

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 835 07 xx xx RD2FL RB2BD xx xx

2" Adjustable Track Luminaire with flood optic and snoot/deep cutoff bezel

#### Test Number

SP-01579

#### Test Date

9/26/2023

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	690
Efficacy	100.01 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°	0.53
Four luminaires	0.49

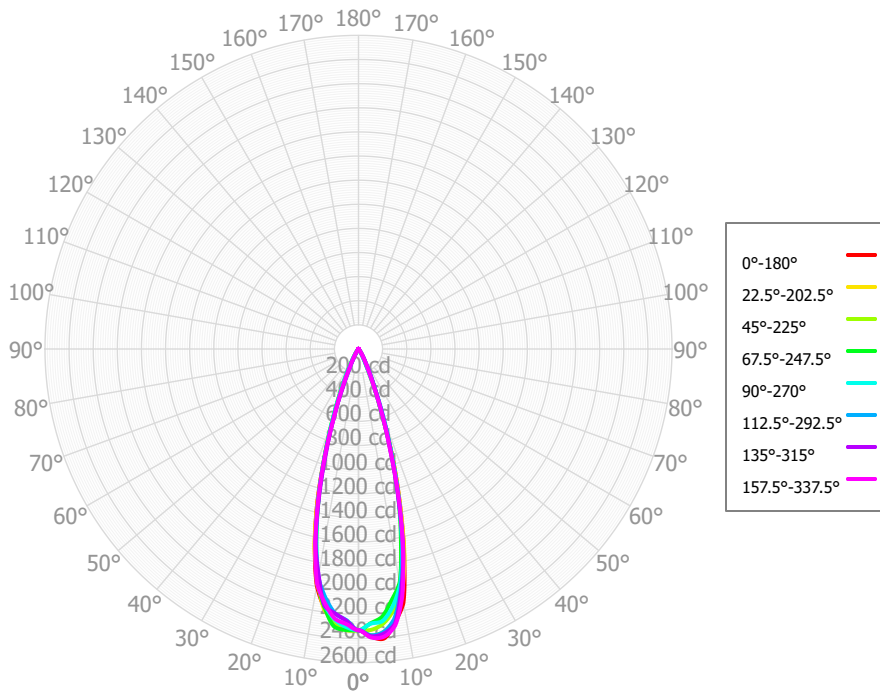
#### Full Beam Angle

0° - 180°	31°
90° - 270°	31°

### IES File Header Contents

Keyword	Value
TEST	SP-01579
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	9/29/2023
LUMCAT	STR2 835 07 xx xx RD2FL RB2BD xx xx
LUMINAIRE	2" Adjustable Track Luminaire with flood optic and snoot/deep cutoff bezel
OTHER	Beam Angle: 31 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°	211.93	30.71%	90.00° - 100.00°	0.94	0.14%
10.00° - 20.00°	340.58	49.36%	100.00° - 110.00°	0.94	0.14%
20.00° - 30.00°	107.29	15.55%	100.00° - 120.00°	1.81	0.26%
30.00° - 40.00°	17.92	2.60%	120.00° - 130.00°	0.76	0.11%
40.00° - 50.00°	2.80	0.41%	130.00° - 140.00°	0.74	0.11%
50.00° - 60.00°	0.93	0.14%	140.00° - 150.00°	0.70	0.10%
60.00° - 70.00°	0.90	0.13%	150.00° - 160.00°	0.50	0.07%
70.00° - 80.00°	0.91	0.13%	160.00° - 170.00°	0.31	0.04%
80.00° - 90.00°	0.94	0.14%	170.00° - 180.00°	0.10	0.01%
0.00° - 90.00°	684.21	99.15%	0.00° - 180.00°	690.05	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°	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51	2332.51
2.50°	2387.32	2376.74	2332.38	2278.06	2280.87	2252.67	2257.96	2284.30	2309.47	2333.09	2328.24	2333.17	2308.59	2375.89	2384.25	2394.70	2387.32
5.00°	2410.67	2357.29	2290.46	2230.86	2265.89	2203.48	2203.21	2245.07	2249.58	2262.70	2289.86	2311.04	2253.05	2356.76	2370.25	2396.12	2410.67
7.50°	2290.78	2269.74	2192.25	2102.76	2158.33	2085.16	2149.87	2127.50	2163.33	2179.61	2140.57	2161.96	2140.74	2261.56	2301.02	2316.39	2290.78
