

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2SP RB2BS xx xx
2" Adjustable Track Luminaire with spot optic and standard bezel

Test Number

SP-01570_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	957
Efficacy	81.13 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.37
Two luminaires, plane 90°	0.37
Four luminaires	0.36

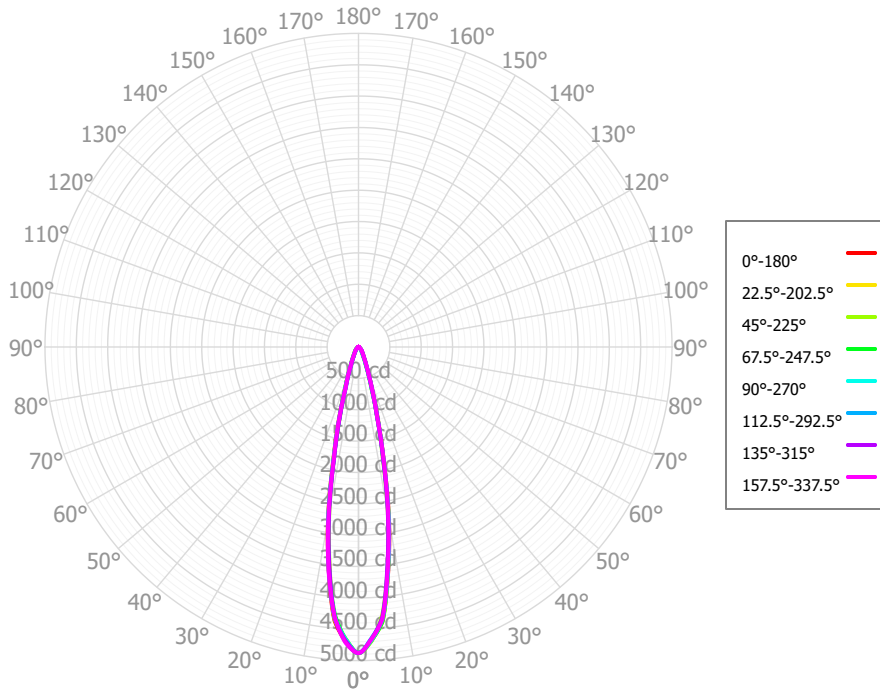
Full Beam Angle

0° - 180°	22°
90° - 270°	22°

IES File Header Contents

Keyword	Value
TEST	SP-01570_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 RD2SP RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with spot optic and standard bezel
OTHER	Beam Angle: 22 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°	360.92	37.70%	90.00° - 100.00°	1.10	0.12%
10.00° - 20.00°	338.17	35.33%	100.00° - 110.00°	1.12	0.12%
20.00° - 30.00°	117.79	12.30%	100.00° - 120.00°	2.18	0.23%
30.00° - 40.00°	63.61	6.64%	120.00° - 130.00°	0.94	0.10%
40.00° - 50.00°	41.55	4.34%	130.00° - 140.00°	0.89	0.09%
50.00° - 60.00°	20.44	2.14%	140.00° - 150.00°	0.79	0.08%
60.00° - 70.00°	5.16	0.54%	150.00° - 160.00°	0.62	0.06%
70.00° - 80.00°	1.45	0.15%	160.00° - 170.00°	0.37	0.04%
80.00° - 90.00°	1.17	0.12%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	950.27	99.27%	0.00° - 180.00°	957.28	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°	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41	4879.41
2.50°	4688.13	4680.85	4699.22	4682.68	4683.63	4704.44	4692.02	4722.14	4693.58	4693.35	4660.97	4667.69	4668.13	4655.91	4665.87	4668.80	4688.13
5.00°	4367.86	4395.41	4307.40	4393.45	4360.47	4325.31	4345.07	4328.42	4379.55	4333.50	4362.42	4294.53	4341.56	4351.07	4335.99	4359.28	4367.86
7.50°	3621.93	3594.21	3567.40	3582.79	3606.85	3620.73	3552.00	3636.42	3618.23	3610.29	3529.94	3580.64	3587.93	3555.09	3530.37	3576.68	3621.93
10.00°	2798.86	2765.85	2708.94	2746.92	2775.38	2760.90	2704.73	2769.13	2793.95	2775.24	2685.67	2753.79	2768.80	2733.30	2697.04	2741.33	2798.86
12.50°	1853.34	1852.17	1764.87	1833.13	1822.59	1794.47	1785.69	1810.45	1861.84	1834.29	1826.26	1818.66	1835.33	1851.99	1806.10	1865.09	1853.34
15.00°	1187.67	1150.71	1167.51	1133.75	1158.22	1180.02	1151.04	1207.54	1193.13	1206.06	1134.60	1195.54	1172.23	1140.75	1153.58	1131.98	1187.67
17.50°	730.04	732.21	673.18	716.73	701.57	662.90	692.66	682.37	735.02	709.26	738.95	707.61	729.19	746.35	728.32	752.33	730.04
20.00°	495.55	476.12	474.63	462.07	468.56	471.61	471.77	494.69	497.57	499.69	480.59	497.87	495.24	486.28	491.51	486.30	495.55
22.50°	329.99	321.43	305.47	306.06	302.95	307.07	307.40	330.42	335.20	331.93	333.58	330.62	334.09	340.77	334.53	345.67	329.99
25.00°	252.42	238.95	230.61	223.41	226.50	230.30	236.43	248.23	254.80	253.43	249.21	254.99	253.38	252.61	256.83	254.80	252.42
27.50°	184.85	173.84	169.23	157.69	159.83	167.40	172.98	184.32	185.07	186.59	186.92	189.73	183.77	186.00	191.36	189.29	184.85
30.00°	150.44	142.83	134.55	128.30	126.06	130.49	140.42	146.45	151.65	151.48	153.68	153.13	150.65	152.76	156.98	153.28	150.44
