

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2XS RB2BS xx xx

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

Test Number

SP-01569_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
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Lumen Output

Output Lumens	915
Efficacy	77.53 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

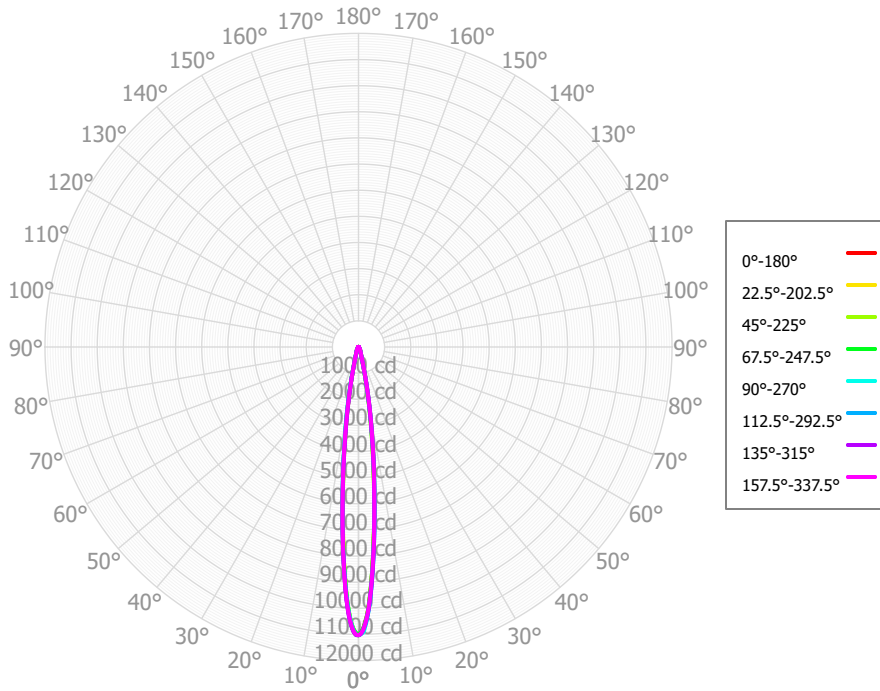
Full Beam Angle

0° - 180°	13°
90° - 270°	13°

IES File Header Contents

Keyword	Value
TEST	SP-01569_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 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°	510.96	55.85%	90.00° - 100.00°	1.22	0.13%
10.00° - 20.00°	211.58	23.13%	100.00° - 110.00°	1.11	0.12%
20.00° - 30.00°	77.51	8.47%	100.00° - 120.00°	2.19	0.24%
30.00° - 40.00°	53.97	5.90%	120.00° - 130.00°	1.00	0.11%
40.00° - 50.00°	32.86	3.59%	130.00° - 140.00°	0.84	0.09%
50.00° - 60.00°	15.10	1.65%	140.00° - 150.00°	0.77	0.08%
60.00° - 70.00°	3.58	0.39%	150.00° - 160.00°	0.56	0.06%
70.00° - 80.00°	1.27	0.14%	160.00° - 170.00°	0.34	0.04%
80.00° - 90.00°	1.07	0.12%	170.00° - 180.00°	0.10	0.01%
0.00° - 90.00°	907.89	99.23%	0.00° - 180.00°	914.91	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°	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48	11028.48
0.50°	10953.31	10939.80	10943.83	10901.50	10982.26	10996.19	11023.22	10995.38	11012.96	11001.19	10959.56	10942.55	11011.84	10981.15	10976.12	10959.66	10943.83
1.00°	10755.48	10814.71	10787.51	10756.36	10917.00	10884.47	10889.66	10875.85	10884.42	10843.38	10801.83	10800.01	10846.62	10814.90	10802.79	10798.85	10787.51
1.50°	10494.76	10541.26	10535.11	10494.77	10622.40	10671.50	10638.75	10652.62	10649.58	10602.45	10572.98	10558.32	10575.88	10591.54	10542.04	10526.50	10494.76
2.00°	10145.23	10169.08	10167.17	10141.54	10262.90	10306.15	10341.94	10294.38	10293.39	10243.66	10202.42	10197.77	10238.35	10226.89	10215.37	10175.10	10145.23
2.50°	9698.34	9710.95	9704.83	9658.35	9806.64	9867.77	9901.65	9889.57	9856.24	9800.58	9775.12	9757.79	9810.64	9821.68	9782.50	9718.10	9698.34
3.00°	9173.34	9190.21	9151.88	9125.40	9271.15	9358.45	9376.18	9372.08	9330.07	9255.50	9255.92	9250.93	9300.57	9303.66	9271.94	9206.08	9173.34
3.50°	8593.64	8627.20	8579.07	8566.51	8707.09	8759.90	8791.11	8825.19	8765.39	8671.75	8676.09	8689.52	8742.58	8739.50	8728.10	8636.82	8593.64
