2	26.3	26.6	27.2	19.9	20.3	20.4	20.8	21.3
	<b>8H</b>	25.7	26.1	26.2	26.6	27.1	19.9	20.3	20.4	20.8	21.3

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0