

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

STR2 835 10 xx xx RD2XF RB2BSA1 xx xx

2" Adjustable Track Luminaire with extra wide flood optic, acrylic .5" bezel

#### Test Number

SP-01588\_1

#### Test Date

9/27/2023

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	1015
Efficacy	86.06 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.93
Two luminaires, plane 90°	0.93
Four luminaires	0.79

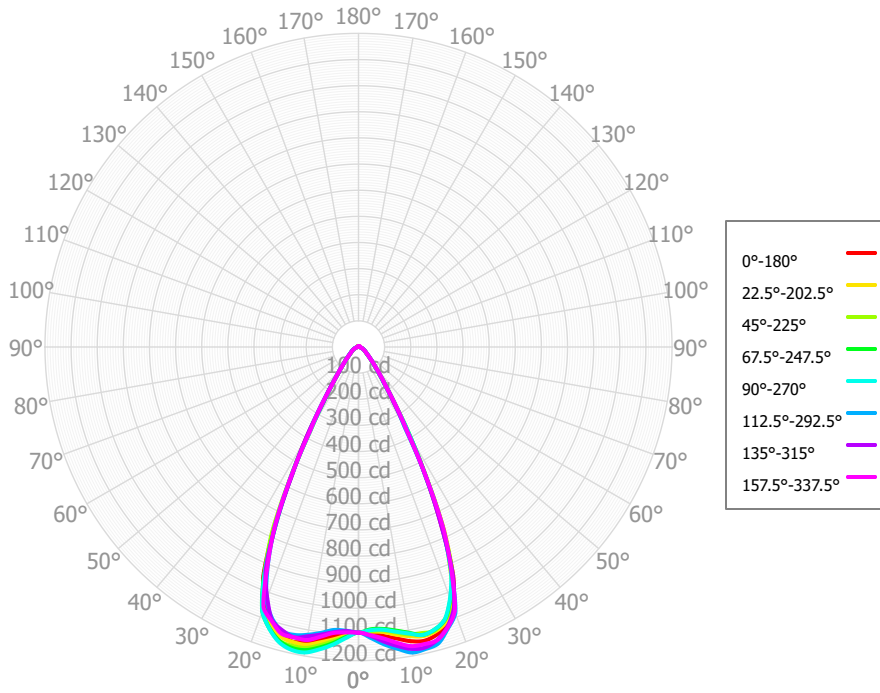
#### Full Beam Angle

0° - 180°	54°
90° - 270°	54°

### IES File Header Contents

Keyword	Value
TEST	SP-01588_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 10 xx xx RD2XF RB2BSA1 xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, acrylic .5" bezel
OTHER	Beam Angle: 54 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°	109.08	10.74%	90.00° - 100.00°	3.18	0.31%
10.00° - 20.00°	318.21	31.34%	100.00° - 110.00°	3.45	0.34%
20.00° - 30.00°	331.62	32.66%	100.00° - 120.00°	6.49	0.64%
30.00° - 40.00°	123.14	12.13%	120.00° - 130.00°	2.00	0.20%
40.00° - 50.00°	52.03	5.12%	130.00° - 140.00°	1.08	0.11%
50.00° - 60.00°	30.57	3.01%	140.00° - 150.00°	0.78	0.08%
60.00° - 70.00°	20.39	2.01%	150.00° - 160.00°	0.60	0.06%
70.00° - 80.00°	11.06	1.09%	160.00° - 170.00°	0.36	0.04%
80.00° - 90.00°	4.77	0.47%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1000.86	98.56%	0.00° - 180.00°	1015.47	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°	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31	1093.31
2.50°	1097.02	1090.72	1088.45	1081.47	1084.70	1087.30	1088.65	1093.70	1097.29	1106.55	1110.76	1111.47	1115.38	1115.46	1107.52	1104.88	1097.02
5.00°	1110.53	1095.14	1089.00	1083.28	1086.49	1087.32	1096.22	1098.66	1111.87	1123.86	1131.04	1138.36	1144.26	1143.12	1132.32	1120.48	1110.53
7.50°	1125.37	1110.77	1102.27	1094.84	1099.23	1103.77	1110.40	1118.62	1130.58	1140.69	1152.19	1160.73	1168.14	1165.89	1154.79	1142.69	1125.37
10.00°	1143.28	1123.82	1117.15	1110.61	1113.56	1118.58	1124.40	1139.08	1143.93	1157.23	1169.62	1178.03	1187.25	1187.49	1173.38	1162.65	1143.28
