

## 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 10 xx xx RD2FL RB2BD xx xx

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

#### Test Number

SP-01579\_1

#### Test Date

9/26/2023

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

### Summary of Results

#### Power

Input Watts	11.8 W
-------------	--------

#### Lumen Output

Output Lumens	941
Efficacy	79.74 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

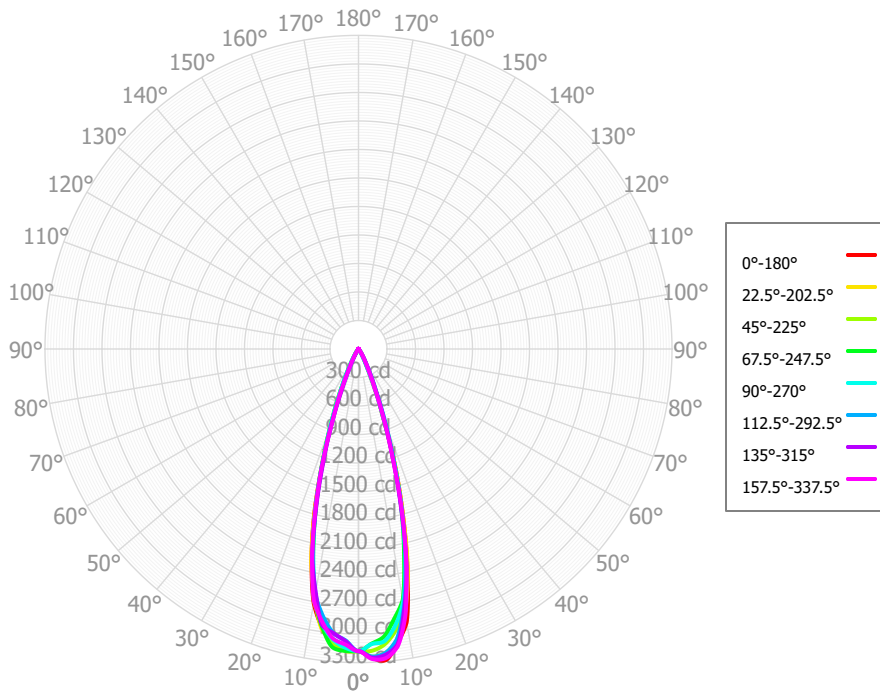
#### Full Beam Angle

0° - 180°	31°
90° - 270°	31°

### IES File Header Contents

Keyword	Value
TEST	SP-01579_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	9/29/2023
LUMCAT	STR2 835 10 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°	288.99	30.71%	90.00° - 100.00°	1.28	0.14%
10.00° - 20.00°	464.43	49.36%	100.00° - 110.00°	1.28	0.14%
20.00° - 30.00°	146.30	15.55%	100.00° - 120.00°	2.46	0.26%
30.00° - 40.00°	24.44	2.60%	120.00° - 130.00°	1.04	0.11%
40.00° - 50.00°	3.81	0.41%	130.00° - 140.00°	1.00	0.11%
50.00° - 60.00°	1.27	0.14%	140.00° - 150.00°	0.95	0.10%
60.00° - 70.00°	1.23	0.13%	150.00° - 160.00°	0.68	0.07%
70.00° - 80.00°	1.25	0.13%	160.00° - 170.00°	0.42	0.04%
80.00° - 90.00°	1.29	0.14%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	933.02	99.15%	0.00° - 180.00°	940.98	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°	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70	3180.70
2.50°	3255.43	3241.00	3180.51	3106.44	3110.28	3071.82	3079.03	3114.95	3149.28	3181.48	3174.87	3181.59	3148.07	3239.85	3251.25	3265.50	3255.43
5.00°	3287.28	3214.48	3123.35	3042.09	3089.84	3004.75	3004.38	3061.47	3067.61	3085.51	3122.54	3151.41	3072.34	3213.77	3232.17	3267.43	3287.28
7.50°	3123.79	3095.09	2989.43	2867.39	2943.17	2843.39	2931.64	2901.13	2949.99	2972.20	2918.96	2948.13	2919.19	3083.94	3137.75	3158.71	3123.79
10.00°	2919.95	2817.15	2748.50	2682.12	2706.85	2620.44	2596.57	2695.69	2715.93	2655.60	2695.16	2670.09	2610.54	2752.31	2776.99	2845.48	2919.95
