

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 13 xx xx RD2WW RB2BW xx xx

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

Test Number

SP-01589_2

Test Date

9/27/2023

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

Summary of Results

Power

Input Watts	14.4 W
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Lumen Output

Output Lumens	894
Efficacy	62.05 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

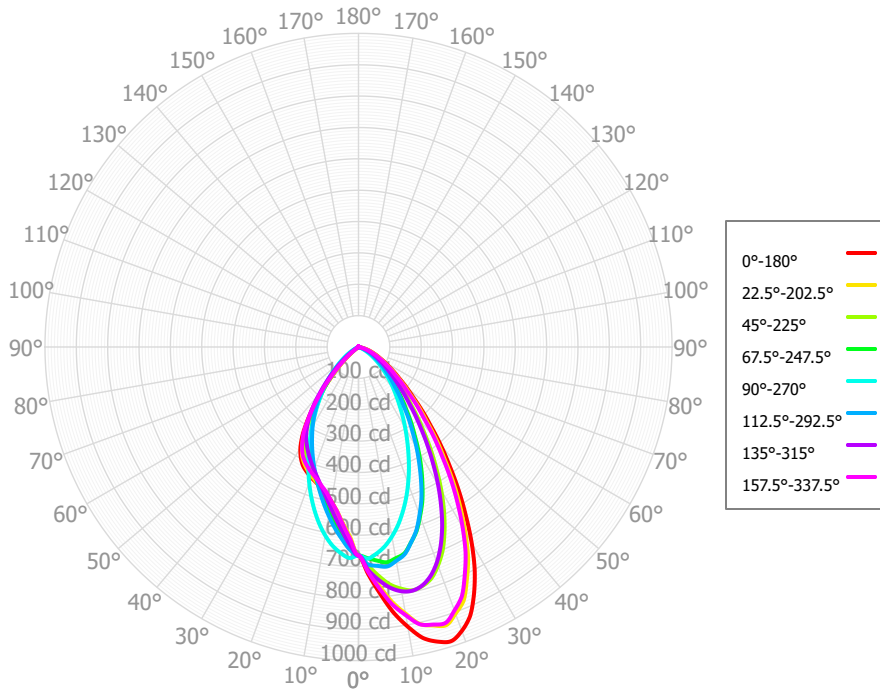
Full Beam Angle

0° - 180°	48°
90° - 270°	36°

IES File Header Contents

Keyword	Value
TEST	SP-01589_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/27/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 835 13 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	07L x .55, 10L x .75

