

## 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 RB2BD xx xx

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

#### Test Number

SP-01580

#### 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
-------------	-------

#### Lumen Output

Output Lumens	665
Efficacy	96.39 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.91
Two luminaires, plane 90°	0.91
Four luminaires	0.78

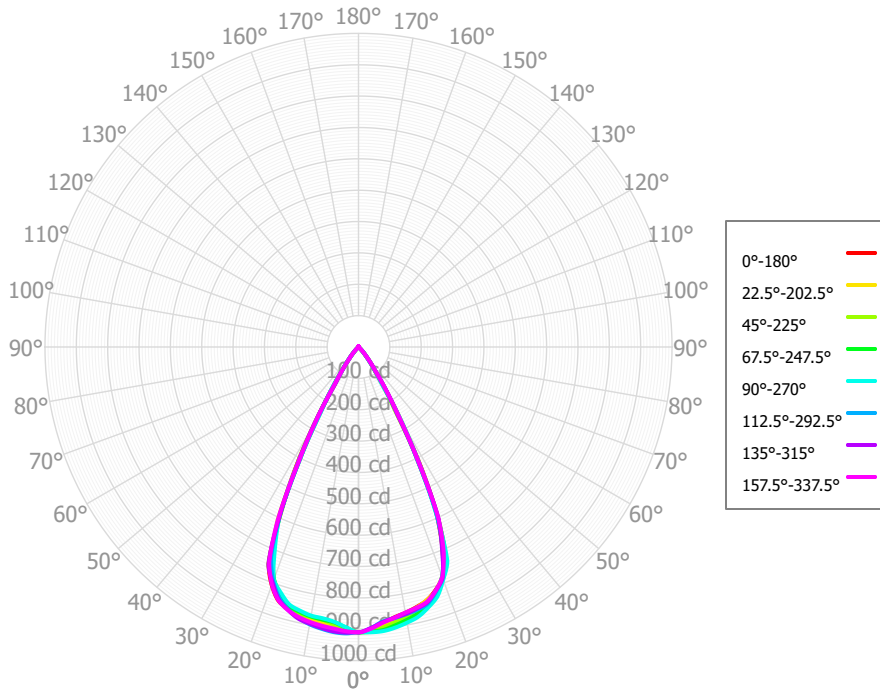
#### Full Beam Angle

0° - 180°	54°
90° - 270°	54°

### IES File Header Contents

Keyword	Value
TEST	SP-01580
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 RD2XF RB2BD xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic and snoot/deep cutoff 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°	86.07	12.94%	90.00° - 100.00°	0.98	0.15%
10.00° - 20.00°	238.45	35.85%	100.00° - 110.00°	0.98	0.15%
20.00° - 30.00°	252.83	38.02%	100.00° - 120.00°	1.88	0.28%
30.00° - 40.00°	67.37	10.13%	120.00° - 130.00°	0.86	0.13%
40.00° - 50.00°	10.35	1.56%	130.00° - 140.00°	0.77	0.12%
50.00° - 60.00°	1.07	0.16%	140.00° - 150.00°	0.65	0.10%
60.00° - 70.00°	0.91	0.14%	150.00° - 160.00°	0.51	0.08%
70.00° - 80.00°	0.94	0.14%	160.00° - 170.00°	0.31	0.05%
80.00° - 90.00°	1.00	0.15%	170.00° - 180.00°	0.11	0.02%
0.00° - 90.00°	658.99	99.09%	0.00° - 180.00°	665.06	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°	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03	910.03
2.50°	903.98	902.69	909.12	908.76	910.92	914.35	912.10	907.55	907.91	903.57	899.57	896.37	895.10	898.04	897.41	899.61	903.98
5.00°	885.48	892.55	898.61	906.17	909.52	912.74	910.62	901.76	899.22	892.16	888.76	881.72	880.22	879.55	881.21	883.30	885.48
7.50°	870.20	878.43	886.63	895.59	902.66	906.41	904.10	896.64	888.78	886.12	876.93	877.28	872.86	872.81	871.33	871.61	870.20
10.00°	861.00	864.88	873.18	884.40	892.78	898.23	896.24	890.59	883.61	880.60	873.82	872.70	870.03	866.09	864.71	860.27	861.00
12.50°	850.26	852.38	858.53	871.51	881.17	884.67	887.45	882.12	878.96	873.92	873.49	865.34	861.50	859.42	854.99	852.13	850.26
15.00°	837.53	836.88	843.03	853.65	860.02	866.43	868.50	869.01	864.97	865.61	858.77	854.69	850.58	848.86	844.23	841.47	837.53
17.50°	814.45	817.47	817.03	826.44	835.20	839.01	844.75	847.85	848.82	838.65	841.46	827.66	822.53	820.21	816.08	816.34	814.45
20.00°	781.68	779.73	785.80	785.25	790.13	795.13	800.80	807.40	808.74	802.89	798.00	788.08	790.01	779.54	784.53	780.87	781.68
22.50°	701.46	725.27	700.72	725.97	740.34	729.11	750.70	743.79	749.03	721.38	750.59	710.57	697.18	704.34	696.29	710.80	701.46
25.00°	590.17	595.39	598.26	599.17	586.63	598.92	595.74	609.91	592.36	610.60	588.56	596.43	595.68	591.86	602.44	603.60	590.17
27.50°	431.90	416.14	420.98	409.30	420.28	406.47	421.95	415.13	433.75	411.72	427.69	410.17	416.90	409.02	420.26	416.86	431.90
30.00°	252.78	275.64	229.16	263.78	274.52	260.64	275.41	267.51	269.32	248.00	277.55	259.81	240.32	261.60	246.84	265.44	252.78
