

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2FL RB2BS xx xx

2" Adjustable Track Luminaire with flood optic and standard bezel

Test Number

SP-01571_1

Test Date

9/26/2023

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	1017
Efficacy	86.18 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.56
Two luminaires, plane 90°	0.55
Four luminaires	0.5

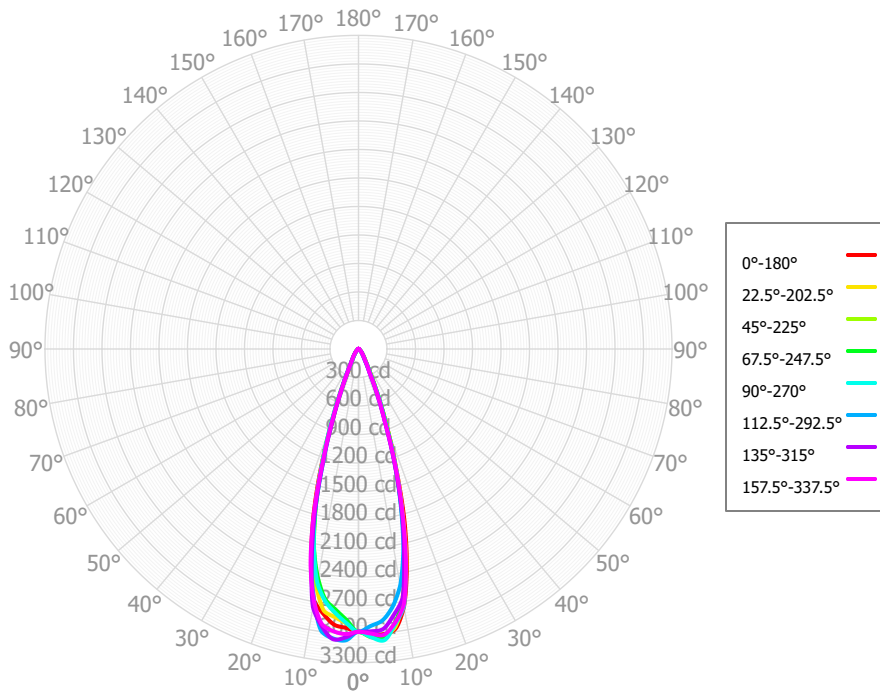
Full Beam Angle

0° - 180°	33°
90° - 270°	32°

IES File Header Contents

Keyword	Value
TEST	SP-01571_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	9/29/2023
LUMCAT	STR2 835 10 xx xx RD2FL RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with flood optic and standard bezel
OTHER	Beam Angle: 33 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°	275.70	27.11%	90.00° - 100.00°	1.09	0.11%
10.00° - 20.00°	467.80	46.00%	100.00° - 110.00°	1.10	0.11%
20.00° - 30.00°	161.23	15.86%	100.00° - 120.00°	2.08	0.20%
30.00° - 40.00°	55.61	5.47%	120.00° - 130.00°	0.93	0.09%
40.00° - 50.00°	29.35	2.89%	130.00° - 140.00°	0.86	0.08%
50.00° - 60.00°	13.86	1.36%	140.00° - 150.00°	0.78	0.08%
60.00° - 70.00°	4.01	0.39%	150.00° - 160.00°	0.60	0.06%
70.00° - 80.00°	1.29	0.13%	160.00° - 170.00°	0.39	0.04%
80.00° - 90.00°	1.14	0.11%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1010.01	99.33%	0.00° - 180.00°	1016.87	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°	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30	2976.30
2.50°	3009.18	3024.20	3036.99	3031.22	3035.74	3069.29	3037.69	3003.48	2939.79	2892.40	2875.04	2856.58	2888.77	2918.85	2975.10	2997.86	3009.18
5.00°	3014.87	3033.90	3044.37	3052.61	3078.60	3058.75	3066.66	2983.83	2914.23	2834.56	2793.60	2754.62	2790.06	2870.04	2960.15	3021.61	3014.87
7.50°	2972.41	2954.80	2928.19	2917.27	2928.17	2995.45	2947.68	2925.38	2814.80	2780.61	2664.41	2661.56	2679.36	2739.81	2827.40	2913.21	2972.41
10.00°	2756.34	2694.81	2670.49	2681.69	2752.44	2693.82	2760.35	2699.68	2687.71	2550.99	2520.56	2452.16	2497.43	2527.92	2666.18	2739.06	2756.34
