

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 835 10 xx xx RD2XS RB2BSA1 xx xx

2" Adjustable Track Luminaire with extra narrow spot optic, acrylic .5" bezel

#### Test Number

SP-01585\_1

#### Test Date

2/19/2024

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

### Summary of Results

#### Power

Input Watts	11.8 W
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#### Lumen Output

Output Lumens	877
Efficacy	74.35 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.21
Two luminaires, plane 90°	0.21
Four luminaires	0.23

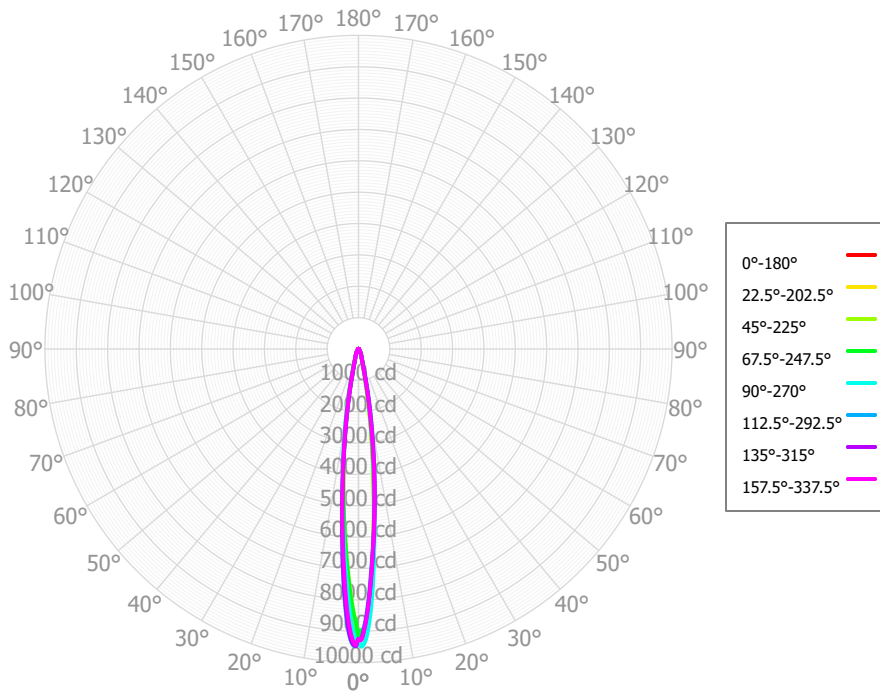
#### Full Beam Angle

0° - 180°	12°
90° - 270°	12°

### IES File Header Contents

Keyword	Value
TEST	SP-01585_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/19/2024
ISSUEDATE	2/19/2024
LUMCAT	STR2 835 10 xx xx RD2XS RB2BSA1 xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra narrow spot optic, acrylic .5" bezel
OTHER	Beam Angle: 12 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°	425.95	48.55%	90.00° - 100.00°	2.56	0.29%
10.00° - 20.00°	208.78	23.80%	100.00° - 110.00°	2.55	0.29%
20.00° - 30.00°	88.34	10.07%	100.00° - 120.00°	4.75	0.54%
30.00° - 40.00°	54.22	6.18%	120.00° - 130.00°	1.72	0.20%
40.00° - 50.00°	36.34	4.14%	130.00° - 140.00°	1.17	0.13%
50.00° - 60.00°	25.33	2.89%	140.00° - 150.00°	0.93	0.11%
60.00° - 70.00°	15.03	1.71%	150.00° - 160.00°	0.75	0.09%
70.00° - 80.00°	7.28	0.83%	160.00° - 170.00°	0.43	0.05%
80.00° - 90.00°	3.58	0.41%	170.00° - 180.00°	0.14	0.02%
0.00° - 90.00°	864.84	98.58%	0.00° - 180.00°	877.29	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°	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23	9247.23
0.50°	9248.82	9134.47	9009.41	8986.61	9497.24	9477.41	9477.09	9441.83	9277.78	8957.15	8762.66	8727.34	9311.05	9222.11	9257.06	9293.20	9248.82
1.00°	9095.14	9051.98	8963.09	8926.24	9429.69	9456.10	9432.09	9341.21	9063.34	8695.11	8456.90	8476.46	9038.54	8949.27	9028.25	9065.52	9095.14
1.50°	8812.50	8839.69	8794.51	8759.48	9245.73	9311.19	9271.02	9103.78	8780.16	8337.37	8074.00	8134.14	8711.75	8638.84	8717.40	8750.91	8812.50
2.00°	8430.92	8515.68	8507.76	8488.98	8925.20	9029.63	8975.76	8752.19	8344.16	7911.47	7682.15	7737.31	8296.04	8243.94	8329.46	8359.71	8430.92
2.50°	8017.64	8105.60	8147.74	8119.87	8524.40	8651.02	8551.53	8337.64	7875.65	7449.17	7262.24	7331.99	7824.01	7804.42	7907.49	7911.12	8017.64
3.00°	7532.87	7652.14	7703.61	7679.48	8043.47	8171.41	8072.33	7834.08	7384.05	7009.97	6870.04	6927.56	7341.39	7319.10	7460.65	7430.90	7532.87
