

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2SP RB2BD xx RA2HL

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

Test Number

SP-01582_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	687
Efficacy	58.25 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.34
Two luminaires, plane 90°	0.34
Four luminaires	0.33

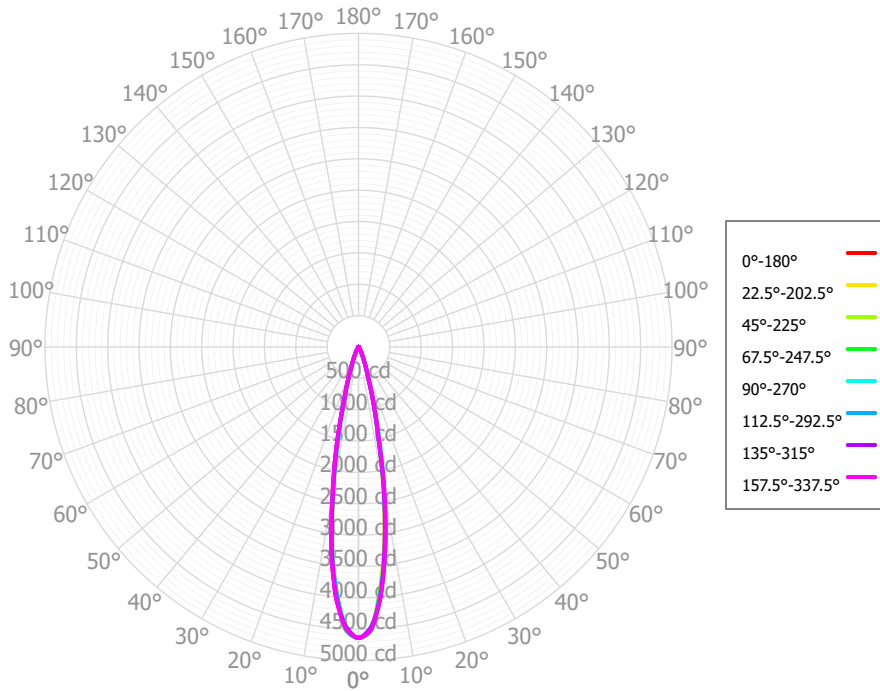
Full Beam Angle

0° - 180°	20°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	SP-01582_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 10 xx xx RD2SP RB2BD xx RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with spot optic, hex louver and snoot/deep cutoff bezel
OTHER	Beam Angle: 20 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°	327.87	47.70%	90.00° - 100.00°	1.14	0.17%
10.00° - 20.00°	268.76	39.10%	100.00° - 110.00°	1.07	0.16%
20.00° - 30.00°	66.47	9.67%	100.00° - 120.00°	2.04	0.30%
30.00° - 40.00°	11.90	1.73%	120.00° - 130.00°	0.89	0.13%
40.00° - 50.00°	1.67	0.24%	130.00° - 140.00°	0.86	0.12%
50.00° - 60.00°	0.94	0.14%	140.00° - 150.00°	0.75	0.11%
60.00° - 70.00°	0.99	0.14%	150.00° - 160.00°	0.54	0.08%
70.00° - 80.00°	1.01	0.15%	160.00° - 170.00°	0.33	0.05%
80.00° - 90.00°	1.12	0.16%	170.00° - 180.00°	0.11	0.02%
0.00° - 90.00°	680.73	99.03%	0.00° - 180.00°	687.38	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°	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34	4638.34
2.50°	4515.57	4490.18	4492.40	4533.55	4469.92	4502.05	4473.36	4503.07	4500.25	4496.51	4493.37	4530.77	4470.72	4527.05	4483.39	4512.78	4515.57
5.00°	3996.51	3961.43	3908.68	3921.73	4007.50	3971.38	4045.75	4040.67	4022.42	4003.90	3942.67	3953.90	3986.10	3966.01	4011.70	4009.46	3996.51
7.50°	3259.65	3194.22	3145.25	3238.46	3262.05	3276.35	3256.33	3310.35	3311.40	3267.53	3216.14	3273.15	3220.96	3249.27	3186.61	3253.75	3259.65
10.00°	2388.74	2336.76	2277.06	2329.16	2362.38	2351.54	2330.10	2387.55	2388.81	2335.67	2273.27	2329.33	2362.32	2351.65	2332.26	2387.49	2388.74
12.50°	1468.07	1439.72	1382.98	1433.58	1614.41	1574.25	1581.71	1613.59	1610.21	1567.85	1501.88	1511.72	1442.07	1417.79	1451.38	1467.21	1468.07
15.00°	947.48	923.32	908.81	952.21	921.70	942.89	874.67	914.91	925.05	892.05	882.23	910.15	883.96	922.28	887.05	932.03	947.48
17.50°	519.83	513.73	487.88	513.56	592.07	557.07	567.14	560.65	555.68	541.56	516.11	496.80	489.70	465.83	524.95	522.59	519.83
20.00°	350.08	341.52	335.23	348.87	344.75	345.50	307.20	321.30	326.73	315.81	307.88	312.61	306.44	324.61	327.77	342.91	350.08
22.50°	211.01	206.96	194.70	205.21	231.88	219.24	213.68	212.45	214.54	208.40	194.75	191.32	185.94	190.50	203.86	208.27	211.01
25.00°	148.49	143.71	134.68	135.84	134.38	135.56	126.82	129.94	136.38	129.02	122.67	124.33	124.12	131.31	134.66	143.10	148.49
27.50°	89.41	85.52	79.14	78.61	89.31	86.55	87.72	88.96	90.51	84.89	80.28	78.60	72.14	77.62	81.39	84.04	89.41
