

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 07 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

Test Date

9/26/2023

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	445
Efficacy	64.56 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

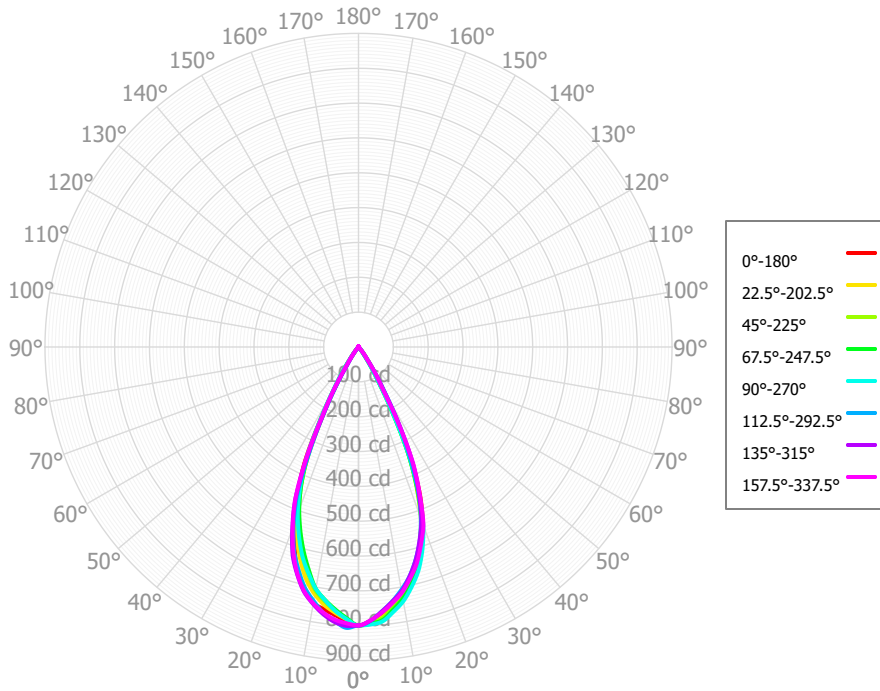
Full Beam Angle

0° - 180°	48°
90° - 270°	47°

IES File Header Contents

Keyword	Value
TEST	SP-01584
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/26/2023
ISSUEDATE	10/02/2023
LUMCAT	STR2 835 07 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°	73.31	16.46%	90.00° - 100.00°	0.95	0.21%
10.00° - 20.00°	177.84	39.92%	100.00° - 110.00°	0.97	0.22%
20.00° - 30.00°	151.27	33.96%	100.00° - 120.00°	1.86	0.42%
30.00° - 40.00°	30.77	6.91%	120.00° - 130.00°	0.85	0.19%
40.00° - 50.00°	2.64	0.59%	130.00° - 140.00°	0.73	0.16%
50.00° - 60.00°	0.86	0.19%	140.00° - 150.00°	0.63	0.14%
60.00° - 70.00°	0.91	0.20%	150.00° - 160.00°	0.47	0.10%
70.00° - 80.00°	0.98	0.22%	160.00° - 170.00°	0.28	0.06%
80.00° - 90.00°	0.98	0.22%	170.00° - 180.00°	0.10	0.02%
0.00° - 90.00°	439.55	98.68%	0.00° - 180.00°	445.43	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°	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47	799.47
2.50°	788.10	793.53	792.14	794.85	797.46	806.98	801.35	793.94	787.51	782.62	780.50	779.11	781.97	786.78	786.63	785.42	788.10
5.00°	774.25	779.11	782.10	787.08	790.76	789.44	792.20	785.45	772.33	766.08	760.10	756.88	760.74	762.55	762.64	765.65	774.25
7.50°	749.48	755.63	754.33	760.98	766.97	770.52	773.98	769.46	759.34	747.56	736.97	732.76	733.68	737.42	737.65	741.92	749.48
10.00°	721.28	728.73	725.31	733.68	741.05	740.55	749.40	747.39	746.51	721.42	710.71	705.28	705.28	707.93	712.00	716.71	721.28
12.50°	684.02	688.63	686.43	698.37	705.16	709.06	720.67	718.70	710.73	687.06	667.64	657.06	664.82	675.30	675.50	681.88	684.02
15.00°	643.94	645.01	644.31	658.80	664.77	663.89	677.86	675.71	672.99	639.68	621.32	607.78	622.17	632.80	633.71	644.62	643.94
17.50°	598.54	587.10	587.83	602.43	610.16	614.57	628.10	621.04	609.21	581.77	564.00	554.57	568.43	584.48	582.50	595.80	598.54
20.00°	539.90	526.88	523.43	536.22	543.48	545.19	555.73	552.29	542.80	513.69	502.26	497.55	510.46	523.38	528.04	545.13	539.90
22.50°	462.77	440.38	435.93	442.86	450.13	462.05	475.43	474.70	458.80	439.47	429.83	430.82	438.77	448.40	452.34	460.58	462.77
25.00°	361.93	351.73	337.00	336.96	341.54	334.21	352.43	360.77	366.34	335.75	342.15	348.73	354.63	350.44	371.58	373.60	361.93
27.50°	235.52	236.71	213.71	206.39	208.36	217.09	219.04	230.17	240.43	218.63	227.82	237.60	242.40	252.60	259.39	253.05	235.52
30.00°	144.25	126.29	118.42	109.01	111.52	124.24	135.94	141.74	133.84	137.74	137.82	147.11	149.52	154.91	142.86	137.30	144.25