3.50°	7042.71	7137.36	7188.83	7161.94	7522.59	7644.48	7565.70	7304.96	6900.64	6562.81	6465.86	6512.08	6868.99	6871.99	7007.83	6953.49	7042.71
4.00°	6538.86	6607.93	6651.07	6636.11	6947.17	7078.11	7010.94	6795.78	6447.43	6158.77	6074.73	6102.59	6447.50	6466.61	6553.34	6515.13	6538.86
4.50°	6066.75	6109.70	6128.02	6100.89	6376.65	6533.13	6456.38	6296.93	5995.93	5795.93	5711.12	5706.86	6039.65	6074.15	6138.15	6095.97	6066.75
5.00°	5624.19	5615.11	5619.31	5603.08	5854.97	5978.00	5931.89	5802.93	5581.55	5403.11	5325.33	5343.60	5646.38	5677.98	5721.90	5694.63	5624.19
5.50°	5204.89	5139.50	5126.81	5138.69	5358.41	5458.19	5431.13	5363.70	5180.54	5041.90	4963.43	4996.24	5271.11	5287.75	5308.67	5290.23	5204.89
6.00°	4798.57	4689.58	4649.26	4683.78	4899.25	4967.30	4952.36	4914.32	4786.03	4669.93	4604.88	4648.48	4885.04	4918.14	4915.27	4891.39	4798.57
6.50°	4404.56	4245.06	4194.94	4267.57	4475.35	4513.84	4500.53	4477.03	4418.72	4298.76	4267.97	4308.87	4522.13	4543.68	4536.50	4506.89	4404.56
7.00°	4017.35	3851.34	3775.97	3872.12	4071.46	4085.52	4080.41	4087.54	4051.03	3960.37	3938.21	3952.99	4168.78	4179.97	4164.23	4112.19	4017.35
7.50°	3655.22	3465.96	3394.62	3496.57	3699.17	3683.37	3680.76	3731.96	3715.47	3686.59	3630.38	3630.61	3842.44	3838.66	3796.06	3741.72	3655.22
8.00°	3295.99	3104.57	3046.84	3152.95	3344.51	3330.78	3316.14	3373.37	3401.45	3355.55	3334.71	3334.84	3544.56	3513.78	3440.36	3393.49	3295.99
8.50°	2955.71	2775.99	2729.57	2831.87	3009.08	3002.35	2982.67	3047.83	3098.10	3070.19	3055.40	3047.27	3236.61	3201.16	3109.91	3061.32	2955.71
9.00°	2645.60	2478.29	2430.24	2537.40	2699.52	2688.29	2671.14	2745.22	2810.13	2786.14	2787.89	2778.69	2957.59	2911.79	2795.59	2736.12	2645.60
9.50°	2346.17	2194.43	2149.61	2270.69	2409.14	2401.25	2390.04	2471.79	2536.41	2534.52	2534.27	2503.28	2679.43	2633.70	2510.55	2443.23	2346.17
10.00°	2069.26	1932.16	1887.20	2013.77	2139.28	2136.22	2132.99	2207.18	2284.15	2287.90	2290.51	2268.45	2415.63	2371.67	2247.17	2168.60	2069.26
10.50°	1816.33	1701.91	1654.36	1772.69	1891.42	1884.60	1887.32	1963.65	2044.69	2051.17	2063.59	2052.53	2166.35	2133.98	1997.16	1914.28	1816.33
11.00°	1593.28	1487.59	1442.18	1553.08	1665.63	1649.16	1662.96	1745.78	1823.17	1838.92	1852.68	1842.64	1940.51	1896.69	1763.26	1675.47	1593.28
11.50°	1388.96	1295.92	1251.39	1354.23	1459.82	1447.33	1458.95	1545.86	1619.47	1648.36	1661.95	1644.92	1718.07	1679.05	1545.95	1467.03	1388.96
