

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2SP RB2BS xx RA2HL

2" Adjustable Track Luminaire with spot optic, hex louver and standard bezel

Test Number

SP-01574

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	518
Efficacy	75.05 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.34
Two luminaires, plane 90°	0.34
Four luminaires	0.33

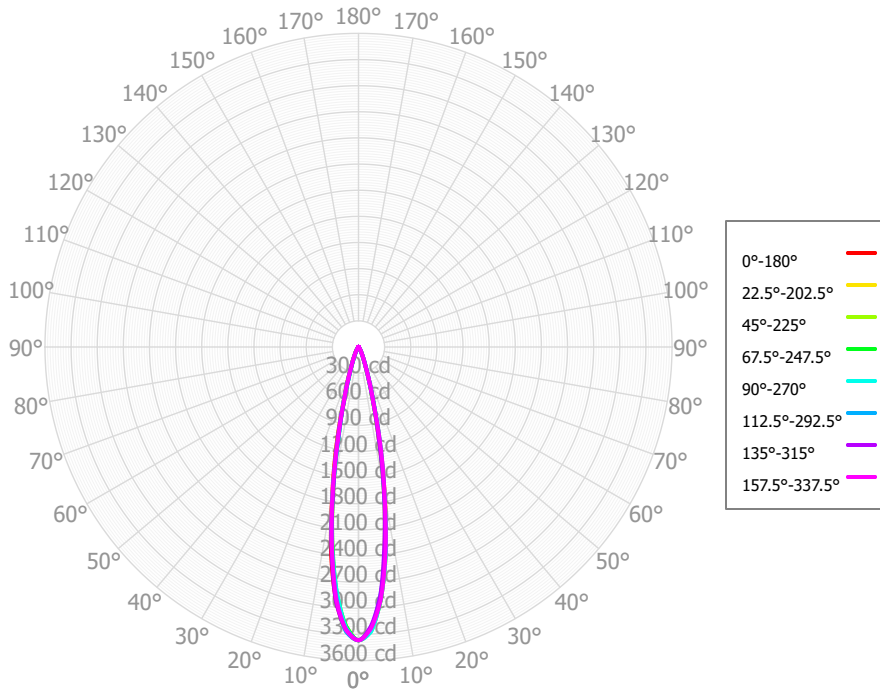
Full Beam Angle

0° - 180°	20°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	SP-01574
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 RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with spot optic, hex louver and standard bezel
OTHER	Beam Angle: 20 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°	237.57	45.88%	90.00° - 100.00°	0.90	0.17%
10.00° - 20.00°	196.87	38.02%	100.00° - 110.00°	0.85	0.16%
20.00° - 30.00°	52.80	10.20%	100.00° - 120.00°	1.63	0.32%
30.00° - 40.00°	17.42	3.36%	120.00° - 130.00°	0.77	0.15%
40.00° - 50.00°	4.25	0.82%	130.00° - 140.00°	0.68	0.13%
50.00° - 60.00°	1.02	0.20%	140.00° - 150.00°	0.58	0.11%
60.00° - 70.00°	0.87	0.17%	150.00° - 160.00°	0.45	0.09%
70.00° - 80.00°	0.84	0.16%	160.00° - 170.00°	0.27	0.05%
80.00° - 90.00°	0.85	0.16%	170.00° - 180.00°	0.08	0.02%
0.00° - 90.00°	512.50	98.97%	0.00° - 180.00°	517.86	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°	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48	3366.48
2.50°	3243.40	3267.24	3230.50	3256.45	3274.46	3272.02	3248.72	3254.55	3259.71	3262.78	3214.32	3214.01	3230.76	3230.61	3214.38	3239.14	3243.40
5.00°	2891.98	2903.11	2913.34	2922.95	2910.36	2900.35	2941.81	2910.81	2935.61	2869.01	2908.87	2845.85	2836.63	2871.40	2867.55	2917.93	2891.98
7.50°	2348.42	2400.47	2292.34	2377.08	2400.49	2340.17	2361.79	2333.36	2405.21	2341.67	2324.60	2290.25	2320.35	2359.35	2278.67	2379.26	2348.42
10.00°	1736.62	1717.45	1676.37	1687.03	1702.27	1711.32	1673.95	1722.16	1736.98	1716.74	1673.33	1689.56	1702.44	1711.05	1679.59	1722.43	1736.62
12.50°	1079.87	1145.30	1067.95	1129.52	1125.70	1049.73	1132.75	1084.21	1181.30	1062.32	1138.24	1060.08	1054.09	1163.76	1069.86	1168.39	1079.87
15.00°	670.41	682.18	629.35	639.73	669.55	663.53	632.14	671.34	681.23	692.63	620.14	661.99	683.34	685.24	652.77	655.47	670.41
17.50°	381.30	396.20	385.48	391.20	389.15	372.38	409.10	394.01	424.70	378.09	411.66	374.55	367.13	415.64	390.02	406.99	381.30
20.00°	238.80	243.62	229.49	231.16	240.07	241.42	233.90	248.42	255.74	257.07	224.48	236.44	245.49	251.38	238.31	231.35	238.80
22.50°	148.12	155.98	149.70	153.60	152.64	147.25	164.92	161.91	174.52	156.60	163.95	149.08	144.99	164.06	153.22	157.25	148.12
25.00°	104.01	104.84	99.45	96.94	99.56	104.24	105.28	113.71	115.00	116.71	106.17	105.51	105.29	105.06	104.13	100.53	104.01
27.50°	70.92	74.59	68.73	68.98	68.15	68.25	79.28	77.60	84.51	79.47	80.70	72.03	68.13	74.49	71.12	74.13	70.92
