

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 9DW 10 xx xx RD2FL RB2BS xx xx

2" Adjustable Track Luminaire with flood optic and standard bezel

#### Test Number

SP-01598

#### Test Date

9/28/2023

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

### Summary of Results

#### Power

Input Watts	14.3 W
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#### Lumen Output

Output Lumens	1006
Efficacy	70.37 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.59
Two luminaires, plane 90°	0.59
Four luminaires	0.54

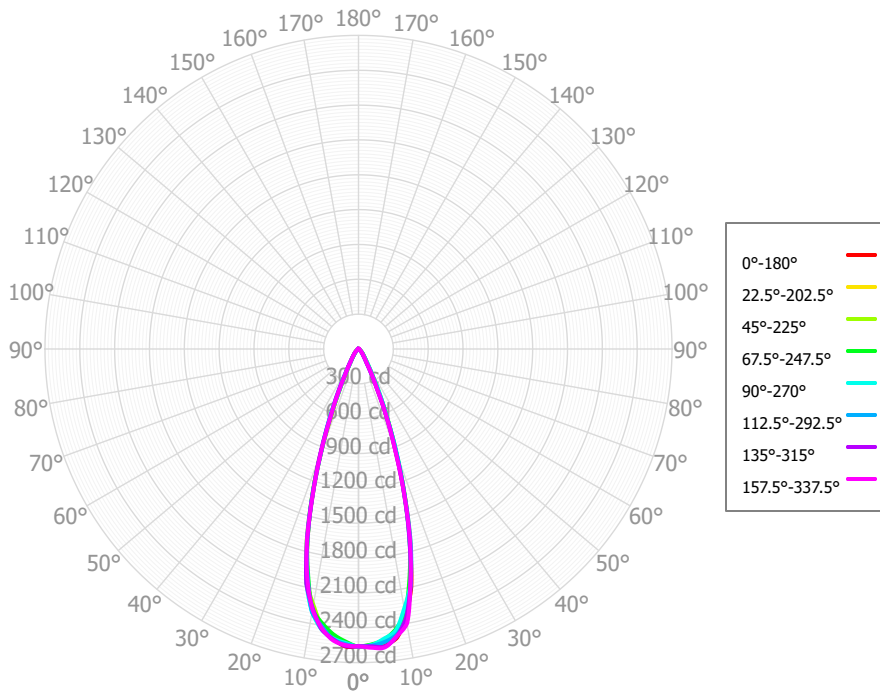
#### Full Beam Angle

0° - 180°	35°
90° - 270°	35°

### IES File Header Contents

Keyword	Value
TEST	SP-01598
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/28/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 9DW 10 xx xx RD2FL RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with flood optic and standard bezel
OTHER	Beam Angle: 35 deg
OTHER	90 CRI, Dim to Warm 3000K to 1800K tested
OTHER	CCT Output Multipliers: N/A, dim to warm
OTHER	Only available in 1000 lumens
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°	236.83	23.54%	90.00° - 100.00°	1.60	0.16%
10.00° - 20.00°	450.57	44.77%	100.00° - 110.00°	1.56	0.16%
20.00° - 30.00°	199.68	19.84%	100.00° - 120.00°	3.04	0.30%
30.00° - 40.00°	59.67	5.93%	120.00° - 130.00°	1.35	0.13%
40.00° - 50.00°	29.17	2.90%	130.00° - 140.00°	1.30	0.13%
50.00° - 60.00°	12.74	1.27%	140.00° - 150.00°	1.09	0.11%
60.00° - 70.00°	4.31	0.43%	150.00° - 160.00°	0.82	0.08%
70.00° - 80.00°	1.82	0.18%	160.00° - 170.00°	0.50	0.05%
80.00° - 90.00°	1.63	0.16%	170.00° - 180.00°	0.17	0.02%
0.00° - 90.00°	996.43	99.02%	0.00° - 180.00°	1006.30	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°	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33	2561.33
2.50°	2561.57	2552.22	2552.42	2546.97	2552.86	2544.34	2560.51	2552.59	2564.67	2533.74	2531.88	2522.74	2534.85	2556.75	2563.42	2575.23	2561.57
5.00°	2555.56	2533.78	2514.09	2514.70	2505.10	2510.82	2509.73	2518.97	2502.01	2490.61	2471.81	2468.33	2501.99	2534.47	2572.43	2580.24	2555.56
