

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2XF RB2BS xx RA2LS

2" Adjustable Track Luminaire with extra wide flood optic, difusing lens and standard bezel

Test Number

SP-01593_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	1007
Efficacy	85.33 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°	0.94
Four luminaires	0.86

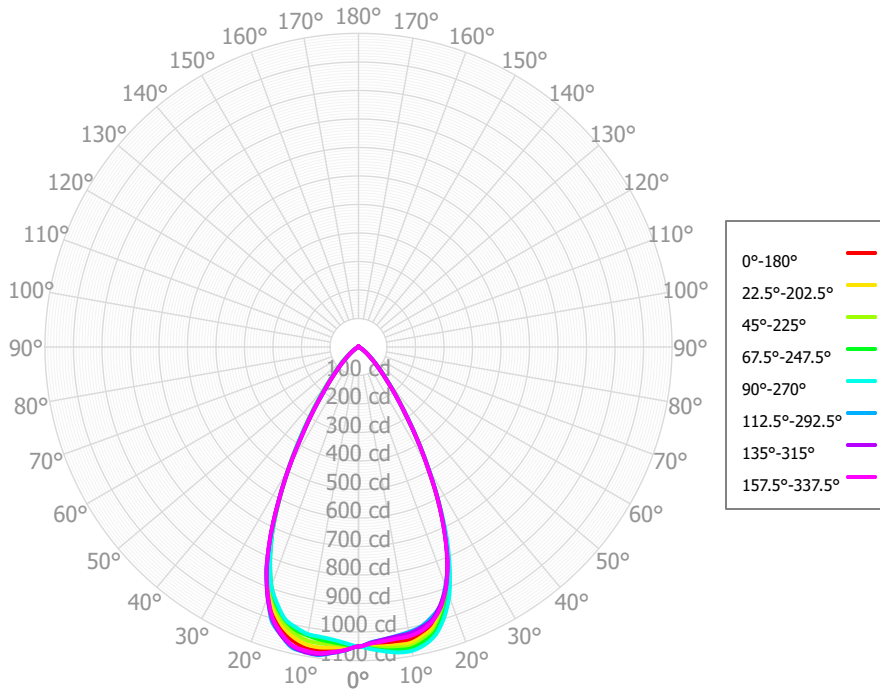
Full Beam Angle

0° - 180°	57°
90° - 270°	58°

IES File Header Contents

Keyword	Value
TEST	SP-01593_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 835 10 xx xx RD2XF RB2BS xx RA2LS
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, difusing lens and standard bezel
OTHER	Beam Angle: 58 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°	102.22	10.15%	90.00° - 100.00°	1.11	0.11%
10.00° - 20.00°	282.19	28.03%	100.00° - 110.00°	1.10	0.11%
20.00° - 30.00°	322.18	32.00%	100.00° - 120.00°	2.15	0.21%
30.00° - 40.00°	185.00	18.37%	120.00° - 130.00°	1.02	0.10%
40.00° - 50.00°	73.38	7.29%	130.00° - 140.00°	0.88	0.09%
50.00° - 60.00°	25.33	2.52%	140.00° - 150.00°	0.75	0.07%
60.00° - 70.00°	6.71	0.67%	150.00° - 160.00°	0.60	0.06%
70.00° - 80.00°	1.73	0.17%	160.00° - 170.00°	0.35	0.03%
80.00° - 90.00°	1.18	0.12%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	999.92	99.31%	0.00° - 180.00°	1006.89	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°	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92	1050.92
2.50°	1045.80	1052.28	1055.72	1059.75	1061.32	1065.39	1064.94	1064.25	1060.23	1055.24	1048.04	1045.10	1040.00	1036.86	1038.34	1041.10	1045.80
5.00°	1042.21	1054.19	1060.25	1068.26	1071.88	1077.95	1077.58	1074.66	1068.96	1058.69	1046.11	1039.42	1030.87	1029.60	1029.80	1035.88	1042.21
7.50°	1042.23	1054.63	1063.24	1072.28	1080.66	1090.07	1087.38	1083.46	1073.20	1062.81	1048.15	1035.27	1025.92	1022.44	1024.19	1032.06	1042.23
10.00°	1042.91	1054.25	1065.75	1073.43	1082.13	1086.28	1086.86	1081.14	1073.10	1059.22	1045.14	1027.94	1022.79	1015.69	1020.80	1030.28	1042.91
12.50°	1029.04	1039.70	1050.02	1059.57	1070.50	1080.02	1075.39	1072.58	1056.46	1044.44	1029.64	1016.66	1008.61	1005.77	1009.33	1019.85	1029.04
15.00°	1012.81	1017.83	1029.14	1036.59	1045.33	1046.95	1047.38	1041.90	1032.51	1017.36	1005.00	992.18	990.05	983.63	992.06	997.87	1012.81
17.50°	962.77	970.10	977.51	987.35	997.28	1010.18	1002.97	999.86	982.93	973.86	959.87	952.64	946.56	952.71	951.80	958.94	962.77
20.00°	908.12	910.22	918.21	923.46	930.85	930.54	933.59	927.97	922.48	910.33	901.14	892.98	893.85	891.14	896.41	898.56	908.12
22.50°	815.60	820.47	821.54	829.93	835.90	846.10	841.09	842.09	828.04	821.49	813.76	811.55	809.59	818.70	813.30	817.71	815.60
25.00°	718.89	717.54	716.34	720.81	729.37	727.30	730.53	728.74	726.36	719.09	716.28	713.82	714.84	712.42	713.21	712.98	718.89
27.50°	602.40	602.53	600.19	604.01	605.91	605.37	604.54	603.30	604.37	600.89	599.38	599.83	602.81	603.77	601.33	601.81	602.40
30.00°	484.05	482.69	481.87	483.52	488.87	486.92	485.50	485.15	486.59	488.18	487.26	489.93	485.43	488.26	482.74	483.72	484.05
