

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2XF RB2BS xx xx

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

Test Number

SP-01572

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
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Lumen Output

Output Lumens	779
Efficacy	112.83 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.01
Two luminaires, plane 90°	1.02
Four luminaires	0.88

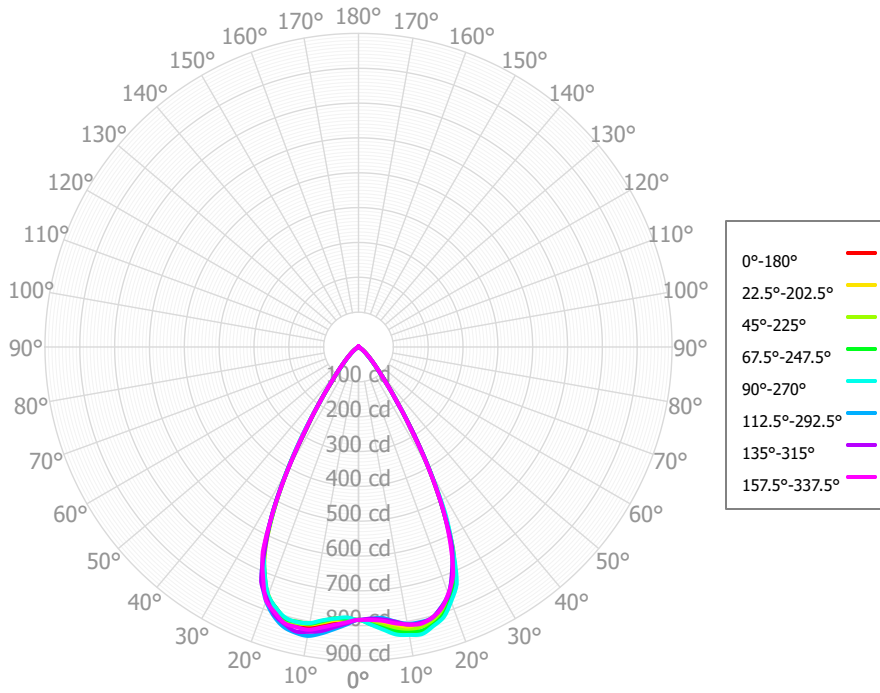
Full Beam Angle

0° - 180°	59°
90° - 270°	59°

IES File Header Contents

Keyword	Value
TEST	SP-01572
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 RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic and standard bezel
OTHER	Beam Angle: 59 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°	77.95	10.01%	90.00° - 100.00°	0.85	0.11%
10.00° - 20.00°	227.36	29.20%	100.00° - 110.00°	0.85	0.11%
20.00° - 30.00°	279.39	35.89%	100.00° - 120.00°	1.64	0.21%
30.00° - 40.00°	130.80	16.80%	120.00° - 130.00°	0.77	0.10%
40.00° - 50.00°	39.74	5.10%	130.00° - 140.00°	0.71	0.09%
50.00° - 60.00°	12.69	1.63%	140.00° - 150.00°	0.62	0.08%
60.00° - 70.00°	3.30	0.42%	150.00° - 160.00°	0.47	0.06%
70.00° - 80.00°	1.02	0.13%	160.00° - 170.00°	0.29	0.04%
80.00° - 90.00°	0.86	0.11%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	773.09	99.30%	0.00° - 180.00°	778.55	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°	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46	783.46
2.50°	786.66	789.35	792.04	796.50	797.51	797.65	794.55	791.15	785.87	784.50	781.29	781.11	777.07	780.79	780.67	784.41	786.66
5.00°	791.37	796.93	802.86	809.81	814.38	813.37	807.60	800.85	791.64	787.19	782.98	782.38	782.56	780.73	785.23	788.91	791.37
7.50°	801.86	808.98	815.18	824.09	832.46	829.77	822.28	812.22	805.09	797.82	795.92	793.17	791.39	794.41	794.93	799.90	801.86
10.00°	813.25	817.08	826.53	832.87	839.35	842.10	830.38	824.13	815.02	808.84	806.82	806.25	804.68	806.80	809.15	808.48	813.25
12.50°	812.96	816.53	823.11	834.87	843.90	839.89	835.95	823.62	819.43	811.39	812.23	807.96	809.10	809.29	811.68	814.67	812.96
15.00°	811.29	809.01	817.01	825.97	829.54	831.62	822.91	820.59	814.13	811.69	808.67	808.21	805.13	806.88	806.78	806.67	811.29
17.50°	788.33	791.02	795.77	807.57	813.31	809.56	805.47	798.87	798.13	793.38	788.94	785.66	786.49	785.15	785.57	788.72	788.33
20.00°	761.86	759.51	767.55	772.70	777.38	776.25	769.01	775.28	766.08	768.37	756.96	760.69	757.82	755.18	757.33	753.56	761.86
22.50°	707.39	713.72	716.91	727.76	736.63	725.50	730.17	715.69	721.20	714.38	709.19	703.70	704.37	704.15	700.70	709.83	707.39
25.00°	640.62	632.92	644.26	638.98	641.99	644.42	633.26	650.60	636.46	642.93	630.10	638.59	639.29	631.98	636.32	624.59	640.62
27.50°	524.07	525.33	524.16	531.47	540.93	529.43	532.89	526.94	529.55	525.29	522.54	523.56	530.33	523.56	523.83	525.87	524.07
30.00°	407.66	406.38	404.90	407.18	406.14	409.25	402.60	404.99	407.34	406.45	404.41	408.20	407.57	409.59	403.86	404.12	407.66