12.00°	1210.67	1130.42	1088.87	1179.56	1275.00	1253.93	1276.67	1357.95	1430.38	1460.69	1477.77	1457.70	1513.03	1484.52	1352.41	1274.98	1210.67
12.50°	1053.35	985.65	950.83	1028.53	1112.22	1086.50	1114.48	1191.09	1257.84	1290.05	1307.69	1283.34	1328.28	1295.28	1183.34	1103.65	1053.35
13.00°	915.55	863.88	829.53	896.61	970.14	948.91	973.11	1045.26	1106.37	1135.32	1151.95	1121.29	1158.53	1135.84	1033.41	960.46	915.55
13.50°	802.15	763.23	733.27	783.92	848.47	826.01	851.86	916.90	966.63	997.87	1011.00	979.86	1010.96	988.32	902.73	839.70	802.15
14.00°	705.58	675.64	650.22	692.20	749.12	729.30	755.22	805.71	846.14	872.42	886.97	859.74	885.07	868.07	792.58	739.24	705.58
14.50°	628.71	604.11	583.92	616.77	664.88	644.79	667.28	712.52	747.95	763.97	779.81	756.41	775.78	765.73	702.73	656.24	628.71
15.00°	563.51	547.98	530.46	556.16	598.09	580.14	599.28	632.77	663.91	676.75	686.60	671.56	686.31	677.16	623.68	587.04	563.51
15.50°	514.78	499.92	487.07	508.46	539.81	523.43	539.77	569.80	588.34	604.78	613.74	600.00	612.01	606.83	559.69	528.94	514.78
16.00°	472.52	458.80	449.22	468.78	497.77	478.86	491.42	517.66	528.84	543.65	549.45	540.20	549.99	546.48	508.27	482.62	472.52
16.50°	432.06	425.19	417.78	433.79	459.65	444.50	452.01	470.99	482.47	491.83	500.82	491.43	500.52	495.62	468.22	444.04	432.06
17.00°	400.86	395.99	389.83	403.47	423.44	412.84	417.92	431.07	442.61	451.31	455.85	449.67	458.48	456.12	429.34	409.29	400.86
17.50°	375.06	370.32	364.96	375.21	393.85	385.04	389.66	398.87	409.63	413.51	422.60	414.71	421.94	422.54	401.19	383.03	375.06
18.00°	353.25	348.16	341.90	354.07	374.11	360.54	364.24	374.74	382.11	386.70	390.69	385.26	393.33	391.87	375.03	361.79	353.25
18.50°	332.37	326.70	323.79	334.34	351.57	340.21	342.66	353.76	358.05	360.48	366.98	360.98	370.18	364.71	348.93	340.11	332.37
19.00°	316.63	311.89	308.85	319.05	332.45	322.86	324.93	332.61	336.54	340.70	345.43	342.34	352.28	342.58	328.34	321.24	316.63
19.50°	302.32	297.48	293.85	306.71	315.84	308.80	308.94	315.47	320.72	325.26	325.22	321.61	333.78	323.71	313.17	304.84	302.32
20.00°	290.66	283.38	279.49	290.10	300.48	294.85	297.06	299.85	304.36	307.36	307.30	306.49	315.67	308.50	298.88	290.34	290.66
20.50°	278.82	273.36	266.66	275.01	290.18	282.92	282.84	287.38	290.26	293.73	291.86	289.29	295.81	294.30	285.60	276.75	278.82
21.00°	266.17	260.90	258.52	267.69	279.07	269.62	271.40	276.11	278.56	279.76	278.45	274.49	282.77	280.13	272.43	264.37	266.17

