

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2XS RB2BSA1 xx xx

2" Adjustable Track Luminaire with extra narrow spot optic, acrylic .5" bezel

Test Number

SP-01585

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	643
Efficacy	93.24 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

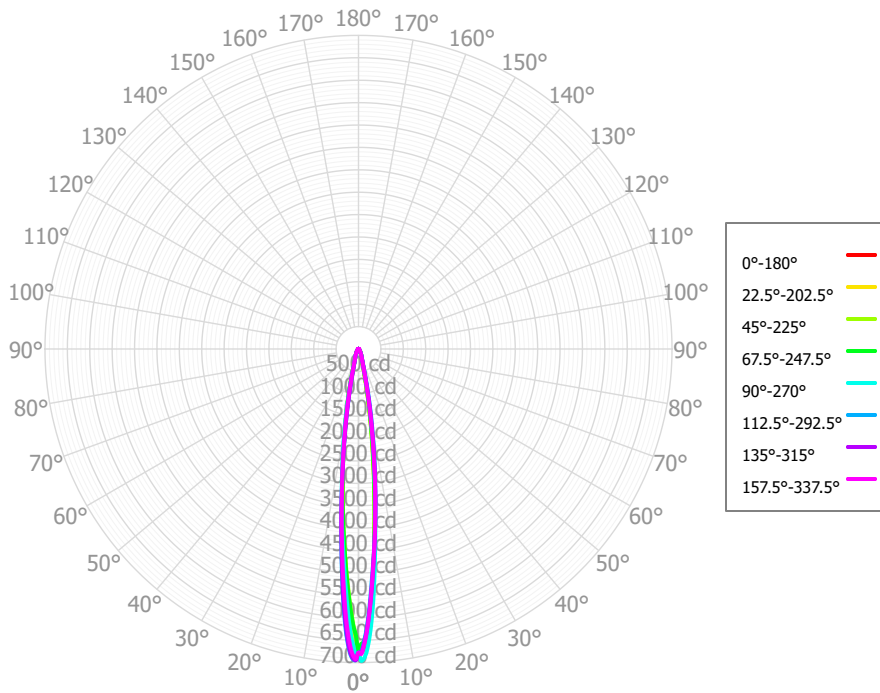
Full Beam Angle

0° - 180°	12°
90° - 270°	12°

IES File Header Contents

Keyword	Value
TEST	SP-01585
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 RB2BSA1 xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra narrow spot optic, acrylic .5" 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°	312.36	48.55%	90.00° - 100.00°	1.88	0.29%
10.00° - 20.00°	153.11	23.80%	100.00° - 110.00°	1.87	0.29%
20.00° - 30.00°	64.78	10.07%	100.00° - 120.00°	3.48	0.54%
30.00° - 40.00°	39.76	6.18%	120.00° - 130.00°	1.26	0.20%
40.00° - 50.00°	26.65	4.14%	130.00° - 140.00°	0.86	0.13%
50.00° - 60.00°	18.57	2.89%	140.00° - 150.00°	0.68	0.11%
60.00° - 70.00°	11.02	1.71%	150.00° - 160.00°	0.55	0.09%
70.00° - 80.00°	5.34	0.83%	160.00° - 170.00°	0.32	0.05%
80.00° - 90.00°	2.63	0.41%	170.00° - 180.00°	0.10	0.02%
0.00° - 90.00°	634.22	98.58%	0.00° - 180.00°	643.35	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°	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30	6781.30
0.50°	6782.47	6698.61	6606.90	6590.18	6964.64	6950.10	6949.86	6924.01	6803.71	6568.57	6425.95	6400.05	6828.11	6762.88	6788.51	6815.02	6782.47
1.00°	6669.77	6638.12	6572.93	6545.91	6915.11	6934.47	6916.87	6850.22	6646.45	6376.42	6201.73	6216.07	6628.26	6562.80	6620.72	6648.05	6669.77
1.50°	6462.50	6482.44	6449.31	6423.62	6780.20	6828.21	6798.75	6676.10	6438.78	6114.07	5920.94	5965.03	6388.62	6335.15	6392.76	6417.33	6462.50
2.00°	6182.68	6244.83	6239.02	6225.25	6545.14	6621.73	6582.22	6418.27	6119.05	5801.74	5633.57	5674.02	6083.76	6045.55	6108.27	6130.46	6182.68
2.50°	5879.60	5944.11	5975.01	5954.57	6251.23	6344.08	6271.12	6114.27	5775.47	5462.73	5325.64	5376.79	5737.61	5723.24	5798.82	5801.49	5879.60
3.00°	5524.10	5611.57	5649.32	5631.62	5898.54	5992.37	5919.71	5744.99	5414.97	5140.65	5038.03	5080.21	5383.68	5367.34	5471.14	5449.33	5524.10
3.50°	5164.65	5234.06	5271.81	5252.09	5516.57	5605.96	5548.18	5356.97	5060.47	4812.73	4741.63	4775.53	5037.26	5039.46	5139.08	5099.23	5164.65
