

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 xx xx RD2WW RB2BW xx xx

2" Adjustable Track Luminaire with wall wash optic, and bias wall wash bezel

Test Number

SP-01589

Test Date

9/27/2023

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	491
Efficacy	71.23 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.35
Two luminaires, plane 90°	0.82
Four luminaires	1.02

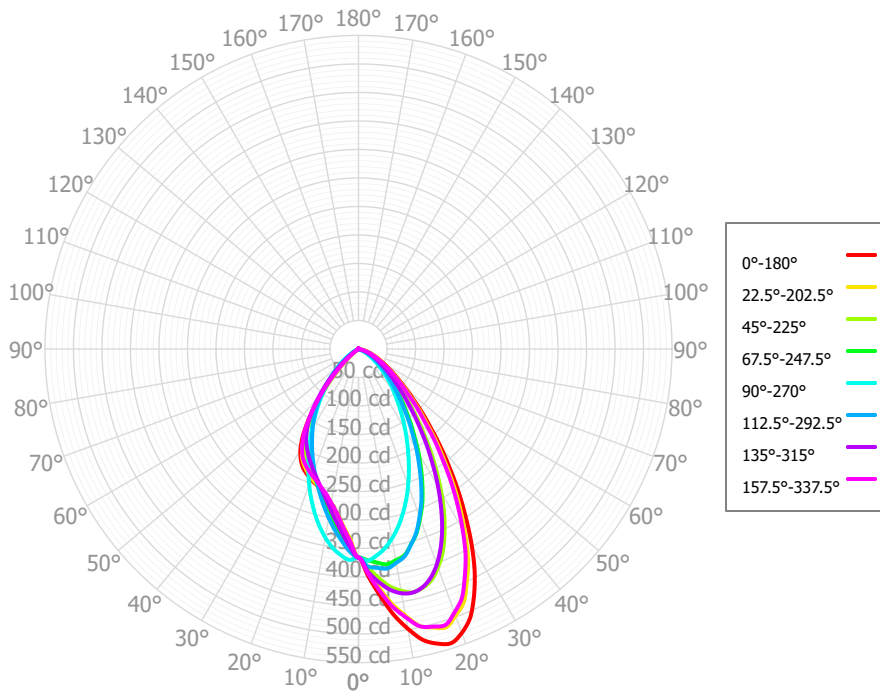
Full Beam Angle

0° - 180°	48°
90° - 270°	36°

IES File Header Contents

Keyword	Value
TEST	SP-01589
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 835 07 xx xx RD2WW RB2BW xx xx
LUMINAIRE	2" Adjustable Track Luminaire with wall wash optic, and bias wall wash bezel
OTHER	Beam Angle: 48 x 36 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
_CRI	80+
_CCTMULT	822 x 0.75, 827 x 0.93, 830 x 1.0, 840 x 1.0
_CCTMULTA	927 x 0.81, 930 x 0.81, 935 x 0.81, 940 x 0.87
_LAMPMULT	10L x 1.36, 13L x 1.82

