

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2XS RB2BS xx RA2HL

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

Test Number

SP-01573_1

Test Date

2/19/2024

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	11.8 W
-------------	--------

Lumen Output

Output Lumens	692
Efficacy	58.64 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.2
Two luminaires, plane 90°	0.2
Four luminaires	0.22

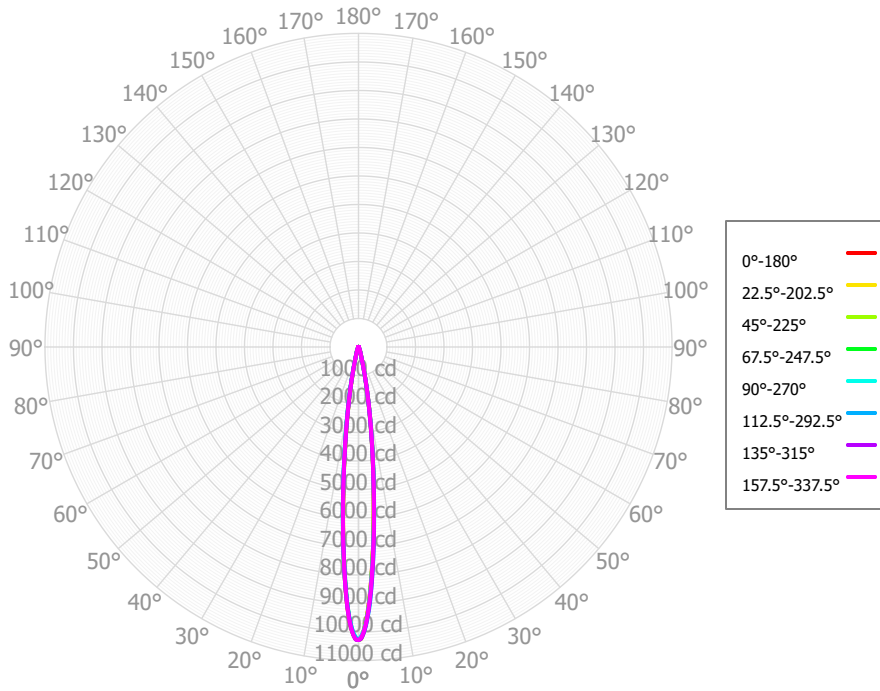
Full Beam Angle

0° - 180°	12°
90° - 270°	12°

IES File Header Contents

Keyword	Value
TEST	SP-01573_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/19/2024
ISSUEDATE	2/19/2024
LUMCAT	STR2 835 10 xx xx RD2XS RB2BS xx RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with extra narrow spot optic, hex louver and standard bezel
OTHER	Beam Angle: 12 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°	451.51	65.25%	90.00° - 100.00°	1.23	0.18%
10.00° - 20.00°	163.63	23.65%	100.00° - 110.00°	1.22	0.18%
20.00° - 30.00°	44.23	6.39%	100.00° - 120.00°	2.38	0.34%
30.00° - 40.00°	16.75	2.42%	120.00° - 130.00°	1.11	0.16%
40.00° - 50.00°	3.61	0.52%	130.00° - 140.00°	0.92	0.13%
50.00° - 60.00°	1.23	0.18%	140.00° - 150.00°	0.78	0.11%
60.00° - 70.00°	1.12	0.16%	150.00° - 160.00°	0.61	0.09%
70.00° - 80.00°	1.18	0.17%	160.00° - 170.00°	0.36	0.05%
80.00° - 90.00°	1.17	0.17%	170.00° - 180.00°	0.11	0.02%
0.00° - 90.00°	684.44	98.92%	0.00° - 180.00°	691.94	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°	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17	10275.17
0.50°	10194.16	10247.71	10216.00	10184.90	10141.70	10208.95	10271.16	10256.38	10241.88	10231.92	10261.87	10231.05	10192.80	10215.72	10239.12	10198.34	10194.16
1.00°	9983.03	10005.39	10032.43	9994.60	9984.49	10070.22	10110.26	10115.87	10104.76	10097.04	10086.75	10104.68	10027.46	10044.38	10055.32	10009.21	9983.03
1.50°	9690.56	9690.72	9730.39	9706.97	9716.79	9783.58	9858.27	9857.35	9871.21	9843.09	9837.74	9845.46	9782.43	9798.34	9770.31	9736.47	9690.56
2.00°	9279.40	9317.18	9332.92	9342.56	9356.20	9444.19	9503.93	9520.59	9525.82	9503.67	9492.16	9471.36	9467.01	9447.32	9401.00	9363.20	9279.40
2.50°	8819.82	8864.40	8873.36	8889.56	8882.22	9021.87	9069.53	9080.22	9098.49	9048.44	9044.08	9029.29	9041.78	9061.55	8968.40	8909.20	8819.82
3.00°	8293.75	8316.54	8369.26	8364.89	8348.38	8471.02	8545.85	8564.04	8586.26	8530.19	8546.15	8520.26	8555.88	8533.10	8502.62	8396.34	8293.75