4.00°	4795.16	4845.82	4877.45	4866.48	5094.59	5190.62	5141.35	4983.57	4728.11	4516.43	4454.80	4475.24	4728.17	4742.18	4805.78	4777.76	4795.16
4.50°	4448.95	4480.44	4493.88	4473.98	4676.21	4790.96	4734.68	4617.75	4397.01	4250.35	4188.15	4185.03	4429.07	4454.38	4501.31	4470.38	4448.95
5.00°	4124.41	4117.75	4120.83	4108.93	4293.64	4383.87	4350.05	4255.48	4093.13	3962.28	3905.24	3918.64	4140.68	4163.85	4196.06	4176.06	4124.41
5.50°	3816.92	3768.97	3759.66	3768.37	3929.50	4002.67	3982.83	3933.38	3799.06	3697.39	3639.85	3663.91	3865.48	3877.69	3893.02	3879.51	3816.92
6.00°	3518.95	3439.03	3409.45	3434.77	3592.79	3642.68	3631.73	3603.84	3509.75	3424.61	3376.91	3408.88	3582.36	3606.63	3604.53	3587.02	3518.95
6.50°	3230.01	3113.04	3076.29	3129.55	3281.92	3310.15	3300.39	3283.16	3240.40	3152.42	3129.85	3159.84	3316.23	3332.04	3326.77	3305.05	3230.01
7.00°	2946.05	2824.31	2769.05	2839.56	2985.74	2996.05	2992.30	2997.53	2970.76	2904.27	2888.02	2898.86	3057.11	3065.31	3053.77	3015.60	2946.05
7.50°	2680.49	2541.70	2489.39	2564.15	2712.72	2701.14	2699.22	2736.77	2724.68	2703.50	2662.28	2662.45	2817.79	2815.02	2783.78	2743.93	2680.49
8.00°	2417.06	2276.69	2234.35	2312.17	2452.64	2442.57	2431.84	2473.80	2494.40	2460.74	2445.46	2445.55	2599.34	2576.77	2522.93	2488.56	2417.06
8.50°	2167.52	2035.72	2001.68	2076.71	2206.66	2201.72	2187.29	2235.08	2271.94	2251.47	2240.62	2234.66	2373.51	2347.52	2280.60	2244.96	2167.52
9.00°	1940.10	1817.41	1782.17	1860.76	1979.65	1971.41	1958.84	2013.16	2060.77	2043.17	2044.45	2037.71	2168.90	2135.31	2050.10	2006.49	1940.10
9.50°	1720.52	1609.25	1576.38	1665.17	1766.70	1760.92	1752.69	1812.65	1860.04	1858.65	1858.47	1835.74	1964.92	1931.38	1841.07	1791.70	1720.52
10.00°	1517.45	1416.91	1383.95	1476.77	1568.81	1566.56	1564.19	1618.60	1675.04	1677.79	1679.71	1663.53	1771.46	1739.23	1647.92	1590.30	1517.45
10.50°	1331.97	1248.07	1213.20	1299.97	1387.04	1382.04	1384.03	1440.01	1499.44	1504.19	1513.30	1505.19	1588.66	1564.92	1464.58	1403.80	1331.97
11.00°	1168.40	1090.90	1057.60	1138.93	1221.46	1209.39	1219.50	1280.24	1336.99	1348.54	1358.63	1351.27	1423.04	1390.91	1293.05	1228.68	1168.40
11.50°	1018.57	950.34	917.69	993.10	1070.53	1061.38	1069.90	1133.63	1187.61	1208.80	1218.77	1206.27	1259.92	1231.31	1133.70	1075.82	1018.57
12.00°	887.82	828.98	798.51	865.01	935.00	919.55	936.23	995.83	1048.94	1071.18	1083.70	1068.98	1109.56	1088.65	991.77	934.98	887.82
