

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2XF RB2BD xx RA2HL

2" Adjustable Track Luminaire with extra wide flood optic, hex louver and
snoot/deep cutoff bezel

Test Number

SP-01584_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	607
Efficacy	51.48 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.78
Two luminaires, plane 90°	0.78
Four luminaires	0.7

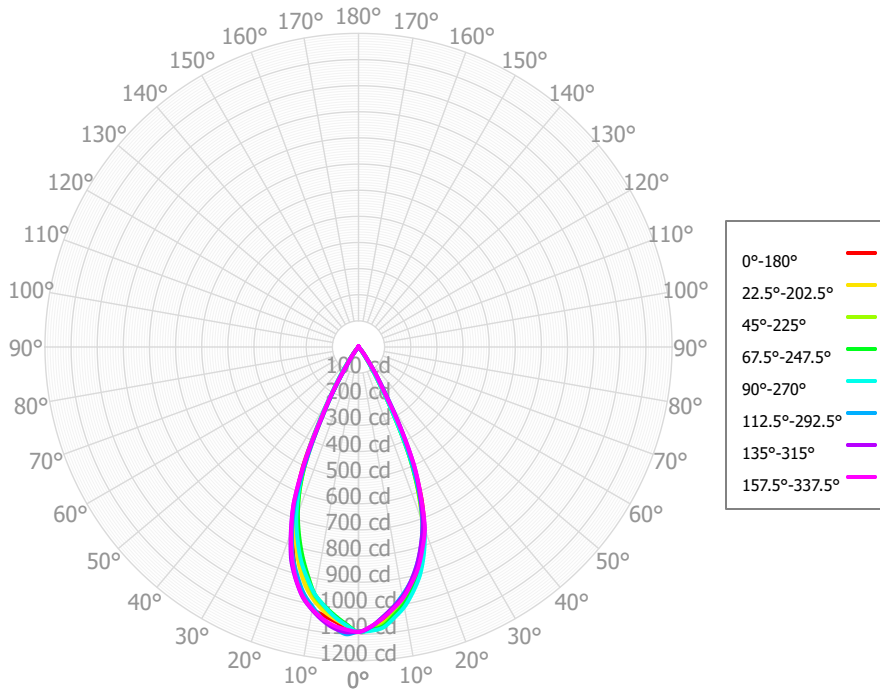
Full Beam Angle

0° - 180°	48°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01584_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 10 xx xx RD2XF RB2BD xx RA2HL
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic, hex louver and snoot/deep cutoff bezel
OTHER	Beam Angle: 48 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°	99.97	16.46%	90.00° - 100.00°	1.30	0.21%
10.00° - 20.00°	242.51	39.92%	100.00° - 110.00°	1.32	0.22%
20.00° - 30.00°	206.28	33.96%	100.00° - 120.00°	2.54	0.42%
30.00° - 40.00°	41.96	6.91%	120.00° - 130.00°	1.17	0.19%
40.00° - 50.00°	3.60	0.59%	130.00° - 140.00°	1.00	0.16%
50.00° - 60.00°	1.17	0.19%	140.00° - 150.00°	0.86	0.14%
60.00° - 70.00°	1.24	0.20%	150.00° - 160.00°	0.64	0.10%
70.00° - 80.00°	1.33	0.22%	160.00° - 170.00°	0.39	0.06%
80.00° - 90.00°	1.33	0.22%	170.00° - 180.00°	0.13	0.02%
0.00° - 90.00°	599.39	98.68%	0.00° - 180.00°	607.41	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°	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18	1090.18
2.50°	1074.68	1082.09	1080.19	1083.89	1087.44	1100.42	1092.75	1082.64	1073.87	1067.21	1064.32	1062.42	1066.33	1072.89	1072.68	1071.03	1074.68
5.00°	1055.79	1062.42	1066.50	1073.30	1078.31	1076.51	1080.28	1071.07	1053.18	1044.66	1036.50	1032.11	1037.37	1039.84	1039.96	1044.07	1055.79
7.50°	1022.02	1030.41	1028.64	1037.71	1045.87	1050.71	1055.43	1049.27	1035.46	1019.41	1004.96	999.22	1000.48	1005.58	1005.89	1011.71	1022.02
10.00°	983.57	993.72	989.06	1000.47	1010.53	1009.84	1021.91	1019.17	1017.97	983.75	969.14	961.74	961.74	965.36	970.90	977.33	983.57
12.50°	932.76	939.04	936.04	952.32	961.58	966.90	982.73	980.05	969.18	936.89	910.42	895.99	906.57	920.86	921.13	929.84	932.76
15.00°	878.11	879.56	878.61	898.37	906.50	905.30	924.36	921.42	917.71	872.29	847.25	828.80	848.42	862.90	864.15	879.02	878.11
17.50°	816.19	800.59	801.59	821.49	832.04	838.05	856.50	846.87	830.75	793.32	769.10	756.23	775.14	797.02	794.32	812.45	816.19
20.00°	736.22	718.47	713.77	731.21	741.11	743.44	757.82	753.12	740.18	700.49	684.91	678.47	696.08	713.70	720.05	743.35	736.22
22.50°	631.05	600.52	594.45	603.90	613.82	630.07	648.32	647.31	625.63	599.28	586.13	587.48	598.32	611.46	616.83	628.06	631.05
25.00°	493.54	479.64	459.55	459.49	465.73	455.74	480.59	491.95	499.55	457.85	466.57	475.54	483.59	477.87	506.70	509.46	493.54
27.50°	321.16	322.79	291.42	281.44	284.13	296.04	298.70	313.87	327.86	298.13	310.66	324.00	330.55	344.45	353.72	345.06	321.16