12.50°	2380.42	2401.38	2276.24	2217.59	2279.62	2228.33	2246.92	2258.30	2283.16	2298.09	2223.58	2205.23	2205.41	2284.46	2344.19	2323.76	2380.42
15.00°	1802.48	1806.07	1769.74	1745.62	1749.45	1752.82	1719.56	1750.86	1802.00	1786.06	1739.54	1735.90	1739.21	1768.20	1734.07	1765.85	1802.48
17.50°	1261.13	1263.70	1208.50	1234.53	1240.83	1271.02	1206.62	1259.62	1258.76	1256.37	1283.62	1258.42	1244.53	1227.21	1192.80	1179.93	1261.13
20.00°	729.95	773.67	756.51	749.41	740.67	786.98	804.81	771.55	824.99	870.79	842.48	854.09	872.27	831.08	777.23	759.17	729.95
22.50°	474.40	449.87	438.24	465.25	443.04	485.54	444.43	496.09	499.46	497.17	562.71	551.12	541.49	488.42	462.45	435.99	474.40
25.00°	236.10	250.82	235.55	217.93	200.35	228.85	273.05	242.95	288.20	322.33	308.49	331.29	353.27	311.37	287.56	265.69	236.10
27.50°	160.89	143.43	140.35	139.22	114.46	136.53	131.92	160.83	163.93	159.62	200.33	200.06	197.32	176.93	169.15	161.83	160.89
30.00°	92.81	88.46	81.04	73.35	55.91	68.41	84.18	85.70	93.25	106.90	107.40	116.20	131.21	115.37	110.18	103.94	92.81
32.50°	61.08	54.47	47.40	46.45	35.39	43.71	46.18	57.07	53.21	59.35	69.28	70.69	77.30	65.30	68.01	60.42	61.08
35.00°	33.82	29.43	28.21	25.09	18.34	22.02	29.56	30.32	31.62	38.11	38.03	42.23	50.20	41.55	39.25	38.21	33.82
37.50°	21.67	18.35	16.73	15.72	12.01	14.78	16.63	19.80	17.76	20.12	24.27	24.32	24.80	19.83	22.74	20.36	21.67
40.00°	11.70	11.45	9.99	8.65	6.07	7.84	9.69	10.45	10.90	13.05	13.53	14.62	17.17	14.56	13.71	13.53	11.70
42.50°	6.92	7.05	5.14	5.30	4.05	4.93	5.02	6.76	6.13	7.26	8.36	8.66	9.93	9.41	8.59	8.00	6.92
45.00°	3.52	3.14	3.42	2.93	2.24	2.35	3.17	3.64	4.03	4.49	4.65	5.41	6.96	5.43	5.28	4.94	3.52
47.50°	2.57	2.39	2.57	1.76	1.95	1.97	1.94	2.41	2.47	2.51	2.98	3.06	4.21	1.92	3.45	2.04	2.57
50.00°	1.91	1.97	1.87	1.24	1.69	1.63	1.31	1.56	1.73	1.93	1.92	2.26	2.68	1.59	2.10	1.81	1.91
52.50°	1.64	1.64	1.18	1.34	1.53	1.43	1.04	1.59	1.09	1.51	1.52	1.81	1.47	1.32	1.54	1.57	1.64