12.50°	2352.53	2326.37	2232.21	2258.23	2265.31	2292.48	2272.83	2329.49	2298.73	2296.28	2160.74	2163.37	2164.14	2179.73	2214.71	2309.81	2352.53
15.00°	1866.77	1795.10	1768.00	1746.50	1764.12	1770.48	1772.51	1833.30	1841.95	1789.80	1758.37	1747.42	1771.72	1728.60	1755.63	1790.12	1866.77
17.50°	1313.22	1310.06	1278.87	1291.93	1295.42	1213.56	1234.29	1254.31	1321.85	1270.41	1280.61	1267.37	1287.00	1275.91	1256.51	1294.21	1313.22
20.00°	884.61	877.85	880.30	856.70	843.81	823.30	775.83	826.37	791.86	851.49	794.68	861.02	862.88	822.33	803.93	803.92	884.61
22.50°	533.29	557.65	548.19	572.55	560.66	464.20	484.66	471.52	511.60	454.53	516.73	481.67	510.61	519.17	510.09	524.90	533.29
25.00°	335.13	335.37	346.81	322.07	308.24	312.96	274.76	293.55	250.08	300.87	253.52	299.26	285.36	278.31	277.61	275.89	335.13
27.50°	207.50	213.62	216.69	223.60	218.30	182.45	192.09	177.48	187.22	165.48	186.92	165.40	175.33	179.52	192.80	202.44	207.50
30.00°	151.77	157.76	155.83	144.94	142.55	145.19	135.73	133.77	127.22	133.84	125.38	123.80	116.10	122.20	129.85	140.15	151.77
32.50°	119.34	121.68	122.68	116.13	114.45	110.61	110.21	106.91	105.75	104.73	104.75	96.10	91.48	96.27	105.10	113.70	119.34
35.00°	95.07	95.29	98.17	89.88	89.34	90.19	88.66	86.99	84.96	84.57	84.84	79.57	74.09	76.13	84.72	88.08	95.07
37.50°	72.58	76.34	76.04	73.38	71.34	70.70	70.67	68.04	68.35	66.96	68.26	63.78	60.35	64.21	70.03	71.55	72.58
40.00°	61.20	59.98	62.13	57.53	56.40	58.26	57.35	57.08	53.70	55.57	53.61	52.02	49.47	53.08	57.80	56.34	61.20
42.50°	51.16	49.62	49.66	48.37	46.75	46.76	47.18	46.59	46.61	44.97	44.91	40.60	39.64	42.73	48.00	48.51	51.16
45.00°	40.68	40.68	40.52	39.40	37.93	39.39	38.47	38.24	38.87	35.78	36.34	33.27	31.80	32.67	38.02	40.50	40.68
47.50°	30.31	33.11	31.66	31.43	30.18	32.42	30.50	30.15	29.39	28.34	28.07	26.38	24.46	27.89	27.92	31.86	30.31
50.00°	24.74	25.72	25.68	24.41	24.24	26.58	24.74	24.95	22.24	23.27	21.74	22.12	20.62	23.19	23.03	24.33	24.74
52.50°	19.33	21.16	19.86	20.62	20.10	21.10	19.78	19.90	19.51	19.03	18.50	18.10	17.30	19.09	21.09	19.53	19.33