32.50°	160.67	152.34	150.49	147.17	135.43	146.45	133.26	148.34	143.20	153.20	146.24	159.43	161.49	161.61	165.14	165.60	160.67
35.00°	94.02	95.75	81.57	88.68	92.69	87.93	92.25	89.01	92.15	85.23	97.29	92.45	89.20	95.24	92.61	97.15	94.02
37.50°	62.28	58.66	57.21	55.88	53.81	55.13	53.75	54.71	54.11	54.48	56.51	58.06	59.95	60.46	63.22	61.67	62.28
40.00°	36.14	38.40	33.99	36.65	36.97	35.63	36.58	34.97	34.08	32.62	37.32	35.01	34.18	37.24	37.63	37.99	36.14
42.50°	22.18	20.83	21.75	21.37	21.77	20.21	20.95	19.02	19.43	19.40	21.09	19.69	20.76	21.61	22.69	22.98	22.18
45.00°	9.26	12.02	10.83	12.17	11.87	11.41	11.77	11.01	9.99	10.48	10.25	10.45	9.96	11.81	10.94	12.74	9.26
47.50°	5.37	3.89	5.85	3.93	4.48	3.75	4.60	4.06	4.66	4.50	3.56	4.13	5.15	4.68	5.24	5.00	5.37
50.00°	1.90	2.50	2.07	2.32	2.43	2.26	2.75	2.39	2.13	2.03	2.09	2.10	1.97	2.30	1.75	2.25	1.90
52.50°	1.43	1.25	1.51	1.09	1.17	1.17	1.48	0.99	1.16	1.24	1.24	1.40	1.34	1.31	1.12	1.20	1.43
55.00°	1.04	1.02	1.09	1.13	1.06	1.10	1.22	0.95	0.93	1.13	0.95	1.11	0.95	1.01	0.82	1.03	1.04
57.50°	1.02	0.85	0.96	1.15	0.93	1.02	1.14	0.93	0.85	1.23	0.93	0.90	0.82	0.82	0.81	1.03	1.02
60.00°	0.98	0.88	0.91	1.01	0.80	0.89	1.28	1.04	0.82	1.11	1.07	0.92	0.83	0.86	0.84	1.06	0.98
62.50°	0.88	0.90	0.95	0.89	0.81	0.79	1.20	1.09	0.86	0.95	0.99	0.96	0.95	0.91	0.88	1.09	0.88
65.00°	0.86	0.86	0.94	0.88	0.91	0.79	0.92	0.93	0.92	0.96	0.82	0.91	0.95	0.91	0.86	1.09	0.86
67.50°	0.96	0.89	0.87	0.87	0.88	0.81	0.86	0.88	1.03	0.98	0.89	0.86	0.89	0.89	0.79	1.07	0.96
70.00°	0.96	1.00	0.87	0.86	0.77	0.88	0.93	1.03	1.12	0.93	1.03	0.87	0.87	0.79	0.79	0.95	0.96
72.50°	0.83	1.01	0.89	0.86	0.78	0.90	0.95	1.08	0.93	0.90	1.06	0.87	0.87	0.69	0.81	0.86	0.83
75.00°	0.81	0.91	0.88	0.86	0.82	0.86	0.94	0.98	0.76	0.98	1.06	0.89	0.84	0.65	0.78	0.92	0.81
77.50°	0.86	0.88	0.86	0.89	0.91	0.86	0.95	0.99	0.78	1.03	0.93	0.89	0.80	0.66	0.75	0.96	0.86
80.00°	0.97	0.92	0.77	0.96	1.02	0.90	0.97	1.10	0.81	0.93	0.81	0.84	0.84	0.80	0.88	0.96	0.97
82.50°	1.10	0.97	0.67	0.99	0.87	0.89	0.99	1.11	0.82	0.86	0.87	0.83	0.88	0.87	1.02	0.93	1.10
85.00°	1.06	1.02	0.76	0.99	0.70	0.84	1.02	1.03	0.86	0.90	0.93	0.91	0.94	0.80	1.03	0.84	1.06
87.50°	0.95	0.99	0.87	0.97	0.75	0.86	1.02	0.95	0.94	0.92	0.99	0.93	0.99	0.79	1.03	0.84	0.95
90.00°	0.84	0.92	0.96	0.95	0.80	0.91	1.02	0.86	0.97	0.91	1.01	0.87	0.94	0.86	0.98	0.94	0.84
92.50°	0.73	0.96	1.03	0.91	0.77	0.90	0.95	0.82	0.92	0.88	0.89	0.81	0.89	0.94	0.95	0.92	0.73
95.00°	0.89	1.03	0.96	0.86	0.78	0.85	0.90	0.80	0.88	0.82	0.80	0.74	0.87	1.04	0.99	0.77	0.89
97.50°	1.09	0.85	0.90	0.88	0.97	0.95	1.00	0.79	0.87	0.84	0.79	0.83	0.85	1.08	1.05	0.78	1.09
100.00°	1.07	0.65	0.89	0.91	1.09	1.09	1.03	0.80	0.89	0.93	0.81	1.01	0.86	1.07	1.12	0.89	1.07
102.50°	1.05	0.78	0.88	0.93	1.02	1.01	0.84	0.94	0.95	0.83	0.85	0.92	0.86	1.06	1.08	1.02	1.05
105.00°	0.98	0.90	0.90	0.95	0.98	0.90	0.82	1.10	0.95	0.63	0.87	0.73	0.88	1.04	0.83	1.18	0.98