32.50°	81.47	82.00	66.90	59.77	59.63	56.85	59.99	67.39	78.73	68.38	79.41	85.46	89.42	87.30	90.15	88.23	81.47
35.00°	45.21	41.41	32.72	28.28	28.35	31.41	36.53	37.98	36.75	38.91	40.38	43.53	46.25	48.42	41.75	43.55	45.21
37.50°	25.47	25.47	19.37	16.63	16.25	14.45	16.17	18.38	20.60	18.04	20.80	22.89	24.40	24.84	24.69	25.81	25.47
40.00°	13.84	11.66	10.38	8.96	8.74	8.23	9.66	10.51	9.19	9.87	9.51	10.40	10.80	12.22	8.75	10.73	13.84
42.50°	5.90	6.26	5.33	4.63	4.54	4.28	3.57	4.07	4.65	3.19	4.48	4.51	5.23	5.90	4.97	6.07	5.90
45.00°	2.92	2.11	2.65	2.41	2.46	2.49	2.18	2.50	1.98	2.16	2.16	1.83	2.32	2.90	1.69	2.46	2.92
47.50°	1.52	1.40	1.59	1.52	1.51	1.46	1.00	1.19	1.42	1.35	1.41	1.08	1.34	1.60	1.34	1.65	1.52
50.00°	1.23	0.89	1.09	1.14	1.19	1.01	0.93	1.05	1.09	1.14	1.17	0.84	0.90	0.97	1.11	1.07	1.23
52.50°	1.19	0.80	0.88	1.01	1.09	0.87	0.88	0.93	0.95	0.95	1.15	0.82	0.75	0.83	1.28	0.94	1.19
55.00°	1.10	0.84	0.83	0.92	1.17	0.92	0.86	0.89	0.84	0.96	1.02	0.84	0.85	0.83	1.30	0.90	1.10
57.50°	1.00	1.07	0.84	0.83	1.30	0.92	0.85	0.85	0.75	0.95	0.86	0.87	1.04	0.93	0.94	1.00	1.00
60.00°	1.00	1.09	0.84	0.87	1.26	0.91	0.91	0.81	0.78	0.83	0.90	0.87	1.01	1.05	0.72	1.00	1.00
62.50°	1.01	0.88	0.83	0.95	1.18	1.00	0.95	0.81	0.87	0.75	0.97	0.86	0.91	0.95	0.78	0.89	1.01
65.00°	0.93	0.77	0.90	0.99	1.07	1.12	0.96	0.89	0.89	0.78	0.96	0.80	0.99	0.83	0.83	0.82	0.93
67.50°	0.89	0.75	0.97	1.03	0.95	1.06	0.96	0.93	0.89	0.86	0.95	0.72	1.11	0.85	0.87	0.78	0.89
70.00°	1.09	0.75	0.98	0.98	0.90	0.97	0.94	0.87	0.90	1.03	0.96	0.85	0.99	0.88	0.92	0.83	1.09
72.50°	1.22	0.77	0.98	0.93	0.85	1.03	0.92	0.79	0.92	1.07	0.96	0.98	0.85	1.00	0.98	0.93	1.22
75.00°	1.00	0.80	0.93	0.85	0.86	1.11	0.88	0.65	1.03	0.87	0.91	0.87	0.87	1.11	1.02	0.93	1.00
77.50°	0.83	0.85	0.89	0.78	0.87	1.08	0.94	0.63	1.15	0.78	0.89	0.78	0.88	1.06	1.06	0.88	0.83
80.00°	0.82	0.85	0.97	0.82	0.97	1.04	1.07	0.78	1.10	0.84	0.97	0.89	0.84	1.05	1.06	0.92	0.82
82.50°	0.86	0.84	1.02	0.85	1.01	0.93	0.98	0.83	1.04	0.81	1.03	0.94	0.79	1.13	1.05	0.99	0.86
85.00°	1.04	0.94	0.91	0.86	0.86	0.82	0.78	0.81	0.95	0.70	1.03	0.73	0.74	1.13	1.00	0.90	1.04
87.50°	1.10	1.07	0.82	0.88	0.75	0.81	0.79	0.84	0.88	0.72	1.00	0.61	0.73	0.89	0.93	0.77	1.10
90.00°	0.97	1.03	0.78	0.93	0.77	0.79	0.90	0.92	0.87	0.85	0.93	0.77	0.81	0.74	0.91	0.76	0.97
92.50°	0.87	0.98	0.80	0.94	0.79	0.77	0.89	0.90	0.87	0.85	0.91	0.89	0.85	0.79	0.91	0.76	0.87
95.00°	0.82	0.97	0.95	0.89	0.81	0.81	0.84	0.81	0.89	0.79	0.99	0.91	0.78	0.83	0.95	0.83	0.82
97.50°	0.83	0.97	0.97	0.86	0.90	1.00	0.83	0.82	0.90	0.76	1.02	0.92	0.74	0.86	0.98	0.90	0.83
100.00°	0.90	0.93	0.76	0.89	1.07	1.10	0.81	0.87	0.86	0.74	0.98	0.92	0.75	0.90	1.02	0.89	0.90
102.50°	0.94	0.89	0.69	0.88	1.15	1.04	0.88	0.86	0.85	0.84	0.97	0.91	0.81	0.95	1.06	0.88	0.94
105.00°	0.95	0.80	0.81	0.83	1.13	1.06	0.96	0.84	0.90	0.97	0.99	0.87	0.94	0.92	1.05	0.83	0.95