7.50°	2512.37	2453.15	2443.23	2438.27	2448.54	2410.31	2434.79	2424.35	2431.90	2403.80	2405.41	2383.90	2436.09	2485.26	2502.87	2498.62	2512.37
10.00°	2339.44	2362.86	2298.32	2309.48	2268.25	2302.55	2267.97	2281.41	2261.49	2268.28	2238.09	2280.76	2300.02	2356.75	2354.51	2402.74	2339.44
12.50°	2099.28	2051.41	2066.77	2027.52	2074.23	2018.27	2072.49	2032.35	2065.22	2032.96	2057.35	2002.07	2067.92	2077.30	2072.10	2065.51	2099.28
15.00°	1706.04	1729.45	1698.34	1705.68	1691.95	1723.36	1705.64	1717.05	1693.29	1726.64	1693.61	1702.24	1693.23	1738.77	1693.32	1718.87	1706.04
17.50°	1318.17	1318.51	1326.56	1305.44	1313.92	1319.73	1308.97	1303.43	1318.65	1318.30	1327.44	1305.29	1317.37	1320.92	1308.51	1303.49	1318.17
20.00°	938.53	931.42	951.11	949.60	969.01	939.10	965.17	939.04	933.84	944.92	944.84	933.22	940.32	951.55	920.76	913.83	938.53
22.50°	628.77	642.62	653.54	653.39	652.32	664.21	628.09	626.94	601.40	606.54	599.96	629.04	635.25	627.58	627.56	620.89	628.77
25.00°	393.42	396.68	415.53	430.07	446.40	425.17	431.15	406.12	390.98	381.05	390.47	384.25	383.50	397.67	365.25	374.65	393.42
27.50°	244.71	262.25	270.96	275.02	276.49	283.98	248.91	252.92	235.33	234.19	225.48	246.05	239.31	228.92	238.10	241.34	244.71
30.00°	162.22	162.69	176.92	182.44	193.67	176.53	181.67	169.14	165.41	158.02	160.73	152.24	149.56	145.90	136.08	144.93	162.22
32.50°	116.19	123.23	127.73	131.71	130.86	131.59	122.50	121.62	116.87	116.35	112.06	114.84	108.85	101.68	102.52	108.21	116.19
35.00°	89.25	92.78	94.40	99.98	101.41	97.06	96.56	94.75	92.23	90.07	88.54	87.16	84.18	79.41	74.14	81.62	89.25
37.50°	71.55	73.07	75.52	76.87	77.85	75.77	74.01	74.88	73.58	68.61	69.52	68.10	67.58	63.41	61.52	66.38	71.55
40.00°	57.01	58.20	59.78	62.32	61.07	59.96	59.96	61.72	59.60	57.11	55.38	54.59	52.55	51.59	49.20	53.88	57.01
42.50°	46.89	47.46	50.13	50.22	48.88	49.14	47.91	49.87	49.40	47.36	44.52	44.58	43.00	40.41	39.48	43.60	46.89
45.00°	37.69	37.89	41.07	40.49	40.37	39.35	39.22	40.62	41.30	37.21	36.12	35.65	33.93	32.04	30.50	34.57	37.69
47.50°	30.05	29.01	32.00	31.15	32.61	30.20	31.34	31.61	32.77	27.17	28.41	27.18	27.45	24.02	24.74	26.22	30.05
50.00°	22.55	23.00	23.30	25.38	25.29	24.17	24.43	25.38	24.09	23.16	21.05	21.36	21.25	20.73	19.76	21.47	22.55
