

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 13 xx xx RD2XF RB2BD xx RA2HL

2" Adjustable Track Luminaire with extra wide flood optic, hex louver and
snoot/deep cutoff bezel

Test Number

SP-01584_2

Test Date

9/26/2023

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

Summary of Results

Power

Input Watts	14.4 W
-------------	--------

Lumen Output

Output Lumens	810
Efficacy	56.24 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.78
Two luminaires, plane 90°	0.78
Four luminaires	0.7

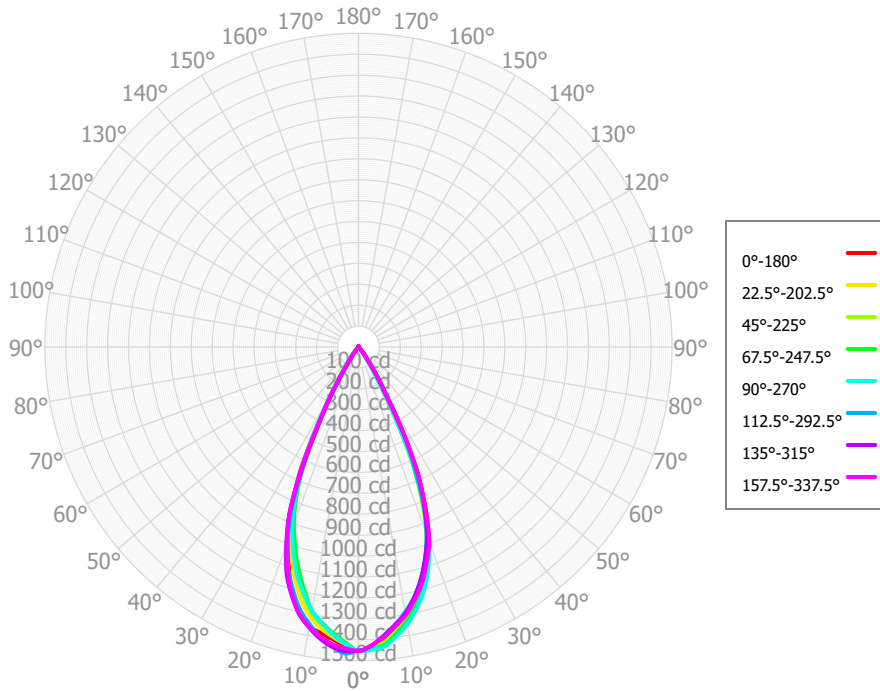
Full Beam Angle

0° - 180°	48°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01584_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 13 xx xx RD2XF RB2BD xx RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, hex louver and snoot/deep cutoff bezel
OTHER	Beam Angle: 48 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
_CRI	80+
_CCTMULT	822 x 0.75, 827 x 0.93, 830 x 1.0, 840 x 1.0
_CCTMULTA	927 x 0.81, 930 x 0.81, 935 x 0.81, 940 x 0.87
_LAMPMULT	07L x .55, 10L x .75

