

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2XS RB2BS xx xx

2" Adjustable Track Luminaire with extra narrow spot optic and standard
bezel

Test Number

SP-01569

Test Date

2/19/2024

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	671
Efficacy	97.24 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.21
Two luminaires, plane 90°	0.21
Four luminaires	0.23

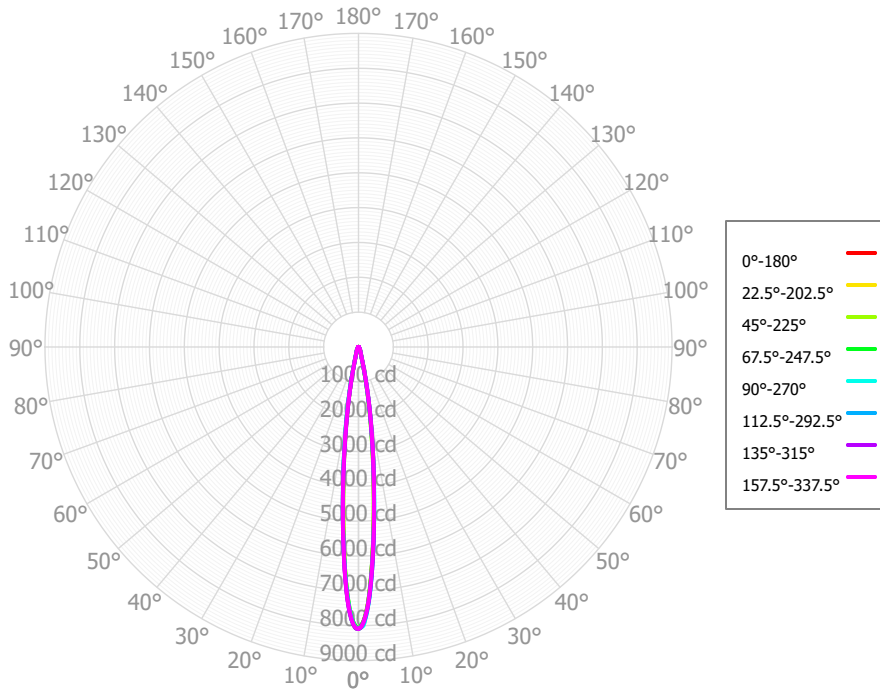
Full Beam Angle

0° - 180°	13°
90° - 270°	13°

IES File Header Contents

Keyword	Value
TEST	SP-01569
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/19/2024
ISSUEDATE	2/19/2024
LUMCAT	STR2 835 07 xx xx RD2XS RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra narrow spot optic and standard bezel
OTHER	Beam Angle: 13 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°	374.70	55.85%	90.00° - 100.00°	0.89	0.13%
10.00° - 20.00°	155.16	23.13%	100.00° - 110.00°	0.82	0.12%
20.00° - 30.00°	56.84	8.47%	100.00° - 120.00°	1.61	0.24%
30.00° - 40.00°	39.57	5.90%	120.00° - 130.00°	0.73	0.11%
40.00° - 50.00°	24.10	3.59%	130.00° - 140.00°	0.61	0.09%
50.00° - 60.00°	11.07	1.65%	140.00° - 150.00°	0.56	0.08%
60.00° - 70.00°	2.62	0.39%	150.00° - 160.00°	0.41	0.06%
70.00° - 80.00°	0.93	0.14%	160.00° - 170.00°	0.25	0.04%
80.00° - 90.00°	0.79	0.12%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	665.79	99.23%	0.00° - 180.00°	670.93	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°	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55	8087.55
0.50°	8032.43	8022.52	8025.47	7994.43	8053.66	8063.87	8083.69	8063.28	8076.17	8067.54	8037.01	8024.54	8075.35	8052.84	8049.15	8037.09	8032.43
1.00°	7887.35	7930.78	7910.84	7888.00	8005.80	7981.94	7985.75	7975.62	7981.91	7951.81	7921.34	7920.01	7954.19	7930.92	7922.05	7919.16	7887.35
1.50°	7696.15	7730.26	7725.75	7696.16	7789.76	7825.77	7801.75	7811.92	7809.69	7775.13	7753.52	7742.77	7755.64	7767.13	7730.83	7719.43	7696.15
2.00°	7439.84	7457.32	7455.93	7437.13	7526.13	7557.84	7584.09	7549.21	7548.49	7512.02	7481.77	7478.36	7508.12	7499.72	7491.27	7461.74	7439.84
2.50°	7112.12	7121.36	7116.88	7082.79	7191.54	7236.36	7261.21	7252.35	7227.91	7187.09	7168.42	7155.71	7194.47	7202.57	7173.83	7126.61	7112.12
3.00°	6727.11	6739.49	6711.38	6691.96	6798.85	6862.86	6875.87	6872.86	6842.05	6787.37	6787.68	6784.02	6820.42	6822.68	6799.42	6751.13	6727.11
