

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2FL RB2BS xx RA2HL

2" Adjustable Track Luminaire with flood optic, hex louver and standard
bezel

Test Number

SP-01575_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	743
Efficacy	63 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.51
Two luminaires, plane 90°	0.5
Four luminaires	0.47

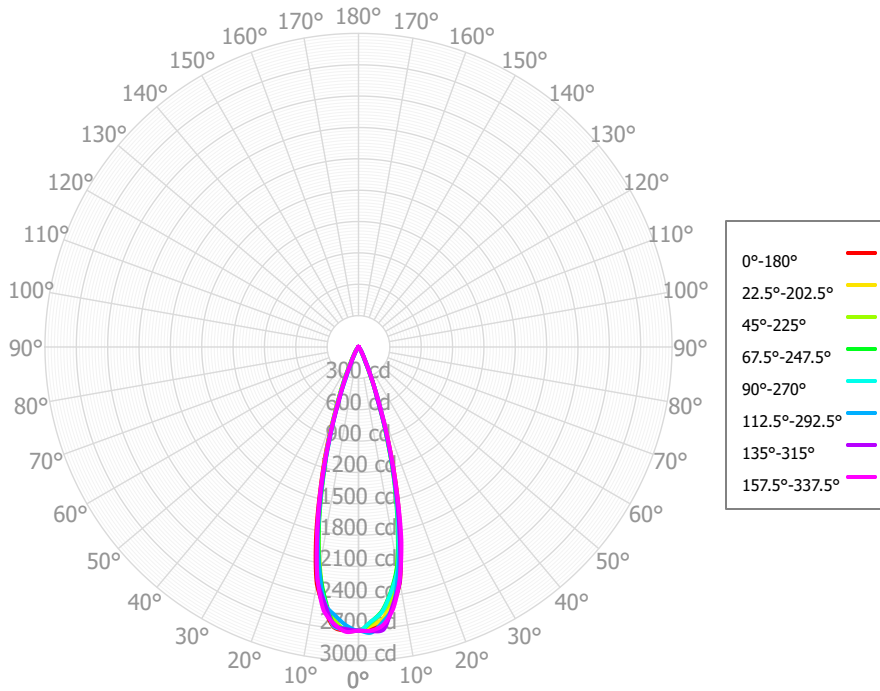
Full Beam Angle

0° - 180°	30°
90° - 270°	30°

IES File Header Contents

Keyword	Value
TEST	SP-01575_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 RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with flood optic, hex louver and standard bezel
OTHER	Beam Angle: 30 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°	240.25	32.32%	90.00° - 100.00°	1.28	0.17%
10.00° - 20.00°	359.70	48.38%	100.00° - 110.00°	1.23	0.17%
20.00° - 30.00°	103.29	13.89%	100.00° - 120.00°	2.47	0.33%
30.00° - 40.00°	22.40	3.01%	120.00° - 130.00°	1.12	0.15%
40.00° - 50.00°	4.70	0.63%	130.00° - 140.00°	0.99	0.13%
50.00° - 60.00°	1.39	0.19%	140.00° - 150.00°	0.85	0.11%
60.00° - 70.00°	1.25	0.17%	150.00° - 160.00°	0.67	0.09%
70.00° - 80.00°	1.24	0.17%	160.00° - 170.00°	0.39	0.05%
80.00° - 90.00°	1.31	0.18%	170.00° - 180.00°	0.12	0.02%
0.00° - 90.00°	735.54	98.94%	0.00° - 180.00°	743.42	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°	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49	2714.49
2.50°	2700.54	2670.55	2650.86	2635.52	2633.66	2667.38	2701.82	2728.38	2715.74	2705.72	2721.47	2697.68	2699.89	2736.38	2721.67	2717.03	2700.54
5.00°	2645.91	2617.35	2550.00	2541.21	2549.05	2578.37	2675.63	2660.40	2693.11	2661.21	2622.45	2668.69	2685.51	2644.37	2716.74	2673.22	2645.91
7.50°	2499.06	2439.22	2438.87	2363.55	2371.60	2483.03	2474.81	2546.52	2516.49	2472.68	2478.20	2437.71	2461.13	2518.42	2497.88	2531.49	2499.06
10.00°	2283.24	2232.05	2122.19	2131.44	2158.82	2155.73	2267.58	2254.77	2299.03	2229.91	2127.75	2153.08	2207.42	2183.82	2276.27	2266.38	2283.24
12.50°	1847.01	1821.15	1768.91	1722.01	1747.81	1798.35	1807.83	1837.54	1878.64	1791.78	1762.29	1746.18	1781.99	1827.90	1812.10	1895.66	1847.01
15.00°	1405.54	1365.10	1329.60	1311.79	1335.59	1352.81	1349.80	1393.56	1406.75	1363.91	1331.61	1308.91	1334.15	1351.85	1348.70	1395.64	1405.54
17.50°	947.94	950.20	875.82	899.16	916.91	897.03	944.01	931.25	1004.35	971.47	928.69	944.02	953.62	901.89	926.55	955.73	947.94
20.00°	552.37	543.98	564.70	535.75	533.37	583.72	547.16	594.74	618.82	620.27	640.94	596.32	580.95	591.10	511.40	587.32	552.37
22.50°	336.74	333.10	275.49	317.79	322.23	285.68	350.38	340.62	394.23	403.06	383.61	388.73	377.10	314.04	329.72	326.99	336.74
25.00°	164.04	160.39	168.93	144.44	140.06	178.95	161.06	194.68	206.04	221.13	244.21	212.11	191.47	203.21	153.54	189.75	164.04
27.50°	109.10	102.18	88.70	95.65	93.12	90.22	114.04	116.43	133.86	147.25	127.26	136.28	128.43	106.95	109.63	102.92	109.10