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	133.30	16.46%	90.00° - 100.00°	1.73	0.21%
10.00° - 20.00°	323.34	39.92%	100.00° - 110.00°	1.76	0.22%
20.00° - 30.00°	275.04	33.96%	100.00° - 120.00°	3.39	0.42%
30.00° - 40.00°	55.95	6.91%	120.00° - 130.00°	1.55	0.19%
40.00° - 50.00°	4.80	0.59%	130.00° - 140.00°	1.33	0.16%
50.00° - 60.00°	1.56	0.19%	140.00° - 150.00°	1.14	0.14%
60.00° - 70.00°	1.65	0.20%	150.00° - 160.00°	0.85	0.10%
70.00° - 80.00°	1.78	0.22%	160.00° - 170.00°	0.51	0.06%
80.00° - 90.00°	1.77	0.22%	170.00° - 180.00°	0.18	0.02%
0.00° - 90.00°	799.19	98.68%	0.00° - 180.00°	809.88	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°	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57	1453.57
2.50°	1432.91	1442.79	1440.25	1445.18	1449.92	1467.23	1457.00	1443.53	1431.83	1422.94	1419.09	1416.56	1421.77	1430.52	1430.24	1428.04	1432.91
5.00°	1407.72	1416.56	1422.01	1431.06	1437.74	1435.35	1440.37	1428.10	1404.23	1392.88	1382.00	1376.14	1383.16	1386.46	1386.62	1392.09	1407.72
7.50°	1362.70	1373.88	1371.52	1383.61	1394.50	1400.95	1407.24	1399.03	1380.62	1359.21	1339.95	1332.29	1333.97	1340.77	1341.18	1348.95	1362.70
10.00°	1311.42	1324.96	1318.75	1333.96	1347.37	1346.46	1362.55	1358.89	1357.30	1311.67	1292.19	1282.33	1282.32	1287.15	1294.54	1303.11	1311.42
12.50°	1243.68	1252.05	1248.06	1269.76	1282.11	1289.20	1310.30	1306.73	1292.24	1249.19	1213.89	1194.65	1208.76	1227.82	1228.17	1239.78	1243.68
15.00°	1170.81	1172.74	1171.48	1197.83	1208.67	1207.07	1232.47	1228.57	1223.62	1163.06	1129.67	1105.06	1131.23	1150.54	1152.19	1172.03	1170.81
17.50°	1088.25	1067.46	1068.78	1095.33	1109.38	1117.40	1142.00	1129.17	1107.66	1057.76	1025.46	1008.31	1033.52	1062.69	1059.09	1083.27	1088.25
20.00°	981.63	957.96	951.70	974.95	988.14	991.26	1010.42	1004.16	986.91	933.98	913.21	904.63	928.10	951.59	960.07	991.14	981.63
22.50°	841.40	800.70	792.60	805.20	818.43	840.09	864.43	863.09	834.17	799.04	781.51	783.30	797.76	815.27	822.44	837.41	841.40
25.00°	658.05	639.52	612.73	612.65	620.98	607.65	640.79	655.94	666.07	610.46	622.09	634.05	644.78	637.16	675.61	679.27	658.05
27.50°	428.21	430.39	388.56	375.25	378.84	394.71	398.26	418.50	437.14	397.51	414.22	432.00	440.73	459.27	471.63	460.08	428.21
30.00°	262.28	229.61	215.31	198.20	202.76	225.90	247.17	257.71	243.34	250.44	250.57	267.47	271.85	281.65	259.75	249.63	262.28
32.50°	148.12	149.08	121.64	108.68	108.42	103.37	109.07	122.52	143.14	124.33	144.39	155.38	162.59	158.73	163.90	160.43	148.12
35.00°	82.21	75.29	59.49	51.42	51.55	57.10	66.41	69.05	66.81	70.75	73.42	79.15	84.08	88.03	75.91	79.17	82.21