3.50°	6302.00	6326.61	6291.32	6282.11	6385.20	6423.92	6446.82	6471.81	6427.96	6359.28	6362.46	6372.31	6411.22	6408.97	6400.61	6333.67	6302.00
4.00°	5871.74	5880.90	5871.63	5837.86	5934.82	5992.74	5997.57	6008.92	5990.51	5915.51	5931.11	5946.87	5984.44	5980.03	5967.33	5908.59	5871.74
4.50°	5446.03	5448.93	5442.62	5414.77	5508.76	5551.05	5559.85	5556.88	5530.33	5467.62	5463.79	5508.25	5551.18	5547.71	5540.34	5482.06	5446.03
5.00°	5042.33	5032.40	5012.73	5009.11	5110.13	5124.22	5124.14	5108.45	5080.78	5018.32	5023.55	5066.31	5113.42	5106.58	5102.72	5057.00	5042.33
5.50°	4638.57	4599.72	4584.18	4608.65	4698.49	4704.83	4672.00	4680.28	4663.43	4602.12	4587.58	4625.92	4686.24	4682.47	4664.89	4634.49	4638.57
6.00°	4248.15	4213.65	4180.55	4210.59	4306.71	4298.59	4251.96	4264.37	4274.60	4213.67	4177.00	4206.53	4297.45	4284.13	4247.25	4247.40	4248.15
6.50°	3896.64	3841.05	3799.84	3839.40	3924.57	3904.02	3843.76	3875.93	3864.41	3844.72	3801.28	3834.39	3927.20	3917.80	3870.51	3888.90	3896.64
7.00°	3566.46	3492.17	3434.53	3474.00	3567.10	3545.63	3457.20	3514.38	3531.27	3488.17	3439.15	3489.27	3581.02	3581.24	3528.40	3548.77	3566.46
7.50°	3254.62	3164.45	3095.36	3144.17	3227.09	3200.57	3108.40	3173.86	3190.20	3156.38	3116.35	3171.65	3254.28	3250.56	3200.43	3227.71	3254.62
8.00°	2947.30	2858.57	2776.24	2835.69	2902.89	2861.47	2773.73	2852.50	2871.71	2844.82	2803.07	2857.39	2943.92	2940.08	2886.24	2922.88	2947.30
8.50°	2646.85	2576.24	2480.61	2545.91	2600.54	2559.65	2473.16	2549.38	2572.66	2551.31	2507.59	2580.47	2652.45	2655.27	2596.73	2633.44	2646.85
9.00°	2382.25	2304.17	2215.26	2280.83	2325.15	2281.68	2199.62	2264.35	2299.72	2273.24	2241.90	2301.44	2385.09	2392.76	2323.10	2355.42	2382.25
9.50°	2124.94	2052.59	1968.08	2026.40	2066.26	2026.59	1946.45	2014.01	2039.64	2015.53	1985.00	2055.27	2136.21	2149.10	2076.39	2107.59	2124.94
10.00°	1883.54	1816.08	1724.58	1788.37	1822.41	1788.86	1719.21	1771.10	1792.27	1776.07	1750.92	1819.86	1898.35	1915.04	1839.13	1874.83	1883.54
10.50°	1655.22	1594.43	1513.56	1573.13	1596.78	1571.33	1514.90	1551.24	1571.55	1559.17	1539.67	1606.54	1678.63	1695.65	1618.07	1653.14	1655.22
11.00°	1451.99	1397.44	1323.61	1364.69	1388.29	1374.97	1327.80	1358.79	1369.05	1361.93	1346.89	1414.22	1471.58	1490.89	1420.27	1451.00	1451.99
11.50°	1261.38	1213.85	1151.71	1187.38	1202.84	1194.32	1153.50	1180.59	1186.03	1182.83	1174.50	1230.87	1285.97	1298.91	1240.30	1261.79	1261.38