30.00°	64.80	64.60	59.74	55.66	52.36	63.49	68.72	72.50	86.07	86.46	91.85	81.66	77.00	78.92	66.98	71.89	64.80
32.50°	48.62	46.09	37.46	39.36	38.43	42.07	49.82	49.39	60.57	64.28	60.19	57.03	55.39	52.80	49.68	48.39	48.62
35.00°	33.70	30.81	25.59	25.22	25.58	30.02	31.61	33.74	39.52	44.28	41.58	38.24	36.36	34.94	32.77	32.87	33.70
37.50°	21.98	20.86	14.98	16.63	17.25	18.69	22.83	22.47	27.32	30.51	25.15	25.91	24.70	19.42	22.65	21.03	21.98
40.00°	12.31	11.76	10.52	9.53	10.00	12.81	14.38	15.14	16.80	18.93	16.05	14.77	13.61	13.66	12.95	12.99	12.31
42.50°	7.58	7.63	6.72	6.11	6.93	7.28	9.82	10.03	11.81	13.23	8.42	9.99	8.84	8.43	9.19	7.57	7.58
45.00°	3.93	4.22	4.49	3.46	4.21	4.74	5.46	6.43	7.78	8.28	5.41	6.29	4.49	5.32	5.56	4.72	3.93
47.50°	2.79	3.01	2.41	2.63	2.77	2.35	3.33	3.64	4.84	5.31	2.97	4.03	3.17	2.74	3.46	2.85	2.79
50.00°	1.91	2.08	1.94	1.91	1.60	1.93	1.40	2.34	2.06	3.03	2.23	1.99	2.01	2.15	1.52	1.92	1.91
52.50°	1.59	1.48	1.61	1.44	1.37	1.59	1.45	1.81	1.56	2.44	1.67	1.99	1.85	1.71	1.25	1.48	1.59
55.00°	1.38	0.92	1.51	1.26	1.19	1.61	1.48	1.40	1.40	1.95	1.68	2.28	1.73	1.72	1.00	1.47	1.38
57.50°	1.41	1.09	1.43	1.70	1.16	1.63	1.32	1.06	1.26	1.73	1.69	1.70	1.45	1.71	1.03	1.46	1.41
60.00°	1.43	1.33	1.32	1.90	1.14	1.64	1.16	0.97	1.12	1.57	1.75	1.00	1.17	1.62	1.06	1.45	1.43
62.50°	1.41	1.32	1.21	1.60	1.19	1.65	1.02	1.00	1.11	1.56	1.71	1.04	1.14	1.52	1.08	1.31	1.41
65.00°	1.33	1.29	1.16	1.35	1.27	1.54	0.91	1.02	1.12	1.52	1.41	1.17	1.11	1.42	1.11	1.07	1.33
67.50°	1.09	1.17	1.12	1.20	1.46	1.43	1.06	1.04	1.34	1.39	1.21	1.18	1.08	1.37	1.21	0.97	1.09
70.00°	0.90	1.04	1.17	1.12	1.54	1.33	1.18	1.21	1.58	1.26	1.27	1.17	1.05	1.44	1.30	0.98	0.90
72.50°	0.81	1.18	1.23	1.15	1.28	1.24	1.09	1.45	1.54	1.08	1.25	1.25	1.10	1.46	1.31	0.97	0.81
75.00°	0.77	1.35	1.06	1.12	1.12	1.24	1.04	1.41	1.47	1.00	1.07	1.34	1.15	1.33	1.30	0.92	0.77
77.50°	0.84	1.30	0.89	0.99	1.22	1.25	1.28	1.25	1.34	1.08	1.02	1.07	1.05	1.24	1.16	0.96	0.84
80.00°	0.90	1.23	0.95	0.92	1.28	1.38	1.46	1.26	1.22	1.11	1.31	0.77	0.95	1.23	1.05	1.06	0.90
82.50°	0.95	1.25	1.03	0.99	1.21	1.51	1.31	1.34	1.34	1.02	1.46	0.97	1.19	1.26	1.08	1.12	0.95
85.00°	1.06	1.28	1.10	1.05	1.12	1.46	1.19	1.29	1.48	0.99	1.33	1.20	1.42	1.34	1.14	1.15	1.06
87.50°	1.26	1.30	1.17	1.11	0.95	1.42	1.30	1.19	1.31	1.05	1.23	1.07	1.32	1.38	1.44	1.16	1.26
90.00°	1.41	1.32	1.07	1.16	0.83	1.39	1.33	1.18	1.13	1.08	1.21	0.92	1.22	1.33	1.64	1.16	1.41
92.50°	1.46	1.40	0.97	1.19	0.84	1.37	0.94	1.20	1.02	1.04	1.16	1.22	1.13	1.28	1.37	1.15	1.46
95.00°	1.43	1.48	0.95	1.20	0.89	1.36	0.69	1.18	0.93	1.14	1.03	1.55	1.05	1.22	1.15	1.14	1.43
97.50°	1.28	1.39	0.93	1.17	1.04	1.34	1.05	1.14	1.19	1.47	1.02	1.38	0.94	1.17	1.17	1.10	1.28
100.00°	1.14	1.30	0.99	1.14	1.18	1.30	1.35	1.16	1.48	1.57	1.23	1.18	0.84	1.16	1.19	1.06	1.14
102.50°	1.02	1.21	1.06	1.14	1.27	1.27	1.35	1.21	1.17	1.29	1.33	1.15	0.95	1.16	1.18	0.96	1.02
105.00°	0.99	1.12	1.09	1.20	1.30	1.39	1.31	1.04	0.83	1.17	1.26	1.13	1.06	1.21	1.21	0.82	0.99