4.00°	8006.92	8019.41	8006.77	7960.72	8092.94	8171.92	8178.51	8193.99	8168.88	8066.60	8087.87	8109.36	8160.60	8154.59	8137.27	8057.16	8006.92
4.50°	7426.40	7430.36	7421.75	7383.78	7511.94	7569.62	7581.62	7577.57	7541.36	7455.84	7450.62	7511.25	7569.79	7565.05	7555.00	7475.54	7426.40
5.00°	6875.91	6862.36	6835.54	6830.60	6968.36	6987.58	6987.46	6966.07	6928.34	6843.16	6850.29	6908.61	6972.85	6963.52	6958.25	6895.91	6875.91
5.50°	6325.32	6272.34	6251.16	6284.53	6407.04	6415.67	6370.91	6382.20	6359.22	6275.62	6255.80	6308.07	6390.32	6385.18	6361.21	6319.75	6325.32
6.00°	5792.93	5745.89	5700.75	5741.72	5872.79	5861.72	5798.13	5815.06	5828.99	5745.91	5695.91	5736.18	5860.16	5842.00	5791.71	5791.91	5792.93
6.50°	5313.60	5237.79	5181.60	5235.54	5351.69	5323.67	5241.49	5285.36	5269.65	5242.80	5183.57	5228.71	5355.28	5342.45	5277.97	5303.04	5313.60
7.00°	4863.35	4762.05	4683.45	4737.27	4864.23	4834.95	4714.37	4792.33	4815.36	4756.60	4689.75	4758.09	4883.21	4883.52	4811.46	4839.24	4863.35
7.50°	4438.12	4315.16	4220.94	4287.51	4400.58	4364.42	4238.73	4327.99	4350.27	4304.16	4249.56	4324.98	4437.65	4432.58	4364.23	4401.42	4438.12
8.00°	4019.05	3898.06	3785.79	3866.86	3958.48	3902.00	3782.35	3889.78	3915.97	3879.30	3822.37	3896.45	4014.44	4009.21	3935.79	3985.75	4019.05
8.50°	3609.35	3513.05	3382.65	3471.70	3546.19	3490.44	3372.50	3476.43	3508.17	3479.06	3419.43	3518.82	3616.97	3620.83	3540.99	3591.06	3609.35
9.00°	3248.52	3142.05	3020.80	3110.22	3170.66	3111.39	2999.48	3087.75	3135.98	3099.87	3057.14	3138.33	3252.39	3262.86	3167.86	3211.94	3248.52
9.50°	2897.65	2798.98	2683.75	2763.27	2817.62	2763.53	2654.25	2746.38	2781.33	2748.44	2706.82	2802.64	2913.02	2930.59	2831.44	2873.98	2897.65
10.00°	2568.46	2476.48	2351.70	2438.68	2485.11	2439.36	2344.38	2415.13	2444.01	2421.91	2387.62	2481.62	2588.66	2611.42	2507.91	2556.59	2568.46
10.50°	2257.12	2174.23	2063.95	2145.17	2177.43	2142.72	2065.77	2115.32	2143.03	2126.14	2099.55	2190.74	2289.04	2312.25	2206.45	2254.29	2257.12
11.00°	1979.99	1905.60	1804.92	1860.94	1893.13	1874.96	1810.64	1852.90	1866.89	1857.17	1836.67	1928.48	2006.70	2033.03	1936.73	1978.64	1979.99
11.50°	1720.07	1655.25	1570.52	1619.15	1640.24	1628.62	1572.96	1609.89	1617.31	1612.95	1601.59	1678.46	1753.59	1771.25	1691.31	1720.63	1720.07
12.00°	1495.84	1431.75	1357.70	1393.87	1415.69	1399.79	1358.15	1387.52	1397.00	1395.68	1384.43	1455.47	1512.67	1533.31	1464.99	1484.47	1495.84