32.50°	383.71	381.80	382.40	380.80	380.49	368.71	372.06	369.91	379.83	381.50	383.68	383.90	385.51	380.73	379.48	378.92	383.71
35.00°	284.63	287.86	286.32	285.96	288.70	285.80	281.81	283.64	284.69	292.25	293.49	295.92	290.37	293.97	284.22	287.65	284.63
37.50°	220.36	220.90	221.88	218.43	218.03	204.61	208.81	208.17	217.14	220.69	225.54	223.66	223.55	217.28	214.79	214.94	220.36
40.00°	157.99	163.01	162.23	162.07	161.72	158.85	155.21	157.53	158.71	164.86	168.41	168.79	163.60	165.14	158.03	159.64	157.99
42.50°	122.82	124.19	125.92	123.97	122.26	114.29	115.27	115.21	120.55	123.97	127.76	127.89	125.14	120.35	119.28	118.04	122.82
45.00°	88.53	91.10	92.62	92.62	90.87	88.81	86.04	87.18	87.75	92.52	94.45	96.54	91.45	91.86	88.56	88.60	88.53
47.50°	68.51	69.54	71.33	70.61	68.21	63.57	63.73	63.62	65.79	69.46	71.69	72.44	70.41	67.54	67.08	66.09	68.51
50.00°	48.77	51.19	51.33	51.80	50.69	48.85	47.18	47.67	47.07	51.53	52.74	54.06	51.80	51.65	49.48	49.25	48.77
52.50°	37.50	39.12	38.63	38.72	38.45	34.25	34.10	33.83	34.54	37.80	38.82	39.66	38.77	37.66	36.61	36.20	37.50
55.00°	26.33	28.59	26.54	27.41	28.21	25.67	24.97	24.74	24.15	27.24	27.63	28.98	26.70	27.31	25.53	26.08	26.33
57.50°	19.77	21.37	19.91	20.06	19.84	17.25	18.04	16.81	17.50	19.15	19.84	20.76	19.47	18.74	18.34	18.42	19.77
60.00°	13.31	14.89	13.66	13.83	13.60	12.74	12.46	11.94	12.13	13.41	13.82	14.61	12.96	13.28	12.50	12.54	13.31
62.50°	9.31	10.64	10.02	9.57	9.25	8.35	7.57	7.77	8.80	9.35	9.83	9.71	9.30	8.82	8.92	8.66	9.31
65.00°	5.44	6.82	6.51	5.81	6.12	5.95	5.06	5.50	6.07	6.43	6.75	6.52	6.00	5.99	6.07	6.11	5.44
67.50°	3.93	4.76	4.64	4.12	4.00	3.67	3.70	3.59	4.23	4.28	4.66	4.29	4.48	3.83	4.34	4.12	3.93
70.00°	2.48	2.99	2.82	2.90	2.62	2.76	2.55	2.49	2.91	2.94	3.22	2.97	3.14	2.68	2.93	2.48	2.48
72.50°	1.98	2.23	2.10	1.99	1.82	1.88	1.50	1.52	2.31	2.09	2.43	2.12	2.25	1.81	2.15	1.70	1.98
75.00°	1.50	1.62	1.39	1.16	1.31	1.36	1.15	1.24	1.72	1.69	1.79	1.53	1.40	1.32	1.54	1.42	1.50
77.50°	1.30	1.35	1.27	1.02	1.00	0.90	1.09	1.06	1.15	1.54	1.30	1.08	1.19	1.15	1.29	1.26	1.30
80.00°	1.12	1.12	1.16	1.01	0.94	0.97	1.07	1.10	0.94	1.35	1.00	0.99	1.03	1.39	1.11	1.15	1.12
82.50°	1.18	1.10	1.22	1.05	1.05	1.03	1.06	1.17	1.19	1.13	0.88	1.07	1.04	1.46	1.16	1.07	1.18
85.00°	1.21	1.11	1.28	1.10	0.99	0.99	1.01	1.10	1.23	1.04	0.85	1.07	1.06	1.34	1.25	1.00	1.21
87.50°	1.04	1.20	1.25	1.14	0.82	0.96	0.94	1.01	1.04	1.03	0.88	1.04	0.98	1.19	1.17	1.00	1.04
90.00°	0.92	1.29	1.23	1.18	0.87	0.98	0.97	1.05	0.98	0.99	0.97	0.97	0.90	0.99	1.05	1.05	0.92
92.50°	1.00	1.16	1.18	1.09	1.03	0.99	1.04	1.10	1.04	0.95	1.09	0.90	1.05	0.89	0.99	1.02	1.00
95.00°	1.06	1.01	1.13	0.98	1.03	0.98	0.96	1.03	1.07	1.01	1.11	0.97	1.20	0.90	0.93	0.97	1.06
97.50°	1.01	1.00	1.08	0.96	0.96	0.97	0.84	0.96	1.06	1.12	1.05	1.10	1.17	0.87	0.84	1.01	1.01
100.00°	0.97	1.00	1.03	0.94	1.09	0.94	0.81	0.87	1.11	1.17	1.05	1.09	1.15	0.80	0.75	1.09	0.97
102.50°	0.99	1.16	1.00	0.94	1.32	0.92	0.80	0.78	1.21	1.21	1.11	1.03	1.13	0.83	0.88	1.00	0.99
105.00°	1.01	1.32	0.98	0.95	1.23	0.93	0.89	1.05	1.23	1.24	1.05	0.95	1.13	0.96	1.04	0.84	1.01