52.50°	18.72	18.13	18.85	19.83	19.31	19.46	18.93	19.32	18.39	19.01	16.24	16.24	17.59	17.39	16.83	18.07	18.72
55.00°	14.87	14.67	14.60	14.91	13.83	14.57	14.61	14.77	13.33	13.64	12.32	12.44	13.96	13.63	13.61	13.93	14.87
57.50°	10.89	11.56	11.31	10.30	10.15	9.63	11.24	10.48	9.59	8.90	9.31	8.82	10.48	10.09	9.89	9.62	10.89
60.00°	7.36	8.94	8.39	7.91	6.89	7.17	8.40	7.38	5.98	6.74	6.49	6.95	7.49	7.36	6.97	7.79	7.36
62.50°	5.84	6.37	6.52	5.79	5.22	5.07	6.23	4.88	4.81	4.93	4.96	5.16	5.84	5.06	5.03	6.23	5.84
65.00°	4.38	5.00	4.82	4.69	3.74	4.13	4.32	4.01	3.67	4.01	3.55	3.76	4.41	3.79	3.66	4.63	4.38
67.50°	3.09	3.68	3.44	3.53	2.67	3.24	3.11	3.15	2.74	3.02	2.82	2.53	3.39	2.84	2.76	3.10	3.09
70.00°	2.10	2.70	2.47	2.18	1.68	2.64	2.07	2.28	1.95	1.90	2.12	2.39	2.58	2.40	2.15	2.46	2.10
72.50°	1.66	1.85	2.01	1.31	1.73	2.05	1.72	1.78	1.83	1.37	1.73	2.22	2.02	2.03	1.70	1.89	1.66
75.00°	1.44	1.69	1.75	1.18	1.74	1.61	1.44	1.74	1.71	1.53	1.41	2.01	1.73	1.76	1.65	1.61	1.44
77.50°	1.51	1.53	1.67	1.20	1.51	1.39	1.46	1.69	1.61	1.61	1.43	1.82	1.69	1.69	1.77	1.41	1.51
80.00°	1.64	1.39	1.56	1.38	1.32	1.95	1.48	1.64	1.53	1.62	1.44	1.71	1.57	1.79	1.72	1.43	1.64
82.50°	1.81	1.30	1.43	1.47	1.26	2.20	1.35	1.45	1.53	1.59	1.44	1.56	1.43	1.64	1.64	1.48	1.81
85.00°	1.71	1.32	1.39	1.48	1.29	1.73	1.28	1.18	1.60	1.54	1.49	1.37	1.49	1.35	1.40	1.58	1.71
87.50°	1.44	1.32	1.39	1.58	1.51	1.51	1.51	1.27	1.77	1.46	1.65	1.27	1.63	1.36	1.14	1.62	1.44
90.00°	1.35	1.31	1.48	1.72	1.58	1.67	1.66	1.51	1.81	1.38	1.65	1.26	1.58	1.47	1.13	1.58	1.35
92.50°	1.36	1.35	1.59	1.70	1.44	1.80	1.54	1.50	1.73	1.37	1.44	1.28	1.48	1.43	1.14	1.45	1.36
95.00°	1.56	1.47	1.39	1.62	1.39	1.88	1.50	1.43	1.59	1.38	1.41	1.33	1.44	1.36	1.26	1.23	1.56
97.50°	1.82	1.46	1.15	1.49	1.43	1.76	1.65	1.46	1.41	1.40	1.52	1.46	1.41	1.35	1.36	1.33	1.82
100.00°	1.63	1.38	1.36	1.34	1.30	1.49	1.74	1.50	1.35	1.41	1.57	1.63	1.53	1.36	1.32	1.64	1.63
102.50°	1.39	1.39	1.59	1.61	1.06	1.33	1.76	1.64	1.34	1.19	1.56	1.76	1.64	1.27	1.31	1.71	1.39
105.00°	1.37	1.45	1.79	1.92	1.22	1.25	1.70	1.76	1.38	0.99	1.49	1.89	1.54	1.19	1.40	1.68	1.37