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	63.89	7.15%	90.00° - 100.00°	1.30	0.15%
10.00° - 20.00°	175.39	19.63%	100.00° - 110.00°	1.24	0.14%
20.00° - 30.00°	232.83	26.06%	100.00° - 120.00°	2.43	0.27%
30.00° - 40.00°	203.44	22.77%	120.00° - 130.00°	1.09	0.12%
40.00° - 50.00°	121.31	13.58%	130.00° - 140.00°	0.96	0.11%
50.00° - 60.00°	55.94	6.26%	140.00° - 150.00°	0.79	0.09%
60.00° - 70.00°	24.05	2.69%	150.00° - 160.00°	0.62	0.07%
70.00° - 80.00°	7.41	0.83%	160.00° - 170.00°	0.39	0.04%
80.00° - 90.00°	1.60	0.18%	170.00° - 180.00°	0.13	0.02%
0.00° - 90.00°	885.86	99.14%	0.00° - 180.00°	893.57	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°	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21	665.21
2.50°	726.55	710.33	697.96	674.20	675.54	646.39	631.23	613.05	612.71	606.63	619.86	629.51	673.44	694.11	712.20	719.12	726.55
5.00°	789.44	765.00	732.37	683.96	661.38	614.17	590.37	568.86	567.46	565.58	581.80	598.45	659.18	700.95	746.64	773.81	789.44
7.50°	854.19	820.00	763.77	692.49	641.39	581.58	552.53	528.18	528.62	527.24	546.38	567.37	638.72	705.86	774.55	828.64	854.19
10.00°	905.97	863.49	782.87	684.21	613.92	546.65	517.06	499.86	499.31	500.87	514.69	536.06	610.63	692.67	791.10	868.82	905.97
12.50°	950.72	905.20	794.91	674.56	581.96	511.72	486.44	474.26	476.81	477.07	487.29	504.87	577.70	677.78	795.95	906.03	950.72
15.00°	972.86	919.56	788.96	645.75	544.65	476.74	459.41	457.42	463.73	463.52	465.49	474.41	540.60	646.24	787.24	916.79	972.86
17.50°	983.68	930.29	773.45	615.75	505.03	442.43	436.35	441.84	452.10	450.26	445.40	444.23	501.07	613.45	765.43	922.79	983.68
20.00°	963.78	905.05	741.56	574.09	462.81	411.31	416.03	430.00	442.33	438.00	427.43	415.50	459.93	569.20	731.03	894.63	963.78
22.50°	929.58	875.86	701.65	531.92	420.12	380.38	396.11	417.64	431.14	425.00	408.57	386.56	417.92	524.30	685.32	861.15	929.58
25.00°	871.34	817.82	649.09	482.41	376.95	350.27	376.47	403.93	418.25	409.56	388.73	356.63	376.73	472.26	631.37	802.12	871.34
27.50°	802.82	757.18	590.79	432.71	336.25	320.61	355.93	386.43	398.34	389.95	365.88	326.83	335.96	419.95	570.51	739.71	802.82
30.00°	722.22	680.69	528.22	382.99	297.97	292.68	334.86	359.67	370.53	358.08	339.83	297.56	297.83	370.32	507.97	664.15	722.22
32.50°	636.84	603.10	463.86	333.34	262.16	264.73	306.79	326.43	331.47	320.88	306.53	267.43	260.95	320.74	444.10	587.12	636.84
35.00°	556.09	527.09	403.32	291.15	228.58	236.75	274.85	278.45	280.63	269.38	266.03	234.02	228.57	278.47	384.34	511.89	556.09
37.50°	477.00	451.16	344.27	249.17	199.19	208.30	235.42	229.79	228.06	218.29	222.84	200.55	198.13	236.35	327.60	436.82	477.00
40.00°	407.39	386.59	293.64	214.75	173.38	178.40	192.15	179.66	173.81	168.24	177.17	166.89	170.80	203.78	277.99	373.06	407.39
42.50°	340.94	322.37	245.98	180.80	149.41	148.66	152.08	133.73	127.80	122.47	136.05	134.14	144.71	171.52	233.23	310.09	340.94
45.00°	286.75	272.89	208.31	157.02	126.89	119.40	113.51	95.96	89.31	86.52	98.88	104.18	121.24	148.39	196.24	262.38	286.75
47.50°	236.25	223.68	173.88	133.59	106.68	92.00	82.84	62.70	57.30	54.61	68.82	76.82	98.72	125.53	164.15	215.45	236.25
50.00°	198.31	189.45	146.65	115.36	88.18	69.47	55.64	37.54	30.84	31.21	44.53	56.71	80.00	107.52	138.10	182.29	198.31
52.50°	163.81	155.45	121.55	97.43	71.68	49.03	35.26	18.22	14.34	13.42	26.12	38.36	62.54	89.72	115.61	149.58	163.81
55.00°	137.76	131.35	103.09	83.19	56.56	33.63	17.65	8.69	5.75	6.54	12.16	24.51	48.41	74.97	97.03	126.83	137.76
57.50°	113.78	107.54	86.39	69.17	43.68	20.32	8.96	2.56	1.86	1.96	5.05	13.00	35.28	60.55	80.60	104.24	113.78
60.00°	95.51	90.88	73.78	57.21	32.24	11.69	3.57	1.71	1.43	1.56	2.79	7.05	25.01	49.69	67.30	87.41	95.51
62.50°	78.50	74.44	62.15	45.48	22.43	5.18	1.78	1.19	1.26	1.31	1.77	2.69	15.51	38.94	55.59	70.68	78.50
65.00°	65.09	61.92	50.88	35.69	13.59	3.01	1.20	1.16	1.25	1.32	1.56	1.79	9.53	29.11	44.80	58.44	65.09
67.50°	52.38	49.57	39.69	26.09	7.78	1.50	1.17	1.14	1.25	1.32	1.50	1.22	4.41	19.63	34.44	46.27	52.38
70.00°	42.07	39.59	30.54	17.78	3.64	1.25	1.31	1.14	1.25	1.29	1.52	1.31	2.54	12.76	25.21	36.20	42.07
72.50°	32.18	29.68	21.77	10.08	1.93	1.10	1.33	1.22	1.24	1.29	1.42	1.35	1.40	6.44	16.47	26.23	32.18
75.00°	22.13	20.47	14.16	5.97	1.47	1.13	1.32	1.38	1.22	1.32	1.25	1.27	1.09	3.68	10.09	18.20	22.13
77.50°	12.06	11.73	6.73	2.44	1.21	1.15	1.24	1.49	1.20	1.34	1.20	1.21	0.93	1.32	4.65	10.45	12.06
80.00°	7.00	6.99	3.90	1.87	1.05	1.18	1.13	1.52	1.17	1.35	1.21	1.17	1.02	1.20	2.43	6.14	7.00
82.50°	2.57	2.74	1.72	1.40	1.01	1.15	1.03	1.47	1.19	1.33	1.26	1.17	1.15	1.11	1.40	2.17	2.57
85.00°	1.72	2.01	1.37	1.30	1.02	1.03	0.93	1.33	1.23	1.28	1.34	1.26	1.24	1.14	1.20	1.63	1.72
87.50°	1.23	1.39	1.25	1.23	1.03	0.97	0.89	1.21	1.31	1.28	1.35	1.33	1.33	1.16	1.27	1.16	1.23
90.00°	1.09	1.37	1.34	1.20	1.02	0.99	0.87	1.11	1.40	1.33	1.33	1.40	1.19	1.14	1.24	1.30	1.09
92.50°	0.97	1.35	1.47	1.23	1.04	1.01	0.89	1.12	1.34	1.33	1.31	1.36	1.03	1.12	1.17	1.42	0.97
95.00°	1.11	1.36	1.41	1.44	1.07	1.04	0.92	1.24	1.21	1.27	1.30	1.17	1.03	1.05	1.08	1.35	1.11
97.50°	1.26	1.36	1.33	1.55	1.07	1.08	0.97	1.26	1.16	1.24	1.29	1.12	1.06	1.00	0.99	1.29	1.26
100.00°	1.16	1.32	1.38	1.36	1.06	1.12	1.01	1.19	1.14	1.22	1.29	1.24	1.09	1.03	1.05	1.27	1.16
102.50°	1.05	1.28	1.44	1.19	1.08	1.11	1.02	1.20	1.18	1.22	1.24	1.33	1.12	1.03	1.15	1.26	1.05
105.00°	1.02	1.29	1.49	1.12	1.11	1.05	1.02	1.27	1.24	1.24	1.18	1.38	1.07	0.92	1.15	1.31	1.02