55.00°	1.47	1.33	1.32	1.31	1.36	1.30	1.04	1.68	1.44	1.32	1.36	1.59	1.35	1.29	1.16	1.22	1.47
57.50°	1.39	1.25	1.52	1.18	1.14	1.41	1.08	1.87	1.79	1.19	1.39	1.41	1.26	1.28	1.28	0.91	1.39
60.00°	1.31	1.18	1.31	1.16	1.07	1.45	1.17	1.74	1.65	1.12	1.41	1.36	1.23	1.32	1.47	0.84	1.31
62.50°	1.22	1.23	1.11	1.19	1.31	1.37	1.18	1.20	1.50	1.04	1.41	1.31	1.26	1.34	1.41	0.82	1.22
65.00°	1.22	1.22	1.30	1.22	1.46	1.34	1.17	0.97	1.44	0.95	1.29	1.19	1.44	1.32	1.35	0.93	1.22
67.50°	1.27	0.97	1.46	1.27	1.47	1.41	1.16	1.03	1.35	1.07	1.11	1.08	1.43	1.27	1.33	1.05	1.27
70.00°	1.32	0.82	1.34	1.31	1.43	1.40	1.14	1.04	1.18	1.30	1.05	1.13	1.17	1.16	1.32	1.18	1.32
72.50°	1.35	1.02	1.21	1.36	1.33	1.31	1.21	1.03	1.07	1.29	1.03	1.18	1.08	1.13	1.31	1.22	1.35
75.00°	1.19	1.19	1.00	1.24	1.22	1.29	1.29	1.01	1.12	1.15	1.08	1.27	1.19	1.18	1.31	1.06	1.19
77.50°	0.95	1.30	0.93	1.10	1.11	1.31	1.16	0.99	1.14	1.17	1.14	1.33	1.15	1.22	1.31	1.06	0.95
80.00°	1.01	1.31	1.29	1.16	1.22	1.21	1.02	1.04	1.11	1.22	1.25	1.31	0.99	1.24	1.27	1.26	1.01
82.50°	1.13	1.13	1.50	1.23	1.47	1.02	1.02	1.12	1.16	1.27	1.38	1.29	1.00	1.23	1.10	1.31	1.13
85.00°	1.13	1.05	1.39	1.35	1.41	1.05	1.02	1.08	1.36	1.33	1.34	1.25	1.14	1.20	0.94	1.20	1.13
87.50°	1.12	1.07	1.32	1.46	1.18	1.19	0.90	1.00	1.37	1.26	1.30	1.21	1.14	1.17	0.79	1.05	1.12
90.00°	1.23	1.16	1.29	1.22	1.22	1.19	0.82	1.01	1.16	1.18	1.26	1.17	1.10	1.14	0.70	0.88	1.23
92.50°	1.35	1.30	1.27	1.06	1.38	1.14	0.94	1.02	1.12	1.21	1.22	1.13	1.29	1.17	0.73	0.82	1.35
95.00°	1.35	1.28	1.24	1.52	1.41	1.08	1.04	0.89	1.24	1.25	1.05	1.08	1.56	1.22	0.83	0.84	1.35
97.50°	1.33	1.13	1.15	1.88	1.42	1.01	1.06	0.73	1.40	1.03	0.95	1.16	1.48	1.28	1.04	1.01	1.33
100.00°	1.20	1.18	1.02	1.76	1.32	1.11	1.09	1.07	1.59	0.85	1.19	1.39	1.31	1.34	1.12	1.26	1.20
102.50°	1.07	1.35	1.09	1.65	1.21	1.24	1.16	1.40	1.54	1.06	1.36	1.38	1.05	1.22	1.06	1.38	1.07
105.00°	0.91	1.27	1.31	1.58	1.50	1.03	1.18	1.21	1.34	1.26	1.22	1.18	0.78	1.07	1.05	1.47	0.91