32.50°	121.79	114.52	108.39	101.45	98.21	104.23	112.96	119.62	122.84	124.54	124.41	124.16	122.04	124.15	127.11	122.96	121.79
35.00°	104.93	97.15	89.90	85.62	82.22	87.10	94.08	100.17	104.22	107.21	107.71	104.43	103.61	108.42	109.65	107.39	104.93
37.50°	90.12	82.33	76.68	72.31	69.44	74.79	79.73	86.27	88.97	93.02	92.52	89.84	88.59	93.36	94.67	92.78	90.12
40.00°	77.19	71.85	65.58	63.17	59.59	64.30	68.90	73.85	77.05	80.54	80.75	78.11	77.01	79.89	82.65	81.40	77.19
42.50°	65.87	61.27	56.27	54.13	51.00	55.76	59.58	64.44	66.47	69.51	69.37	67.81	66.32	67.78	70.80	70.14	65.87
45.00°	55.22	50.60	47.34	45.18	42.91	47.58	50.77	55.02	56.47	58.76	58.38	57.80	56.03	57.14	59.05	59.06	55.22
47.50°	46.19	41.87	40.08	37.91	36.63	41.00	43.08	45.17	47.14	47.90	47.74	47.51	47.49	48.18	49.33	49.41	46.19
50.00°	37.50	33.80	33.12	31.20	30.63	34.54	35.62	36.33	38.06	37.92	37.27	37.90	39.24	40.07	40.07	40.70	37.50
52.50°	30.28	28.10	26.92	25.90	25.47	28.42	29.24	29.31	31.34	31.14	30.47	30.91	31.43	31.74	32.76	32.03	30.28
55.00°	23.00	22.37	20.97	20.59	20.37	22.09	22.82	22.87	24.32	24.39	24.15	23.88	23.73	23.46	25.18	23.37	23.00
57.50°	15.55	15.36	15.29	14.55	15.44	15.55	16.31	16.90	16.40	17.68	16.77	16.81	16.35	16.75	16.58	15.96	15.55
60.00°	9.94	9.64	10.84	9.44	10.93	10.71	10.96	11.94	10.49	11.67	10.38	11.17	10.63	10.78	10.03	9.33	9.94
62.50°	6.48	6.77	7.03	6.28	6.92	6.72	6.74	7.34	7.08	6.14	6.95	6.54	7.04	7.24	6.56	6.37	6.48
65.00°	4.30	4.47	5.24	4.26	4.60	4.62	4.71	5.07	4.99	4.33	4.40	4.39	4.88	4.60	4.32	4.23	4.30
67.50°	2.80	2.75	3.82	3.34	3.17	2.87	3.63	3.14	3.67	3.57	2.99	2.94	3.57	3.20	2.94	3.55	2.80
70.00°	2.26	1.78	2.51	2.52	2.26	2.08	2.76	2.40	2.57	2.66	2.09	2.10	2.35	2.23	2.04	2.73	2.26
72.50°	1.90	1.15	1.45	1.74	1.47	1.47	1.94	1.68	1.53	1.79	1.50	1.39	1.16	1.52	1.28	1.81	1.90
75.00°	1.50	1.11	1.24	1.37	1.14	1.41	1.36	1.03	1.20	1.26	1.14	1.26	1.14	1.13	1.28	1.35	1.50
77.50°	1.15	1.13	1.04	1.09	0.89	1.47	0.92	0.81	0.96	0.90	0.84	1.14	1.13	0.82	1.26	1.05	1.15
80.00°	1.01	0.94	0.86	1.38	0.90	1.67	0.91	1.04	1.09	0.87	0.71	1.04	1.13	0.98	0.93	1.15	1.01
82.50°	1.03	0.89	0.88	1.55	1.02	1.64	0.88	1.07	1.14	0.90	0.64	1.05	1.18	1.10	0.73	1.22	1.03
85.00°	1.28	1.22	1.03	1.38	1.27	1.45	0.82	1.01	1.07	0.99	0.87	1.15	1.30	0.96	0.79	0.96	1.28
87.50°	1.23	1.23	1.11	1.30	1.31	1.16	0.92	0.84	0.99	0.99	1.20	1.16	1.30	0.99	0.85	0.79	1.23
90.00°	0.97	0.87	1.18	1.31	1.22	0.85	1.11	0.68	0.90	0.95	1.71	1.14	1.21	1.31	0.90	0.84	0.97
92.50°	0.88	0.75	1.12	1.18	1.07	0.87	0.93	0.87	0.80	1.00	1.64	1.10	1.08	1.36	0.94	0.90	0.88
95.00°	0.83	0.78	1.07	0.95	0.91	0.91	0.68	1.02	0.68	1.06	1.12	1.08	0.93	1.18	0.97	0.98	0.83
97.50°	1.13	0.79	1.06	1.06	0.88	1.02	0.73	1.04	0.64	1.07	0.97	1.26	1.15	1.13	0.86	1.17	1.13
100.00°	1.35	0.80	1.01	1.24	0.87	1.11	0.77	1.15	0.64	1.06	0.95	1.33	1.34	1.13	0.76	1.41	1.35
102.50°	1.06	1.05	0.90	1.08	1.04	1.18	0.80	1.37	0.91	0.99	0.99	1.10	1.22	1.10	0.89	1.27	1.06
105.00°	0.91	1.22	0.93	0.97	1.09	1.12	0.91	1.28	1.05	0.93	1.03	1.11	1.14	1.06	1.03	1.08	0.91