30.00°	52.70	53.02	48.81	45.39	45.67	50.79	54.33	55.55	58.30	61.29	56.71	54.01	50.77	51.00	51.64	50.36	52.70
32.50°	36.60	39.28	34.15	33.90	32.61	34.44	40.67	36.39	43.59	43.92	41.52	38.06	34.20	36.33	36.49	37.21	36.60
35.00°	26.64	27.80	24.14	23.28	22.29	25.84	27.78	26.83	29.64	33.05	27.73	27.85	24.16	23.01	27.76	24.53	26.64
37.50°	17.10	20.10	15.77	16.71	15.94	17.50	20.27	18.38	22.29	22.99	19.20	18.03	15.03	16.58	20.37	17.59	17.10
40.00°	12.25	13.10	11.00	10.37	10.32	11.92	13.44	13.73	15.13	16.72	11.93	12.83	10.26	10.63	13.68	11.11	12.25
42.50°	7.58	8.86	7.10	7.22	6.96	6.80	9.47	9.27	10.46	10.89	7.91	7.81	6.09	7.09	7.07	7.90	7.58
45.00°	4.83	4.90	4.66	4.33	3.81	4.27	5.88	6.13	6.15	6.45	4.60	4.81	3.79	3.72	4.29	5.00	4.83
47.50°	2.38	3.15	2.44	2.95	2.59	2.16	3.38	3.21	4.00	3.08	2.61	2.20	2.07	2.38	1.73	3.42	2.38
50.00°	1.63	1.52	1.82	1.76	1.46	1.54	1.56	2.25	2.13	2.08	1.43	1.77	1.62	1.21	1.42	2.09	1.63
52.50°	1.02	1.27	1.30	1.29	1.28	1.06	1.16	1.39	1.37	1.39	1.39	1.38	1.27	1.11	1.14	1.51	1.02
55.00°	0.91	1.04	1.11	0.93	1.12	0.95	0.94	1.01	0.77	1.18	1.32	1.14	1.06	1.01	1.04	1.11	0.91
57.50°	0.82	1.01	0.93	0.86	1.08	0.91	1.01	0.72	0.63	1.05	1.23	0.99	0.99	0.90	0.96	1.08	0.82
60.00°	0.79	0.98	0.97	0.86	1.03	1.01	0.98	0.76	0.58	1.02	1.10	1.05	1.09	0.79	0.93	1.09	0.79
62.50°	0.78	1.00	0.98	0.99	0.96	1.02	0.83	0.81	0.73	1.02	0.95	1.07	1.06	0.71	0.88	1.15	0.78
65.00°	0.80	0.98	0.76	0.99	0.87	0.94	0.78	0.85	0.81	1.05	0.80	1.00	0.92	0.70	0.79	1.12	0.80
67.50°	0.82	0.88	0.62	0.82	0.75	0.84	0.81	0.87	0.80	0.93	0.64	0.91	0.86	0.84	0.73	0.99	0.82
70.00°	0.83	0.80	0.74	0.81	0.69	0.74	0.75	0.88	0.89	0.70	0.73	0.79	0.84	0.92	0.76	0.92	0.83
72.50°	0.82	0.77	0.77	1.00	0.74	0.67	0.63	0.85	1.08	0.70	0.94	0.76	0.84	0.91	0.74	0.90	0.82
75.00°	0.78	0.76	0.57	0.98	0.77	0.64	0.64	0.80	1.17	0.83	0.91	0.83	0.83	0.80	0.65	0.93	0.78
77.50°	0.78	0.78	0.49	0.79	0.75	0.65	0.71	0.77	1.17	0.79	0.82	0.82	0.83	0.57	0.64	0.99	0.78
80.00°	0.82	0.82	0.63	0.73	0.69	0.67	0.70	0.77	1.12	0.70	0.81	0.75	0.83	0.56	0.71	0.93	0.82
82.50°	0.86	0.87	0.75	0.75	0.60	0.63	0.67	0.70	1.04	0.84	0.83	0.72	0.82	0.72	0.72	0.82	0.86
85.00°	0.90	0.84	0.85	0.74	0.67	0.55	0.75	0.58	0.90	1.04	0.82	0.71	0.80	0.82	0.66	0.71	0.90
87.50°	1.00	0.73	0.94	0.70	0.89	0.61	0.86	0.58	0.73	0.99	0.81	0.77	0.80	0.88	0.64	0.61	1.00
90.00°	1.12	0.77	1.03	0.64	0.90	0.71	0.97	0.64	0.76	0.89	0.80	0.85	0.80	0.87	0.64	0.65	1.12
92.50°	0.93	0.91	1.05	0.56	0.76	0.77	1.07	0.72	0.85	0.87	0.79	0.82	0.82	0.82	0.68	0.73	0.93
95.00°	0.64	1.00	1.02	0.64	0.80	0.83	0.96	0.80	0.81	0.85	0.91	0.74	0.83	0.77	0.73	0.83	0.64
97.50°	0.66	1.06	0.93	0.76	0.93	0.77	0.83	0.81	0.73	0.95	1.00	0.73	0.83	0.72	0.70	0.92	0.66
100.00°	0.75	0.92	0.81	0.80	0.94	0.69	0.72	0.80	0.77	1.03	0.88	0.72	0.83	0.75	0.63	0.90	0.75
102.50°	0.74	0.71	0.81	0.83	0.90	0.79	0.63	0.83	0.82	0.90	0.77	0.78	0.81	0.79	0.59	0.87	0.74
105.00°	0.72	0.82	0.88	0.77	0.91	0.89	0.76	0.87	0.76	0.78	0.71	0.84	0.79	0.88	0.55	0.85	0.72

