

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2FL RB2BS xx RA2HL

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

Test Number

SP-01575

Test Date

9/26/2023

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	545
Efficacy	79.01 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

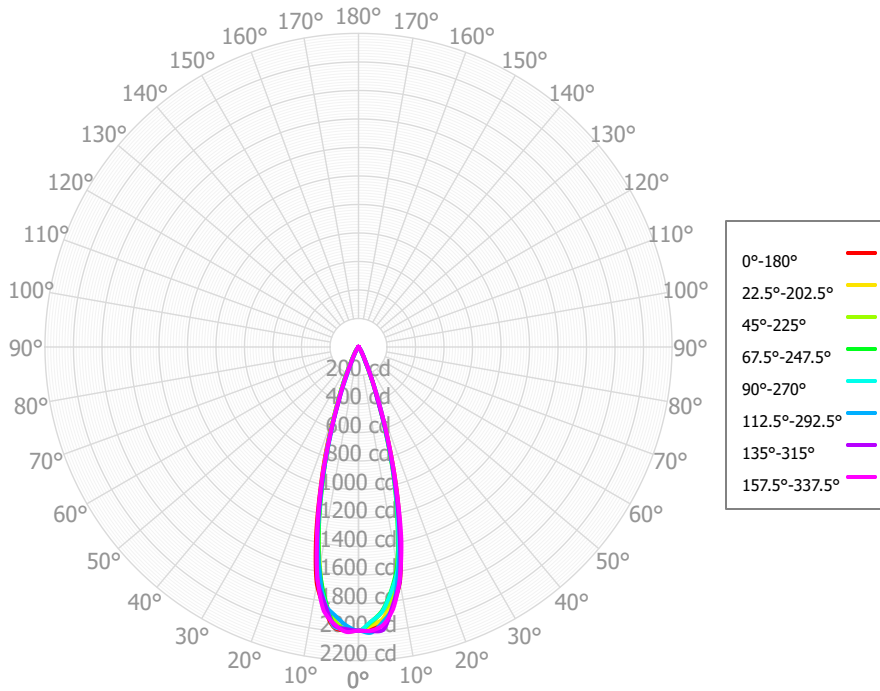
Full Beam Angle

0° - 180°	30°
90° - 270°	30°

IES File Header Contents

Keyword	Value
TEST	SP-01575
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	9/29/2023
LUMCAT	STR2 835 07 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°	176.19	32.32%	90.00° - 100.00°	0.94	0.17%
10.00° - 20.00°	263.78	48.38%	100.00° - 110.00°	0.90	0.17%
20.00° - 30.00°	75.74	13.89%	100.00° - 120.00°	1.81	0.33%
30.00° - 40.00°	16.42	3.01%	120.00° - 130.00°	0.82	0.15%
40.00° - 50.00°	3.45	0.63%	130.00° - 140.00°	0.72	0.13%
50.00° - 60.00°	1.02	0.19%	140.00° - 150.00°	0.62	0.11%
60.00° - 70.00°	0.92	0.17%	150.00° - 160.00°	0.49	0.09%
70.00° - 80.00°	0.91	0.17%	160.00° - 170.00°	0.29	0.05%
80.00° - 90.00°	0.96	0.18%	170.00° - 180.00°	0.09	0.02%
0.00° - 90.00°	539.39	98.94%	0.00° - 180.00°	545.18	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°	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63	1990.63
2.50°	1980.40	1958.41	1943.97	1932.72	1931.35	1956.08	1981.34	2000.81	1991.54	1984.20	1995.75	1978.30	1979.92	2006.68	1995.89	1992.49	1980.40
5.00°	1940.34	1919.39	1870.00	1863.55	1869.31	1890.80	1962.13	1950.96	1974.95	1951.55	1923.13	1957.04	1969.37	1939.20	1992.28	1960.36	1940.34
7.50°	1832.65	1788.76	1788.51	1733.27	1739.18	1820.89	1814.86	1867.45	1845.43	1813.30	1817.34	1787.65	1804.83	1846.84	1831.78	1856.43	1832.65
10.00°	1674.38	1636.84	1556.27	1563.06	1583.13	1580.87	1662.89	1653.50	1685.96	1635.27	1560.35	1578.92	1618.78	1601.46	1669.26	1662.01	1674.38
12.50°	1354.48	1335.51	1297.20	1262.81	1281.73	1318.79	1325.74	1347.53	1377.67	1313.97	1292.35	1280.53	1306.79	1340.46	1328.87	1390.15	1354.48
15.00°	1030.73	1001.07	975.04	961.98	979.43	992.06	989.85	1021.94	1031.62	1000.20	976.52	959.86	978.38	991.36	989.05	1023.47	1030.73
17.50°	695.16	696.81	642.27	659.38	672.40	657.82	692.28	682.91	736.53	712.41	681.04	692.28	699.32	661.39	679.47	700.87	695.16
20.00°	405.07	398.92	414.11	392.89	391.14	428.06	401.25	436.14	453.80	454.86	470.03	437.30	426.03	433.47	375.03	430.70	405.07
22.50°	246.94	244.27	202.02	233.04	236.30	209.50	256.94	249.79	289.10	295.58	281.31	285.07	276.54	230.29	241.79	239.79	246.94
25.00°	120.30	117.62	123.88	105.92	102.71	131.23	118.11	142.76	151.09	162.16	179.09	155.55	140.41	149.02	112.60	139.15	120.30
27.50°	80.01	74.93	65.05	70.14	68.29	66.16	83.63	85.38	98.17	107.98	93.32	99.94	94.18	78.43	80.40	75.48	80.01
30.00°	47.52	47.38	43.81	40.82	38.40	46.56	50.39	53.17	63.12	63.41	67.36	59.89	56.47	57.88	49.12	52.72	47.52