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	1196	1196	1196	1196	1167	1167	1167	1167	1113	1113	1113	1063	1063	1063	1018	1018	996
	<b>1</b>	1148	1124	1102	1083	1123	1102	1082	1065	1060	1044	1030	1021	1009	998	985	976	956
	<b>2</b>	1103	1062	1027	999	1081	1044	1013	987	1011	985	964	980	960	942	951	935	917
	<b>3</b>	1061	1007	965	932	1041	993	955	924	966	934	908	941	915	893	918	897	879
	<b>4</b>	1020	958	912	877	1003	946	904	872	925	889	861	904	874	850	886	860	844
	<b>5</b>	983	914	867	831	967	905	860	827	887	849	819	870	837	812	855	827	812
	<b>6</b>	947	875	826	791	934	867	822	788	852	812	783	838	803	777	825	795	781
	<b>7</b>	914	839	790	756	902	833	787	754	820	779	750	808	772	745	797	765	753
	<b>8</b>	883	806	758	725	872	801	755	723	790	749	720	780	743	716	771	738	726
	<b>9</b>	854	776	729	696	844	771	726	695	762	721	693	754	717	690	746	712	701
	<b>10</b>	826	748	702	671	817	744	700	670	736	696	668	729	692	666	722	688	678

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	84.7 fc	3.5 ft
6.5 ft	60.6 fc	4.1 ft
7.5 ft	45.5 fc	4.8 ft
8.0 ft	40.0 fc	5.1 ft
10.0 ft	25.6 fc	6.4 ft
12.0 ft	17.8 fc	7.7 ft
14.0 ft	13.1 fc	8.9 ft
16.0 ft	10.0 fc	10.2 ft
20.0 ft	6.4 fc	12.8 ft
24.0 ft	4.4 fc	15.3 ft
28.0 ft	3.3 fc	17.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	795989	795989	795989
<b>45.00°</b>	16565	18052	17742
<b>55.00°</b>	8055	7910	7492
<b>65.00°</b>	3219	3548	2751
<b>75.00°</b>	1728	2101	2088
<b>85.00°</b>	6096	4954	4586

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	8.9	9.8	9.2	10.1	10.5	8.0	8.9	8.4	9.3	9.6
	<b>3H</b>	9.1	9.9	9.5	10.3	10.7	8.3	9.1	8.7	9.5	9.9
	<b>4H</b>	9.2	9.9	9.6	10.3	10.7	8.4	9.2	8.9	9.6	10.0
	<b>6H</b>	9.3	10.0	9.8	10.4	10.8	8.7	9.4	9.1	9.8	10.2
	<b>8H</b>	9.5	10.2	10.0	10.6	11.0	8.9	9.5	9.3	9.9	10.4
	<b>12H</b>	9.9	10.5	10.3	10.9	11.4	9.1	9.8	9.6	10.2	10.6
<b>4H</b>	<b>2H</b>	8.8	9.6	9.3	10.0	10.4	8.0	8.7	8.4	9.1	9.5
	<b>3H</b>	9.2	9.8	9.6	10.2	10.7	8.4	9.0	8.9	9.5	9.9
	<b>4H</b>	9.3	9.8	9.8	10.3	10.8	8.7	9.2	9.1	9.7	10.1
	<b>6H</b>	9.6	10.1	10.1	10.5	11.0	9.1	9.6	9.6	10.0	10.5
	<b>8H</b>	9.9	10.4	10.4	10.8	11.3	9.4	9.9	9.9	10.3	10.8
	<b>12H</b>	10.4	10.8	11.0	11.3	11.8	9.9	10.3	10.4	10.8	11.3
<b>8H</b>	<b>4H</b>	9.3	9.7	9.8	10.2	10.7	8.7	9.1	9.1	9.6	10.1
	<b>6H</b>	9.7	10.1	10.3	10.6	11.1	9.3	9.7	9.9	10.2	10.7
	<b>8H</b>	10.2	10.5	10.7	11.0	11.6	9.9	10.2	10.5	10.8	11.3
	<b>12H</b>	11.0	11.2	11.5	11.7	12.3	10.7	10.9	11.2	11.4	12.0
<b>12H</b>	<b>4H</b>	9.3	9.6	9.8	10.2	10.7	8.6	9.0	9.2	9.5	10.0
	<b>6H</b>	9.8	10.1	10.3	10.6	11.2	9.4	9.7	9.9	10.2	10.8
	<b>8H</b>	10.3	10.6	10.9	11.1	11.7	10.1	10.3	10.6	10.9	11.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0