12.50°	1152.26	1133.67	1121.49	1129.08	1129.10	1129.10	1138.34	1138.17	1155.75	1157.08	1171.41	1179.59	1187.16	1184.05	1178.04	1164.80	1152.26
15.00°	1142.63	1128.36	1124.89	1120.76	1120.24	1126.66	1123.36	1136.40	1140.09	1148.16	1165.31	1165.48	1170.78	1175.64	1161.48	1161.99	1142.63
17.50°	1116.40	1106.30	1095.05	1096.71	1094.95	1093.50	1097.95	1101.59	1117.83	1113.52	1130.17	1130.69	1132.24	1132.80	1126.49	1129.15	1116.40
20.00°	1059.81	1043.53	1063.05	1028.50	1024.52	1031.12	1021.87	1062.14	1041.23	1067.03	1071.55	1076.99	1076.46	1084.16	1066.58	1077.71	1059.81
22.50°	947.57	940.73	917.64	937.47	926.35	908.33	929.50	912.02	953.38	928.42	939.68	945.18	939.64	927.07	943.14	931.11	947.57
25.00°	745.50	777.07	768.52	764.33	758.21	757.54	750.77	758.52	760.31	751.58	784.18	749.89	746.86	755.89	743.42	771.58	745.50
27.50°	554.87	558.59	564.84	554.03	552.17	555.87	548.50	559.61	549.76	560.99	563.00	557.92	555.72	555.61	553.52	557.84	554.87
30.00°	381.08	390.69	363.05	395.60	394.77	385.97	394.66	370.23	395.90	365.47	373.90	368.41	365.61	352.59	374.42	368.77	381.08
32.50°	252.90	263.31	265.09	258.33	261.28	268.56	252.37	268.07	249.29	256.33	261.98	248.66	250.11	258.17	251.25	266.30	252.90
35.00°	184.35	182.01	170.05	183.37	184.62	180.53	183.73	173.61	185.49	173.73	172.98	174.91	176.13	171.18	182.82	178.90	184.35
37.50°	133.57	134.49	132.46	130.39	132.36	135.46	129.48	135.37	130.04	131.01	132.10	129.75	131.96	135.14	134.99	138.34	133.57
40.00°	104.07	102.51	96.49	101.44	102.23	101.09	102.68	100.08	104.28	99.10	98.86	101.25	102.35	100.94	105.11	103.25	104.07
42.50°	81.59	80.64	79.76	79.74	80.34	81.03	80.14	81.66	80.50	79.64	80.16	80.28	81.82	82.79	82.68	82.78	81.59
45.00°	66.58	65.28	63.59	65.48	65.99	65.39	66.03	64.54	66.19	62.99	64.18	63.30	65.31	64.85	66.19	65.32	66.58
47.50°	54.30	53.65	52.51	53.20	54.16	55.02	52.99	53.38	52.28	52.26	52.77	51.82	53.82	54.28	53.99	54.83	54.30
50.00°	44.60	44.95	42.20	44.90	45.88	46.63	45.36	43.40	44.65	42.67	43.60	42.90	44.26	43.95	44.83	45.50	44.60
52.50°	37.87	37.76	37.11	37.47	38.61	40.33	38.21	38.10	37.18	36.85	37.74	36.95	38.39	38.66	38.48	38.59	37.87
