

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 835 07 xx xx RD2XF RB2BSA1 xx xx

2" Adjustable Track Luminaire with extra wide flood optic, acrylic .5" bezel

#### Test Number

SP-01588

#### 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	745
Efficacy	107.92 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.93
Two luminaires, plane 90°	0.93
Four luminaires	0.79

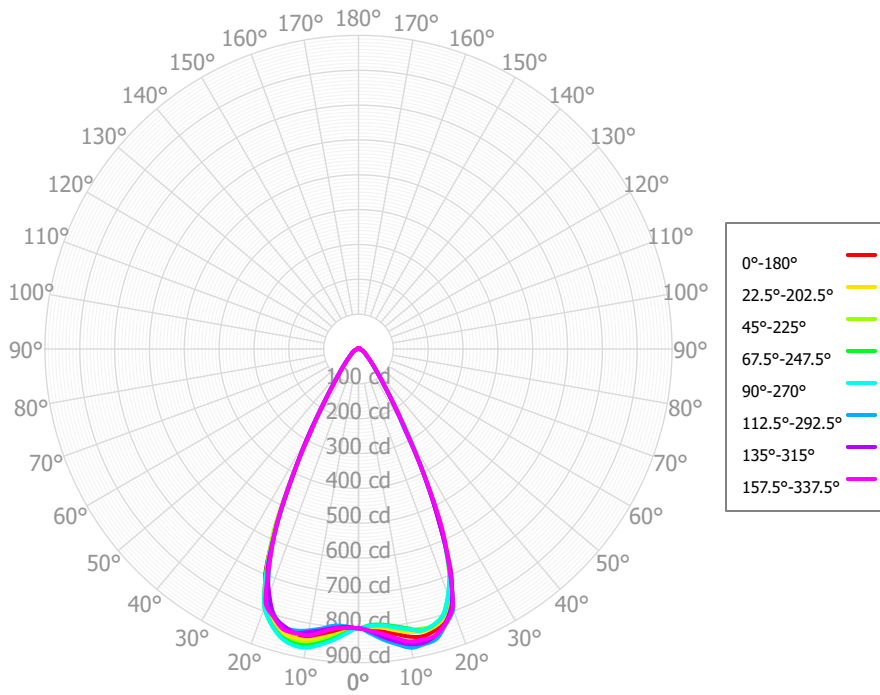
#### Full Beam Angle

0° - 180°	54°
90° - 270°	54°

### IES File Header Contents

Keyword	Value
TEST	SP-01588
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 07 xx xx RD2XF RB2BSA1 xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, acrylic .5" bezel
OTHER	Beam Angle: 54 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°	79.99	10.74%	90.00° - 100.00°	2.33	0.31%
10.00° - 20.00°	233.35	31.34%	100.00° - 110.00°	2.53	0.34%
20.00° - 30.00°	243.19	32.66%	100.00° - 120.00°	4.76	0.64%
30.00° - 40.00°	90.30	12.13%	120.00° - 130.00°	1.47	0.20%
40.00° - 50.00°	38.15	5.12%	130.00° - 140.00°	0.79	0.11%
50.00° - 60.00°	22.42	3.01%	140.00° - 150.00°	0.57	0.08%
60.00° - 70.00°	14.95	2.01%	150.00° - 160.00°	0.44	0.06%
70.00° - 80.00°	8.11	1.09%	160.00° - 170.00°	0.27	0.04%
80.00° - 90.00°	3.49	0.47%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	733.96	98.56%	0.00° - 180.00°	744.68	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°	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76	801.76
2.50°	804.48	799.86	798.19	793.08	795.45	797.35	798.34	802.04	804.68	811.47	814.56	815.08	817.94	818.00	812.18	810.25	804.48
5.00°	814.39	803.10	798.60	794.40	796.76	797.37	803.90	805.69	815.37	824.17	829.43	834.80	839.12	838.29	830.37	821.68	814.39
7.50°	825.27	814.56	808.33	802.88	806.10	809.43	814.29	820.32	829.09	836.51	844.94	851.20	856.63	854.99	846.85	837.98	825.27
10.00°	838.41	824.13	819.24	814.44	816.61	820.29	824.56	835.33	838.88	848.63	857.72	863.89	870.65	870.82	860.48	852.61	838.41
12.50°	844.99	831.36	822.43	827.99	828.01	828.01	834.78	834.66	847.55	848.52	859.04	865.04	870.59	868.31	863.89	854.19	844.99
15.00°	837.93	827.46	824.92	821.89	821.51	826.22	823.80	833.36	836.06	841.99	854.56	854.69	858.57	862.14	851.75	852.12	837.93
17.50°	818.69	811.29	803.04	804.26	802.97	801.90	805.16	807.83	819.74	816.58	828.79	829.17	830.31	830.72	826.09	828.04	818.69
20.00°	777.19	765.25	779.57	754.23	751.31	756.16	749.37	778.90	763.57	782.49	785.80	789.79	789.41	795.05	782.16	790.32	777.19
22.50°	694.88	689.87	672.94	687.48	679.32	666.11	681.63	668.82	699.15	680.84	689.10	693.13	689.07	679.85	691.63	682.81	694.88
25.00°	546.70	569.85	563.58	560.51	556.02	555.53	550.57	556.25	557.56	551.16	575.06	549.92	547.70	554.32	545.17	565.82	546.70
27.50°	406.90	409.63	414.21	406.29	404.93	407.64	402.23	410.38	403.16	411.39	412.87	409.14	407.53	407.44	405.91	409.08	406.90
30.00°	279.46	286.51	266.24	290.11	289.50	283.04	289.42	271.50	290.33	268.01	274.20	270.17	268.11	258.56	274.57	270.43	279.46
