

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 835 07 xx xx RD2FL RB2BS xx RA2LS

2" Adjustable Track Luminaire with flood optic, difusing lens and standard  
bezel

#### Test Number

SP-01592

#### Test Date

9/27/2023

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

### Summary of Results

#### Power

Input Watts	6.9 W
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#### Lumen Output

Output Lumens	703
Efficacy	101.91 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.21
90° - 270° Size	-0.21
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	0.54
Two luminaires, plane 90°	0.55
Four luminaires	0.53

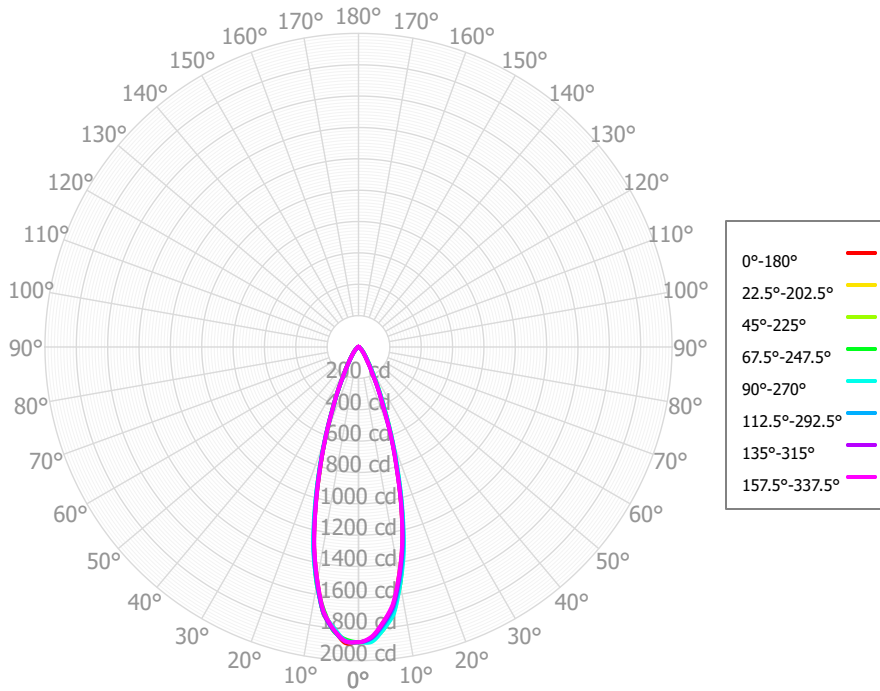
#### Full Beam Angle

0° - 180°	32°
90° - 270°	33°

### IES File Header Contents

Keyword	Value
TEST	SP-01592
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 835 07 xx xx RD2FL RB2BS xx RA2LS
LUMINAIRE	2" Adjustable Track Luminaire with flood optic, difusing lens and standard bezel
OTHER	Beam Angle: 33 deg
OTHER	80 CRI, 3500K tested
OTHER	CCT Output Multipliers: 822 x 0.75, 827 x 0.93, 830 x 1.0, 840 x 1.0
OTHER	CCT Output Multipliers: 927 x 0.81, 930 x 0.81, 935 x 0.81, 940 x 0.87
OTHER	Total luminaire wattages are approximate
OTHER	This report prepared by Spectrum Lighting