12.50°	1278.28	1231.98	1172.20	1195.31	1212.64	1199.08	1168.14	1190.81	1199.88	1197.66	1192.30	1255.26	1305.09	1324.72	1262.43	1273.46	1278.28
13.00°	1102.23	1057.45	1005.55	1022.37	1037.38	1025.00	1004.21	1022.78	1029.47	1024.81	1027.13	1078.51	1111.73	1137.81	1087.36	1097.17	1102.23
13.50°	943.75	906.80	864.75	872.36	886.35	878.52	863.50	879.36	883.33	876.10	881.95	925.88	953.76	968.55	931.89	935.38	943.75
14.00°	808.18	780.79	746.19	753.55	763.86	755.63	744.87	755.73	757.98	754.31	758.70	796.94	824.41	828.50	801.19	803.26	808.18
14.50°	697.11	677.68	652.51	653.65	662.88	653.89	648.95	657.57	658.91	657.42	658.93	687.90	706.95	719.05	693.88	692.52	697.11
15.00°	607.05	591.96	570.03	572.60	581.54	577.22	572.61	579.32	580.00	573.70	578.80	599.83	619.94	623.51	605.14	604.17	607.05
15.50°	533.99	523.23	507.92	504.68	512.20	510.99	508.07	512.71	514.09	512.15	512.25	530.96	548.32	544.27	533.94	533.51	533.99
16.00°	479.90	467.60	457.70	453.03	458.00	456.58	453.90	461.06	459.74	458.36	457.88	476.13	489.16	488.46	477.03	478.75	479.90
16.50°	432.05	424.55	412.61	409.52	414.34	416.39	412.34	416.57	417.38	417.37	414.75	429.33	439.94	438.34	430.41	428.07	432.05
17.00°	390.38	384.98	377.09	375.46	380.86	378.51	376.64	380.28	379.38	377.23	378.39	390.22	400.05	398.64	391.36	389.93	390.38
17.50°	358.84	357.32	350.38	344.78	349.36	349.37	348.59	349.42	347.73	347.98	349.34	359.21	366.37	367.12	359.20	360.31	358.84
18.00°	332.13	327.80	324.35	323.87	324.96	324.70	326.17	325.04	323.73	323.83	323.08	331.92	345.33	340.30	328.81	333.32	332.13
18.50°	309.62	309.52	304.69	303.27	305.63	307.42	305.43	305.47	300.60	301.13	300.99	311.80	322.25	316.86	310.02	309.06	309.62
19.00°	290.49	288.20	283.30	282.64	285.45	289.67	288.26	287.94	284.67	285.59	281.47	291.85	300.40	294.28	290.66	290.24	290.49
19.50°	274.81	273.16	272.90	265.93	272.81	272.36	273.47	273.65	271.95	268.91	268.24	273.05	280.71	274.41	274.87	272.67	274.81
20.00°	258.96	258.52	259.16	252.98	257.08	258.14	259.09	258.57	257.29	253.57	254.91	257.71	264.85	262.94	260.81	258.78	258.96
20.50°	246.99	248.44	245.37	241.30	244.64	248.08	251.22	242.46	245.78	240.02	238.69	245.61	255.56	248.49	246.81	246.16	246.99
21.00°	235.68	235.45	233.35	230.40	235.59	237.48	239.10	235.19	234.47	231.11	230.02	236.53	242.99	235.54	234.73	234.30	235.68