32.50°	291.63	281.41	286.86	278.36	283.41	284.99	279.24	291.29	279.46	285.48	279.53	291.70	297.98	288.77	294.57	278.04	291.63
35.00°	196.55	198.22	195.94	198.42	197.49	198.30	197.79	192.35	198.15	191.57	194.10	193.03	190.77	198.14	187.69	199.60	196.55
37.50°	137.94	130.23	133.97	125.95	128.53	132.19	127.30	137.11	127.81	131.97	126.35	134.64	136.95	133.72	137.11	125.59	137.94
40.00°	94.27	94.06	92.38	93.24	93.43	94.05	93.66	92.38	93.96	90.88	90.21	89.88	87.28	92.90	89.91	94.99	94.27
42.50°	68.71	64.86	66.15	63.09	65.67	66.49	65.41	68.09	64.32	66.34	63.10	66.08	66.35	66.41	67.74	65.72	68.71
45.00°	50.01	49.49	48.66	48.49	48.34	49.48	49.21	48.97	49.34	48.79	48.04	47.49	46.43	48.32	47.81	50.23	50.01
47.50°	37.19	35.55	35.73	34.63	35.11	34.91	36.00	36.78	35.03	35.74	34.97	34.69	35.54	33.81	36.55	35.92	37.19
50.00°	27.52	27.25	26.32	26.14	25.99	26.32	27.35	27.09	26.93	26.65	26.40	25.07	25.42	25.24	26.42	27.19	27.52
52.50°	19.79	19.25	18.17	18.35	18.89	18.45	19.69	19.83	19.30	19.31	18.20	17.94	18.78	18.26	19.13	19.13	19.79
55.00°	13.66	13.99	13.13	13.27	13.24	13.79	13.10	14.19	14.35	14.04	13.14	12.60	12.77	13.02	13.18	12.96	13.66
57.50°	8.20	9.10	8.75	8.99	9.31	9.35	8.79	9.67	9.82	9.36	8.40	8.22	8.45	8.04	9.45	8.07	8.20
60.00°	5.57	6.15	6.61	6.69	6.24	7.19	6.26	6.65	6.66	6.91	6.20	5.76	5.14	5.96	6.43	5.62	5.57
62.50°	3.70	3.71	4.70	4.75	4.68	5.12	4.52	4.36	4.24	4.82	4.18	4.02	3.66	4.04	4.23	3.85	3.70
65.00°	2.86	2.89	3.27	3.42	3.62	3.61	3.20	3.17	3.38	3.52	2.91	2.94	2.70	2.83	2.75	2.96	2.86
67.50°	2.17	2.13	1.92	2.32	2.58	2.30	2.22	2.32	2.49	2.28	1.86	2.02	2.42	1.70	1.88	2.12	2.17
70.00°	1.53	1.48	1.52	1.49	1.54	1.66	1.36	1.54	1.57	1.61	1.38	1.43	1.89	1.24	1.38	1.32	1.53
72.50°	0.91	1.03	1.13	1.02	1.14	1.15	1.04	0.76	1.07	1.00	1.05	0.88	1.12	0.87	1.09	0.84	0.91
75.00°	0.93	0.85	0.79	0.87	0.79	0.94	0.84	0.88	1.01	0.87	0.97	0.87	0.86	0.83	0.92	0.58	0.93
77.50°	0.92	0.81	0.56	0.80	0.81	0.79	0.84	1.05	0.94	0.80	0.88	0.87	0.93	0.81	0.80	0.59	0.92
80.00°	0.77	0.90	0.64	0.79	0.82	0.75	0.87	0.78	0.88	0.96	0.79	0.93	0.90	0.81	0.74	0.74	0.77
82.50°	0.66	0.84	0.75	0.81	0.82	0.76	0.77	0.54	0.78	1.06	0.80	0.96	0.82	0.78	0.69	0.72	0.66
85.00°	0.75	0.67	0.90	0.86	0.83	0.84	0.69	0.57	0.66	0.99	0.91	0.85	0.77	0.68	0.79	0.64	0.75
87.50°	0.79	0.63	0.94	0.84	0.86	0.85	0.70	0.61	0.77	0.87	0.91	0.78	0.72	0.66	0.92	0.69	0.79
90.00°	0.70	0.66	0.80	0.80	0.87	0.80	0.72	0.66	0.97	0.68	0.83	0.83	0.74	0.71	0.92	0.76	0.70
92.50°	0.64	0.71	0.73	0.94	0.84	0.83	0.72	0.72	0.85	0.62	0.77	0.87	0.78	0.76	0.92	0.79	0.64
95.00°	0.62	0.78	0.73	1.11	0.81	0.90	0.73	0.78	0.68	0.71	0.72	0.88	0.72	0.83	0.83	0.81	0.62
97.50°	0.69	0.82	0.76	0.86	0.78	0.89	0.76	0.84	0.75	0.75	0.68	0.83	0.65	0.84	0.76	0.85	0.69
100.00°	0.86	0.86	0.80	0.62	0.75	0.86	0.77	0.87	0.85	0.74	0.65	0.71	0.65	0.82	0.80	0.88	0.86
102.50°	0.96	0.85	0.88	0.72	0.73	0.85	0.75	0.87	0.80	0.76	0.70	0.68	0.67	0.80	0.85	0.80	0.96
105.00°	1.01	0.84	0.97	0.80	0.75	0.85	0.77	0.84	0.76	0.80	0.76	0.75	0.78	0.77	0.92	0.74	1.01