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	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	1062	1062	1062	1062	1036	1036	1036	1036	989	989	989	945	945	945	905	905	886
	1	1002	973	947	923	979	952	929	908	914	895	878	879	864	850	847	835	818
	2	940	888	846	810	919	872	833	800	841	809	781	812	786	763	786	765	748
	3	881	813	760	718	861	799	751	712	774	733	699	750	716	687	728	700	685
	4	826	746	688	643	808	735	681	639	714	667	630	694	654	621	676	642	629
	5	775	687	626	581	759	678	621	578	660	610	571	643	600	565	628	590	578
	6	728	635	573	528	713	627	568	526	612	560	521	598	552	517	585	544	534
	7	685	589	527	483	672	582	523	481	569	516	478	557	510	475	546	504	495
	8	646	548	486	444	634	542	484	443	531	478	440	521	473	438	511	468	459
	9	610	512	451	410	599	507	449	409	497	444	407	488	440	405	479	436	428
	10	578	479	420	381	567	475	418	380	466	414	378	458	410	377	451	407	400

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	22.0 fc	5.2 ft
6.5 ft	15.7 fc	6.1 ft
7.5 ft	11.8 fc	7.1 ft
8.0 ft	10.4 fc	7.6 ft
10.0 ft	6.7 fc	9.5 ft
12.0 ft	4.6 fc	11.3 ft
14.0 ft	3.4 fc	13.2 ft
16.0 ft	2.6 fc	15.1 ft
20.0 ft	1.7 fc	18.9 ft
24.0 ft	1.2 fc	22.7 ft
28.0 ft	0.8 fc	26.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	206727	206727	206727
45.00°	126027	91553	55768
55.00°	74640	55855	30643
65.00°	47861	37414	9997
75.00°	26574	17001	1765
85.00°	6123	4885	3654

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	25.0	26.2	25.4	26.6	26.9	13.6	14.8	14.0	15.1	15.5
	3H	25.9	27.0	26.3	27.3	27.7	13.6	14.7	14.0	15.0	15.4
	4H	26.1	27.1	26.6	27.5	27.9	13.6	14.5	14.0	14.9	15.3
	6H	26.1	27.0	26.6	27.4	27.8	13.5	14.4	13.9	14.8	15.2
	8H	26.1	26.9	26.5	27.4	27.8	13.5	14.3	13.9	14.7	15.2
	12H	26.1	26.9	26.5	27.3	27.7	13.5	14.3	14.0	14.7	15.2
4H	2H	25.1	26.1	25.5	26.5	26.9	13.4	14.4	13.8	14.7	15.1
	3H	26.1	26.9	26.6	27.4	27.8	13.4	14.2	13.8	14.6	15.0
	4H	26.4	27.1	26.8	27.5	28.0	13.3	14.0	13.8	14.5	14.9
	6H	26.4	27.0	26.9	27.5	28.0	13.3	13.9	13.8	14.4	14.9
	8H	26.4	27.0	26.9	27.4	27.9	13.3	13.9	13.8	14.3	14.8
	12H	26.3	26.8	26.8	27.3	27.8	13.4	13.9	13.9	14.4	14.9
8H	4H	26.3	26.9	26.8	27.3	27.8	13.2	13.8	13.7	14.2	14.7
	6H	26.3	26.8	26.8	27.3	27.8	13.2	13.7	13.7	14.2	14.7
	8H	26.3	26.7	26.8	27.2	27.7	13.3	13.7	13.8	14.2	14.7
	12H	26.3	26.6	26.8	27.1	27.7	13.4	13.8	14.0	14.3	14.9
12H	4H	26.2	26.7	26.7	27.2	27.7	13.2	13.7	13.7	14.2	14.7
	6H	26.3	26.7	26.8	27.2	27.7	13.2	13.6	13.7	14.1	14.6
	8H	26.2	26.6	26.8	27.1	27.7	13.3	13.6	13.8	14.1	14.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0