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	35.14	7.15%	90.00° - 100.00°	0.72	0.15%
10.00° - 20.00°	96.46	19.63%	100.00° - 110.00°	0.68	0.14%
20.00° - 30.00°	128.06	26.06%	100.00° - 120.00°	1.33	0.27%
30.00° - 40.00°	111.89	22.77%	120.00° - 130.00°	0.60	0.12%
40.00° - 50.00°	66.72	13.58%	130.00° - 140.00°	0.53	0.11%
50.00° - 60.00°	30.77	6.26%	140.00° - 150.00°	0.43	0.09%
60.00° - 70.00°	13.23	2.69%	150.00° - 160.00°	0.34	0.07%
70.00° - 80.00°	4.07	0.83%	160.00° - 170.00°	0.21	0.04%
80.00° - 90.00°	0.88	0.18%	170.00° - 180.00°	0.07	0.02%
0.00° - 90.00°	487.22	99.14%	0.00° - 180.00°	491.46	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°	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86	365.86
2.50°	399.60	390.68	383.88	370.81	371.54	355.51	347.18	337.18	336.99	333.64	340.92	346.23	370.39	381.76	391.71	395.52	399.60
5.00°	434.19	420.75	402.80	376.18	363.76	337.79	324.70	312.87	312.10	311.07	319.99	329.15	362.55	385.52	410.65	425.59	434.19
7.50°	469.80	451.00	420.07	380.87	352.77	319.87	303.89	290.50	290.74	289.98	300.51	312.05	351.30	388.22	426.00	455.75	469.80
10.00°	498.28	474.92	430.58	376.31	337.65	300.66	284.38	274.92	274.62	275.48	283.08	294.83	335.84	380.97	435.10	477.85	498.28
12.50°	522.89	497.86	437.20	371.01	320.08	281.45	267.54	260.84	262.25	262.39	268.01	277.68	317.73	372.78	437.77	498.32	522.89
15.00°	535.07	505.76	433.93	355.16	299.56	262.21	252.67	251.58	255.05	254.94	256.02	260.93	297.33	355.43	432.98	504.23	535.07
17.50°	541.02	511.66	425.40	338.66	277.76	243.34	239.99	243.01	248.66	247.64	244.97	244.33	275.59	337.40	420.98	507.53	541.02
20.00°	530.08	497.78	407.86	315.75	254.55	226.22	228.81	236.50	243.28	240.90	235.08	228.53	252.96	313.06	402.07	492.05	530.08
22.50°	511.27	481.72	385.90	292.55	231.07	209.21	217.86	229.70	237.13	233.75	224.72	212.61	229.85	288.37	376.93	473.63	511.27
25.00°	479.24	449.80	357.00	265.32	207.32	192.65	207.06	222.16	230.03	225.26	213.80	196.15	207.20	259.74	347.25	441.17	479.24
27.50°	441.55	416.45	324.94	237.99	184.94	176.34	195.76	212.54	219.09	214.47	201.23	179.76	184.78	230.97	313.78	406.84	441.55
30.00°	397.22	374.38	290.52	210.64	163.89	160.97	184.17	197.82	203.79	196.94	186.91	163.66	163.81	203.68	279.38	365.28	397.22
32.50°	350.26	331.71	255.12	183.34	144.19	145.60	168.74	179.54	182.31	176.48	168.59	147.08	143.52	176.41	244.26	322.92	350.26
35.00°	305.85	289.90	221.83	160.13	125.72	130.21	151.17	153.15	154.34	148.16	146.31	128.71	125.71	153.16	211.39	281.54	305.85
37.50°	262.35	248.14	189.35	137.04	109.56	114.57	129.48	126.38	125.43	120.06	122.56	110.30	108.97	129.99	180.18	240.25	262.35