32.50°	35.66	33.80	27.47	28.86	28.18	30.85	36.54	36.22	44.42	47.14	44.14	41.82	40.62	38.72	36.43	35.49	35.66
35.00°	24.71	22.60	18.76	18.50	18.76	22.01	23.18	24.74	28.98	32.47	30.49	28.04	26.66	25.62	24.03	24.11	24.71
37.50°	16.12	15.30	10.98	12.20	12.65	13.70	16.74	16.48	20.04	22.38	18.44	19.00	18.11	14.24	16.61	15.42	16.12
40.00°	9.03	8.62	7.71	6.99	7.33	9.39	10.55	11.11	12.32	13.88	11.77	10.83	9.98	10.01	9.49	9.53	9.03
42.50°	5.56	5.59	4.93	4.48	5.08	5.34	7.20	7.36	8.66	9.70	6.17	7.32	6.49	6.18	6.74	5.55	5.56
45.00°	2.89	3.10	3.29	2.54	3.08	3.47	4.01	4.72	5.71	6.07	3.97	4.61	3.29	3.90	4.08	3.46	2.89
47.50°	2.05	2.21	1.77	1.93	2.03	1.73	2.44	2.67	3.55	3.89	2.18	2.95	2.33	2.01	2.54	2.09	2.05
50.00°	1.40	1.53	1.42	1.40	1.17	1.41	1.03	1.72	1.51	2.22	1.63	1.46	1.48	1.58	1.11	1.41	1.40
52.50°	1.17	1.09	1.18	1.06	1.01	1.17	1.06	1.33	1.14	1.79	1.23	1.46	1.36	1.25	0.91	1.08	1.17
55.00°	1.01	0.68	1.11	0.93	0.87	1.18	1.08	1.03	1.02	1.43	1.23	1.67	1.27	1.26	0.73	1.08	1.01
57.50°	1.03	0.80	1.05	1.25	0.85	1.20	0.97	0.78	0.92	1.27	1.24	1.25	1.07	1.26	0.75	1.07	1.03
60.00°	1.05	0.98	0.97	1.39	0.84	1.20	0.85	0.71	0.82	1.15	1.28	0.74	0.86	1.18	0.78	1.06	1.05
62.50°	1.04	0.97	0.89	1.17	0.87	1.21	0.75	0.73	0.81	1.15	1.25	0.77	0.84	1.11	0.79	0.96	1.04
65.00°	0.97	0.94	0.85	0.99	0.93	1.13	0.67	0.75	0.82	1.11	1.03	0.86	0.82	1.04	0.81	0.79	0.97
67.50°	0.80	0.85	0.82	0.88	1.07	1.05	0.78	0.76	0.98	1.02	0.89	0.87	0.80	1.00	0.89	0.71	0.80
70.00°	0.66	0.76	0.86	0.82	1.13	0.98	0.87	0.89	1.16	0.92	0.93	0.86	0.77	1.05	0.95	0.72	0.66
72.50°	0.59	0.87	0.90	0.84	0.94	0.91	0.80	1.06	1.13	0.79	0.92	0.92	0.81	1.07	0.96	0.71	0.59
75.00°	0.57	0.99	0.78	0.82	0.82	0.91	0.76	1.03	1.08	0.73	0.78	0.98	0.84	0.97	0.95	0.68	0.57
77.50°	0.62	0.95	0.65	0.72	0.90	0.92	0.94	0.91	0.99	0.79	0.75	0.79	0.77	0.91	0.85	0.71	0.62
80.00°	0.66	0.90	0.70	0.68	0.94	1.01	1.07	0.92	0.89	0.81	0.96	0.57	0.70	0.90	0.77	0.78	0.66
82.50°	0.70	0.92	0.75	0.72	0.89	1.11	0.96	0.98	0.98	0.75	1.07	0.71	0.87	0.92	0.79	0.82	0.70
85.00°	0.78	0.94	0.81	0.77	0.82	1.07	0.88	0.94	1.08	0.72	0.97	0.88	1.04	0.98	0.84	0.84	0.78
87.50°	0.92	0.95	0.86	0.81	0.69	1.04	0.96	0.87	0.96	0.77	0.90	0.79	0.97	1.01	1.05	0.85	0.92
90.00°	1.03	0.97	0.78	0.85	0.61	1.02	0.97	0.87	0.83	0.79	0.89	0.68	0.89	0.97	1.21	0.85	1.03
92.50°	1.07	1.02	0.71	0.87	0.61	1.00	0.69	0.88	0.75	0.76	0.85	0.90	0.83	0.94	1.01	0.84	1.07
95.00°	1.05	1.08	0.69	0.88	0.65	0.99	0.50	0.86	0.68	0.83	0.76	1.14	0.77	0.89	0.84	0.83	1.05
97.50°	0.94	1.02	0.68	0.85	0.77	0.99	0.77	0.83	0.87	1.08	0.75	1.01	0.69	0.86	0.86	0.81	0.94
100.00°	0.83	0.95	0.73	0.84	0.86	0.95	0.99	0.85	1.08	1.15	0.90	0.86	0.61	0.85	0.87	0.78	0.83
102.50°	0.75	0.89	0.78	0.84	0.93	0.93	0.99	0.88	0.86	0.95	0.98	0.84	0.69	0.85	0.87	0.70	0.75
105.00°	0.73	0.82	0.80	0.88	0.95	1.02	0.96	0.76	0.61	0.86	0.92	0.83	0.77	0.88	0.89	0.60	0.73

