

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 RD2SP RB2BS xx xx
2" Adjustable Track Luminaire with spot optic and standard bezel

Test Number

SP-01570

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	702
Efficacy	101.74 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.37
Two luminaires, plane 90°	0.37
Four luminaires	0.36

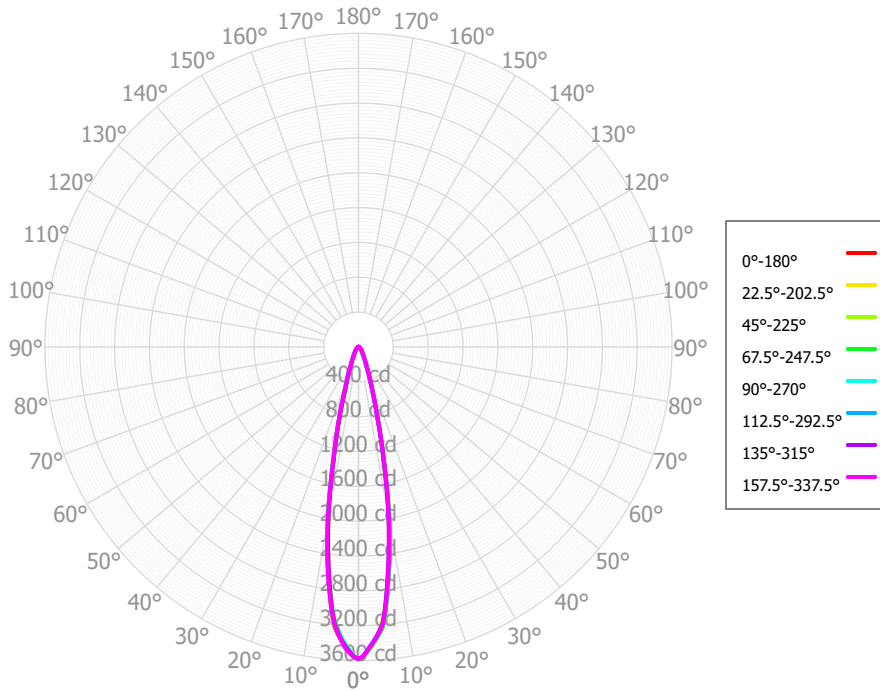
Full Beam Angle

0° - 180°	22°
90° - 270°	22°

IES File Header Contents

Keyword	Value
TEST	SP-01570
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 RD2SP RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with spot optic and standard bezel
OTHER	Beam Angle: 22 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°	264.68	37.70%	90.00° - 100.00°	0.81	0.12%
10.00° - 20.00°	247.99	35.33%	100.00° - 110.00°	0.82	0.12%
20.00° - 30.00°	86.38	12.30%	100.00° - 120.00°	1.60	0.23%
30.00° - 40.00°	46.65	6.64%	120.00° - 130.00°	0.69	0.10%
40.00° - 50.00°	30.47	4.34%	130.00° - 140.00°	0.65	0.09%
50.00° - 60.00°	14.99	2.14%	140.00° - 150.00°	0.58	0.08%
60.00° - 70.00°	3.78	0.54%	150.00° - 160.00°	0.45	0.06%
70.00° - 80.00°	1.07	0.15%	160.00° - 170.00°	0.27	0.04%
80.00° - 90.00°	0.86	0.12%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	696.86	99.27%	0.00° - 180.00°	702.00	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°	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23	3578.23
2.50°	3437.96	3432.62	3446.09	3433.96	3434.66	3449.92	3440.81	3462.91	3441.96	3441.79	3418.05	3422.97	3423.30	3414.34	3421.64	3423.79	3437.96
5.00°	3203.10	3223.30	3158.76	3221.86	3197.67	3171.89	3186.38	3174.18	3211.67	3177.90	3199.11	3149.32	3183.81	3190.79	3179.72	3196.81	3203.10
7.50°	2656.08	2635.75	2616.09	2627.38	2645.02	2655.20	2604.80	2666.71	2653.37	2647.55	2588.62	2625.81	2631.15	2607.07	2588.94	2622.90	2656.08
10.00°	2052.49	2028.29	1986.55	2014.41	2035.28	2024.66	1983.47	2030.70	2048.90	2035.18	1969.49	2019.45	2030.45	2004.42	1977.83	2010.31	2052.49
12.50°	1359.11	1358.26	1294.24	1344.30	1336.57	1315.95	1309.51	1327.66	1365.35	1345.14	1339.25	1333.68	1345.91	1358.13	1324.48	1367.73	1359.11
15.00°	870.96	843.85	856.18	831.42	849.36	865.34	844.10	885.53	874.97	884.44	832.04	876.73	859.64	836.55	845.96	830.12	870.96
17.50°	535.36	536.95	493.66	525.60	514.48	486.13	507.95	500.40	539.01	520.12	541.89	518.92	534.74	547.32	534.10	551.71	535.36
20.00°	363.41	349.16	348.06	338.85	343.61	345.85	345.97	362.77	364.89	366.44	352.43	365.11	363.18	356.61	360.44	356.62	363.41
22.50°	241.99	235.72	224.01	224.45	222.16	225.18	225.42	242.31	245.81	243.42	244.62	242.45	245.00	249.90	245.32	253.49	241.99
25.00°	185.11	175.23	169.11	163.84	166.10	168.89	173.39	182.04	186.85	185.85	182.75	186.99	185.81	185.25	188.34	186.85	185.11
27.50°	135.55	127.48	124.10	115.64	117.21	122.76	126.85	135.17	135.72	136.83	137.08	139.13	134.77	136.40	140.33	138.81	135.55
30.00°	110.32	104.74	98.67	94.09	92.44	95.69	102.98	107.40	111.21	111.08	112.70	112.29	110.48	112.02	115.12	112.40	110.32