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	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	1088	1088	1088	1088	1061	1061	1061	1061	1013	1013	1013	968	968	968	927	927	908
	1	1052	1033	1016	1000	1029	1012	997	984	975	963	952	940	931	923	908	902	884
	2	1018	986	959	937	999	970	946	926	941	922	905	913	898	885	888	876	859
	3	987	946	914	889	971	934	905	881	910	886	867	889	869	853	868	853	837
	4	959	912	877	851	945	902	870	846	883	856	835	866	843	825	849	831	816
	5	934	882	846	820	921	874	841	816	859	831	809	845	821	802	831	811	797
	6	910	856	820	794	899	850	816	792	837	808	786	825	800	781	815	793	780
	7	889	833	798	773	879	828	794	771	818	788	767	808	782	763	799	776	764
	8	869	813	778	754	860	809	775	752	800	770	749	792	765	746	784	761	749
	9	851	795	761	738	843	791	759	736	784	754	734	777	750	732	770	747	736
	10	834	778	745	723	827	775	743	722	769	740	720	763	737	718	757	734	723

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	364.6 fc	1.2 ft
6.5 ft	261.0 fc	1.4 ft
7.5 ft	196.1 fc	1.7 ft
8.0 ft	172.3 fc	1.8 ft
10.0 ft	110.3 fc	2.2 ft
12.0 ft	76.6 fc	2.6 ft
14.0 ft	56.3 fc	3.1 ft
16.0 ft	43.1 fc	3.5 ft
20.0 ft	27.6 fc	4.4 ft
24.0 ft	19.1 fc	5.3 ft
28.0 ft	14.1 fc	6.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3427340	3427340	3427340
45.00°	19118	18663	15993
55.00°	8709	8862	8936
65.00°	2405	2577	2345
75.00°	1315	1324	1594
85.00°	2958	4455	3316

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	9.5	10.5	9.9	10.8	11.2	9.8	10.7	10.2	11.1	11.4
	3H	9.5	10.4	9.9	10.7	11.1	9.8	10.6	10.2	10.9	11.3
	4H	9.5	10.3	10.0	10.7	11.1	9.7	10.5	10.2	10.9	11.3
	6H	9.5	10.2	10.0	10.6	11.0	9.8	10.5	10.2	10.9	11.3
	8H	9.5	10.2	10.0	10.6	11.0	9.8	10.5	10.2	10.9	11.3
	12H	9.6	10.2	10.1	10.6	11.1	9.9	10.5	10.3	10.9	11.3
4H	2H	9.4	10.2	9.8	10.5	10.9	9.6	10.4	10.0	10.8	11.2
	3H	9.4	10.1	9.9	10.5	10.9	9.6	10.2	10.0	10.7	11.1
	4H	9.5	10.1	10.0	10.5	11.0	9.6	10.2	10.1	10.6	11.1
	6H	9.6	10.1	10.1	10.5	11.0	9.8	10.2	10.2	10.7	11.2
	8H	9.7	10.1	10.2	10.6	11.1	9.9	10.3	10.4	10.8	11.3
	12H	9.8	10.2	10.3	10.7	11.2	10.0	10.4	10.5	10.9	11.4
8H	4H	9.4	9.8	9.9	10.3	10.8	9.5	10.0	10.0	10.4	10.9
	6H	9.6	9.9	10.1	10.5	11.0	9.8	10.1	10.3	10.7	11.2
	8H	9.8	10.1	10.3	10.6	11.1	10.0	10.4	10.6	10.9	11.4
	12H	10.2	10.4	10.7	11.0	11.6	10.3	10.6	10.9	11.1	11.7
12H	4H	9.3	9.7	9.8	10.2	10.7	9.5	9.8	10.0	10.3	10.8
	6H	9.6	9.9	10.1	10.4	10.9	9.8	10.1	10.3	10.6	11.1
	8H	9.8	10.1	10.4	10.6	11.2	10.1	10.4	10.6	10.9	11.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0