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	164.83	23.44%	90.00° - 100.00°	0.74	0.11%
10.00° - 20.00°	285.90	40.66%	100.00° - 110.00°	0.73	0.10%
20.00° - 30.00°	147.70	21.00%	100.00° - 120.00°	1.43	0.20%
30.00° - 40.00°	56.34	8.01%	120.00° - 130.00°	0.66	0.09%
40.00° - 50.00°	26.73	3.80%	130.00° - 140.00°	0.60	0.08%
50.00° - 60.00°	11.75	1.67%	140.00° - 150.00°	0.53	0.08%
60.00° - 70.00°	3.48	0.50%	150.00° - 160.00°	0.41	0.06%
70.00° - 80.00°	1.02	0.14%	160.00° - 170.00°	0.24	0.03%
80.00° - 90.00°	0.77	0.11%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	698.52	99.33%	0.00° - 180.00°	703.21	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°	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14	1883.14
2.50°	1862.12	1859.80	1873.23	1866.28	1883.79	1878.31	1881.24	1878.98	1890.80	1879.34	1880.50	1867.52	1875.80	1862.55	1858.49	1852.13	1862.12
5.00°	1767.65	1775.05	1788.35	1810.21	1810.79	1815.04	1813.44	1809.32	1805.98	1807.02	1803.13	1819.69	1798.49	1786.90	1775.41	1767.26	1767.65
7.50°	1671.46	1671.17	1696.51	1691.18	1719.25	1711.39	1711.20	1702.00	1715.27	1703.40	1711.47	1693.41	1711.60	1687.99	1673.65	1660.72	1671.46
10.00°	1483.90	1490.65	1503.36	1535.21	1533.83	1528.43	1519.43	1513.06	1514.07	1515.25	1518.16	1536.81	1527.83	1514.19	1495.09	1485.23	1483.90
12.50°	1294.78	1289.45	1303.41	1306.44	1336.12	1321.61	1309.97	1303.84	1309.42	1309.11	1316.51	1314.77	1332.76	1311.31	1295.20	1286.11	1294.78
15.00°	1054.90	1055.38	1060.30	1072.84	1084.27	1071.92	1058.30	1054.54	1059.45	1059.00	1063.90	1069.89	1084.86	1072.66	1056.70	1052.43	1054.90
17.50°	816.96	813.48	815.27	830.53	841.45	836.16	821.08	820.32	814.40	822.21	819.23	837.15	831.93	821.47	808.72	808.13	816.96
20.00°	615.76	616.19	621.27	616.60	634.20	623.35	615.26	613.39	618.53	615.01	616.03	608.20	626.39	614.36	604.42	605.09	615.76
22.50°	420.44	428.17	428.60	449.62	446.38	444.75	437.16	437.69	431.92	436.57	429.27	447.20	424.24	421.10	409.52	413.33	420.44
25.00°	306.31	311.52	319.11	314.18	326.41	317.96	313.98	313.79	319.37	316.34	316.83	305.17	311.56	301.04	294.27	294.70	306.31
27.50°	197.81	207.67	210.94	227.19	222.09	219.66	214.76	216.18	214.67	218.42	216.12	222.85	203.25	201.51	193.83	193.76	197.81
30.00°	147.91	154.09	161.76	159.85	166.51	161.02	158.95	158.59	161.93	161.78	161.98	155.28	154.43	147.88	143.48	141.28	147.91
32.50°	101.13	108.13	113.50	120.25	118.50	116.36	114.44	114.18	113.56	116.38	114.47	117.66	107.22	105.85	101.05	99.25	101.13
35.00°	80.18	84.51	90.46	89.52	91.71	89.61	88.72	88.46	89.69	90.24	90.33	86.53	84.92	81.77	79.65	77.03	80.18
37.50°	60.36	63.70	67.98	70.30	68.79	68.83	67.70	67.88	67.68	68.77	68.73	68.97	62.94	61.68	61.03	58.51	60.36