32.50°	185.46	193.09	194.40	189.44	191.61	196.94	185.07	196.59	182.81	187.97	192.12	182.35	183.42	189.33	184.25	195.28	185.46
35.00°	135.19	133.48	124.70	134.47	135.38	132.39	134.74	127.32	136.03	127.40	126.85	128.27	129.16	125.53	134.07	131.19	135.19
37.50°	97.95	98.62	97.14	95.62	97.06	99.34	94.95	99.27	95.36	96.07	96.87	95.15	96.77	99.10	98.99	101.45	97.95
40.00°	76.32	75.18	70.76	74.39	74.97	74.14	75.30	73.39	76.47	72.67	72.50	74.25	75.06	74.02	77.08	75.72	76.32
42.50°	59.83	59.13	58.49	58.48	58.91	59.42	58.77	59.89	59.03	58.40	58.78	58.87	60.00	60.71	60.63	60.70	59.83
45.00°	48.82	47.87	46.63	48.02	48.39	47.95	48.42	47.33	48.54	46.19	47.07	46.42	47.89	47.56	48.54	47.90	48.82
47.50°	39.82	39.34	38.51	39.01	39.71	40.35	38.86	39.15	38.34	38.32	38.70	38.00	39.47	39.80	39.59	40.21	39.82
50.00°	32.71	32.96	30.95	32.92	33.65	34.19	33.26	31.83	32.75	31.29	31.98	31.46	32.46	32.23	32.88	33.37	32.71
52.50°	27.77	27.69	27.22	27.48	28.31	29.57	28.02	27.94	27.26	27.02	27.68	27.10	28.15	28.35	28.22	28.30	27.77
55.00°	24.72	24.33	23.70	24.50	25.11	25.95	25.30	24.38	24.83	23.19	24.03	23.62	24.77	24.58	24.90	24.27	24.72
57.50°	22.01	21.83	21.38	21.98	22.40	23.30	22.71	21.90	22.40	20.94	21.26	21.56	22.58	22.15	21.96	22.16	22.01
60.00°	19.56	19.60	19.06	19.59	20.17	20.73	20.03	19.50	19.80	18.88	18.83	20.01	20.74	19.71	19.25	19.78	19.56
62.50°	17.38	17.48	16.76	17.21	18.04	18.24	17.35	17.34	17.22	16.53	16.81	17.60	18.07	17.12	16.80	16.93	17.38
65.00°	15.38	15.40	14.58	14.79	15.82	16.07	14.87	15.13	15.07	14.17	14.61	14.91	15.20	14.60	14.49	14.58	15.38
67.50°	13.18	13.33	12.88	12.36	13.58	14.15	12.41	12.85	12.97	12.11	12.23	12.85	13.15	12.64	12.61	12.98	13.18
70.00°	10.86	11.09	11.13	10.63	11.58	12.22	10.96	10.75	11.31	10.07	10.18	10.95	11.27	10.77	10.92	11.36	10.86
72.50°	9.24	8.80	9.25	8.97	9.61	10.27	9.50	9.06	9.62	8.55	8.45	9.01	9.89	9.47	9.03	9.74	9.24
75.00°	7.99	7.17	7.47	7.13	7.86	8.32	7.76	7.51	7.72	7.03	6.97	7.06	8.59	8.14	7.07	7.94	7.99
77.50°	6.47	5.72	5.98	5.29	6.13	6.36	6.04	6.23	5.96	5.68	5.70	5.94	6.60	6.66	5.67	5.96	6.47
80.00°	4.81	4.74	4.68	4.65	4.79	4.88	4.70	4.99	4.97	4.34	4.68	4.97	4.51	5.25	4.47	4.64	4.81
82.50°	3.67	3.88	3.84	4.04	3.47	3.69	3.45	3.82	3.98	3.80	3.85	3.97	3.87	4.10	3.55	4.03	3.67
85.00°	2.76	3.19	3.08	3.22	3.04	2.93	3.16	2.96	2.98	3.25	3.07	2.97	3.39	3.07	2.72	3.28	2.76
87.50°	2.21	2.55	2.48	2.42	2.64	2.39	2.86	2.58	2.16	2.64	2.32	2.43	2.70	2.47	2.57	2.41	2.21
90.00°	1.80	2.40	2.06	2.11	2.54	2.23	2.53	2.23	2.11	2.08	1.92	1.93	2.00	2.07	2.61	2.09	1.80
92.50°	1.95	2.33	2.00	1.82	2.44	2.22	2.21	1.93	2.09	2.16	1.75	1.98	2.25	2.24	2.36	2.24	1.95
95.00°	2.28	2.20	2.13	1.96	2.12	1.92	1.96	1.87	2.22	2.22	1.76	2.07	2.54	2.32	2.05	2.32	2.28
97.50°	2.41	2.06	2.58	2.12	1.83	1.51	1.75	2.13	2.31	2.12	1.89	2.15	2.53	2.17	1.99	2.35	2.41
100.00°	2.48	2.18	2.74	2.31	2.08	1.75	1.74	2.28	2.25	2.04	1.92	2.23	2.51	2.13	1.97	2.45	2.48
102.50°	2.52	2.32	2.44	2.50	2.31	2.20	1.77	2.29	2.21	2.02	1.91	2.48	2.50	2.37	2.28	2.60	2.52
105.00°	2.55	2.45	2.37	2.55	2.28	2.47	2.00	2.36	2.20	2.02	2.17	2.73	2.49	2.55	2.64	2.60	2.55