30.00°	196.71	172.21	161.48	148.65	152.07	169.42	185.37	193.28	182.50	187.83	187.93	200.61	203.89	211.24	194.81	187.22	196.71
32.50°	111.09	111.81	91.23	81.51	81.31	77.53	81.80	91.89	107.36	93.24	108.29	116.53	121.94	119.05	122.93	120.32	111.09
35.00°	61.66	56.46	44.62	38.57	38.66	42.83	49.81	51.79	50.11	53.06	55.07	59.36	63.06	66.02	56.93	59.38	61.66
37.50°	34.74	34.73	26.41	22.68	22.16	19.71	22.05	25.06	28.09	24.60	28.36	31.21	33.27	33.87	33.66	35.19	34.74
40.00°	18.88	15.90	14.16	12.22	11.92	11.22	13.17	14.34	12.53	13.45	12.97	14.18	14.72	16.66	11.93	14.63	18.88
42.50°	8.05	8.54	7.26	6.31	6.19	5.83	4.87	5.55	6.34	4.36	6.11	6.15	7.13	8.04	6.77	8.27	8.05
45.00°	3.98	2.88	3.62	3.29	3.36	3.39	2.98	3.41	2.71	2.95	2.95	2.49	3.16	3.96	2.31	3.36	3.98
47.50°	2.07	1.91	2.17	2.07	2.06	2.00	1.36	1.62	1.94	1.84	1.92	1.48	1.82	2.19	1.83	2.25	2.07
50.00°	1.68	1.22	1.49	1.56	1.62	1.37	1.27	1.44	1.49	1.55	1.60	1.14	1.23	1.32	1.51	1.46	1.68
52.50°	1.62	1.10	1.20	1.38	1.49	1.19	1.20	1.27	1.29	1.29	1.57	1.11	1.02	1.13	1.75	1.28	1.62
55.00°	1.49	1.15	1.13	1.25	1.60	1.25	1.17	1.21	1.14	1.31	1.39	1.14	1.16	1.14	1.77	1.23	1.49
57.50°	1.37	1.46	1.15	1.13	1.77	1.25	1.17	1.15	1.02	1.30	1.18	1.19	1.42	1.27	1.28	1.36	1.37
60.00°	1.37	1.49	1.15	1.19	1.71	1.24	1.24	1.11	1.06	1.14	1.22	1.19	1.38	1.43	0.99	1.36	1.37
62.50°	1.37	1.20	1.14	1.30	1.61	1.36	1.30	1.10	1.18	1.02	1.32	1.17	1.24	1.29	1.07	1.21	1.37
65.00°	1.27	1.06	1.22	1.35	1.46	1.53	1.31	1.21	1.21	1.07	1.31	1.08	1.35	1.13	1.14	1.11	1.27
67.50°	1.21	1.02	1.33	1.41	1.30	1.45	1.31	1.26	1.21	1.17	1.30	0.99	1.51	1.16	1.19	1.06	1.21
70.00°	1.49	1.02	1.33	1.34	1.23	1.32	1.28	1.19	1.23	1.41	1.30	1.16	1.35	1.19	1.26	1.13	1.49
72.50°	1.67	1.05	1.34	1.27	1.16	1.41	1.25	1.07	1.25	1.46	1.31	1.34	1.16	1.37	1.33	1.26	1.67
75.00°	1.36	1.10	1.27	1.16	1.17	1.51	1.21	0.88	1.41	1.19	1.25	1.19	1.19	1.51	1.39	1.26	1.36
77.50°	1.13	1.15	1.22	1.07	1.19	1.47	1.28	0.86	1.57	1.07	1.21	1.07	1.21	1.45	1.44	1.20	1.13
80.00°	1.11	1.16	1.32	1.12	1.32	1.42	1.45	1.06	1.50	1.14	1.32	1.21	1.14	1.43	1.45	1.26	1.11
82.50°	1.18	1.15	1.39	1.16	1.38	1.26	1.34	1.14	1.42	1.10	1.41	1.28	1.07	1.55	1.43	1.36	1.18
85.00°	1.42	1.29	1.24	1.17	1.17	1.12	1.06	1.10	1.30	0.95	1.40	1.00	1.02	1.55	1.36	1.23	1.42
87.50°	1.50	1.46	1.12	1.20	1.02	1.10	1.08	1.15	1.19	0.99	1.37	0.83	0.99	1.21	1.27	1.05	1.50
90.00°	1.32	1.41	1.07	1.26	1.05	1.08	1.23	1.26	1.19	1.16	1.27	1.05	1.10	1.01	1.25	1.03	1.32
92.50°	1.19	1.33	1.09	1.29	1.08	1.05	1.22	1.22	1.18	1.16	1.24	1.21	1.16	1.08	1.25	1.04	1.19
95.00°	1.11	1.33	1.29	1.21	1.11	1.11	1.15	1.10	1.21	1.08	1.35	1.23	1.06	1.14	1.29	1.13	1.11
97.50°	1.13	1.33	1.32	1.18	1.23	1.36	1.13	1.11	1.23	1.04	1.39	1.25	1.00	1.17	1.34	1.23	1.13
100.00°	1.23	1.27	1.04	1.21	1.46	1.50	1.11	1.19	1.18	1.01	1.33	1.25	1.02	1.22	1.40	1.22	1.23
102.50°	1.28	1.21	0.94	1.20	1.57	1.42	1.21	1.18	1.16	1.14	1.32	1.24	1.10	1.29	1.45	1.20	1.28
105.00°	1.29	1.10	1.10	1.13	1.53	1.44	1.31	1.14	1.23	1.32	1.36	1.19	1.28	1.26	1.43	1.14	1.29