10.00°	2141.30	2065.91	2015.57	1966.89	1985.03	1921.66	1904.15	1976.84	1991.68	1947.44	1976.45	1958.07	1914.40	2018.36	2036.46	2086.68	2141.30
12.50°	1745.64	1761.01	1669.24	1626.23	1671.72	1634.11	1647.74	1656.08	1674.31	1685.27	1630.63	1617.17	1617.30	1675.27	1719.07	1704.09	1745.64
15.00°	1321.82	1324.45	1297.81	1280.12	1282.93	1285.40	1261.01	1283.96	1321.47	1309.78	1275.67	1272.99	1275.42	1296.68	1271.65	1294.96	1321.82
17.50°	924.83	926.71	886.23	905.33	909.94	932.08	884.85	923.72	923.09	921.34	941.32	922.84	912.65	899.96	874.72	865.28	924.83
20.00°	535.30	567.36	554.77	549.57	543.16	577.12	590.20	565.80	605.00	638.58	617.82	626.34	639.67	609.46	569.97	556.72	535.30
22.50°	347.89	329.90	321.38	341.18	324.90	356.06	325.91	363.80	366.27	364.59	412.65	404.15	397.09	358.18	339.13	319.73	347.89
25.00°	173.14	183.93	172.74	159.82	146.92	167.82	200.24	178.16	211.35	236.38	226.23	242.94	259.07	228.34	210.87	194.84	173.14
27.50°	117.99	105.18	102.92	102.10	83.94	100.12	96.74	117.94	120.21	117.05	146.91	146.71	144.70	129.75	124.04	118.67	117.99
30.00°	68.06	64.87	59.43	53.79	41.00	50.17	61.73	62.84	68.38	78.39	78.76	85.21	96.22	84.60	80.80	76.22	68.06
32.50°	44.79	39.95	34.76	34.06	25.95	32.05	33.86	41.85	39.02	43.53	50.80	51.84	56.69	47.88	49.87	44.31	44.79
35.00°	24.80	21.58	20.68	18.40	13.45	16.15	21.67	22.23	23.19	27.95	27.89	30.97	36.82	30.47	28.78	28.02	24.80
37.50°	15.89	13.46	12.27	11.53	8.81	10.84	12.19	14.52	13.02	14.75	17.80	17.84	18.19	14.54	16.67	14.93	15.89
40.00°	8.58	8.40	7.33	6.35	4.45	5.75	7.10	7.67	7.99	9.57	9.92	10.72	12.59	10.68	10.05	9.93	8.58
42.50°	5.07	5.17	3.77	3.89	2.97	3.61	3.68	4.95	4.50	5.32	6.13	6.35	7.28	6.90	6.30	5.87	5.07
45.00°	2.58	2.30	2.51	2.15	1.64	1.72	2.32	2.67	2.96	3.29	3.41	3.97	5.10	3.98	3.87	3.62	2.58
47.50°	1.89	1.75	1.89	1.29	1.43	1.45	1.42	1.77	1.81	1.84	2.18	2.24	3.08	1.41	2.53	1.50	1.89
50.00°	1.40	1.45	1.37	0.91	1.24	1.20	0.96	1.15	1.27	1.41	1.41	1.66	1.97	1.17	1.54	1.33	1.40
52.50°	1.20	1.21	0.87	0.98	1.12	1.05	0.77	1.17	0.80	1.11	1.11	1.33	1.08	0.97	1.13	1.15	1.20
