

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2XF RB2BS xx RA2LS

2" Adjustable Track Luminaire with extra wide flood optic, difusing lens and standard bezel

Test Number

SP-01593

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	738
Efficacy	107.01 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°	0.94
Four luminaires	0.86

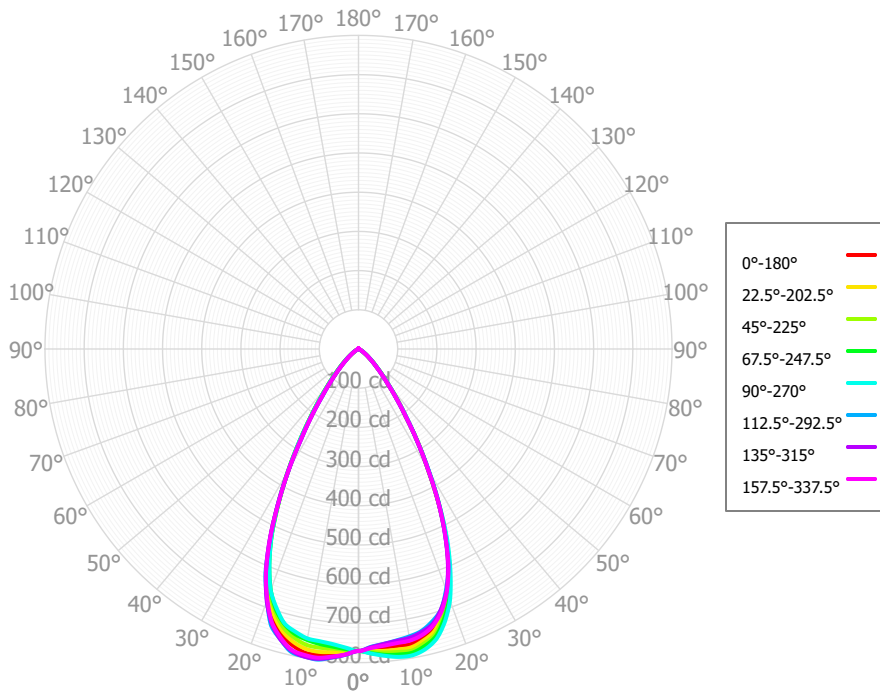
Full Beam Angle

0° - 180°	57°
90° - 270°	58°

IES File Header Contents

Keyword	Value
TEST	SP-01593
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 835 07 xx xx RD2XF RB2BS xx RA2LS
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, difusing lens and standard bezel
OTHER	Beam Angle: 58 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°	74.96	10.15%	90.00° - 100.00°	0.81	0.11%
10.00° - 20.00°	206.94	28.03%	100.00° - 110.00°	0.80	0.11%
20.00° - 30.00°	236.27	32.00%	100.00° - 120.00°	1.57	0.21%
30.00° - 40.00°	135.66	18.37%	120.00° - 130.00°	0.75	0.10%
40.00° - 50.00°	53.81	7.29%	130.00° - 140.00°	0.64	0.09%
50.00° - 60.00°	18.57	2.52%	140.00° - 150.00°	0.55	0.07%
60.00° - 70.00°	4.92	0.67%	150.00° - 160.00°	0.44	0.06%
70.00° - 80.00°	1.27	0.17%	160.00° - 170.00°	0.26	0.03%
80.00° - 90.00°	0.86	0.12%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	733.27	99.31%	0.00° - 180.00°	738.39	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°	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68	770.68
2.50°	766.92	771.67	774.19	777.15	778.30	781.28	780.96	780.45	777.50	773.84	768.56	766.40	762.66	760.36	761.45	763.48	766.92
5.00°	764.29	773.07	777.52	783.39	786.04	790.49	790.22	788.09	783.90	776.37	767.15	762.24	755.97	755.04	755.18	759.65	764.29
7.50°	764.30	773.39	779.71	786.34	792.49	799.39	797.41	794.54	787.01	779.39	768.65	759.20	752.34	749.79	751.07	756.85	764.30
10.00°	764.80	773.12	781.55	787.18	793.57	796.61	797.03	792.83	786.94	776.76	766.44	753.82	750.05	744.84	748.59	755.54	764.80
12.50°	754.63	762.44	770.02	777.02	785.03	792.01	788.62	786.56	774.74	765.92	755.07	745.55	739.65	737.57	740.17	747.89	754.63
15.00°	742.73	746.41	754.71	760.16	766.57	767.76	768.08	764.06	757.17	746.07	737.00	727.60	726.04	721.33	727.51	731.77	742.73
17.50°	706.03	711.41	716.84	724.06	731.34	740.80	735.51	733.23	720.81	714.17	703.90	698.61	694.14	698.65	697.98	703.23	706.03
20.00°	665.96	667.50	673.35	677.20	682.62	682.40	684.63	680.51	676.48	667.57	660.83	654.85	655.49	653.50	657.37	658.95	665.96
22.50°	598.11	601.67	602.46	608.61	612.99	620.48	616.80	617.53	607.23	602.43	596.76	595.14	593.70	600.38	596.42	599.66	598.11
25.00°	527.18	526.19	525.31	528.60	534.87	533.36	535.72	534.41	532.66	527.33	525.27	523.47	524.22	522.44	523.02	522.85	527.18
27.50°	441.76	441.86	440.14	442.94	444.33	443.94	443.33	442.42	443.21	440.65	439.55	439.87	442.06	442.76	440.97	441.33	441.76
30.00°	354.97	353.98	353.37	354.58	358.50	357.07	356.03	355.78	356.83	358.00	357.33	359.28	355.99	358.06	354.01	354.72	354.97