### 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>	884	884	884	884	862	862	862	862	821	821	821	784	784	784	750	750	734
	<b>1</b>	839	817	797	780	820	800	782	766	768	754	741	738	727	717	711	702	687
	<b>2</b>	796	758	726	700	778	744	715	691	718	694	674	694	675	658	672	656	643
	<b>3</b>	755	705	667	636	739	694	659	630	673	643	619	653	629	608	635	615	597
	<b>4</b>	717	659	617	585	702	650	611	580	632	599	572	616	588	565	601	577	565
	<b>5</b>	681	618	574	541	668	610	569	538	596	560	532	582	551	527	569	543	532
	<b>6</b>	648	581	536	504	636	575	532	502	562	525	497	551	518	493	540	511	502
	<b>7</b>	617	548	503	471	606	542	500	470	532	494	466	522	488	463	513	483	474
	<b>8</b>	588	518	473	443	579	513	471	441	504	466	439	496	461	436	488	457	449
	<b>9</b>	562	490	447	417	553	486	445	416	479	441	414	471	437	412	464	433	426
	<b>10</b>	537	465	423	394	529	462	421	393	455	418	392	449	414	390	443	411	405

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	26.5 fc	5.6 ft
6.5 ft	19.0 fc	6.6 ft
7.5 ft	14.3 fc	7.6 ft
8.0 ft	12.5 fc	8.1 ft
10.0 ft	8.0 fc	10.2 ft
12.0 ft	5.6 fc	12.2 ft
14.0 ft	4.1 fc	14.3 ft
16.0 ft	3.1 fc	16.3 ft
20.0 ft	2.0 fc	20.4 ft
24.0 ft	1.4 fc	24.4 ft
28.0 ft	1.0 fc	28.5 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
<b>0.00°</b>	249165	249165	249165
<b>45.00°</b>	21458	20496	21269
<b>55.00°</b>	13391	12840	13602
<b>65.00°</b>	11307	10723	11633
<b>75.00°</b>	9596	8975	9439
<b>85.00°</b>	9834	10978	10828

### 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	14.8	15.9	15.2	16.2	16.6	15.0	16.0	15.4	16.4	16.7
	3H	16.3	17.2	16.7	17.6	18.0	16.5	17.4	16.9	17.7	18.1
	4H	16.8	17.7	17.3	18.1	18.5	17.0	17.9	17.4	18.2	18.7
	6H	17.2	18.0	17.7	18.4	18.9	17.4	18.2	17.8	18.6	19.0
	8H	17.4	18.1	17.8	18.5	19.0	17.5	18.3	18.0	18.7	19.1
	12H	17.5	18.2	18.0	18.6	19.1	17.7	18.4	18.1	18.8	19.3
4H	2H	15.2	16.1	15.7	16.5	16.9	15.4	16.2	15.8	16.6	17.0
	3H	16.9	17.6	17.3	18.0	18.5	17.0	17.7	17.5	18.2	18.6
	4H	17.5	18.2	18.0	18.6	19.1	17.7	18.3	18.2	18.8	19.3
	6H	18.1	18.6	18.6	19.1	19.6	18.2	18.8	18.7	19.2	19.7
	8H	18.3	18.8	18.8	19.3	19.8	18.4	18.9	18.9	19.4	19.9
	12H	18.5	18.9	19.0	19.4	19.9	18.6	19.1	19.2	19.6	20.1
8H	4H	17.7	18.2	18.2	18.7	19.2	17.9	18.4	18.4	18.8	19.3
	6H	18.4	18.8	18.9	19.3	19.8	18.5	18.9	19.0	19.4	20.0
	8H	18.7	19.0	19.2	19.6	20.1	18.8	19.2	19.4	19.7	20.2
	12H	19.0	19.4	19.6	19.9	20.5	19.2	19.5	19.7	20.0	20.6
12H	4H	17.7	18.1	18.2	18.7	19.2	17.9	18.3	18.4	18.8	19.3
	6H	18.4	18.8	19.0	19.3	19.8	18.5	18.9	19.1	19.4	20.0
	8H	18.8	19.1	19.3	19.6	20.2	18.9	19.2	19.4	19.7	20.3

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0