### 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>	1118	1118	1118	1118	1091	1091	1091	1091	1041	1041	1041	995	995	995	953	953	933
	<b>1</b>	1079	1059	1040	1024	1056	1038	1021	1007	999	986	974	963	953	944	930	923	916
	<b>2</b>	1043	1008	979	955	1023	992	966	944	961	940	922	933	916	902	907	894	882
	<b>3</b>	1009	964	930	902	991	951	920	894	927	901	880	904	883	865	883	866	851
	<b>4</b>	977	925	888	859	961	915	880	853	895	866	843	877	853	833	860	840	823
	<b>5</b>	947	891	851	822	933	882	846	818	866	835	811	851	824	803	837	814	796
	<b>6</b>	919	859	819	790	907	852	815	788	839	806	782	826	798	777	815	790	771
	<b>7</b>	892	830	790	762	881	824	787	760	813	780	756	803	774	752	793	767	748
	<b>8</b>	867	804	764	737	857	799	761	735	789	756	732	781	751	729	772	746	726
	<b>9</b>	843	779	740	714	834	775	738	712	767	733	710	759	729	707	752	725	705
	<b>10</b>	820	756	718	692	813	753	716	691	746	712	689	739	709	687	733	705	686

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	105.1 fc	3.1 ft
6.5 ft	75.3 fc	3.7 ft
7.5 ft	56.5 fc	4.2 ft
8.0 ft	49.7 fc	4.5 ft
10.0 ft	31.8 fc	5.6 ft
12.0 ft	22.1 fc	6.8 ft
14.0 ft	16.2 fc	7.9 ft
16.0 ft	12.4 fc	9.0 ft
20.0 ft	8.0 fc	11.3 ft
24.0 ft	5.5 fc	13.5 ft
28.0 ft	4.1 fc	15.8 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	988472	988472	988472
<b>45.00°</b>	1548	1505	984
<b>55.00°</b>	794	713	735
<b>65.00°</b>	899	958	1070
<b>75.00°</b>	1424	1201	1462
<b>85.00°</b>	4038	4960	5039

### 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	-5.0	-4.7	-5.0	-4.1	-4.6	-3.8	-3.4
	3H	-2.7	-1.9	-2.3	-1.6	-1.2	-1.6	-0.9	-1.2	-0.5	-0.1
	4H	-0.7	0.0	-0.3	0.4	0.8	0.0	0.7	0.4	1.1	1.5
	6H	1.0	1.7	1.5	2.1	2.5	1.8	2.4	2.2	2.8	3.2
	8H	2.2	2.8	2.7	3.2	3.7	2.9	3.5	3.3	3.9	4.3
	12H	3.5	4.1	4.0	4.5	5.0	4.2	4.8	4.7	5.2	5.6
4H	2H	-4.9	-4.2	-4.5	-3.8	-3.4	-4.2	-3.5	-3.8	-3.1	-2.7
	3H	-1.4	-0.8	-0.9	-0.4	0.1	-0.6	-0.1	-0.2	0.4	0.8
	4H	0.7	1.2	1.1	1.6	2.1	1.3	1.8	1.7	2.2	2.7
	6H	2.7	3.2	3.2	3.6	4.1	3.3	3.7	3.8	4.2	4.7
	8H	4.0	4.4	4.5	4.9	5.4	4.5	4.9	5.0	5.3	5.8
	12H	5.4	5.7	5.9	6.2	6.7	5.9	6.2	6.4	6.8	7.3
8H	4H	1.4	1.9	1.9	2.3	2.8	1.9	2.3	2.4	2.8	3.3
	6H	3.9	4.2	4.4	4.8	5.3	4.3	4.6	4.8	5.1	5.6
	8H	5.4	5.6	5.9	6.2	6.7	5.6	5.9	6.2	6.4	6.9
	12H	6.9	7.2	7.5	7.7	8.3	7.2	7.5	7.8	8.0	8.6
12H	4H	1.7	2.0	2.2	2.5	3.0	2.1	2.4	2.6	2.9	3.4
	6H	4.3	4.6	4.9	5.1	5.7	4.6	4.8	5.1	5.3	5.9
	8H	5.9	6.1	6.4	6.6	7.2	6.0	6.3	6.6	6.8	7.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0