32.50°	89.32	83.98	79.49	74.40	72.02	76.43	82.84	87.72	90.08	91.33	91.24	91.05	89.49	91.05	93.22	90.17	89.32
35.00°	76.95	71.24	65.93	62.79	60.29	63.87	68.99	73.46	76.43	78.62	78.98	76.58	75.98	79.51	80.41	78.75	76.95
37.50°	66.09	60.38	56.23	53.03	50.92	54.85	58.47	63.26	65.24	68.21	67.85	65.88	64.96	68.46	69.43	68.04	66.09
40.00°	56.61	52.69	48.09	46.32	43.70	47.15	50.53	54.16	56.51	59.07	59.22	57.28	56.48	58.59	60.61	59.69	56.61
42.50°	48.31	44.93	41.27	39.70	37.40	40.89	43.69	47.26	48.74	50.98	50.87	49.73	48.63	49.71	51.92	51.44	48.31
45.00°	40.49	37.10	34.71	33.13	31.47	34.89	37.23	40.35	41.41	43.09	42.81	42.39	41.09	41.90	43.30	43.31	40.49
47.50°	33.88	30.71	29.39	27.80	26.86	30.06	31.59	33.13	34.57	35.13	35.01	34.84	34.83	35.33	36.18	36.24	33.88
50.00°	27.50	24.79	24.29	22.88	22.46	25.33	26.12	26.64	27.91	27.81	27.33	27.80	28.77	29.38	29.38	29.85	27.50
52.50°	22.20	20.61	19.74	19.00	18.68	20.84	21.44	21.50	22.98	22.84	22.35	22.67	23.05	23.28	24.02	23.49	22.20
55.00°	16.87	16.41	15.37	15.10	14.94	16.20	16.73	16.77	17.83	17.89	17.71	17.51	17.40	17.21	18.46	17.14	16.87
57.50°	11.40	11.26	11.21	10.67	11.32	11.40	11.96	12.39	12.03	12.97	12.30	12.33	11.99	12.28	12.16	11.70	11.40
60.00°	7.29	7.07	7.95	6.92	8.02	7.86	8.03	8.76	7.69	8.56	7.61	8.19	7.80	7.91	7.35	6.84	7.29
62.50°	4.75	4.96	5.15	4.60	5.07	4.93	4.94	5.39	5.19	4.51	5.09	4.80	5.16	5.31	4.81	4.67	4.75
65.00°	3.15	3.28	3.84	3.12	3.37	3.38	3.45	3.72	3.66	3.18	3.22	3.22	3.58	3.37	3.17	3.10	3.15
67.50°	2.05	2.02	2.80	2.45	2.32	2.10	2.66	2.30	2.69	2.62	2.19	2.16	2.62	2.35	2.15	2.60	2.05
70.00°	1.66	1.31	1.84	1.85	1.66	1.53	2.02	1.76	1.89	1.95	1.53	1.54	1.73	1.63	1.49	2.01	1.66
72.50°	1.39	0.84	1.06	1.28	1.08	1.08	1.42	1.23	1.12	1.32	1.10	1.02	0.85	1.11	0.94	1.33	1.39
75.00°	1.10	0.81	0.91	1.00	0.84	1.04	0.99	0.76	0.88	0.92	0.84	0.92	0.84	0.83	0.94	0.99	1.10
77.50°	0.85	0.83	0.76	0.80	0.65	1.08	0.68	0.60	0.71	0.66	0.62	0.83	0.83	0.60	0.92	0.77	0.85
80.00°	0.74	0.69	0.63	1.01	0.66	1.23	0.67	0.76	0.80	0.64	0.52	0.76	0.83	0.72	0.68	0.84	0.74
82.50°	0.76	0.65	0.64	1.14	0.74	1.20	0.64	0.79	0.84	0.66	0.47	0.77	0.87	0.80	0.53	0.90	0.76
85.00°	0.94	0.89	0.75	1.01	0.93	1.06	0.60	0.74	0.78	0.72	0.64	0.84	0.96	0.70	0.58	0.70	0.94
87.50°	0.90	0.91	0.82	0.95	0.96	0.85	0.67	0.62	0.73	0.72	0.88	0.85	0.96	0.72	0.62	0.58	0.90
90.00°	0.71	0.64	0.87	0.96	0.89	0.63	0.81	0.50	0.66	0.70	1.26	0.84	0.89	0.96	0.66	0.62	0.71
92.50°	0.64	0.55	0.82	0.86	0.79	0.64	0.68	0.64	0.58	0.74	1.20	0.81	0.79	0.99	0.69	0.66	0.64
95.00°	0.61	0.57	0.79	0.70	0.67	0.67	0.50	0.75	0.50	0.78	0.82	0.79	0.68	0.87	0.71	0.72	0.61
97.50°	0.83	0.58	0.78	0.78	0.64	0.75	0.53	0.76	0.47	0.78	0.71	0.93	0.84	0.83	0.63	0.86	0.83
100.00°	0.99	0.59	0.74	0.91	0.64	0.82	0.56	0.84	0.47	0.78	0.70	0.98	0.98	0.83	0.56	1.03	0.99
102.50°	0.78	0.77	0.66	0.79	0.76	0.87	0.59	1.01	0.66	0.72	0.72	0.81	0.89	0.81	0.65	0.93	0.78
105.00°	0.67	0.89	0.68	0.71	0.80	0.82	0.67	0.94	0.77	0.68	0.75	0.81	0.83	0.78	0.76	0.79	0.67