40.00°	224.07	212.62	161.50	118.11	95.36	98.12	105.68	98.81	95.60	92.53	97.44	91.79	93.94	112.08	152.89	205.18	224.07
42.50°	187.52	177.31	135.29	99.44	82.17	81.76	83.64	73.55	70.29	67.36	74.83	73.77	79.59	94.33	128.28	170.55	187.52
45.00°	157.71	150.09	114.57	86.36	69.79	65.67	62.43	52.78	49.12	47.58	54.39	57.30	66.68	81.62	107.93	144.31	157.71
47.50°	129.94	123.02	95.63	73.47	58.68	50.60	45.56	34.48	31.51	30.03	37.85	42.25	54.30	69.04	90.28	118.50	129.94
50.00°	109.07	104.20	80.66	63.45	48.50	38.21	30.60	20.65	16.96	17.17	24.49	31.19	44.00	59.13	75.95	100.26	109.07
52.50°	90.10	85.50	66.85	53.59	39.42	26.97	19.40	10.02	7.88	7.38	14.36	21.10	34.40	49.35	63.59	82.27	90.10
55.00°	75.77	72.24	56.70	45.76	31.11	18.50	9.71	4.78	3.16	3.59	6.69	13.48	26.62	41.24	53.37	69.76	75.77
57.50°	62.58	59.15	47.51	38.05	24.02	11.18	4.93	1.41	1.02	1.08	2.78	7.15	19.40	33.30	44.33	57.33	62.58
60.00°	52.53	49.98	40.58	31.46	17.73	6.43	1.96	0.94	0.79	0.86	1.53	3.88	13.75	27.33	37.02	48.08	52.53
62.50°	43.17	40.94	34.18	25.02	12.34	2.85	0.98	0.66	0.69	0.72	0.97	1.48	8.53	21.42	30.58	38.88	43.17
65.00°	35.80	34.05	27.98	19.63	7.48	1.65	0.66	0.64	0.69	0.73	0.86	0.98	5.24	16.01	24.64	32.14	35.80
67.50°	28.81	27.26	21.83	14.35	4.28	0.82	0.64	0.63	0.69	0.72	0.82	0.67	2.43	10.80	18.94	25.45	28.81
70.00°	23.14	21.77	16.80	9.78	2.00	0.69	0.72	0.63	0.69	0.71	0.84	0.72	1.40	7.02	13.87	19.91	23.14
72.50°	17.70	16.32	11.98	5.54	1.06	0.61	0.73	0.67	0.68	0.71	0.78	0.74	0.77	3.54	9.06	14.43	17.70
75.00°	12.17	11.26	7.79	3.28	0.81	0.62	0.73	0.76	0.67	0.73	0.69	0.70	0.60	2.02	5.55	10.01	12.17
77.50°	6.64	6.45	3.70	1.34	0.67	0.63	0.68	0.82	0.66	0.74	0.66	0.66	0.51	0.73	2.56	5.75	6.64
80.00°	3.85	3.85	2.15	1.03	0.57	0.65	0.62	0.84	0.64	0.74	0.66	0.64	0.56	0.66	1.34	3.38	3.85
82.50°	1.42	1.51	0.94	0.77	0.55	0.63	0.57	0.81	0.66	0.73	0.69	0.65	0.63	0.61	0.77	1.19	1.42
85.00°	0.94	1.11	0.75	0.72	0.56	0.57	0.51	0.73	0.68	0.70	0.74	0.69	0.68	0.62	0.66	0.89	0.94
87.50°	0.68	0.76	0.68	0.68	0.56	0.53	0.49	0.67	0.72	0.70	0.74	0.73	0.73	0.64	0.70	0.64	0.68
90.00°	0.60	0.75	0.74	0.66	0.56	0.54	0.48	0.61	0.77	0.73	0.73	0.77	0.66	0.63	0.68	0.71	0.60
92.50°	0.53	0.74	0.81	0.67	0.57	0.56	0.49	0.62	0.74	0.73	0.72	0.75	0.56	0.61	0.64	0.78	0.53
95.00°	0.61	0.75	0.77	0.79	0.59	0.57	0.51	0.68	0.67	0.70	0.71	0.64	0.57	0.58	0.60	0.74	0.61
97.50°	0.69	0.75	0.73	0.85	0.59	0.59	0.53	0.69	0.64	0.68	0.71	0.61	0.58	0.55	0.54	0.71	0.69
100.00°	0.64	0.72	0.76	0.75	0.58	0.62	0.56	0.66	0.63	0.67	0.71	0.68	0.60	0.57	0.58	0.70	0.64
102.50°	0.58	0.70	0.79	0.66	0.60	0.61	0.56	0.66	0.65	0.67	0.68	0.73	0.62	0.57	0.63	0.69	0.58
105.00°	0.56	0.71	0.82	0.61	0.61	0.58	0.56	0.70	0.68	0.68	0.65	0.76	0.59	0.50	0.63	0.72	0.56