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	1197	1197	1197	1197	1168	1168	1168	1168	1115	1115	1115	1066	1066	1066	1021	1021	1000
	1	1140	1111	1085	1062	1114	1088	1065	1045	1046	1028	1011	1008	993	980	972	961	941
	2	1081	1031	990	955	1058	1013	975	943	979	948	922	948	923	901	919	899	881
	3	1025	959	908	867	1005	945	898	860	917	878	845	892	859	831	868	841	824
	4	972	895	838	794	953	883	830	789	860	815	779	839	800	769	819	787	771
	5	922	836	776	732	905	826	770	729	807	759	721	790	747	714	773	737	723
	6	875	784	722	678	859	775	718	676	759	709	671	744	700	665	731	691	679
	7	831	736	675	631	817	729	671	630	715	663	626	703	656	622	691	650	638
	8	790	693	632	590	778	687	629	588	675	623	586	664	617	583	654	612	602
	9	752	654	594	553	741	649	591	552	639	586	550	629	582	547	620	577	568
	10	717	618	559	520	707	614	557	519	605	553	517	597	549	516	589	545	537

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	34.7 fc	6.0 ft
6.5 ft	24.9 fc	7.1 ft
7.5 ft	18.7 fc	8.2 ft
8.0 ft	16.4 fc	8.8 ft
10.0 ft	10.5 fc	11.0 ft
12.0 ft	7.3 fc	13.2 ft
14.0 ft	5.4 fc	15.4 ft
16.0 ft	4.1 fc	17.5 ft
20.0 ft	2.6 fc	21.9 ft
24.0 ft	1.8 fc	26.3 ft
28.0 ft	1.3 fc	30.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	326597	326597	326597
45.00°	38910	40708	39936
55.00°	14264	14378	15284
65.00°	4001	4785	4499
75.00°	1803	1674	1569
85.00°	4305	4556	3523

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	13.1	14.1	13.4	14.4	14.7	12.8	13.8	13.2	14.2	14.5
	3H	13.1	14.0	13.5	14.3	14.7	12.9	13.7	13.3	14.1	14.5
	4H	13.0	13.9	13.5	14.2	14.6	12.8	13.6	13.2	14.0	14.4
	6H	13.0	13.7	13.4	14.1	14.5	12.7	13.5	13.2	13.9	14.3
	8H	13.0	13.7	13.4	14.1	14.5	12.7	13.4	13.2	13.8	14.3
	12H	13.0	13.7	13.4	14.1	14.5	12.7	13.4	13.2	13.8	14.3
4H	2H	13.0	13.8	13.4	14.1	14.6	12.7	13.5	13.1	13.9	14.3
	3H	13.0	13.7	13.4	14.1	14.5	12.8	13.5	13.2	13.9	14.3
	4H	13.0	13.6	13.4	14.0	14.5	12.7	13.3	13.2	13.8	14.2
	6H	13.0	13.5	13.4	13.9	14.4	12.7	13.2	13.2	13.7	14.2
	8H	13.0	13.4	13.5	13.9	14.4	12.7	13.2	13.2	13.6	14.1
	12H	13.0	13.4	13.5	13.9	14.4	12.7	13.2	13.2	13.7	14.2
8H	4H	12.8	13.3	13.3	13.8	14.3	12.6	13.1	13.1	13.5	14.0
	6H	12.9	13.2	13.4	13.7	14.2	12.6	13.0	13.1	13.5	14.0
	8H	12.9	13.2	13.4	13.8	14.3	12.6	13.0	13.2	13.5	14.0
	12H	13.1	13.3	13.6	13.9	14.5	12.8	13.1	13.3	13.6	14.2
12H	4H	12.8	13.2	13.3	13.7	14.2	12.6	13.0	13.1	13.5	14.0
	6H	12.8	13.2	13.4	13.6	14.2	12.5	12.9	13.1	13.4	13.9
	8H	12.9	13.2	13.4	13.7	14.3	12.6	12.9	13.2	13.4	14.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0