12.00°	1096.95	1049.95	995.64	1022.17	1038.17	1026.51	995.98	1017.51	1024.47	1023.50	1015.25	1067.35	1109.29	1124.43	1074.33	1088.61	1096.95
12.50°	937.40	903.45	859.61	876.56	889.27	879.33	856.64	873.26	879.92	878.29	874.35	920.52	957.07	971.46	925.78	933.87	937.40
13.00°	808.30	775.46	737.40	749.74	760.75	751.66	736.42	750.04	754.95	751.53	753.23	790.90	815.27	834.39	797.39	804.59	808.30
13.50°	692.09	664.99	634.15	639.73	649.99	644.25	633.23	644.86	647.78	642.48	646.76	678.98	699.43	710.27	683.39	685.94	692.09
14.00°	592.67	572.58	547.21	552.60	560.16	554.13	546.23	554.20	555.85	553.16	556.38	584.42	604.57	607.56	587.54	589.06	592.67
14.50°	511.21	496.96	478.51	479.34	486.11	479.52	475.89	482.22	483.20	482.11	483.22	504.46	518.43	527.31	508.84	507.85	511.21
15.00°	445.17	434.10	418.02	419.90	426.46	423.30	419.92	424.83	425.33	420.71	424.45	439.88	454.63	457.24	443.77	443.05	445.17
15.50°	391.59	383.70	372.48	370.10	375.61	374.72	372.59	375.99	377.00	375.58	375.65	389.37	402.10	399.13	391.56	391.24	391.59
16.00°	351.93	342.91	335.64	332.22	335.87	334.83	332.86	338.11	337.15	336.13	335.78	349.16	358.71	358.20	349.82	351.08	351.93
16.50°	316.83	311.34	302.58	300.31	303.85	305.35	302.38	305.48	306.08	306.07	304.15	314.84	322.62	321.45	315.63	313.92	316.83
17.00°	286.28	282.32	276.53	275.34	279.30	277.57	276.20	278.87	278.21	276.64	277.49	286.16	293.37	292.34	287.00	285.95	286.28
17.50°	263.15	262.03	256.95	252.84	256.20	256.20	255.63	256.24	255.00	255.19	256.19	263.42	268.67	269.22	263.41	264.23	263.15
18.00°	243.56	240.38	237.86	237.50	238.31	238.12	239.19	238.36	237.41	237.47	236.92	243.41	253.24	249.55	241.12	244.44	243.56
18.50°	227.05	226.98	223.44	222.40	224.13	225.44	223.98	224.01	220.44	220.83	220.73	228.65	236.32	232.36	227.35	226.64	227.05
19.00°	213.02	211.35	207.76	207.27	209.33	212.43	211.39	211.15	208.76	209.43	206.41	214.02	220.29	215.80	213.15	212.84	213.02
19.50°	201.53	200.32	200.13	195.02	200.06	199.73	200.54	200.68	199.43	197.20	196.71	200.23	205.85	201.23	201.57	199.96	201.53
20.00°	189.90	189.58	190.05	185.52	188.53	189.30	190.00	189.62	188.68	185.95	186.93	188.99	194.22	192.82	191.26	189.77	189.90
20.50°	181.13	182.19	179.94	176.96	179.41	181.92	184.22	177.81	180.24	176.01	175.04	180.12	187.41	182.23	181.00	180.52	181.13
21.00°	172.83	172.66	171.12	168.96	172.77	174.15	175.34	172.48	171.95	169.48	168.68	173.46	178.19	172.73	172.14	171.82	172.83