55.00°	1.08	0.97	0.97	0.96	0.99	0.96	0.76	1.23	1.05	0.97	0.99	1.17	0.99	0.95	0.85	0.89	1.08
57.50°	1.02	0.91	1.12	0.87	0.84	1.03	0.80	1.37	1.32	0.87	1.02	1.03	0.92	0.94	0.94	0.67	1.02
60.00°	0.96	0.87	0.96	0.85	0.79	1.06	0.85	1.28	1.21	0.82	1.03	0.99	0.90	0.96	1.08	0.62	0.96
62.50°	0.90	0.90	0.81	0.87	0.96	1.00	0.87	0.88	1.10	0.76	1.03	0.96	0.93	0.98	1.04	0.60	0.90
65.00°	0.90	0.89	0.96	0.90	1.07	0.99	0.86	0.71	1.05	0.69	0.94	0.87	1.05	0.97	0.99	0.68	0.90
67.50°	0.93	0.71	1.07	0.93	1.08	1.03	0.85	0.75	0.99	0.78	0.81	0.79	1.05	0.93	0.98	0.77	0.93
70.00°	0.96	0.60	0.98	0.96	1.05	1.03	0.83	0.77	0.87	0.96	0.77	0.83	0.85	0.85	0.97	0.87	0.96
72.50°	0.99	0.75	0.89	0.99	0.97	0.96	0.89	0.76	0.78	0.94	0.76	0.87	0.79	0.83	0.96	0.89	0.99
75.00°	0.87	0.87	0.73	0.91	0.89	0.94	0.95	0.74	0.82	0.85	0.79	0.93	0.87	0.87	0.96	0.78	0.87
77.50°	0.70	0.95	0.68	0.81	0.81	0.96	0.85	0.73	0.84	0.85	0.83	0.97	0.84	0.90	0.96	0.78	0.70
80.00°	0.74	0.96	0.95	0.85	0.89	0.88	0.74	0.76	0.82	0.89	0.92	0.96	0.72	0.91	0.93	0.93	0.74
82.50°	0.83	0.83	1.10	0.90	1.08	0.74	0.75	0.82	0.85	0.93	1.01	0.94	0.74	0.90	0.81	0.96	0.83
85.00°	0.83	0.77	1.02	0.99	1.04	0.77	0.74	0.79	1.00	0.98	0.98	0.92	0.83	0.88	0.69	0.88	0.83
87.50°	0.82	0.78	0.97	1.07	0.87	0.87	0.66	0.73	1.01	0.92	0.95	0.89	0.84	0.86	0.58	0.77	0.82
90.00°	0.90	0.85	0.95	0.89	0.90	0.87	0.60	0.74	0.85	0.86	0.93	0.86	0.80	0.84	0.51	0.64	0.90
92.50°	0.99	0.96	0.93	0.78	1.01	0.84	0.69	0.75	0.82	0.89	0.89	0.83	0.95	0.86	0.54	0.60	0.99
95.00°	0.99	0.94	0.91	1.12	1.04	0.79	0.76	0.65	0.91	0.91	0.77	0.79	1.15	0.89	0.61	0.62	0.99
97.50°	0.98	0.83	0.84	1.38	1.04	0.74	0.77	0.54	1.03	0.75	0.70	0.85	1.08	0.94	0.76	0.74	0.98
100.00°	0.88	0.87	0.74	1.29	0.97	0.81	0.80	0.78	1.17	0.63	0.87	1.02	0.96	0.98	0.82	0.92	0.88
102.50°	0.78	0.99	0.80	1.21	0.89	0.91	0.85	1.02	1.13	0.78	0.99	1.01	0.77	0.89	0.78	1.01	0.78
105.00°	0.67	0.93	0.96	1.16	1.10	0.76	0.87	0.89	0.98	0.92	0.89	0.87	0.57	0.79	0.77	1.08	0.67