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	721	721	721	721	703	703	703	703	670	670	670	640	640	640	612	612	599
	1	691	676	663	650	676	662	650	639	637	627	618	613	605	599	591	585	573
	2	663	637	616	598	649	626	607	590	605	590	576	587	574	563	569	559	548
	3	636	602	576	555	624	593	569	550	577	557	541	561	545	531	547	534	523
	4	610	571	542	520	599	564	537	517	550	528	510	537	518	503	526	510	497
	5	586	542	512	490	576	536	508	487	525	501	482	515	494	478	505	487	473
	6	562	516	485	463	554	511	482	461	502	477	458	493	471	454	485	466	451
	7	540	492	461	440	533	488	459	438	480	454	436	473	450	433	466	446	430
	8	520	470	440	418	513	467	438	417	460	434	415	454	430	413	448	427	411
	9	500	450	420	399	494	447	418	398	441	415	396	436	412	395	431	409	393
	10	481	431	401	381	476	429	400	380	423	397	379	419	395	378	414	392	377

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	36.0 fc	4.9 ft
6.5 ft	25.8 fc	5.8 ft
7.5 ft	19.4 fc	6.7 ft
8.0 ft	17.0 fc	7.1 ft
10.0 ft	10.9 fc	8.9 ft
12.0 ft	7.6 fc	10.7 ft
14.0 ft	5.6 fc	12.5 ft
16.0 ft	4.3 fc	14.2 ft
20.0 ft	2.7 fc	17.8 ft
24.0 ft	1.9 fc	21.4 ft
28.0 ft	1.4 fc	24.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	338797	338797	338797
45.00°	1750	1590	1475
55.00°	810	614	868
65.00°	935	900	1074
75.00°	1637	1527	1401
85.00°	5053	4428	4159

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	-3.3	-2.4	-2.9	-2.1	-1.7	-3.9	-3.0	-3.5	-2.7	-2.3
	3H	-0.5	0.3	-0.1	0.6	1.0	-0.4	0.4	0.0	0.7	1.2
	4H	1.6	2.3	2.0	2.7	3.1	1.4	2.1	1.8	2.5	2.9
	6H	3.2	3.9	3.7	4.3	4.7	3.3	4.0	3.8	4.4	4.8
	8H	4.3	4.9	4.7	5.3	5.8	4.5	5.1	4.9	5.5	6.0
	12H	5.8	6.4	6.3	6.8	7.3	5.6	6.2	6.0	6.6	7.0
4H	2H	-2.7	-1.9	-2.2	-1.6	-1.1	-2.9	-2.1	-2.4	-1.7	-1.3
	3H	0.5	1.1	1.0	1.6	2.0	0.8	1.4	1.3	1.9	2.3
	4H	2.7	3.2	3.1	3.7	4.1	2.8	3.4	3.3	3.8	4.3
	6H	4.6	5.1	5.1	5.6	6.1	5.0	5.4	5.5	5.9	6.4
	8H	5.8	6.2	6.3	6.7	7.2	6.2	6.6	6.7	7.1	7.6
	12H	7.5	7.8	8.0	8.3	8.9	7.3	7.7	7.9	8.2	8.7
8H	4H	3.5	3.9	4.0	4.4	4.9	3.5	4.0	4.1	4.4	5.0
	6H	5.8	6.1	6.3	6.7	7.2	6.1	6.4	6.6	6.9	7.4
	8H	7.2	7.5	7.7	8.0	8.5	7.4	7.7	8.0	8.3	8.8
	12H	9.0	9.2	9.5	9.8	10.4	8.8	9.0	9.3	9.5	10.1
12H	4H	3.8	4.1	4.3	4.6	5.1	3.7	4.1	4.3	4.6	5.1
	6H	6.2	6.5	6.8	7.0	7.6	6.4	6.7	7.0	7.2	7.8
	8H	7.7	8.0	8.3	8.5	9.1	7.9	8.1	8.4	8.7	9.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0