

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2XF RB2BS xx RA2HL

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

Test Number

SP-01576

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	475
Efficacy	68.77 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.82
Two luminaires, plane 90°	0.8
Four luminaires	0.74

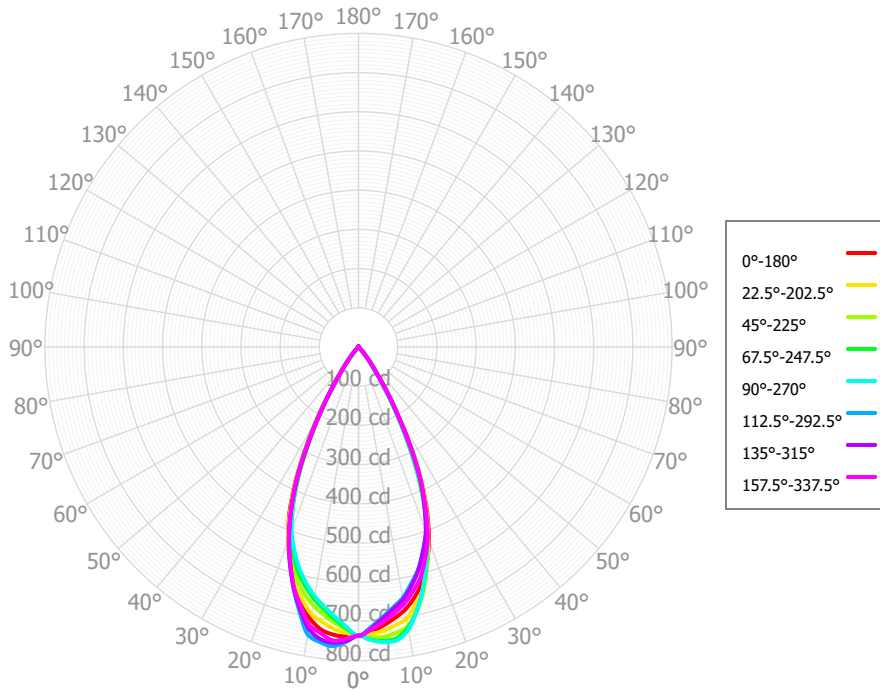
Full Beam Angle

0° - 180°	50°
90° - 270°	49°

IES File Header Contents

Keyword	Value
TEST	SP-01576
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 RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, hex louver and standard bezel
OTHER	Beam Angle: 50 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°	69.23	14.59%	90.00° - 100.00°	0.89	0.19%
10.00° - 20.00°	170.74	35.98%	100.00° - 110.00°	0.79	0.17%
20.00° - 30.00°	163.49	34.45%	100.00° - 120.00°	1.56	0.33%
30.00° - 40.00°	54.87	11.56%	120.00° - 130.00°	0.72	0.15%
40.00° - 50.00°	7.37	1.55%	130.00° - 140.00°	0.62	0.13%
50.00° - 60.00°	1.15	0.24%	140.00° - 150.00°	0.55	0.12%
60.00° - 70.00°	0.88	0.19%	150.00° - 160.00°	0.41	0.09%
70.00° - 80.00°	0.84	0.18%	160.00° - 170.00°	0.26	0.06%
80.00° - 90.00°	0.87	0.18%	170.00° - 180.00°	0.09	0.02%
0.00° - 90.00°	469.43	98.93%	0.00° - 180.00°	474.52	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°	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88	736.88
2.50°	727.36	732.68	741.16	747.97	748.79	753.63	751.77	745.39	739.82	729.90	721.40	718.57	714.44	715.92	719.82	722.16	727.36
5.00°	714.02	727.66	742.42	752.31	756.14	766.01	757.31	751.58	736.90	722.10	706.07	697.15	690.76	692.59	696.25	705.57	714.02
7.50°	698.54	716.36	735.31	749.31	754.51	759.16	751.45	736.70	727.67	707.73	688.58	675.31	667.92	671.10	674.89	686.48	698.54
10.00°	681.22	704.44	724.12	727.00	732.94	745.48	730.53	720.85	705.74	692.14	668.42	653.11	645.62	649.76	654.59	666.47	681.22
12.50°	655.88	672.51	688.04	688.76	688.55	692.99	686.95	678.47	672.93	660.74	644.32	625.88	616.82	618.94	624.34	639.48	655.88
15.00°	624.28	639.06	641.23	637.48	636.17	639.09	637.81	635.49	630.45	627.64	611.20	594.63	584.35	587.64	589.86	610.02	624.28
17.50°	579.68	580.55	581.69	576.41	575.46	578.66	581.17	578.41	580.46	578.89	566.10	552.26	544.39	545.65	547.58	565.89	579.68
20.00°	525.89	521.30	517.34	509.73	511.65	516.60	519.02	520.86	523.59	527.41	509.96	501.86	500.53	503.39	502.41	517.48	525.89
22.50°	458.04	453.27	442.15	439.28	444.95	448.24	450.11	448.57	461.92	456.72	440.68	435.81	438.63	440.45	440.26	448.34	458.04
25.00°	381.31	382.71	363.34	356.23	365.64	374.91	370.02	375.25	383.06	382.72	362.39	359.50	368.44	376.74	372.64	375.26	381.31
27.50°	294.84	290.36	276.81	265.62	275.75	285.01	277.48	284.94	293.51	290.29	274.34	278.73	284.67	285.25	289.42	285.87	294.84
30.00°	202.89	201.53	188.00	187.55	195.90	200.69	196.37	196.97	211.81	202.26	195.07	195.35	195.41	195.15	201.78	200.97	202.89