32.50°	281.39	279.98	280.43	279.25	279.03	270.39	272.84	271.27	278.54	279.77	281.36	281.53	282.70	279.20	278.29	277.87	281.39
35.00°	208.73	211.10	209.97	209.70	211.71	209.59	206.66	208.01	208.78	214.31	215.23	217.01	212.94	215.58	208.43	210.94	208.73
37.50°	161.59	161.99	162.71	160.18	159.89	150.05	153.12	152.66	159.24	161.84	165.40	164.01	163.94	159.34	157.52	157.62	161.59
40.00°	115.86	119.54	118.97	118.85	118.59	116.49	113.82	115.52	116.38	120.90	123.50	123.78	119.97	121.10	115.89	117.07	115.86
42.50°	90.07	91.07	92.34	90.91	89.66	83.81	84.53	84.48	88.41	90.91	93.69	93.79	91.77	88.26	87.47	86.56	90.07
45.00°	64.92	66.81	67.92	67.92	66.64	65.12	63.09	63.94	64.35	67.85	69.26	70.80	67.06	67.36	64.94	64.97	64.92
47.50°	50.24	51.00	52.31	51.78	50.02	46.62	46.73	46.65	48.24	50.94	52.57	53.12	51.63	49.53	49.19	48.47	50.24
50.00°	35.77	37.54	37.64	37.99	37.17	35.82	34.60	34.96	34.52	37.79	38.68	39.64	37.99	37.88	36.28	36.12	35.77
52.50°	27.50	28.69	28.33	28.40	28.20	25.12	25.01	24.81	25.33	27.72	28.47	29.08	28.43	27.62	26.85	26.55	27.50
55.00°	19.31	20.97	19.46	20.10	20.69	18.83	18.31	18.14	17.71	19.98	20.26	21.26	19.58	20.02	18.72	19.12	19.31
57.50°	14.50	15.67	14.60	14.71	14.55	12.65	13.23	12.33	12.83	14.04	14.55	15.22	14.28	13.74	13.45	13.51	14.50
60.00°	9.76	10.92	10.02	10.14	9.97	9.34	9.14	8.76	8.89	9.83	10.14	10.71	9.50	9.74	9.17	9.19	9.76
62.50°	6.83	7.80	7.35	7.02	6.78	6.12	5.55	5.70	6.45	6.86	7.21	7.12	6.82	6.47	6.54	6.35	6.83
65.00°	3.99	5.00	4.77	4.26	4.49	4.36	3.71	4.03	4.45	4.72	4.95	4.78	4.40	4.39	4.45	4.48	3.99
67.50°	2.88	3.49	3.40	3.02	2.93	2.69	2.71	2.63	3.10	3.14	3.42	3.15	3.29	2.81	3.18	3.02	2.88
70.00°	1.82	2.19	2.07	2.12	1.92	2.02	1.87	1.82	2.13	2.15	2.36	2.18	2.31	1.97	2.15	1.82	1.82
72.50°	1.45	1.64	1.54	1.46	1.34	1.38	1.10	1.11	1.69	1.53	1.78	1.55	1.65	1.33	1.58	1.25	1.45
75.00°	1.10	1.19	1.02	0.85	0.96	1.00	0.84	0.91	1.26	1.24	1.31	1.12	1.02	0.97	1.13	1.04	1.10
77.50°	0.95	0.99	0.93	0.75	0.73	0.66	0.80	0.78	0.84	1.13	0.95	0.79	0.88	0.84	0.94	0.92	0.95
80.00°	0.82	0.82	0.85	0.74	0.69	0.71	0.78	0.81	0.69	0.99	0.73	0.73	0.76	1.02	0.82	0.85	0.82
82.50°	0.86	0.81	0.89	0.77	0.77	0.76	0.78	0.86	0.87	0.83	0.65	0.79	0.76	1.07	0.85	0.79	0.86
85.00°	0.89	0.81	0.94	0.81	0.72	0.73	0.74	0.80	0.90	0.76	0.62	0.79	0.78	0.98	0.92	0.73	0.89
87.50°	0.77	0.88	0.92	0.84	0.60	0.70	0.69	0.74	0.76	0.75	0.65	0.76	0.72	0.87	0.86	0.74	0.77
90.00°	0.67	0.95	0.90	0.87	0.64	0.72	0.71	0.77	0.72	0.73	0.71	0.71	0.66	0.73	0.77	0.77	0.67
92.50°	0.73	0.85	0.87	0.80	0.75	0.73	0.76	0.80	0.76	0.70	0.80	0.66	0.77	0.66	0.72	0.75	0.73
95.00°	0.78	0.74	0.83	0.72	0.76	0.72	0.70	0.75	0.78	0.74	0.81	0.71	0.88	0.66	0.68	0.71	0.78
97.50°	0.74	0.74	0.79	0.70	0.70	0.71	0.61	0.70	0.77	0.82	0.77	0.81	0.86	0.63	0.62	0.74	0.74
100.00°	0.71	0.74	0.75	0.69	0.80	0.69	0.59	0.64	0.81	0.86	0.77	0.80	0.84	0.59	0.55	0.80	0.71
102.50°	0.73	0.85	0.74	0.69	0.97	0.67	0.59	0.57	0.89	0.89	0.81	0.76	0.83	0.61	0.65	0.73	0.73
105.00°	0.74	0.97	0.72	0.69	0.90	0.68	0.65	0.77	0.90	0.91	0.77	0.69	0.83	0.70	0.76	0.61	0.74