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	648	648	648	648	632	632	632	632	603	603	603	576	576	576	551	551	539
	1	625	613	602	593	611	601	591	583	578	571	564	557	551	546	538	534	523
	2	604	584	567	553	592	574	559	547	556	544	534	540	530	522	524	517	507
	3	584	558	538	523	574	551	533	518	537	522	509	523	511	501	511	501	492
	4	566	536	514	498	557	530	510	495	519	502	488	508	494	482	498	486	477
	5	549	516	494	477	541	511	490	474	502	484	470	493	478	466	485	472	463
	6	533	498	475	459	526	494	473	457	486	468	454	479	463	450	472	458	450
	7	517	482	459	443	511	478	457	441	472	453	439	466	449	436	460	445	438
	8	503	467	444	428	497	464	442	427	458	439	425	453	436	423	448	433	426
	9	489	453	430	415	484	450	429	414	446	426	413	441	424	411	437	421	415
	10	477	440	418	403	472	438	417	402	434	414	401	430	412	400	426	410	405

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	65.8 fc	3.0 ft
6.5 ft	47.1 fc	3.5 ft
7.5 ft	35.4 fc	4.1 ft
8.0 ft	31.1 fc	4.4 ft
10.0 ft	19.9 fc	5.4 ft
12.0 ft	13.8 fc	6.5 ft
14.0 ft	10.2 fc	7.6 ft
16.0 ft	7.8 fc	8.7 ft
20.0 ft	5.0 fc	10.9 ft
24.0 ft	3.5 fc	13.1 ft
28.0 ft	2.5 fc	15.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	618630	618630	618630
45.00°	1268	1446	1356
55.00°	548	600	473
65.00°	715	628	685
75.00°	680	935	987
85.00°	2764	2871	2929

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	-5.5	-4.7	-5.1	-4.3	-4.0	-4.3	-3.4	-3.9	-3.1	-2.7
	3H	-3.1	-2.3	-2.7	-1.9	-1.5	-1.6	-0.8	-1.2	-0.5	-0.1
	4H	-1.8	-1.1	-1.3	-0.7	-0.3	-0.2	0.6	0.3	0.9	1.4
	6H	0.0	0.6	0.4	1.0	1.5	1.5	2.1	1.9	2.5	3.0
	8H	1.1	1.7	1.6	2.1	2.6	2.5	3.2	3.0	3.6	4.0
	12H	2.5	3.1	3.0	3.5	4.0	3.9	4.5	4.4	4.9	5.4
4H	2H	-4.8	-4.1	-4.4	-3.7	-3.3	-3.8	-3.0	-3.3	-2.7	-2.2
	3H	-1.9	-1.3	-1.4	-0.9	-0.4	-0.7	-0.1	-0.3	0.3	0.8
	4H	-0.2	0.4	0.3	0.8	1.3	1.1	1.6	1.5	2.0	2.5
	6H	1.9	2.3	2.3	2.8	3.3	2.9	3.3	3.4	3.8	4.3
	8H	3.0	3.5	3.5	3.9	4.4	4.1	4.5	4.6	5.0	5.5
	12H	4.5	4.9	5.0	5.4	5.9	5.6	6.0	6.1	6.5	7.0
8H	4H	0.7	1.1	1.2	1.6	2.1	1.7	2.1	2.2	2.6	3.1
	6H	3.0	3.3	3.5	3.9	4.4	3.9	4.2	4.4	4.7	5.3
	8H	4.5	4.8	5.0	5.3	5.8	5.3	5.6	5.9	6.2	6.7
	12H	6.2	6.5	6.8	7.0	7.6	7.1	7.4	7.7	7.9	8.5
12H	4H	0.9	1.2	1.4	1.8	2.3	1.9	2.3	2.4	2.8	3.3
	6H	3.3	3.6	3.9	4.1	4.7	4.3	4.6	4.9	5.1	5.7
	8H	4.9	5.2	5.5	5.7	6.3	5.9	6.1	6.4	6.6	7.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0