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	883	883	883	883	862	862	862	862	822	822	822	785	785	785	751	751	736
	1	852	836	821	808	834	819	806	795	788	778	769	760	752	745	733	728	713
	2	823	796	773	754	807	783	763	745	759	742	728	736	723	712	715	705	696
	3	797	762	734	713	783	751	726	706	732	711	695	714	697	683	697	683	672
	4	772	731	701	679	760	723	695	674	707	684	666	692	673	658	679	663	651
	5	748	704	673	650	738	697	668	647	684	660	641	672	651	635	661	643	632
	6	726	679	648	625	717	674	644	623	663	638	619	653	631	614	644	625	614
	7	706	657	626	604	697	652	623	602	643	617	598	635	612	595	627	607	597
	8	686	636	605	584	678	633	603	583	625	599	580	618	595	577	611	591	581
	9	667	617	587	566	661	614	585	565	608	581	563	602	578	561	596	575	566
	10	650	600	570	550	644	597	568	549	591	565	547	586	562	546	581	560	552

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	89.7 fc	3.0 ft
6.5 ft	64.2 fc	3.5 ft
7.5 ft	48.3 fc	4.1 ft
8.0 ft	42.4 fc	4.4 ft
10.0 ft	27.1 fc	5.4 ft
12.0 ft	18.9 fc	6.5 ft
14.0 ft	13.8 fc	7.6 ft
16.0 ft	10.6 fc	8.7 ft
20.0 ft	6.8 fc	10.9 ft
24.0 ft	4.7 fc	13.1 ft
28.0 ft	3.5 fc	15.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	843587	843587	843587
45.00°	1729	1972	1849
55.00°	748	819	645
65.00°	975	856	934
75.00°	927	1275	1346
85.00°	3769	3915	3994

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	-4.5	-3.6	-4.1	-3.2	-2.9	-3.2	-2.3	-2.8	-2.0	-1.6
	3H	-2.0	-1.2	-1.6	-0.8	-0.4	-0.5	0.2	-0.1	0.6	1.0
	4H	-0.7	0.0	-0.3	0.4	0.8	0.9	1.6	1.3	2.0	2.4
	6H	1.1	1.7	1.5	2.1	2.5	2.6	3.2	3.0	3.6	4.0
	8H	2.2	2.8	2.6	3.2	3.6	3.6	4.2	4.1	4.6	5.1
	12H	3.6	4.2	4.1	4.6	5.1	5.0	5.6	5.4	6.0	6.4
4H	2H	-3.7	-3.0	-3.3	-2.6	-2.2	-2.7	-2.0	-2.2	-1.6	-1.2
	3H	-0.8	-0.2	-0.4	0.2	0.7	0.4	1.0	0.8	1.4	1.8
	4H	0.9	1.4	1.4	1.9	2.4	2.1	2.7	2.6	3.1	3.6
	6H	2.9	3.4	3.4	3.8	4.4	4.0	4.4	4.5	4.9	5.4
	8H	4.1	4.5	4.6	5.0	5.5	5.2	5.6	5.7	6.1	6.6
	12H	5.6	6.0	6.1	6.5	7.0	6.7	7.0	7.2	7.5	8.1
8H	4H	1.8	2.2	2.3	2.6	3.1	2.8	3.2	3.3	3.6	4.1
	6H	4.1	4.4	4.6	4.9	5.5	5.0	5.3	5.5	5.8	6.3
	8H	5.5	5.8	6.1	6.4	6.9	6.4	6.7	7.0	7.2	7.8
	12H	7.3	7.5	7.8	8.1	8.7	8.2	8.4	8.7	9.0	9.6
12H	4H	2.0	2.3	2.5	2.8	3.3	3.0	3.3	3.5	3.8	4.3
	6H	4.4	4.7	5.0	5.2	5.8	5.4	5.7	5.9	6.2	6.7
	8H	6.0	6.3	6.6	6.8	7.4	7.0	7.2	7.5	7.7	8.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0