37.50°	46.31	46.31	35.22	30.24	29.54	26.27	29.40	33.41	37.46	32.81	37.82	41.62	44.37	45.16	44.88	46.92	46.31
40.00°	25.17	21.20	18.87	16.29	15.89	14.96	17.57	19.11	16.71	17.94	17.30	18.90	19.63	22.22	15.91	19.51	25.17
42.50°	10.73	11.39	9.69	8.41	8.25	7.77	6.49	7.40	8.45	5.81	8.15	8.20	9.51	10.72	9.03	11.03	10.73
45.00°	5.31	3.84	4.82	4.38	4.47	4.52	3.97	4.55	3.61	3.93	3.93	3.33	4.21	5.28	3.08	4.48	5.31
47.50°	2.76	2.54	2.89	2.76	2.75	2.66	1.81	2.16	2.59	2.46	2.57	1.97	2.43	2.91	2.44	3.00	2.76
50.00°	2.24	1.62	1.98	2.08	2.16	1.83	1.70	1.92	1.98	2.07	2.13	1.52	1.63	1.76	2.02	1.95	2.24
52.50°	2.16	1.46	1.60	1.84	1.99	1.59	1.60	1.69	1.72	1.72	2.09	1.48	1.36	1.51	2.33	1.71	2.16
55.00°	1.99	1.53	1.51	1.66	2.13	1.67	1.56	1.61	1.52	1.75	1.85	1.52	1.54	1.51	2.36	1.64	1.99
57.50°	1.82	1.95	1.54	1.50	2.36	1.67	1.55	1.54	1.37	1.74	1.57	1.59	1.90	1.69	1.71	1.82	1.82
60.00°	1.82	1.98	1.53	1.59	2.28	1.65	1.65	1.48	1.42	1.52	1.63	1.58	1.84	1.91	1.32	1.82	1.82
62.50°	1.83	1.61	1.52	1.73	2.15	1.82	1.73	1.46	1.57	1.36	1.76	1.56	1.66	1.72	1.42	1.61	1.83
65.00°	1.70	1.41	1.63	1.81	1.95	2.04	1.75	1.61	1.61	1.42	1.75	1.45	1.81	1.51	1.51	1.49	1.70
67.50°	1.61	1.36	1.77	1.88	1.73	1.93	1.75	1.68	1.61	1.56	1.73	1.31	2.01	1.55	1.59	1.41	1.61
70.00°	1.98	1.36	1.78	1.79	1.64	1.76	1.71	1.58	1.64	1.88	1.74	1.55	1.80	1.59	1.68	1.50	1.98
72.50°	2.22	1.40	1.78	1.69	1.55	1.88	1.67	1.43	1.67	1.94	1.74	1.78	1.55	1.82	1.77	1.69	2.22
75.00°	1.82	1.46	1.70	1.55	1.56	2.01	1.61	1.18	1.87	1.58	1.66	1.58	1.58	2.01	1.86	1.69	1.82
77.50°	1.50	1.54	1.63	1.42	1.59	1.96	1.71	1.15	2.10	1.42	1.61	1.43	1.61	1.93	1.93	1.60	1.50
80.00°	1.48	1.55	1.76	1.49	1.76	1.90	1.94	1.41	2.00	1.52	1.76	1.62	1.52	1.90	1.93	1.68	1.48
82.50°	1.57	1.53	1.85	1.55	1.84	1.68	1.79	1.52	1.89	1.47	1.87	1.71	1.43	2.06	1.90	1.81	1.57
85.00°	1.89	1.72	1.66	1.56	1.56	1.49	1.42	1.47	1.74	1.27	1.87	1.33	1.35	2.06	1.81	1.64	1.89
87.50°	2.00	1.94	1.49	1.60	1.36	1.46	1.44	1.53	1.59	1.32	1.83	1.11	1.32	1.62	1.69	1.40	2.00
90.00°	1.76	1.88	1.43	1.68	1.40	1.44	1.64	1.68	1.58	1.54	1.70	1.40	1.47	1.35	1.66	1.37	1.76
92.50°	1.58	1.77	1.46	1.72	1.44	1.41	1.62	1.63	1.58	1.55	1.65	1.62	1.54	1.44	1.66	1.38	1.58
95.00°	1.49	1.77	1.72	1.62	1.48	1.47	1.53	1.47	1.62	1.44	1.79	1.65	1.42	1.51	1.72	1.51	1.49
97.50°	1.51	1.77	1.76	1.57	1.63	1.81	1.50	1.49	1.63	1.39	1.85	1.67	1.34	1.56	1.79	1.64	1.51
100.00°	1.64	1.69	1.39	1.62	1.95	2.00	1.48	1.58	1.57	1.35	1.78	1.67	1.36	1.63	1.86	1.62	1.64
102.50°	1.71	1.61	1.25	1.61	2.09	1.89	1.61	1.57	1.55	1.53	1.76	1.65	1.47	1.73	1.93	1.60	1.71
105.00°	1.72	1.46	1.47	1.51	2.05	1.92	1.75	1.52	1.64	1.76	1.81	1.58	1.71	1.68	1.90	1.51	1.72