32.50°	134.38	136.03	127.80	116.28	123.60	132.76	126.67	134.29	134.47	135.38	124.46	132.18	129.97	130.35	138.18	132.15	134.38
35.00°	77.62	76.70	74.78	72.59	75.40	75.70	77.52	75.71	85.13	76.56	76.04	79.51	72.94	68.74	80.49	73.61	77.62
37.50°	46.03	50.25	47.00	42.35	43.89	46.96	46.79	49.85	49.98	50.18	47.24	47.95	43.53	44.13	49.76	46.71	46.03
40.00°	25.91	26.68	24.53	24.74	24.39	23.79	26.30	26.05	29.76	27.45	28.00	26.24	22.72	21.21	24.57	24.53	25.91
42.50°	15.19	16.06	14.56	12.55	12.32	13.34	14.05	15.40	16.24	17.17	16.35	14.91	13.08	13.48	14.52	14.97	15.19
45.00°	8.23	7.07	6.74	6.53	6.16	5.61	6.97	6.08	8.86	8.62	8.82	7.92	6.49	6.45	7.01	7.33	8.23
47.50°	4.64	4.41	3.82	2.83	3.26	3.32	3.71	3.80	3.90	5.16	4.25	4.58	4.02	4.20	4.13	4.19	4.64
50.00°	2.23	2.21	1.61	1.62	1.90	1.73	2.00	1.85	2.17	2.46	2.07	2.56	2.51	2.20	1.89	1.92	2.23
52.50°	1.50	1.56	1.23	1.23	1.30	1.42	1.30	1.41	1.54	1.75	1.45	1.77	1.84	1.63	1.33	1.48	1.50
55.00°	1.27	1.04	1.04	1.03	1.06	1.16	1.02	1.05	1.30	1.21	1.22	1.37	1.33	1.13	0.94	1.11	1.27
57.50°	1.05	0.87	1.12	0.88	0.98	1.00	0.98	1.00	1.18	1.07	1.22	1.25	1.16	1.01	0.97	0.86	1.05
60.00°	0.82	0.79	1.22	0.82	0.95	0.92	0.95	0.94	1.04	0.98	1.11	1.20	1.05	0.91	1.03	0.74	0.82
62.50°	0.92	0.93	0.97	0.79	0.95	0.95	0.90	0.86	0.88	0.95	0.95	1.08	1.09	0.88	0.99	0.83	0.92
65.00°	1.08	1.01	0.69	0.73	0.98	0.92	0.87	0.82	0.85	0.91	0.85	0.93	1.15	0.84	0.94	0.85	1.08
67.50°	0.91	1.00	0.73	0.67	1.01	0.81	0.84	0.89	0.85	0.83	0.78	0.88	1.05	0.78	0.81	0.78	0.91
70.00°	0.68	0.95	0.78	0.81	0.86	0.72	0.84	0.90	0.79	0.82	0.75	0.86	0.94	0.74	0.68	0.75	0.68
72.50°	0.75	0.85	0.84	0.99	0.66	0.63	0.85	0.77	0.71	0.90	0.75	0.83	0.96	0.77	0.76	0.78	0.75
75.00°	0.86	0.81	0.90	0.94	0.68	0.59	0.83	0.69	0.75	0.90	0.73	0.80	0.98	0.78	0.83	0.78	0.86
77.50°	0.87	0.86	0.85	0.86	0.76	0.59	0.78	0.71	0.81	0.79	0.70	0.80	0.81	0.75	0.79	0.73	0.87
80.00°	0.87	0.82	0.81	0.81	0.79	0.62	0.77	0.77	0.85	0.76	0.74	0.80	0.64	0.73	0.76	0.75	0.87
82.50°	0.82	0.65	0.81	0.77	0.80	0.67	0.76	0.86	0.89	0.84	0.81	0.82	0.74	0.70	0.70	0.85	0.82
85.00°	0.76	0.61	0.81	0.81	0.77	0.70	0.83	0.93	0.83	0.88	0.85	0.84	0.85	0.68	0.65	0.89	0.76
87.50°	0.75	0.75	0.79	0.86	0.74	0.71	0.90	0.98	0.77	0.87	0.88	0.85	0.92	0.69	0.71	0.85	0.75
90.00°	0.74	0.81	0.78	0.82	0.72	0.74	0.85	1.00	0.89	0.88	0.82	0.85	0.99	0.70	0.76	0.83	0.74
92.50°	0.71	0.76	0.78	0.77	0.71	0.77	0.76	1.00	1.01	0.92	0.74	0.81	0.92	0.72	0.84	0.83	0.71
95.00°	0.67	0.78	0.78	0.77	0.75	0.81	0.77	0.98	0.93	0.93	0.77	0.78	0.85	0.71	0.89	0.83	0.67
97.50°	0.74	0.89	0.81	0.77	0.81	0.85	0.80	0.93	0.83	0.92	0.81	0.73	0.83	0.66	0.85	0.84	0.74
100.00°	0.80	0.88	0.82	0.76	0.81	0.82	0.76	0.88	0.80	0.88	0.73	0.68	0.80	0.67	0.80	0.81	0.80
102.50°	0.77	0.75	0.70	0.76	0.81	0.75	0.71	0.81	0.77	0.82	0.63	0.63	0.73	0.76	0.73	0.74	0.77
105.00°	0.73	0.72	0.61	0.72	0.74	0.76	0.73	0.79	0.70	0.75	0.67	0.58	0.68	0.80	0.67	0.71	0.73