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	798	798	798	798	778	778	778	778	743	743	743	710	710	710	680	680	666
	1	771	757	745	733	755	742	731	721	715	706	698	690	683	677	666	661	657
	2	747	723	703	687	732	711	694	679	690	676	664	670	659	649	651	643	635
	3	724	694	670	652	712	685	663	646	667	650	636	652	637	625	637	625	616
	4	703	669	643	624	693	661	638	620	648	628	613	635	619	605	623	609	598
	5	685	647	621	601	675	641	617	599	630	609	593	619	602	588	610	595	583
	6	667	628	602	583	659	623	598	581	614	593	577	605	587	573	597	581	569
	7	652	611	585	567	644	607	583	565	600	578	562	592	573	559	586	569	556
	8	637	596	571	553	631	593	569	552	587	565	549	581	561	547	575	558	545
	9	624	583	558	541	618	580	556	540	575	553	538	570	550	536	565	547	535
	10	612	571	546	530	607	568	545	530	564	543	528	559	540	527	555	538	525

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	267.4 fc	1.2 ft
6.5 ft	191.4 fc	1.4 ft
7.5 ft	143.8 fc	1.7 ft
8.0 ft	126.4 fc	1.8 ft
10.0 ft	80.9 fc	2.2 ft
12.0 ft	56.2 fc	2.6 ft
14.0 ft	41.3 fc	3.1 ft
16.0 ft	31.6 fc	3.5 ft
20.0 ft	20.2 fc	4.4 ft
24.0 ft	14.0 fc	5.3 ft
28.0 ft	10.3 fc	6.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2513383	2513383	2513383
45.00°	14020	13686	11728
55.00°	6387	6498	6553
65.00°	1764	1890	1720
75.00°	964	971	1169
85.00°	2169	3267	2432

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	8.5	9.4	8.9	9.8	10.1	8.7	9.7	9.1	10.0	10.3
	3H	8.5	9.3	8.9	9.6	10.0	8.7	9.5	9.1	9.9	10.3
	4H	8.5	9.2	8.9	9.6	10.0	8.7	9.4	9.1	9.8	10.2
	6H	8.5	9.2	8.9	9.6	10.0	8.7	9.4	9.1	9.8	10.2
	8H	8.5	9.1	8.9	9.5	10.0	8.7	9.4	9.2	9.8	10.2
	12H	8.5	9.2	9.0	9.6	10.0	8.8	9.4	9.2	9.8	10.3
4H	2H	8.3	9.1	8.7	9.4	9.9	8.5	9.3	9.0	9.7	10.1
	3H	8.3	9.0	8.8	9.4	9.8	8.5	9.2	9.0	9.6	10.0
	4H	8.4	9.0	8.9	9.4	9.9	8.5	9.1	9.0	9.5	10.0
	6H	8.5	9.0	9.0	9.5	10.0	8.7	9.2	9.2	9.6	10.1
	8H	8.6	9.0	9.1	9.5	10.0	8.8	9.2	9.3	9.7	10.2
	12H	8.8	9.1	9.3	9.6	10.1	8.9	9.3	9.5	9.8	10.3
8H	4H	8.3	8.8	8.8	9.2	9.7	8.4	8.9	8.9	9.3	9.8
	6H	8.5	8.9	9.0	9.4	9.9	8.7	9.1	9.2	9.6	10.1
	8H	8.7	9.0	9.3	9.6	10.1	9.0	9.3	9.5	9.8	10.3
	12H	9.1	9.4	9.6	9.9	10.5	9.3	9.5	9.8	10.0	10.6
12H	4H	8.3	8.6	8.8	9.2	9.6	8.4	8.8	8.9	9.3	9.8
	6H	8.5	8.8	9.0	9.3	9.9	8.7	9.0	9.2	9.5	10.1
	8H	8.8	9.0	9.3	9.5	10.1	9.0	9.3	9.5	9.8	10.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0