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	926	926	926	926	903	903	903	903	862	862	862	824	824	824	789	789	773
	1	882	861	842	824	863	844	826	811	811	797	785	781	770	760	754	745	730
	2	839	802	770	744	822	788	759	735	762	738	718	738	719	702	715	700	686
	3	797	748	710	679	782	737	702	673	716	686	662	696	671	651	678	657	644
	4	758	700	657	624	743	690	651	620	673	639	612	657	628	605	642	617	606
	5	720	656	611	578	707	648	606	575	634	597	569	620	588	564	607	580	569
	6	684	616	570	537	673	610	566	535	597	559	531	586	552	527	575	546	536
	7	651	580	534	501	641	574	531	500	564	525	497	554	520	494	545	514	505
	8	620	547	501	469	610	542	498	468	533	494	466	525	489	463	517	485	477
	9	591	517	471	441	582	513	469	440	505	466	438	498	462	436	491	458	451
	10	564	489	445	415	556	486	443	414	479	440	413	473	437	411	467	434	427

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	25.9 fc	6.3 ft
6.5 ft	18.5 fc	7.4 ft
7.5 ft	13.9 fc	8.6 ft
8.0 ft	12.2 fc	9.1 ft
10.0 ft	7.8 fc	11.4 ft
12.0 ft	5.4 fc	13.7 ft
14.0 ft	4.0 fc	16.0 ft
16.0 ft	3.1 fc	18.3 ft
20.0 ft	2.0 fc	22.8 ft
24.0 ft	1.4 fc	27.4 ft
28.0 ft	1.0 fc	31.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	243478	243478	243478
45.00°	21979	21385	21245
55.00°	7402	7114	7175
65.00°	2103	2402	2663
75.00°	1115	951	954
85.00°	2674	3220	2970

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	8.1	9.1	8.5	9.4	9.8	8.4	9.3	8.7	9.7	10.0
	3H	8.2	9.1	8.6	9.4	9.8	8.5	9.4	8.9	9.7	10.1
	4H	8.2	9.0	8.6	9.4	9.8	8.5	9.3	8.9	9.7	10.1
	6H	8.2	9.0	8.7	9.3	9.8	8.5	9.2	9.0	9.6	10.0
	8H	8.3	8.9	8.7	9.3	9.8	8.6	9.2	9.0	9.7	10.1
	12H	8.3	9.0	8.8	9.4	9.8	8.7	9.3	9.1	9.7	10.2
4H	2H	8.0	8.8	8.5	9.2	9.6	8.3	9.1	8.7	9.4	9.8
	3H	8.2	8.8	8.6	9.3	9.7	8.5	9.1	8.9	9.5	10.0
	4H	8.2	8.8	8.6	9.2	9.7	8.5	9.1	8.9	9.5	10.0
	6H	8.3	8.8	8.8	9.2	9.7	8.6	9.1	9.1	9.5	10.0
	8H	8.4	8.8	8.9	9.3	9.8	8.7	9.2	9.2	9.6	10.1
	12H	8.5	8.9	9.0	9.4	9.9	8.9	9.3	9.4	9.8	10.3
8H	4H	8.1	8.5	8.6	9.0	9.5	8.4	8.8	8.9	9.3	9.8
	6H	8.3	8.6	8.8	9.1	9.6	8.6	8.9	9.1	9.4	10.0
	8H	8.4	8.7	9.0	9.3	9.8	8.8	9.1	9.3	9.6	10.2
	12H	8.7	9.0	9.3	9.5	10.1	9.2	9.5	9.7	10.0	10.6
12H	4H	8.0	8.4	8.5	8.9	9.4	8.3	8.7	8.8	9.2	9.7
	6H	8.2	8.6	8.8	9.0	9.6	8.6	8.9	9.1	9.4	9.9
	8H	8.5	8.8	9.0	9.3	9.9	8.9	9.1	9.4	9.6	10.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0