55.00°	33.70	33.17	32.32	33.41	34.23	35.39	34.49	33.24	33.86	31.62	32.77	32.21	33.78	33.52	33.95	33.09	33.70
57.50°	30.01	29.77	29.15	29.98	30.55	31.77	30.97	29.87	30.54	28.55	28.99	29.40	30.79	30.21	29.95	30.22	30.01
60.00°	26.67	26.73	25.99	26.71	27.51	28.27	27.32	26.60	26.99	25.74	25.68	27.29	28.28	26.88	26.25	26.97	26.67
62.50°	23.70	23.83	22.85	23.47	24.60	24.87	23.66	23.64	23.49	22.55	22.92	24.00	24.64	23.34	22.91	23.08	23.70
65.00°	20.97	21.00	19.88	20.17	21.57	21.91	20.28	20.64	20.56	19.32	19.93	20.33	20.73	19.91	19.76	19.88	20.97
67.50°	17.97	18.18	17.56	16.85	18.52	19.29	16.93	17.52	17.69	16.51	16.67	17.52	17.93	17.23	17.19	17.70	17.97
70.00°	14.81	15.13	15.18	14.50	15.79	16.66	14.95	14.65	15.42	13.73	13.88	14.93	15.37	14.69	14.89	15.50	14.81
72.50°	12.60	12.01	12.62	12.23	13.11	14.01	12.95	12.35	13.11	11.65	11.52	12.29	13.48	12.91	12.32	13.28	12.60
75.00°	10.90	9.78	10.19	9.73	10.72	11.34	10.58	10.24	10.53	9.59	9.50	9.63	11.72	11.10	9.65	10.83	10.90
77.50°	8.82	7.80	8.16	7.21	8.36	8.67	8.24	8.49	8.12	7.74	7.77	8.10	8.99	9.08	7.74	8.13	8.82
80.00°	6.56	6.47	6.38	6.34	6.53	6.66	6.40	6.81	6.78	5.92	6.38	6.78	6.15	7.15	6.09	6.32	6.56
82.50°	5.00	5.29	5.24	5.51	4.73	5.03	4.71	5.21	5.43	5.18	5.25	5.42	5.28	5.59	4.84	5.49	5.00
85.00°	3.76	4.36	4.20	4.39	4.14	4.00	4.30	4.03	4.06	4.43	4.18	4.05	4.62	4.19	3.70	4.48	3.76
87.50°	3.02	3.47	3.38	3.30	3.60	3.26	3.89	3.52	2.95	3.60	3.16	3.31	3.69	3.37	3.51	3.29	3.02
90.00°	2.46	3.27	2.81	2.87	3.46	3.04	3.45	3.04	2.88	2.84	2.62	2.64	2.73	2.82	3.55	2.85	2.46
92.50°	2.66	3.18	2.73	2.48	3.32	3.03	3.02	2.63	2.86	2.94	2.38	2.70	3.07	3.06	3.22	3.06	2.66
95.00°	3.11	3.00	2.90	2.68	2.89	2.62	2.68	2.55	3.03	3.02	2.41	2.82	3.47	3.17	2.80	3.17	3.11
97.50°	3.29	2.81	3.51	2.89	2.49	2.06	2.39	2.90	3.15	2.89	2.57	2.94	3.45	2.96	2.72	3.20	3.29
100.00°	3.39	2.97	3.73	3.16	2.83	2.38	2.37	3.10	3.07	2.78	2.62	3.05	3.42	2.91	2.69	3.34	3.39
102.50°	3.44	3.16	3.33	3.40	3.15	3.01	2.41	3.13	3.01	2.76	2.61	3.38	3.41	3.23	3.11	3.55	3.44
105.00°	3.48	3.35	3.23	3.48	3.11	3.37	2.73	3.22	3.01	2.75	2.96	3.73	3.40	3.48	3.59	3.55	3.48