55.00°	15.50	16.75	15.97	16.49	15.98	16.35	15.43	15.69	15.98	15.64	14.76	15.01	13.61	14.99	16.67	15.11	15.50
57.50°	11.76	11.74	12.08	11.58	11.88	12.07	11.23	11.70	11.32	11.85	10.40	11.86	9.89	10.94	11.21	11.34	11.76
60.00°	8.50	7.04	8.22	7.59	8.65	8.49	8.01	8.44	7.79	7.77	7.32	8.59	7.29	7.38	7.86	8.08	8.50
62.50°	5.61	5.60	4.83	5.22	5.92	5.73	4.94	5.58	5.48	5.14	5.43	5.89	4.77	5.27	5.12	5.52	5.61
65.00°	3.92	4.20	3.33	3.42	3.98	3.93	3.59	3.74	3.85	3.37	3.87	4.26	3.30	3.44	3.63	3.60	3.92
67.50°	2.44	3.05	2.10	2.35	2.35	2.65	2.35	2.28	2.77	2.24	2.56	2.92	2.00	2.21	2.38	2.34	2.44
70.00°	1.42	2.03	1.67	1.74	1.57	1.82	1.62	1.50	1.94	1.39	1.81	1.97	1.69	1.33	1.81	1.66	1.42
72.50°	0.84	1.45	1.34	1.59	1.04	1.31	0.96	1.09	1.26	1.14	1.35	1.34	1.42	0.99	1.30	1.43	0.84
75.00°	0.99	1.05	1.25	1.38	1.06	1.01	1.04	1.18	1.21	1.06	1.26	1.05	1.26	0.91	1.11	1.47	0.99
77.50°	0.99	1.06	1.24	1.13	1.18	0.89	1.07	1.11	1.44	1.03	1.29	0.95	1.11	1.12	0.93	1.65	0.99
80.00°	0.80	1.10	1.34	1.07	1.11	0.87	0.84	0.85	1.28	1.00	1.20	1.02	1.01	1.25	0.90	1.49	0.80
82.50°	0.77	1.17	1.32	1.13	1.02	0.88	0.70	0.82	1.00	1.11	1.07	1.00	1.01	1.31	0.88	1.17	0.77
85.00°	0.89	1.29	1.17	1.13	1.03	0.90	0.96	0.96	0.97	1.24	0.95	0.94	1.17	1.21	0.97	1.18	0.89
87.50°	0.92	1.48	1.10	1.11	1.03	0.89	1.09	1.00	1.00	0.98	0.85	1.14	1.13	1.03	1.04	1.29	0.92
90.00°	0.86	1.40	1.12	1.14	0.94	0.88	0.91	1.00	1.04	0.73	1.01	1.47	0.81	0.90	1.05	1.12	0.86
92.50°	0.84	1.05	1.03	1.20	0.89	1.11	0.85	0.91	1.08	0.90	1.19	1.24	0.67	0.80	1.03	0.89	0.84
95.00°	0.83	0.90	0.87	1.16	1.12	1.38	1.00	0.78	1.12	1.06	1.10	0.83	0.73	0.87	0.89	1.16	0.83
97.50°	0.93	0.90	0.94	1.12	1.28	1.16	0.99	0.72	1.17	1.02	1.01	1.03	0.85	1.00	0.83	1.49	0.93
100.00°	1.07	0.90	1.12	1.06	1.17	0.91	0.76	0.68	1.02	0.98	0.93	1.36	1.03	1.16	0.92	1.15	1.07
102.50°	1.17	0.89	1.14	0.99	1.08	1.00	0.82	0.84	0.89	0.88	0.87	1.52	1.06	1.32	1.01	0.81	1.17
105.00°	1.25	0.82	1.10	1.14	1.07	1.07	1.18	1.04	0.95	0.83	0.91	1.66	1.00	1.26	1.11	1.02	1.25