### 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%	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>	1041	1041	1041	1041	1016	1016	1016	1016	968	968	968	924	924	924	884	884	865
	<b>1</b>	1001	980	961	944	978	960	943	928	922	909	897	888	878	869	856	849	831
	<b>2</b>	963	928	898	874	943	912	885	863	882	861	843	855	838	823	830	816	800
	<b>3</b>	929	884	849	821	911	871	839	813	847	821	799	825	804	785	805	787	772
	<b>4</b>	898	846	808	779	883	836	801	774	817	787	764	799	774	754	782	762	747
	<b>5</b>	870	814	775	746	856	805	769	742	790	759	735	775	748	728	761	739	725
	<b>6</b>	844	786	747	719	832	779	742	716	766	734	710	754	726	705	742	718	706
	<b>7</b>	821	761	723	695	811	756	719	693	745	713	689	734	706	685	725	700	688
	<b>8</b>	800	740	702	676	791	735	699	674	726	694	671	717	688	668	709	683	673
	<b>9</b>	781	720	683	658	772	716	681	657	708	677	655	701	672	652	694	668	658
	<b>10</b>	763	703	667	643	755	699	665	642	693	661	640	686	658	638	680	655	645

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	305.7 fc	1.2 ft
6.5 ft	218.9 fc	1.4 ft
7.5 ft	164.4 fc	1.6 ft
8.0 ft	144.5 fc	1.7 ft
10.0 ft	92.5 fc	2.1 ft
12.0 ft	64.2 fc	2.5 ft
14.0 ft	47.2 fc	3.0 ft
16.0 ft	36.1 fc	3.4 ft
20.0 ft	23.1 fc	4.2 ft
24.0 ft	16.1 fc	5.1 ft
28.0 ft	11.8 fc	5.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	2873777	2873777	2873777
<b>45.00°</b>	19362	19691	20664
<b>55.00°</b>	14494	14598	15782
<b>65.00°</b>	10388	10660	11179
<b>75.00°</b>	7162	9076	8040
<b>85.00°</b>	11851	12897	10850

### 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	15.4	16.4	15.8	16.7	17.1	15.1	16.1	15.4	16.4	16.8
	3H	16.2	17.1	16.6	17.5	17.9	16.1	17.0	16.5	17.4	17.8
	4H	16.5	17.3	16.9	17.7	18.1	16.5	17.3	16.9	17.7	18.1
	6H	16.7	17.5	17.1	17.9	18.3	16.8	17.6	17.2	18.0	18.4
	8H	16.8	17.6	17.3	18.0	18.4	17.0	17.7	17.4	18.1	18.5
	12H	17.0	17.7	17.5	18.1	18.6	17.1	17.8	17.6	18.2	18.7
4H	2H	15.5	16.4	16.0	16.8	17.2	15.4	16.2	15.8	16.6	17.0
	3H	16.5	17.2	17.0	17.7	18.1	16.6	17.3	17.1	17.7	18.2
	4H	16.9	17.5	17.4	18.0	18.5	17.1	17.7	17.5	18.1	18.6
	6H	17.3	17.8	17.8	18.3	18.8	17.5	18.1	18.0	18.5	19.0
	8H	17.5	18.0	18.0	18.5	19.0	17.7	18.2	18.2	18.7	19.2
	12H	17.8	18.2	18.3	18.7	19.2	18.0	18.4	18.5	18.9	19.4
8H	4H	17.0	17.5	17.5	18.0	18.5	17.3	17.7	17.8	18.2	18.7
	6H	17.5	17.9	18.0	18.4	18.9	17.9	18.2	18.4	18.8	19.3
	8H	17.8	18.2	18.4	18.7	19.3	18.2	18.5	18.7	19.0	19.6
	12H	18.3	18.6	18.8	19.1	19.7	18.6	18.9	19.1	19.4	20.0
12H	4H	17.0	17.4	17.5	17.9	18.4	17.3	17.7	17.8	18.2	18.7
	6H	17.5	17.9	18.1	18.4	18.9	17.9	18.2	18.5	18.7	19.3
	8H	17.9	18.2	18.5	18.7	19.4	18.3	18.6	18.8	19.1	19.7

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0