40.00°	48.22	51.19	55.22	54.98	55.65	55.08	53.96	53.99	54.87	54.65	55.13	53.95	51.55	50.30	49.36	47.50	48.22
42.50°	36.97	39.52	42.83	44.32	43.88	44.20	42.58	42.98	43.05	43.20	43.07	43.66	40.30	40.60	38.42	37.69	36.97
45.00°	30.84	32.57	34.91	35.44	35.27	36.45	34.57	35.45	35.49	35.63	35.32	34.12	33.15	32.81	31.10	31.08	30.84
47.50°	24.93	25.97	27.22	28.53	27.70	29.42	27.75	28.72	28.33	28.84	28.20	28.04	26.08	25.34	24.08	24.89	24.93
50.00°	20.16	20.84	21.74	22.55	22.28	23.12	22.49	22.90	22.69	23.11	22.67	22.42	20.61	20.33	19.19	19.82	20.16
52.50°	15.62	15.78	16.48	17.53	17.64	17.77	17.69	17.76	17.43	18.03	17.65	17.66	15.27	15.66	14.44	14.87	15.62
55.00°	12.18	12.43	12.95	13.54	14.49	13.30	13.44	13.32	13.42	13.75	13.81	13.00	11.63	11.79	10.96	11.14	12.18
57.50°	8.92	9.14	9.56	10.52	11.22	9.70	9.70	9.79	9.75	10.04	10.34	9.67	8.18	8.02	7.54	7.53	8.92
60.00°	6.35	6.86	7.09	7.70	7.77	6.85	6.51	7.12	7.05	6.98	7.65	6.46	6.47	5.69	5.41	5.92	6.35
62.50°	4.12	4.61	4.81	5.04	4.97	4.84	4.40	5.08	4.71	4.76	5.28	4.73	4.78	3.49	3.32	4.44	4.12
65.00°	3.06	3.50	3.49	3.30	3.23	3.48	3.37	3.58	3.39	3.41	3.50	3.08	3.24	2.64	2.61	3.15	3.06
67.50°	2.09	2.40	2.33	2.31	2.02	2.42	2.59	2.40	2.30	2.44	2.14	2.23	1.82	1.89	1.91	1.87	2.09
70.00°	1.40	1.55	1.86	1.61	1.59	1.58	2.03	1.48	1.78	1.83	1.50	1.41	1.28	1.36	1.39	1.36	1.40
72.50°	0.87	0.74	1.42	1.11	1.24	1.09	1.51	0.98	1.33	1.41	1.04	1.13	0.81	0.84	0.88	0.87	0.87
75.00°	0.77	0.68	1.06	0.88	1.01	0.86	1.03	0.80	1.02	1.15	0.85	0.87	0.83	0.70	0.75	0.84	0.77
77.50°	0.69	0.65	0.76	0.84	0.84	0.77	0.80	0.69	0.83	0.96	0.73	0.72	0.82	0.57	0.63	0.80	0.69
80.00°	0.66	0.84	0.69	0.76	0.76	0.77	0.78	0.64	0.89	0.83	0.70	0.59	0.67	0.55	0.75	0.70	0.66
82.50°	0.63	1.01	0.65	0.66	0.71	0.77	0.69	0.58	0.90	0.76	0.69	0.59	0.55	0.52	0.86	0.60	0.63
85.00°	0.61	1.04	0.71	0.68	0.71	0.78	0.56	0.52	0.83	0.75	0.72	0.60	0.58	0.55	0.74	0.70	0.61
87.50°	0.63	1.04	0.75	0.76	0.68	0.78	0.54	0.56	0.76	0.81	0.72	0.68	0.62	0.58	0.63	0.79	0.63
90.00°	0.69	0.80	0.73	0.72	0.61	0.78	0.59	0.65	0.68	0.92	0.70	0.77	0.70	0.62	0.56	0.74	0.69
92.50°	0.73	0.59	0.74	0.62	0.58	0.70	0.59	0.61	0.65	0.85	0.71	0.78	0.76	0.65	0.50	0.69	0.73
95.00°	0.72	0.60	0.88	0.63	0.58	0.58	0.56	0.50	0.72	0.66	0.77	0.78	0.78	0.73	0.59	0.66	0.72
97.50°	0.73	0.62	0.95	0.69	0.63	0.58	0.60	0.57	0.72	0.60	0.75	0.73	0.75	0.79	0.67	0.63	0.73
100.00°	0.76	0.69	0.84	0.78	0.73	0.63	0.68	0.72	0.63	0.63	0.62	0.67	0.58	0.77	0.66	0.57	0.76
102.50°	0.77	0.74	0.77	0.89	0.74	0.63	0.62	0.74	0.61	0.68	0.59	0.68	0.49	0.74	0.66	0.52	0.77
105.00°	0.75	0.68	0.79	0.94	0.70	0.62	0.49	0.71	0.71	0.75	0.66	0.68	0.59	0.64	0.65	0.58	0.75