30.00°	58.10	56.44	51.70	49.36	46.85	48.91	51.49	51.70	49.89	45.10	46.07	45.97	46.81	50.94	51.98	54.08	58.10
32.50°	29.75	29.28	27.76	27.03	28.71	30.03	31.87	33.82	31.12	28.70	28.52	27.50	23.57	28.11	26.45	25.99	29.75
35.00°	18.47	17.26	15.96	15.76	12.61	14.76	15.29	16.88	14.03	13.52	13.54	14.97	14.71	16.77	16.04	16.91	18.47
37.50°	8.97	7.11	7.02	7.99	7.92	9.78	8.93	10.47	8.81	8.88	8.31	9.05	6.56	8.13	6.75	8.82	8.97
40.00°	5.48	4.45	4.49	4.14	4.06	5.69	4.18	4.87	4.02	4.68	3.69	4.91	4.37	4.80	4.44	5.45	5.48
42.50°	2.78	2.39	2.65	2.20	2.91	3.54	2.91	3.31	2.71	3.08	2.61	3.13	2.47	2.52	2.33	2.74	2.78
45.00°	1.79	1.83	1.88	1.78	2.01	1.57	1.95	2.01	1.59	1.76	1.64	1.71	1.73	1.68	1.85	1.94	1.79
47.50°	1.17	1.39	1.41	1.42	1.65	1.40	1.47	1.47	1.18	1.39	1.48	1.38	1.18	1.28	1.41	1.36	1.17
50.00°	1.09	1.16	1.27	1.09	1.34	1.26	1.22	1.09	0.89	1.13	1.31	1.12	1.12	1.31	1.17	1.17	1.09
52.50°	1.07	1.05	1.18	0.96	1.12	1.27	1.21	1.03	0.90	1.13	1.14	1.02	1.04	1.26	0.96	1.05	1.07
55.00°	1.09	1.10	1.11	0.90	1.05	1.25	1.22	1.05	0.89	1.08	1.00	0.93	0.89	1.17	0.86	1.01	1.09
57.50°	1.01	1.09	1.01	1.00	1.15	1.09	1.23	1.20	0.85	0.96	0.90	0.83	0.83	1.16	0.81	1.02	1.01
60.00°	0.85	1.02	0.90	1.14	1.06	1.02	1.10	1.25	0.90	0.85	0.96	0.79	0.86	1.19	0.84	1.06	0.85
62.50°	0.89	0.99	0.84	1.16	0.83	1.10	0.88	1.21	1.07	0.75	1.26	0.98	0.87	1.16	0.92	1.19	0.89
65.00°	1.05	0.98	0.79	1.16	0.78	1.08	0.84	1.11	1.09	0.79	1.34	1.11	0.86	1.11	1.05	1.38	1.05
67.50°	1.08	0.99	0.84	0.97	0.81	0.93	0.85	0.96	0.97	0.95	1.14	1.06	0.80	1.08	1.02	1.40	1.08
70.00°	1.06	1.00	0.91	0.78	0.86	0.85	0.96	1.00	1.09	0.92	1.05	1.01	0.69	1.06	0.83	1.33	1.06
72.50°	1.02	0.80	0.98	0.73	0.91	0.83	1.10	1.13	1.37	0.78	1.06	0.96	0.71	0.92	0.87	1.21	1.02
75.00°	0.97	0.55	1.04	0.71	0.95	0.82	0.92	1.27	1.19	0.90	1.09	0.96	0.78	0.77	1.06	1.06	0.97
77.50°	0.91	0.59	0.93	0.83	0.98	0.81	0.71	1.40	0.81	1.12	1.12	1.01	0.98	0.97	0.99	0.95	0.91
80.00°	0.86	0.67	0.81	0.94	0.92	0.87	0.75	1.28	0.92	1.08	1.21	1.00	1.21	1.14	0.81	0.84	0.86
82.50°	1.11	0.95	0.84	1.01	0.84	0.98	0.79	1.11	1.15	0.99	1.31	0.94	1.09	0.96	0.93	1.05	1.11
85.00°	1.34	1.23	0.86	1.07	0.98	1.03	0.85	1.11	1.13	1.05	1.24	0.81	0.91	0.84	1.13	1.27	1.34
87.50°	1.18	1.09	0.82	1.13	1.11	1.07	0.92	1.12	1.06	1.11	1.12	0.64	1.14	0.96	1.13	1.08	1.18
90.00°	1.03	0.96	0.83	1.19	1.13	0.99	0.96	1.07	1.00	1.16	1.07	0.76	1.39	1.04	1.11	0.91	1.03
92.50°	0.97	0.92	0.99	1.25	1.13	0.89	1.01	1.01	0.94	1.21	1.04	1.02	1.15	1.01	1.13	0.95	0.97
95.00°	0.90	0.92	1.15	1.20	1.04	0.87	1.07	0.89	1.06	1.15	1.04	1.02	0.93	1.13	1.16	1.03	0.90
97.50°	0.77	1.09	1.30	1.03	0.94	0.86	1.11	0.81	1.15	1.07	1.04	0.97	0.88	1.54	1.18	1.28	0.77
100.00°	0.70	1.18	1.31	0.97	0.83	1.05	1.11	0.91	1.07	0.88	1.08	0.92	0.85	1.62	1.17	1.45	0.70
102.50°	0.75	1.05	1.12	0.99	0.77	1.22	1.14	0.98	1.03	0.76	1.09	0.87	0.86	1.24	0.99	1.41	0.75
105.00°	0.80	1.02	0.92	0.96	0.85	1.16	1.20	0.95	1.16	0.92	0.93	0.99	0.91	1.04	0.90	1.31	0.80