12.50°	772.46	722.81	697.28	754.25	815.63	796.76	817.29	873.47	922.42	946.04	958.97	941.12	974.07	949.87	867.79	809.34	772.46
13.00°	671.40	633.51	608.32	657.51	711.43	695.87	713.61	766.53	811.34	832.57	844.77	822.28	849.59	832.95	757.83	704.33	671.40
13.50°	588.25	559.70	537.73	574.87	622.21	605.74	624.70	672.39	708.86	731.77	741.40	718.57	741.37	724.77	662.00	615.78	588.25
14.00°	517.43	495.47	476.83	507.61	549.35	534.82	553.83	590.85	620.50	639.77	650.45	630.48	649.05	636.58	581.23	542.11	517.43
14.50°	461.05	443.01	428.21	452.29	487.58	472.85	489.34	522.51	548.49	560.25	571.86	554.70	568.90	561.54	515.33	481.24	461.05
15.00°	413.24	401.85	389.00	407.85	438.60	425.44	439.47	464.03	486.87	496.29	503.51	492.48	503.29	496.59	457.37	430.50	413.24
15.50°	377.50	366.61	357.19	372.87	395.86	383.85	395.83	417.85	431.45	443.51	450.07	440.00	448.81	445.01	410.44	387.89	377.50
16.00°	346.51	336.45	329.43	343.77	365.03	351.16	360.38	379.62	387.82	398.67	402.93	396.15	403.33	400.75	372.73	353.92	346.51
16.50°	316.85	311.81	306.37	318.12	337.07	325.96	331.48	345.39	353.81	360.67	367.27	360.38	367.04	363.45	343.36	325.63	316.85
17.00°	293.97	290.40	285.87	295.88	310.52	302.75	306.47	316.12	324.58	330.96	334.29	329.76	336.22	334.49	314.85	300.15	293.97
17.50°	275.05	271.57	267.64	275.16	288.82	282.36	285.75	292.51	300.39	303.24	309.91	304.12	309.42	309.86	294.21	280.89	275.05
18.00°	259.05	255.32	250.72	259.65	274.35	264.39	267.11	274.81	280.22	283.58	286.51	282.52	288.44	287.37	275.02	265.31	259.05
18.50°	243.74	239.58	237.44	245.18	257.82	249.49	251.28	259.43	262.57	264.35	269.12	264.72	271.47	267.46	255.88	249.41	243.74
19.00°	232.19	228.72	226.49	233.97	243.80	236.77	238.28	243.91	246.79	249.85	253.31	251.05	258.34	251.23	240.79	235.58	232.19
19.50°	221.70	218.15	215.49	224.92	231.61	226.45	226.56	231.35	235.20	238.53	238.50	235.85	244.77	237.38	229.66	223.55	221.70
20.00°	213.15	207.81	204.96	212.74	220.35	216.22	217.85	219.89	223.20	225.39	225.35	224.76	231.49	226.24	219.18	212.92	213.15
20.50°	204.47	200.47	195.55	201.67	212.80	207.47	207.42	210.74	212.86	215.40	214.03	212.15	216.93	215.82	209.44	202.95	204.47
21.00°	195.19	191.33	189.58	196.30	204.65	197.72	199.03	202.48	204.28	205.16	204.20	201.29	207.36	205.43	199.78	193.87	195.19