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	564	564	564	564	550	550	550	550	524	524	524	501	501	501	480	480	469
	1	540	527	516	507	528	517	507	498	497	489	482	478	472	467	461	457	447
	2	516	495	478	463	506	487	471	458	471	458	447	456	446	437	442	434	425
	3	494	466	445	428	484	459	440	424	447	430	417	435	421	410	424	413	404
	4	472	440	417	399	464	435	413	396	424	406	391	414	399	386	405	392	385
	5	452	417	392	374	444	412	389	372	403	383	368	395	378	365	388	373	366
	6	433	395	370	352	426	391	368	350	384	363	348	377	359	345	371	355	348
	7	415	375	350	332	408	372	348	331	366	344	329	360	341	327	355	338	332
	8	397	357	332	314	392	354	330	314	349	327	312	344	325	310	339	322	317
	9	381	340	315	298	376	338	314	298	333	312	297	329	309	295	325	307	303
	10	366	325	300	284	361	323	299	283	319	297	282	315	295	281	312	294	289

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.4 fc	5.1 ft
6.5 ft	17.4 fc	6.1 ft
7.5 ft	13.1 fc	7.0 ft
8.0 ft	11.5 fc	7.5 ft
10.0 ft	7.4 fc	9.3 ft
12.0 ft	5.1 fc	11.2 ft
14.0 ft	3.8 fc	13.0 ft
16.0 ft	2.9 fc	14.9 ft
20.0 ft	1.8 fc	18.6 ft
24.0 ft	1.3 fc	22.4 ft
28.0 ft	0.9 fc	26.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	229000	229000	229000
45.00°	3618	2960	2706
55.00°	689	564	572
65.00°	792	509	719
75.00°	1028	1078	816
85.00°	2694	2894	2757

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	-5.6	-4.7	-5.3	-4.4	-4.1	-4.1	-3.2	-3.7	-2.8	-2.5
	3H	-2.4	-1.6	-2.0	-1.2	-0.8	-1.5	-0.7	-1.1	-0.3	0.1
	4H	-0.6	0.1	-0.2	0.5	0.9	-0.2	0.6	0.3	1.0	1.4
	6H	1.5	2.1	1.9	2.5	3.0	1.4	2.0	1.8	2.4	2.8
	8H	2.6	3.2	3.0	3.6	4.0	2.3	2.9	2.8	3.3	3.8
	12H	3.7	4.3	4.1	4.7	5.1	3.6	4.2	4.0	4.6	5.0
4H	2H	-4.8	-4.0	-4.3	-3.6	-3.2	-3.5	-2.8	-3.1	-2.4	-2.0
	3H	-1.3	-0.7	-0.8	-0.2	0.2	-0.7	-0.1	-0.2	0.3	0.8
	4H	0.6	1.1	1.1	1.6	2.1	0.8	1.3	1.2	1.8	2.2
	6H	2.9	3.3	3.4	3.8	4.3	2.6	3.0	3.0	3.5	4.0
	8H	4.0	4.5	4.5	4.9	5.4	3.7	4.1	4.2	4.6	5.1
	12H	5.3	5.7	5.8	6.2	6.7	5.1	5.5	5.6	6.0	6.5
8H	4H	1.4	1.8	1.9	2.3	2.8	1.4	1.8	1.9	2.3	2.8
	6H	3.8	4.2	4.4	4.7	5.2	3.5	3.8	4.0	4.3	4.8
	8H	5.1	5.4	5.7	6.0	6.5	4.8	5.1	5.3	5.6	6.1
	12H	6.6	6.9	7.2	7.4	8.0	6.5	6.7	7.0	7.3	7.9
12H	4H	1.6	1.9	2.1	2.4	2.9	1.6	1.9	2.1	2.4	2.9
	6H	4.1	4.4	4.7	4.9	5.5	3.8	4.1	4.3	4.6	5.1
	8H	5.5	5.8	6.1	6.3	6.9	5.3	5.5	5.8	6.0	6.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0