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	615	615	615	615	600	600	600	600	572	572	572	547	547	547	524	524	513
	1	595	585	575	566	582	573	565	557	551	545	539	532	527	522	513	510	499
	2	577	559	544	532	566	550	537	526	533	523	513	518	509	502	503	497	487
	3	560	537	520	506	551	530	514	501	517	504	493	504	494	485	493	484	475
	4	545	518	499	485	536	513	495	482	502	487	476	492	480	470	483	473	464
	5	530	502	482	467	523	497	479	465	488	473	461	480	467	456	473	461	453
	6	517	487	467	452	510	483	464	451	476	460	448	469	455	444	463	451	443
	7	504	473	453	439	499	470	452	438	464	448	436	459	444	434	453	441	434
	8	493	461	442	428	488	459	440	427	454	437	425	449	434	423	444	431	425
	9	482	450	431	418	477	448	430	417	444	427	416	440	425	414	436	422	416
	10	471	440	421	408	467	438	420	408	434	418	407	431	416	405	427	414	408

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	111.3 fc	2.0 ft
6.5 ft	79.7 fc	2.3 ft
7.5 ft	59.8 fc	2.7 ft
8.0 ft	52.6 fc	2.9 ft
10.0 ft	33.7 fc	3.6 ft
12.0 ft	23.4 fc	4.3 ft
14.0 ft	17.2 fc	5.0 ft
16.0 ft	13.2 fc	5.8 ft
20.0 ft	8.4 fc	7.2 ft
24.0 ft	5.8 fc	8.7 ft
28.0 ft	4.3 fc	10.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1046206	1046206	1046206
45.00°	2125	2049	1674
55.00°	491	599	609
65.00°	589	562	640
75.00°	931	682	921
85.00°	3220	3037	2377

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	-5.1	-4.2	-4.7	-3.9	-3.5	-5.3	-4.4	-4.9	-4.1	-3.7
	3H	-2.2	-1.4	-1.8	-1.1	-0.7	-2.6	-1.8	-2.2	-1.4	-1.0
	4H	-0.7	0.0	-0.3	0.4	0.8	-1.0	-0.3	-0.6	0.1	0.5
	6H	1.2	1.9	1.6	2.3	2.7	0.8	1.5	1.2	1.9	2.3
	8H	2.4	3.0	2.8	3.4	3.8	1.7	2.4	2.2	2.8	3.2
	12H	3.7	4.3	4.2	4.7	5.2	2.9	3.5	3.3	3.9	4.3
4H	2H	-4.5	-3.8	-4.1	-3.4	-3.0	-4.7	-4.0	-4.2	-3.6	-3.2
	3H	-1.3	-0.7	-0.9	-0.3	0.2	-1.7	-1.1	-1.2	-0.6	-0.2
	4H	0.5	1.1	1.0	1.5	2.0	0.1	0.6	0.5	1.1	1.5
	6H	2.7	3.2	3.2	3.7	4.2	2.1	2.6	2.6	3.0	3.6
	8H	4.0	4.4	4.5	4.9	5.4	3.2	3.6	3.7	4.1	4.6
	12H	5.4	5.8	5.9	6.3	6.8	4.4	4.8	5.0	5.3	5.8
8H	4H	1.0	1.4	1.5	1.9	2.4	0.8	1.2	1.3	1.7	2.2
	6H	3.6	3.9	4.1	4.4	4.9	3.1	3.4	3.6	3.9	4.4
	8H	5.0	5.3	5.6	5.9	6.4	4.3	4.6	4.8	5.1	5.6
	12H	6.7	7.0	7.3	7.5	8.1	5.7	6.0	6.3	6.5	7.1
12H	4H	1.1	1.5	1.6	2.0	2.5	1.0	1.3	1.5	1.9	2.4
	6H	3.8	4.1	4.3	4.6	5.1	3.4	3.7	3.9	4.2	4.7
	8H	5.4	5.6	5.9	6.2	6.8	4.7	5.0	5.3	5.5	6.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0