3.50°	7744.50	7782.19	7815.73	7799.38	7806.59	7903.24	7965.60	7997.66	8003.89	7929.73	7991.01	7984.78	8015.01	7992.14	7952.70	7853.33	7744.50
4.00°	7210.21	7218.52	7239.33	7231.09	7275.36	7352.96	7393.68	7405.98	7400.63	7345.00	7415.77	7439.28	7438.83	7431.59	7399.51	7297.50	7210.21
4.50°	6646.82	6676.04	6669.37	6681.31	6737.09	6800.51	6813.36	6821.52	6806.13	6782.48	6834.68	6844.33	6859.93	6841.23	6796.50	6740.41	6646.82
5.00°	6108.79	6135.81	6127.41	6152.90	6210.72	6252.14	6233.42	6243.07	6227.29	6201.24	6234.62	6274.65	6289.27	6270.57	6218.98	6189.86	6108.79
5.50°	5596.19	5601.89	5588.36	5638.70	5690.29	5712.92	5661.21	5658.54	5651.53	5625.63	5649.70	5698.54	5726.17	5720.44	5639.36	5646.99	5596.19
6.00°	5117.75	5080.61	5088.82	5126.02	5182.38	5181.20	5112.50	5115.07	5114.60	5073.52	5083.04	5125.35	5187.41	5180.10	5116.23	5113.27	5117.75
6.50°	4658.25	4613.49	4593.76	4645.18	4692.33	4675.78	4599.79	4620.15	4623.26	4577.15	4545.62	4598.33	4690.82	4673.58	4617.98	4628.91	4658.25
7.00°	4208.58	4186.35	4142.55	4193.63	4240.73	4196.93	4111.63	4138.31	4157.39	4110.94	4055.05	4122.90	4237.08	4224.65	4145.18	4183.54	4208.58
7.50°	3793.68	3780.36	3729.50	3760.06	3807.66	3755.90	3651.79	3684.65	3706.57	3675.10	3612.32	3694.46	3796.44	3809.31	3743.90	3769.46	3793.68
8.00°	3418.98	3386.24	3332.61	3372.54	3410.72	3349.66	3230.32	3277.83	3288.63	3263.36	3209.33	3282.87	3396.75	3421.64	3335.05	3381.12	3418.98
8.50°	3070.86	3030.66	2956.89	3018.40	3035.94	2966.30	2863.41	2908.98	2920.83	2881.52	2841.78	2921.76	3030.76	3059.98	2978.67	3020.52	3070.86
9.00°	2726.46	2707.39	2622.85	2679.65	2700.62	2621.96	2517.15	2568.75	2575.63	2539.67	2505.67	2583.73	2698.28	2726.04	2646.79	2683.44	2726.46
9.50°	2409.80	2398.86	2319.43	2373.19	2385.79	2310.18	2227.05	2253.07	2253.17	2220.91	2190.57	2272.96	2375.33	2415.66	2342.14	2375.52	2409.80
10.00°	2123.29	2114.83	2037.87	2087.00	2087.89	2031.44	1953.18	1964.86	1963.82	1921.09	1906.86	1990.66	2073.83	2128.48	2060.05	2091.44	2123.29
10.50°	1859.85	1856.00	1779.78	1818.14	1818.63	1767.70	1696.67	1705.94	1697.69	1662.83	1649.65	1728.51	1805.44	1857.48	1802.71	1840.03	1859.85
11.00°	1615.20	1612.66	1545.10	1581.06	1571.89	1538.16	1468.61	1476.10	1462.20	1431.61	1423.82	1495.43	1564.56	1611.49	1567.23	1597.56	1615.20
11.50°	1396.54	1394.12	1338.96	1372.32	1355.95	1330.82	1266.06	1272.04	1247.38	1225.07	1217.10	1283.43	1346.68	1387.21	1353.47	1382.25	1396.54