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>ptc</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>	1205	1205	1205	1205	1176	1176	1176	1176	1120	1120	1120	1069	1069	1069	1023	1023	1001
	<b>1</b>	1144	1114	1087	1063	1118	1091	1067	1045	1047	1028	1010	1007	991	977	969	958	937
	<b>2</b>	1085	1033	990	954	1061	1014	975	942	979	947	919	946	920	897	916	895	876
	<b>3</b>	1029	962	909	868	1008	946	898	860	918	877	844	891	857	829	866	838	814
	<b>4</b>	977	899	841	797	958	886	833	792	862	817	781	840	801	770	819	787	760
	<b>5</b>	929	843	782	738	911	832	776	734	812	763	726	794	751	718	776	740	711
	<b>6</b>	884	792	731	687	868	783	726	684	767	716	678	751	706	672	736	697	667
	<b>7</b>	842	747	686	643	827	739	682	640	725	674	636	712	666	632	699	659	627
	<b>8</b>	802	706	645	604	789	700	642	602	687	635	598	676	629	595	665	623	592
	<b>9</b>	766	669	609	569	754	663	606	567	653	601	565	643	596	562	633	591	559
	<b>10</b>	732	635	576	537	721	630	574	536	621	569	534	612	565	532	604	561	530

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	36.1 fc	5.6 ft
6.5 ft	25.9 fc	6.6 ft
7.5 ft	19.4 fc	7.6 ft
8.0 ft	17.1 fc	8.1 ft
10.0 ft	10.9 fc	10.2 ft
12.0 ft	7.6 fc	12.2 ft
14.0 ft	5.6 fc	14.3 ft
16.0 ft	4.3 fc	16.3 ft
20.0 ft	2.7 fc	20.4 ft
24.0 ft	1.9 fc	24.4 ft
28.0 ft	1.4 fc	28.5 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
<b>0.00°</b>	339770	339770	339770
<b>45.00°</b>	29261	27949	29003
<b>55.00°</b>	18261	17509	18549
<b>65.00°</b>	15419	14622	15863
<b>75.00°</b>	13085	12239	12871
<b>85.00°</b>	13410	14970	14765

### 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	15.9	17.0	16.3	17.3	17.7	16.1	17.1	16.5	17.4	17.8
	3H	17.4	18.3	17.8	18.7	19.1	17.5	18.5	17.9	18.8	19.2
	4H	17.9	18.8	18.3	19.1	19.6	18.1	18.9	18.5	19.3	19.7
	6H	18.3	19.1	18.8	19.5	19.9	18.5	19.2	18.9	19.7	20.1
	8H	18.5	19.2	18.9	19.6	20.1	18.6	19.3	19.1	19.8	20.2
	12H	18.6	19.3	19.1	19.7	20.2	18.8	19.5	19.2	19.9	20.3
4H	2H	16.3	17.2	16.7	17.5	18.0	16.4	17.3	16.9	17.7	18.1
	3H	18.0	18.7	18.4	19.1	19.6	18.1	18.8	18.6	19.3	19.7
	4H	18.6	19.2	19.1	19.7	20.2	18.8	19.4	19.2	19.9	20.3
	6H	19.1	19.7	19.6	20.2	20.7	19.3	19.8	19.8	20.3	20.8
	8H	19.4	19.9	19.9	20.3	20.8	19.5	20.0	20.0	20.5	21.0
	12H	19.6	20.0	20.1	20.5	21.0	19.7	20.1	20.2	20.7	21.2
8H	4H	18.8	19.3	19.3	19.8	20.3	18.9	19.4	19.4	19.9	20.4
	6H	19.4	19.8	20.0	20.4	20.9	19.6	20.0	20.1	20.5	21.0
	8H	19.8	20.1	20.3	20.7	21.2	19.9	20.2	20.4	20.8	21.3
	12H	20.1	20.4	20.7	21.0	21.6	20.2	20.5	20.8	21.1	21.7
12H	4H	18.8	19.2	19.3	19.7	20.2	18.9	19.4	19.4	19.9	20.4
	6H	19.5	19.8	20.0	20.3	20.9	19.6	20.0	20.2	20.5	21.1
	8H	19.9	20.2	20.4	20.7	21.3	20.0	20.3	20.5	20.8	21.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0