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	878	878	878	878	857	857	857	857	818	818	818	782	782	782	749	749	733
	1	836	815	796	779	817	798	781	766	767	754	742	739	728	719	713	705	690
	2	793	756	726	700	776	743	715	692	718	696	676	695	677	661	674	659	646
	3	752	703	666	636	737	693	658	631	673	644	620	654	630	609	637	617	604
	4	713	656	614	583	699	647	609	579	631	597	571	615	587	564	601	577	566
	5	676	613	569	537	664	606	565	534	592	556	529	579	548	524	567	540	530
	6	642	575	530	498	630	569	526	496	557	520	492	546	513	488	536	507	498
	7	609	540	495	463	599	535	492	462	525	487	459	515	481	456	507	476	468
	8	580	508	463	433	570	504	461	432	495	457	429	487	453	427	480	449	441
	9	552	480	435	406	543	476	434	405	468	430	403	461	426	401	455	423	416
	10	526	454	410	381	518	450	409	381	444	406	379	438	403	378	432	400	394

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	25.5 fc	6.0 ft
6.5 ft	18.2 fc	7.1 ft
7.5 ft	13.7 fc	8.2 ft
8.0 ft	12.0 fc	8.8 ft
10.0 ft	7.7 fc	11.0 ft
12.0 ft	5.4 fc	13.2 ft
14.0 ft	3.9 fc	15.4 ft
16.0 ft	3.0 fc	17.5 ft
20.0 ft	1.9 fc	21.9 ft
24.0 ft	1.3 fc	26.3 ft
28.0 ft	1.0 fc	30.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	239505	239505	239505
45.00°	28534	29852	29287
55.00°	10460	10544	11208
65.00°	2934	3509	3299
75.00°	1322	1228	1150
85.00°	3157	3341	2584

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	12.0	13.0	12.4	13.3	13.7	11.7	12.8	12.1	13.1	13.4
	3H	12.0	12.9	12.4	13.2	13.6	11.8	12.7	12.2	13.0	13.4
	4H	12.0	12.8	12.4	13.2	13.6	11.7	12.6	12.2	12.9	13.3
	6H	11.9	12.7	12.3	13.1	13.5	11.7	12.4	12.1	12.8	13.2
	8H	11.9	12.6	12.3	13.0	13.4	11.6	12.4	12.1	12.8	13.2
	12H	11.9	12.6	12.4	13.0	13.4	11.7	12.3	12.1	12.7	13.2
4H	2H	11.9	12.7	12.3	13.1	13.5	11.6	12.4	12.0	12.8	13.2
	3H	11.9	12.6	12.4	13.0	13.5	11.7	12.4	12.1	12.8	13.2
	4H	11.9	12.5	12.3	12.9	13.4	11.7	12.3	12.1	12.7	13.2
	6H	11.9	12.4	12.4	12.9	13.3	11.6	12.1	12.1	12.6	13.1
	8H	11.9	12.4	12.4	12.8	13.3	11.6	12.1	12.1	12.6	13.1
	12H	12.0	12.4	12.5	12.9	13.4	11.7	12.1	12.2	12.6	13.1
8H	4H	11.8	12.2	12.2	12.7	13.2	11.5	12.0	12.0	12.5	13.0
	6H	11.8	12.2	12.3	12.7	13.2	11.5	11.9	12.0	12.4	12.9
	8H	11.8	12.2	12.4	12.7	13.2	11.5	11.9	12.1	12.4	12.9
	12H	12.0	12.3	12.5	12.8	13.4	11.7	12.0	12.2	12.5	13.1
12H	4H	11.7	12.1	12.2	12.6	13.1	11.5	11.9	12.0	12.4	12.9
	6H	11.7	12.1	12.3	12.6	13.1	11.5	11.8	12.0	12.3	12.9
	8H	11.8	12.1	12.4	12.6	13.2	11.5	11.8	12.1	12.3	12.9

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0