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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1138	1138	1138	1138	1111	1111	1111	1111	1060	1060	1060	1013	1013	1013	970	970	970	950
	1	1096	1074	1054	1036	1072	1052	1035	1019	1013	999	987	977	966	956	943	935	928	916
	2	1055	1017	986	960	1034	1001	973	949	970	947	927	941	923	907	914	900	887	882
	3	1017	968	931	901	999	955	921	893	930	902	878	907	884	864	886	867	850	850
	4	982	926	885	853	966	915	877	848	895	863	837	876	849	827	859	836	817	821
	5	949	888	845	813	935	879	839	810	863	828	802	847	818	795	833	808	788	794
	6	919	854	811	780	907	847	807	777	834	798	772	821	790	766	809	782	761	769
	7	891	824	781	751	880	818	778	749	807	771	745	796	764	741	786	758	737	746
	8	865	797	755	725	855	792	752	724	783	747	721	774	741	718	765	736	715	725
	9	841	773	731	703	832	769	729	702	760	724	699	753	720	697	745	716	695	705
	10	819	751	710	683	811	747	708	682	740	704	680	733	701	678	727	697	676	688

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	161.3 fc	2.1 ft
6.5 ft	115.5 fc	2.5 ft
7.5 ft	86.7 fc	2.9 ft
8.0 ft	76.2 fc	3.1 ft
10.0 ft	48.8 fc	3.9 ft
12.0 ft	33.9 fc	4.6 ft
14.0 ft	24.9 fc	5.4 ft
16.0 ft	19.1 fc	6.2 ft
20.0 ft	12.2 fc	7.7 ft
24.0 ft	8.5 fc	9.3 ft
28.0 ft	6.2 fc	10.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1516382	1516382	1516382
45.00°	24267	20805	18859
55.00°	12461	11359	11035
65.00°	3161	3851	3383
75.00°	1799	1484	1371
85.00°	4582	3657	4529

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	11.6	12.5	12.0	12.9	13.2	11.8	12.8	12.2	13.1	13.5
	3H	11.6	12.4	12.0	12.8	13.2	11.8	12.7	12.2	13.0	13.4
	4H	11.5	12.3	12.0	12.7	13.1	11.8	12.6	12.2	12.9	13.3
	6H	11.5	12.2	11.9	12.6	13.0	11.7	12.4	12.2	12.8	13.3
	8H	11.5	12.2	12.0	12.6	13.0	11.7	12.4	12.2	12.8	13.2
	12H	11.6	12.2	12.0	12.6	13.1	11.8	12.4	12.2	12.8	13.3
4H	2H	11.4	12.2	11.9	12.6	13.0	11.7	12.5	12.1	12.8	13.2
	3H	11.5	12.1	11.9	12.5	13.0	11.7	12.3	12.1	12.8	13.2
	4H	11.5	12.0	11.9	12.5	12.9	11.7	12.2	12.1	12.7	13.1
	6H	11.5	12.0	12.0	12.4	12.9	11.7	12.2	12.2	12.6	13.1
	8H	11.5	12.0	12.0	12.4	12.9	11.7	12.2	12.2	12.7	13.1
	12H	11.6	12.0	12.1	12.5	13.0	11.9	12.3	12.4	12.8	13.3
8H	4H	11.3	11.8	11.8	12.2	12.7	11.5	12.0	12.0	12.4	12.9
	6H	11.4	11.7	11.9	12.3	12.8	11.6	12.0	12.1	12.5	13.0
	8H	11.5	11.8	12.0	12.3	12.8	11.7	12.1	12.3	12.6	13.1
	12H	11.7	12.0	12.3	12.5	13.1	12.1	12.3	12.6	12.9	13.5
12H	4H	11.3	11.7	11.8	12.2	12.7	11.5	11.9	12.0	12.4	12.9
	6H	11.3	11.7	11.9	12.1	12.7	11.6	11.9	12.1	12.4	12.9
	8H	11.5	11.7	12.0	12.3	12.9	11.7	12.0	12.3	12.5	13.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0