### 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>	790	790	790	790	771	771	771	771	736	736	736	703	703	703	673	673	659
	<b>1</b>	757	739	724	710	740	725	711	698	697	686	676	671	663	655	647	641	635
	<b>2</b>	724	694	670	649	709	682	660	641	660	642	627	640	625	612	621	609	599
	<b>3</b>	692	653	624	600	679	644	617	595	626	603	584	609	590	575	594	578	565
	<b>4</b>	662	617	584	558	650	609	578	555	594	568	548	581	559	541	568	549	534
	<b>5</b>	633	583	548	523	622	577	544	520	565	536	515	553	529	510	543	522	505
	<b>6</b>	606	553	517	491	596	547	514	489	537	508	486	527	502	482	519	496	478
	<b>7</b>	580	524	488	463	571	520	486	462	511	481	459	503	476	456	496	472	454
	<b>8</b>	555	498	463	438	548	495	461	437	487	457	435	480	453	433	474	449	431
	<b>9</b>	532	475	439	415	525	471	438	414	465	434	413	459	431	411	453	428	410
	<b>10</b>	511	452	418	394	504	450	416	394	444	414	392	439	411	391	434	408	390

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	30.1 fc	5.6 ft
6.5 ft	21.5 fc	6.7 ft
7.5 ft	16.2 fc	7.7 ft
8.0 ft	14.2 fc	8.2 ft
10.0 ft	9.1 fc	10.2 ft
12.0 ft	6.3 fc	12.3 ft
14.0 ft	4.6 fc	14.3 ft
16.0 ft	3.6 fc	16.4 ft
20.0 ft	2.3 fc	20.5 ft
24.0 ft	1.6 fc	24.6 ft
28.0 ft	1.2 fc	28.7 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	282811	282811	282811
<b>45.00°</b>	4068	4758	5219
<b>55.00°</b>	565	593	572
<b>65.00°</b>	632	691	671
<b>75.00°</b>	970	1061	987
<b>85.00°</b>	3776	2695	2478

### 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	-6.3	-5.4	-5.9	-5.1	-4.7	-6.4	-5.5	-6.0	-5.2	-4.8
	3H	-2.7	-1.9	-2.3	-1.6	-1.2	-3.3	-2.5	-2.9	-2.2	-1.8
	4H	-1.2	-0.5	-0.8	-0.1	0.3	-1.6	-0.8	-1.1	-0.5	-0.1
	6H	0.9	1.6	1.3	1.9	2.4	0.6	1.2	1.0	1.6	2.1
	8H	2.3	2.9	2.8	3.3	3.8	1.7	2.4	2.2	2.8	3.2
	12H	3.8	4.4	4.3	4.8	5.3	2.9	3.5	3.4	3.9	4.4
4H	2H	-5.4	-4.7	-5.0	-4.3	-3.9	-5.5	-4.8	-5.1	-4.4	-4.0
	3H	-1.6	-1.0	-1.2	-0.6	-0.2	-2.0	-1.4	-1.6	-1.0	-0.6
	4H	0.2	0.7	0.6	1.1	1.6	-0.1	0.4	0.3	0.9	1.3
	6H	2.4	2.9	2.9	3.4	3.9	2.2	2.6	2.6	3.1	3.6
	8H	3.9	4.3	4.4	4.8	5.3	3.4	3.8	3.9	4.3	4.8
	12H	5.5	5.9	6.0	6.4	6.9	4.7	5.0	5.2	5.5	6.1
8H	4H	0.8	1.2	1.3	1.7	2.2	0.8	1.2	1.3	1.7	2.2
	6H	3.4	3.7	3.9	4.2	4.7	3.2	3.6	3.8	4.1	4.6
	8H	5.0	5.3	5.6	5.8	6.4	4.6	4.9	5.2	5.4	6.0
	12H	6.9	7.1	7.4	7.6	8.2	6.2	6.4	6.7	6.9	7.5
12H	4H	1.0	1.3	1.5	1.8	2.3	1.1	1.4	1.6	1.9	2.4
	6H	3.7	3.9	4.2	4.4	5.0	3.6	3.9	4.2	4.4	5.0
	8H	5.4	5.7	6.0	6.2	6.8	5.1	5.4	5.6	5.9	6.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0