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	962	962	962	962	938	938	938	938	894	894	894	854	854	854	817	817	799
	1	922	902	884	867	901	883	867	853	849	836	824	817	807	798	788	780	764
	2	884	849	821	797	866	835	809	787	807	786	768	782	765	750	759	745	730
	3	848	803	768	740	832	791	759	734	769	743	721	748	727	708	729	712	698
	4	813	761	723	693	799	751	716	689	733	703	680	717	691	671	701	680	667
	5	781	723	683	653	768	715	678	650	700	668	643	686	659	637	673	650	638
	6	750	688	647	618	738	682	643	615	669	636	610	658	628	606	647	621	610
	7	721	657	615	586	710	651	612	584	641	606	581	631	600	577	621	594	584
	8	693	627	586	558	683	623	583	556	614	579	554	605	574	551	597	569	560
	9	667	600	559	532	658	596	557	531	588	553	529	581	549	526	574	545	537
	10	642	575	535	508	634	571	533	507	565	530	505	558	526	504	552	523	515

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	48.1 fc	4.9 ft
6.5 ft	34.4 fc	5.8 ft
7.5 ft	25.8 fc	6.7 ft
8.0 ft	22.7 fc	7.1 ft
10.0 ft	14.5 fc	8.9 ft
12.0 ft	10.1 fc	10.7 ft
14.0 ft	7.4 fc	12.5 ft
16.0 ft	5.7 fc	14.2 ft
20.0 ft	3.6 fc	17.8 ft
24.0 ft	2.5 fc	21.4 ft
28.0 ft	1.9 fc	24.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	451730	451730	451730
45.00°	2334	2121	1967
55.00°	1080	819	1157
65.00°	1247	1201	1431
75.00°	2183	2036	1868
85.00°	6737	5904	5545

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	-2.3	-1.4	-1.9	-1.1	-0.7	-2.9	-2.0	-2.5	-1.7	-1.3
	3H	0.5	1.3	0.9	1.6	2.0	0.6	1.4	1.0	1.7	2.2
	4H	2.6	3.3	3.0	3.7	4.1	2.4	3.1	2.8	3.5	3.9
	6H	4.2	4.9	4.7	5.3	5.7	4.3	5.0	4.8	5.4	5.8
	8H	5.3	5.9	5.7	6.3	6.8	5.5	6.1	5.9	6.5	7.0
	12H	6.8	7.4	7.3	7.8	8.3	6.6	7.2	7.0	7.6	8.0
4H	2H	-1.7	-0.9	-1.2	-0.6	-0.1	-1.9	-1.1	-1.4	-0.7	-0.3
	3H	1.5	2.1	2.0	2.6	3.0	1.8	2.4	2.3	2.9	3.3
	4H	3.7	4.2	4.1	4.7	5.1	3.8	4.4	4.3	4.8	5.3
	6H	5.6	6.1	6.1	6.6	7.1	6.0	6.4	6.5	6.9	7.4
	8H	6.8	7.2	7.3	7.7	8.2	7.2	7.6	7.7	8.1	8.6
	12H	8.5	8.8	9.0	9.3	9.9	8.3	8.7	8.9	9.2	9.7
8H	4H	4.5	4.9	5.0	5.4	5.9	4.5	5.0	5.1	5.4	6.0
	6H	6.8	7.1	7.3	7.7	8.2	7.1	7.4	7.6	7.9	8.4
	8H	8.2	8.5	8.7	9.0	9.5	8.4	8.7	9.0	9.3	9.8
	12H	10.0	10.2	10.5	10.8	11.4	9.8	10.0	10.3	10.5	11.1
12H	4H	4.8	5.1	5.3	5.6	6.1	4.7	5.1	5.3	5.6	6.1
	6H	7.2	7.5	7.8	8.0	8.6	7.4	7.7	8.0	8.2	8.8
	8H	8.7	9.0	9.3	9.5	10.1	8.9	9.1	9.4	9.7	10.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0