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	764	764	764	764	745	745	745	745	710	710	710	678	678	678	648	648	634
	1	734	719	705	692	717	704	692	681	676	667	658	651	644	637	628	622	609
	2	706	680	659	641	692	669	649	633	647	631	618	627	614	604	608	599	586
	3	681	648	622	602	668	639	615	596	621	602	586	605	589	576	590	577	566
	4	658	620	593	571	647	613	587	568	599	577	560	586	568	553	573	558	548
	5	638	597	568	547	628	591	564	544	579	556	539	568	549	534	558	542	532
	6	619	576	548	527	610	571	544	525	562	538	521	553	532	517	544	527	518
	7	602	558	530	510	594	554	527	508	546	523	505	539	518	502	532	513	505
	8	587	542	515	495	580	539	513	494	532	509	492	526	505	490	520	501	493
	9	572	528	501	483	566	525	499	482	519	496	480	514	493	478	509	490	483
	10	559	515	489	472	554	513	488	471	508	485	469	503	483	468	499	480	473

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	224.2 fc	1.2 ft
6.5 ft	160.5 fc	1.4 ft
7.5 ft	120.6 fc	1.6 ft
8.0 ft	106.0 fc	1.7 ft
10.0 ft	67.8 fc	2.1 ft
12.0 ft	47.1 fc	2.5 ft
14.0 ft	34.6 fc	3.0 ft
16.0 ft	26.5 fc	3.4 ft
20.0 ft	17.0 fc	4.2 ft
24.0 ft	11.8 fc	5.1 ft
28.0 ft	8.6 fc	5.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2107437	2107437	2107437
45.00°	14199	14440	15154
55.00°	10629	10705	11573
65.00°	7618	7817	8198
75.00°	5252	6655	5896
85.00°	8691	9458	7957

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	14.3	15.3	14.7	15.7	16.0	14.0	15.0	14.4	15.3	15.7
	3H	15.1	16.0	15.5	16.4	16.8	15.0	15.9	15.4	16.3	16.7
	4H	15.4	16.2	15.8	16.6	17.0	15.4	16.2	15.8	16.6	17.0
	6H	15.6	16.4	16.1	16.8	17.2	15.7	16.5	16.2	16.9	17.3
	8H	15.8	16.5	16.2	16.9	17.3	15.9	16.6	16.3	17.0	17.5
	12H	15.9	16.6	16.4	17.0	17.5	16.0	16.7	16.5	17.1	17.6
4H	2H	14.5	15.3	14.9	15.7	16.1	14.3	15.1	14.7	15.5	15.9
	3H	15.5	16.1	15.9	16.6	17.0	15.5	16.2	16.0	16.7	17.1
	4H	15.8	16.4	16.3	16.9	17.4	16.0	16.6	16.5	17.1	17.5
	6H	16.2	16.7	16.7	17.2	17.7	16.5	17.0	17.0	17.5	18.0
	8H	16.4	16.9	16.9	17.4	17.9	16.7	17.2	17.2	17.6	18.1
	12H	16.7	17.1	17.2	17.6	18.1	16.9	17.3	17.4	17.8	18.4
8H	4H	15.9	16.4	16.4	16.9	17.4	16.2	16.7	16.7	17.1	17.7
	6H	16.4	16.8	17.0	17.3	17.9	16.8	17.2	17.3	17.7	18.2
	8H	16.8	17.1	17.3	17.7	18.2	17.1	17.4	17.6	18.0	18.5
	12H	17.2	17.5	17.8	18.0	18.6	17.5	17.8	18.0	18.3	18.9
12H	4H	15.9	16.3	16.4	16.8	17.3	16.2	16.6	16.7	17.1	17.6
	6H	16.4	16.8	17.0	17.3	17.9	16.8	17.2	17.4	17.7	18.2
	8H	16.8	17.1	17.4	17.7	18.3	17.2	17.5	17.7	18.0	18.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0