12.00°	1201.77	1199.02	1152.85	1180.58	1164.02	1138.38	1087.56	1086.71	1062.20	1038.94	1036.68	1093.20	1151.28	1185.84	1165.17	1192.00	1201.77
12.50°	1029.42	1025.36	991.03	1007.47	990.48	971.67	930.11	920.11	902.08	881.51	875.81	927.75	977.08	1006.46	997.50	1021.90	1029.42
13.00°	876.99	874.58	842.99	857.37	841.09	826.15	792.46	781.14	766.36	749.64	751.45	790.68	826.49	856.07	855.49	867.65	876.99
13.50°	744.85	746.37	718.22	726.74	713.40	701.86	678.37	669.07	654.23	637.94	637.67	672.05	701.71	729.31	729.24	740.63	744.85
14.00°	634.01	635.67	616.62	619.20	607.95	604.73	582.27	571.08	560.29	543.87	548.81	576.25	598.87	619.38	624.47	632.63	634.01
14.50°	542.17	542.27	530.52	532.75	522.30	519.83	503.86	488.25	483.61	471.59	477.26	500.06	515.85	535.89	540.82	542.86	542.17
15.00°	469.28	469.06	461.87	461.84	450.08	452.68	439.82	426.45	419.10	410.08	416.39	437.43	447.65	464.84	472.83	468.79	469.28
15.50°	407.50	410.88	405.01	401.41	392.13	393.58	385.75	378.34	368.94	361.35	367.65	382.52	392.97	406.48	411.99	407.15	407.50
16.00°	355.86	361.28	351.88	349.99	344.46	345.38	342.69	332.95	325.51	320.98	327.50	342.57	348.85	357.95	364.32	361.62	355.86
16.50°	317.72	320.65	317.53	313.71	306.38	307.64	305.93	297.12	289.78	287.73	295.43	304.31	313.88	324.94	328.48	322.88	317.72
17.00°	289.41	287.20	284.70	283.22	279.02	276.06	275.36	272.00	264.38	262.03	267.74	281.67	286.74	291.69	297.93	292.20	289.41
17.50°	262.10	265.33	262.00	256.26	252.62	250.87	252.86	247.58	243.85	240.97	246.93	257.07	261.77	268.14	270.68	265.68	262.10
18.00°	235.92	237.79	237.35	232.51	230.02	230.19	232.79	226.22	220.44	220.90	227.04	238.18	239.89	243.21	249.06	241.68	235.92
18.50°	218.77	217.16	219.44	213.95	208.63	214.54	212.99	214.07	206.35	202.63	208.52	221.82	221.95	225.44	226.70	219.66	218.77
19.00°	201.84	201.55	203.48	198.92	197.21	199.63	198.21	195.34	190.11	186.98	194.48	204.56	206.06	208.21	208.93	202.70	201.84
19.50°	188.35	186.65	190.50	184.87	183.17	184.88	185.30	180.15	177.37	176.75	182.99	187.67	193.12	191.25	197.64	189.66	188.35
20.00°	174.62	174.81	176.19	171.84	171.16	171.35	173.49	171.13	167.56	167.02	173.05	177.33	182.29	181.95	180.74	178.96	174.62
20.50°	164.05	164.44	165.00	161.47	158.07	162.04	165.09	162.13	158.76	154.13	160.02	167.67	171.59	170.18	169.42	169.20	164.05
21.00°	154.92	154.82	153.86	151.09	152.32	154.14	156.03	153.39	143.95	143.82	148.44	157.84	161.34	159.40	160.20	159.56	154.92