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	834	834	834	834	814	814	814	814	777	777	777	743	743	743	712	712	697
	1	803	787	773	760	786	772	759	747	743	733	724	716	708	701	692	686	672
	2	774	746	723	704	758	734	713	696	711	694	680	690	677	665	670	660	647
	3	746	710	683	661	733	700	675	655	682	661	644	665	648	634	650	636	623
	4	720	679	649	626	708	671	643	622	656	633	614	642	623	607	630	613	599
	5	696	651	620	597	686	645	616	594	633	608	588	621	600	583	611	592	578
	6	674	627	595	572	665	621	592	570	611	585	566	602	579	562	593	573	558
	7	653	605	573	551	645	600	570	549	592	565	546	584	561	543	577	556	540
	8	634	585	554	532	627	581	551	531	574	547	529	567	544	526	561	540	524
	9	617	567	536	515	610	564	535	515	558	531	513	552	528	511	547	525	509
	10	600	550	521	501	595	548	519	500	543	517	499	538	514	497	533	511	496

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	118.3 fc	2.1 ft
6.5 ft	84.7 fc	2.5 ft
7.5 ft	63.6 fc	2.9 ft
8.0 ft	55.9 fc	3.1 ft
10.0 ft	35.8 fc	3.9 ft
12.0 ft	24.8 fc	4.6 ft
14.0 ft	18.3 fc	5.4 ft
16.0 ft	14.0 fc	6.2 ft
20.0 ft	8.9 fc	7.7 ft
24.0 ft	6.2 fc	9.3 ft
28.0 ft	4.6 fc	10.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1112014	1112014	1112014
45.00°	17796	15257	13830
55.00°	9138	8330	8093
65.00°	2318	2824	2481
75.00°	1320	1088	1005
85.00°	3360	2682	3321

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	10.5	11.5	10.9	11.8	12.1	10.7	11.7	11.1	12.0	12.4
	3H	10.5	11.4	10.9	11.7	12.1	10.7	11.6	11.1	11.9	12.3
	4H	10.5	11.3	10.9	11.6	12.0	10.7	11.5	11.1	11.8	12.3
	6H	10.4	11.2	10.9	11.5	12.0	10.6	11.4	11.1	11.8	12.2
	8H	10.4	11.1	10.9	11.5	11.9	10.7	11.3	11.1	11.7	12.2
	12H	10.5	11.1	10.9	11.5	12.0	10.7	11.4	11.2	11.8	12.2
4H	2H	10.4	11.2	10.8	11.5	11.9	10.6	11.4	11.0	11.8	12.2
	3H	10.4	11.0	10.8	11.5	11.9	10.6	11.3	11.1	11.7	12.1
	4H	10.4	11.0	10.8	11.4	11.9	10.6	11.2	11.0	11.6	12.1
	6H	10.4	10.9	10.9	11.3	11.8	10.6	11.1	11.1	11.6	12.1
	8H	10.4	10.9	10.9	11.3	11.8	10.7	11.1	11.1	11.6	12.1
	12H	10.6	11.0	11.1	11.5	12.0	10.8	11.2	11.3	11.7	12.2
8H	4H	10.2	10.7	10.7	11.2	11.7	10.4	10.9	10.9	11.4	11.9
	6H	10.3	10.7	10.8	11.2	11.7	10.5	10.9	11.1	11.4	11.9
	8H	10.4	10.7	10.9	11.2	11.8	10.7	11.0	11.2	11.5	12.0
	12H	10.7	10.9	11.2	11.5	12.1	11.0	11.3	11.5	11.8	12.4
12H	4H	10.2	10.6	10.7	11.1	11.6	10.4	10.8	10.9	11.3	11.8
	6H	10.3	10.6	10.8	11.1	11.6	10.5	10.8	11.0	11.3	11.9
	8H	10.4	10.7	10.9	11.2	11.8	10.7	10.9	11.2	11.5	12.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0