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>ptc</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>	836	836	836	836	816	816	816	816	779	779	779	745	745	745	713	713	699
	<b>1</b>	802	785	770	756	785	770	756	743	740	730	720	714	705	697	689	683	669
	<b>2</b>	770	740	715	695	754	728	705	687	705	687	671	683	669	656	664	652	639
	<b>3</b>	739	700	670	646	725	690	663	641	672	649	630	654	636	620	639	623	611
	<b>4</b>	709	664	632	606	697	656	626	603	641	616	595	627	606	588	614	596	585
	<b>5</b>	682	633	598	573	671	626	594	570	614	586	565	602	578	560	591	571	561
	<b>6</b>	656	604	569	544	647	599	566	542	588	559	538	579	553	534	570	548	538
	<b>7</b>	632	578	543	518	624	573	540	517	565	535	514	557	531	511	549	526	517
	<b>8</b>	610	554	520	496	602	551	518	495	543	514	492	536	510	490	530	506	498
	<b>9</b>	589	533	498	475	582	529	497	474	523	494	473	517	490	471	512	487	480
	<b>10</b>	569	513	479	457	563	510	478	456	505	475	455	499	473	454	495	470	463

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	62.3 fc	3.2 ft
6.5 ft	44.6 fc	3.8 ft
7.5 ft	33.5 fc	4.3 ft
8.0 ft	29.4 fc	4.6 ft
10.0 ft	18.8 fc	5.8 ft
12.0 ft	13.1 fc	7.0 ft
14.0 ft	9.6 fc	8.1 ft
16.0 ft	7.4 fc	9.3 ft
20.0 ft	4.7 fc	11.6 ft
24.0 ft	3.3 fc	13.9 ft
28.0 ft	2.4 fc	16.2 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	585226	585226	585226
<b>45.00°</b>	13555	15342	15503
<b>55.00°</b>	6599	7017	7849
<b>65.00°</b>	2250	2568	2375
<b>75.00°</b>	926	1276	1214
<b>85.00°</b>	2193	2539	2527

### 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	8.5	9.4	8.9	9.8	10.1	9.4	10.3	9.8	10.7	11.0
	3H	8.6	9.4	9.0	9.8	10.2	9.4	10.3	9.8	10.6	11.0
	4H	8.5	9.3	9.0	9.7	10.1	9.4	10.2	9.8	10.5	10.9
	6H	8.5	9.2	9.0	9.6	10.0	9.4	10.1	9.8	10.5	10.9
	8H	8.5	9.2	9.0	9.6	10.0	9.4	10.0	9.8	10.5	10.9
	12H	8.6	9.2	9.1	9.6	10.1	9.4	10.0	9.9	10.4	10.9
4H	2H	8.4	9.2	8.8	9.5	10.0	9.3	10.1	9.7	10.5	10.9
	3H	8.6	9.2	9.0	9.6	10.0	9.4	10.0	9.8	10.5	10.9
	4H	8.5	9.1	9.0	9.5	10.0	9.4	9.9	9.8	10.4	10.8
	6H	8.6	9.1	9.1	9.5	10.0	9.4	9.9	9.9	10.4	10.8
	8H	8.7	9.1	9.1	9.6	10.1	9.4	9.9	9.9	10.4	10.8
	12H	8.8	9.2	9.3	9.7	10.2	9.5	9.9	10.0	10.4	10.9
8H	4H	8.4	8.9	8.9	9.3	9.8	9.3	9.7	9.8	10.2	10.7
	6H	8.6	8.9	9.1	9.4	9.9	9.3	9.7	9.9	10.2	10.7
	8H	8.7	9.1	9.3	9.6	10.1	9.4	9.8	10.0	10.3	10.8
	12H	9.1	9.4	9.6	9.9	10.5	9.7	9.9	10.2	10.4	11.0
12H	4H	8.4	8.8	8.9	9.3	9.8	9.2	9.6	9.7	10.1	10.6
	6H	8.5	8.9	9.1	9.3	9.9	9.3	9.6	9.9	10.1	10.7
	8H	8.8	9.1	9.3	9.6	10.2	9.5	9.7	10.0	10.2	10.8

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0