### 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>	820	820	820	820	800	800	800	800	763	763	763	730	730	730	699	699	684
	<b>1</b>	791	776	763	751	774	761	749	738	732	723	715	706	699	692	682	677	663
	<b>2</b>	765	739	718	700	750	727	708	692	705	690	676	684	672	661	665	655	643
	<b>3</b>	740	707	682	661	727	697	674	656	680	661	645	663	648	635	648	635	623
	<b>4</b>	716	679	651	630	705	671	645	626	656	635	618	643	625	611	631	616	604
	<b>5</b>	694	653	624	603	684	647	620	600	635	612	595	624	605	589	614	597	587
	<b>6</b>	674	630	601	580	665	625	597	578	615	591	573	606	585	569	598	580	570
	<b>7</b>	654	609	579	559	646	605	577	557	596	572	554	589	567	551	582	563	554
	<b>8</b>	636	589	560	540	629	586	558	539	579	554	537	572	551	534	566	547	538
	<b>9</b>	618	571	543	523	612	568	541	522	562	538	521	557	535	519	552	532	524
	<b>10</b>	602	555	526	508	596	552	525	507	547	522	505	542	520	504	538	517	510

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	77.1 fc	3.1 ft
6.5 ft	55.2 fc	3.7 ft
7.5 ft	41.5 fc	4.2 ft
8.0 ft	36.4 fc	4.5 ft
10.0 ft	23.3 fc	5.6 ft
12.0 ft	16.2 fc	6.8 ft
14.0 ft	11.9 fc	7.9 ft
16.0 ft	9.1 fc	9.0 ft
20.0 ft	5.8 fc	11.3 ft
24.0 ft	4.0 fc	13.5 ft
28.0 ft	3.0 fc	15.8 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	724879	724879	724879
<b>45.00°</b>	1135	1103	721
<b>55.00°</b>	583	523	539
<b>65.00°</b>	659	703	785
<b>75.00°</b>	1044	881	1072
<b>85.00°</b>	2961	3637	3695

### 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	-7.3	-6.5	-7.0	-6.1	-5.8	-6.1	-5.2	-5.7	-4.8	-4.5
	3H	-3.8	-3.0	-3.4	-2.7	-2.3	-2.7	-1.9	-2.3	-1.6	-1.2
	4H	-1.8	-1.1	-1.3	-0.7	-0.3	-1.1	-0.4	-0.7	0.0	0.4
	6H	0.0	0.6	0.4	1.0	1.4	0.7	1.3	1.1	1.7	2.1
	8H	1.1	1.7	1.6	2.1	2.6	1.8	2.4	2.2	2.8	3.2
	12H	2.5	3.0	2.9	3.4	3.9	3.1	3.7	3.6	4.1	4.6
4H	2H	-6.0	-5.2	-5.5	-4.9	-4.5	-5.3	-4.5	-4.8	-4.2	-3.8
	3H	-2.5	-1.9	-2.0	-1.4	-1.0	-1.7	-1.1	-1.3	-0.7	-0.3
	4H	-0.4	0.1	0.0	0.6	1.0	0.2	0.7	0.6	1.2	1.6
	6H	1.6	2.1	2.1	2.6	3.1	2.2	2.7	2.7	3.1	3.6
	8H	2.9	3.3	3.4	3.8	4.3	3.4	3.8	3.9	4.3	4.8
	12H	4.3	4.6	4.8	5.2	5.7	4.8	5.2	5.3	5.7	6.2
8H	4H	0.4	0.8	0.9	1.2	1.7	0.8	1.2	1.3	1.7	2.2
	6H	2.8	3.2	3.4	3.7	4.2	3.2	3.5	3.7	4.0	4.5
	8H	4.3	4.6	4.8	5.1	5.6	4.5	4.8	5.1	5.3	5.9
	12H	5.8	6.1	6.4	6.6	7.2	6.2	6.4	6.7	6.9	7.5
12H	4H	0.6	1.0	1.1	1.5	2.0	1.0	1.3	1.5	1.9	2.4
	6H	3.2	3.5	3.8	4.0	4.6	3.5	3.8	4.0	4.3	4.8
	8H	4.8	5.0	5.3	5.6	6.2	5.0	5.2	5.5	5.7	6.3

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0