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	817	817	817	817	797	797	797	797	760	760	760	726	726	726	695	695	681
	1	791	777	765	754	774	762	751	741	734	725	717	707	701	695	683	679	665
	2	768	745	726	710	753	733	716	701	711	697	685	690	679	670	671	663	650
	3	746	717	695	676	734	708	687	671	690	673	660	674	660	649	659	648	636
	4	727	693	669	650	716	686	663	646	672	653	638	659	643	630	646	634	622
	5	709	672	647	628	699	666	643	625	655	635	620	644	627	614	634	620	609
	6	692	654	628	610	684	649	625	607	639	619	603	631	613	599	622	607	597
	7	676	637	611	593	669	633	609	592	625	604	589	618	599	585	611	595	585
	8	661	621	596	579	655	618	594	578	611	590	575	605	587	573	599	583	574
	9	647	607	583	566	642	604	581	565	599	578	563	594	575	561	589	572	563
	10	634	594	570	554	629	592	569	553	587	566	552	582	564	550	578	561	553

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	153.3 fc	2.0 ft
6.5 ft	109.8 fc	2.3 ft
7.5 ft	82.5 fc	2.7 ft
8.0 ft	72.5 fc	2.9 ft
10.0 ft	46.4 fc	3.6 ft
12.0 ft	32.2 fc	4.3 ft
14.0 ft	23.7 fc	5.0 ft
16.0 ft	18.1 fc	5.8 ft
20.0 ft	11.6 fc	7.2 ft
24.0 ft	8.1 fc	8.6 ft
28.0 ft	5.9 fc	10.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1441465	1441465	1441465
45.00°	788	826	882
55.00°	589	602	569
65.00°	775	581	571
75.00°	1160	1255	1139
85.00°	4771	3063	3495

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	-5.8	-4.9	-5.4	-4.6	-4.2	-6.3	-5.4	-5.9	-5.1	-4.7
	3H	-1.9	-1.1	-1.5	-0.8	-0.4	-3.2	-2.4	-2.8	-2.1	-1.7
	4H	-0.4	0.3	0.0	0.6	1.1	-1.5	-0.8	-1.1	-0.4	0.0
	6H	1.1	1.7	1.5	2.1	2.5	1.0	1.6	1.4	2.0	2.4
	8H	2.4	3.0	2.8	3.4	3.8	2.2	2.8	2.7	3.2	3.7
	12H	4.3	4.9	4.8	5.3	5.8	3.5	4.1	3.9	4.5	4.9
4H	2H	-5.0	-4.3	-4.6	-3.9	-3.5	-4.9	-4.2	-4.5	-3.8	-3.4
	3H	-0.9	-0.3	-0.5	0.1	0.5	-1.7	-1.1	-1.3	-0.7	-0.3
	4H	0.6	1.1	1.1	1.6	2.1	0.1	0.6	0.5	1.0	1.5
	6H	2.3	2.7	2.8	3.2	3.7	2.5	3.0	3.0	3.4	3.9
	8H	3.8	4.2	4.3	4.6	5.1	3.8	4.2	4.3	4.7	5.2
	12H	5.9	6.3	6.4	6.8	7.3	5.2	5.6	5.7	6.1	6.6
8H	4H	1.3	1.7	1.8	2.1	2.6	1.0	1.4	1.4	1.8	2.3
	6H	3.2	3.5	3.7	4.0	4.6	3.6	3.9	4.1	4.5	5.0
	8H	4.9	5.2	5.5	5.7	6.2	5.1	5.3	5.6	5.9	6.4
	12H	7.4	7.6	7.9	8.1	8.7	6.7	6.9	7.2	7.4	8.0
12H	4H	1.5	1.8	2.0	2.3	2.8	1.3	1.6	1.8	2.1	2.6
	6H	3.5	3.8	4.1	4.3	4.9	4.0	4.3	4.6	4.8	5.4
	8H	5.4	5.6	5.9	6.1	6.7	5.6	5.8	6.1	6.4	7.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0