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	1209	1209	1209	1209	1180	1180	1180	1180	1126	1126	1126	1077	1077	1077	1031	1031	1010
	1	1163	1139	1118	1099	1138	1117	1098	1081	1075	1060	1047	1036	1025	1014	1001	992	972
	2	1119	1079	1045	1017	1097	1061	1031	1005	1028	1003	982	997	978	961	969	954	935
	3	1078	1025	985	952	1059	1011	974	944	985	954	929	960	935	914	938	917	899
	4	1039	978	934	900	1022	967	926	894	945	911	883	926	896	873	907	883	866
	5	1003	936	890	855	988	927	884	851	909	872	844	893	861	836	878	850	835
	6	969	898	851	817	956	891	846	814	876	837	808	863	829	803	850	820	806
	7	937	864	817	784	925	858	813	781	845	806	777	834	799	773	823	792	779
	8	907	833	786	754	897	827	783	752	817	777	749	807	772	745	798	766	754
	9	879	804	758	727	870	799	755	725	790	751	723	782	746	720	774	742	731
	10	853	777	732	702	844	773	730	701	766	726	699	759	723	697	752	719	709

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	98.4 fc	3.3 ft
6.5 ft	70.4 fc	3.8 ft
7.5 ft	52.9 fc	4.4 ft
8.0 ft	46.5 fc	4.7 ft
10.0 ft	29.8 fc	5.9 ft
12.0 ft	20.7 fc	7.1 ft
14.0 ft	15.2 fc	8.3 ft
16.0 ft	11.6 fc	9.5 ft
20.0 ft	7.4 fc	11.8 ft
24.0 ft	5.2 fc	14.2 ft
28.0 ft	3.8 fc	16.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	924949	924949	924949
45.00°	17877	17807	16669
55.00°	8399	8651	8657
65.00°	2885	2445	2923
75.00°	1193	1502	1269
85.00°	3186	4155	3660

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	9.3	10.3	9.7	10.6	10.9	9.5	10.4	9.9	10.8	11.1
	3H	9.4	10.2	9.8	10.6	10.9	9.5	10.3	9.9	10.7	11.1
	4H	9.3	10.1	9.8	10.5	10.9	9.5	10.2	9.9	10.6	11.0
	6H	9.3	10.0	9.8	10.4	10.8	9.5	10.2	9.9	10.6	11.0
	8H	9.4	10.0	9.8	10.4	10.8	9.5	10.2	10.0	10.6	11.0
	12H	9.4	10.0	9.9	10.4	10.9	9.6	10.2	10.1	10.6	11.1
4H	2H	9.2	10.0	9.6	10.3	10.7	9.4	10.1	9.8	10.5	10.9
	3H	9.3	9.9	9.7	10.3	10.8	9.4	10.0	9.9	10.5	10.9
	4H	9.3	9.8	9.7	10.3	10.7	9.4	10.0	9.9	10.4	10.9
	6H	9.4	9.9	9.9	10.3	10.8	9.5	10.0	10.0	10.4	10.9
	8H	9.5	9.9	10.0	10.4	10.9	9.6	10.0	10.1	10.5	11.0
	12H	9.6	10.0	10.1	10.5	11.0	9.8	10.1	10.3	10.6	11.1
8H	4H	9.2	9.6	9.7	10.1	10.6	9.3	9.7	9.8	10.2	10.7
	6H	9.4	9.8	9.9	10.3	10.8	9.4	9.8	10.0	10.3	10.8
	8H	9.6	9.9	10.1	10.4	11.0	9.6	9.9	10.1	10.4	11.0
	12H	10.0	10.2	10.5	10.8	11.4	9.9	10.2	10.5	10.7	11.3
12H	4H	9.1	9.5	9.7	10.0	10.5	9.2	9.6	9.8	10.1	10.6
	6H	9.4	9.7	10.0	10.2	10.8	9.4	9.7	10.0	10.2	10.8
	8H	9.7	9.9	10.2	10.5	11.1	9.6	9.9	10.2	10.4	11.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0