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	822	822	822	822	802	802	802	802	765	765	765	731	731	731	699	699	684
	1	798	785	774	764	781	770	760	751	741	734	727	715	709	704	691	687	673
	2	778	756	739	724	763	744	729	715	722	710	699	701	692	683	682	675	668
	3	759	732	711	695	747	723	704	689	705	690	677	689	677	666	674	664	656
	4	742	712	689	672	732	704	684	668	690	673	660	677	663	652	665	654	644
	5	727	694	671	654	718	688	667	651	677	659	645	666	651	639	656	644	634
	6	713	679	656	639	705	674	653	637	665	646	633	656	640	628	648	635	624
	7	700	665	643	627	693	661	640	625	654	635	622	647	631	619	640	626	615
	8	689	653	631	616	682	650	629	615	644	625	612	638	621	610	632	618	607
	9	678	642	621	606	672	640	619	605	634	616	603	629	613	601	624	610	599
	10	668	633	612	598	663	630	610	597	626	608	595	621	605	594	617	603	592

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	339.7 fc	1.2 ft
6.5 ft	243.2 fc	1.4 ft
7.5 ft	182.7 fc	1.6 ft
8.0 ft	160.5 fc	1.7 ft
10.0 ft	102.8 fc	2.1 ft
12.0 ft	71.4 fc	2.5 ft
14.0 ft	52.4 fc	2.9 ft
16.0 ft	40.1 fc	3.4 ft
20.0 ft	25.7 fc	4.2 ft
24.0 ft	17.8 fc	5.0 ft
28.0 ft	13.1 fc	5.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3193233	3193233	3193233
45.00°	2532	1206	1502
55.00°	665	763	763
65.00°	1109	926	967
75.00°	1306	1012	1452
85.00°	5309	3196	3643

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	-4.0	-3.2	-3.7	-2.8	-2.5	-3.9	-3.0	-3.5	-2.6	-2.3
	3H	-1.3	-0.5	-0.9	-0.2	0.2	-1.3	-0.6	-0.9	-0.2	0.2
	4H	0.3	1.0	0.7	1.4	1.8	0.4	1.1	0.8	1.5	1.9
	6H	1.9	2.5	2.3	2.9	3.4	2.4	3.1	2.8	3.5	3.9
	8H	3.3	3.9	3.7	4.3	4.8	3.3	3.9	3.7	4.3	4.7
	12H	5.3	5.9	5.8	6.3	6.7	4.2	4.8	4.7	5.2	5.7
4H	2H	-3.4	-2.7	-2.9	-2.3	-1.9	-3.5	-2.8	-3.1	-2.4	-2.0
	3H	-0.2	0.4	0.2	0.8	1.3	-0.6	0.0	-0.2	0.4	0.9
	4H	1.6	2.1	2.0	2.5	3.0	1.3	1.8	1.7	2.2	2.7
	6H	3.3	3.8	3.8	4.3	4.8	3.5	4.0	4.0	4.5	5.0
	8H	4.8	5.2	5.3	5.7	6.2	4.6	5.0	5.1	5.5	6.0
	12H	6.8	7.2	7.3	7.7	8.2	5.7	6.1	6.2	6.6	7.1
8H	4H	2.3	2.7	2.8	3.2	3.7	1.8	2.2	2.3	2.7	3.2
	6H	4.4	4.7	4.9	5.2	5.7	4.4	4.8	5.0	5.3	5.8
	8H	5.8	6.1	6.4	6.7	7.2	5.8	6.1	6.3	6.6	7.1
	12H	7.9	8.2	8.5	8.7	9.3	7.1	7.4	7.7	7.9	8.5
12H	4H	2.6	3.0	3.1	3.5	4.0	2.0	2.4	2.5	2.9	3.4
	6H	4.8	5.0	5.3	5.5	6.1	4.8	5.1	5.3	5.5	6.1
	8H	6.3	6.5	6.8	7.0	7.7	6.3	6.5	6.8	7.0	7.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0