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	584	584	584	584	570	570	570	570	544	544	544	520	520	520	498	498	487
	1	551	535	521	508	538	524	511	499	503	492	483	484	475	468	466	459	450
	2	517	489	465	445	505	480	458	440	463	445	429	447	432	419	432	420	412
	3	485	447	418	395	474	440	413	391	426	403	384	413	394	378	401	385	377
	4	454	410	378	354	444	404	374	351	393	367	346	382	360	342	372	353	346
	5	426	378	344	319	417	373	341	318	363	335	314	354	330	311	345	324	318
	6	401	349	315	290	392	345	313	289	337	308	287	329	304	284	322	299	294
	7	377	324	290	266	369	320	288	265	313	284	263	307	280	261	300	277	272
	8	355	301	268	244	349	298	266	244	292	263	242	286	260	241	281	257	253
	9	336	281	248	226	329	279	247	225	273	244	224	268	242	223	264	240	236
	10	318	263	231	209	312	261	230	209	256	228	208	252	226	207	248	224	220

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.1 fc	5.2 ft
6.5 ft	8.7 fc	6.1 ft
7.5 ft	6.5 fc	7.1 ft
8.0 ft	5.7 fc	7.6 ft
10.0 ft	3.7 fc	9.5 ft
12.0 ft	2.5 fc	11.3 ft
14.0 ft	1.9 fc	13.2 ft
16.0 ft	1.4 fc	15.1 ft
20.0 ft	0.9 fc	18.9 ft
24.0 ft	0.6 fc	22.7 ft
28.0 ft	0.5 fc	26.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	113700	113700	113700
45.00°	69315	50354	30672
55.00°	41052	30720	16853
65.00°	26324	20578	5498
75.00°	14616	9351	971
85.00°	3368	2687	2010

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	23.0	24.2	23.3	24.5	24.8	11.5	12.7	11.9	13.1	13.4
	3H	23.9	24.9	24.3	25.3	25.6	11.5	12.6	11.9	12.9	13.3
	4H	24.1	25.0	24.5	25.4	25.8	11.5	12.5	11.9	12.8	13.2
	6H	24.1	25.0	24.5	25.3	25.8	11.4	12.3	11.9	12.7	13.1
	8H	24.0	24.9	24.5	25.3	25.7	11.4	12.3	11.9	12.7	13.1
	12H	24.0	24.8	24.4	25.2	25.6	11.4	12.2	11.9	12.6	13.1
4H	2H	23.0	24.0	23.5	24.4	24.8	11.3	12.3	11.7	12.6	13.1
	3H	24.1	24.9	24.5	25.3	25.7	11.3	12.1	11.7	12.5	12.9
	4H	24.3	25.0	24.8	25.5	25.9	11.2	12.0	11.7	12.4	12.9
	6H	24.4	25.0	24.8	25.4	25.9	11.2	11.8	11.7	12.3	12.8
	8H	24.3	24.9	24.8	25.3	25.8	11.2	11.8	11.7	12.3	12.8
	12H	24.3	24.8	24.8	25.3	25.8	11.3	11.8	11.8	12.3	12.8
8H	4H	24.2	24.8	24.7	25.2	25.7	11.1	11.7	11.6	12.2	12.6
	6H	24.3	24.7	24.8	25.2	25.7	11.1	11.6	11.7	12.1	12.6
	8H	24.2	24.6	24.8	25.2	25.7	11.2	11.6	11.7	12.1	12.6
	12H	24.2	24.5	24.7	25.0	25.6	11.3	11.7	11.9	12.2	12.8
12H	4H	24.2	24.7	24.7	25.2	25.7	11.1	11.6	11.6	12.1	12.6
	6H	24.2	24.6	24.7	25.1	25.7	11.1	11.5	11.7	12.0	12.6
	8H	24.2	24.5	24.7	25.0	25.6	11.2	11.6	11.7	12.1	12.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0