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	529	529	529	529	516	516	516	516	492	492	492	469	469	469	449	449	440
	1	507	496	486	477	496	486	477	469	467	460	453	449	444	439	433	429	420
	2	486	467	451	438	476	459	445	433	444	432	423	430	421	413	417	410	402
	3	466	442	422	407	457	435	418	404	423	408	396	412	400	390	401	391	384
	4	447	419	397	381	439	413	394	379	403	387	374	394	380	369	386	374	367
	5	429	398	376	359	422	393	373	357	385	367	354	377	362	350	370	357	351
	6	412	379	356	340	406	375	354	338	368	350	336	362	346	333	356	342	336
	7	396	361	338	322	391	358	337	321	352	333	319	347	330	317	342	327	321
	8	381	345	322	307	376	342	321	306	337	318	304	333	316	303	328	313	308
	9	367	330	308	293	362	328	306	292	324	304	291	320	302	290	316	300	295
	10	353	316	294	279	349	314	293	279	311	291	278	307	289	277	304	288	283

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	26.4 fc	4.9 ft
6.5 ft	18.9 fc	5.8 ft
7.5 ft	14.2 fc	6.7 ft
8.0 ft	12.5 fc	7.1 ft
10.0 ft	8.0 fc	8.9 ft
12.0 ft	5.6 fc	10.7 ft
14.0 ft	4.1 fc	12.5 ft
16.0 ft	3.1 fc	14.2 ft
20.0 ft	2.0 fc	17.8 ft
24.0 ft	1.4 fc	21.4 ft
28.0 ft	1.0 fc	24.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	248451	248451	248451
45.00°	1284	1166	1082
55.00°	594	450	636
65.00°	686	660	787
75.00°	1201	1120	1028
85.00°	3705	3247	3050

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	-4.4	-3.5	-4.0	-3.2	-2.8	-5.0	-4.1	-4.6	-3.8	-3.4
	3H	-1.6	-0.8	-1.2	-0.4	0.0	-1.5	-0.7	-1.1	-0.3	0.1
	4H	0.5	1.2	0.9	1.6	2.0	0.3	1.0	0.7	1.4	1.8
	6H	2.2	2.8	2.6	3.2	3.6	2.3	2.9	2.7	3.3	3.8
	8H	3.2	3.8	3.7	4.2	4.7	3.4	4.0	3.9	4.4	4.9
	12H	4.7	5.3	5.2	5.7	6.2	4.5	5.1	5.0	5.5	6.0
4H	2H	-3.7	-3.0	-3.3	-2.6	-2.2	-3.9	-3.2	-3.5	-2.8	-2.4
	3H	-0.5	0.0	-0.1	0.5	0.9	-0.2	0.3	0.2	0.8	1.2
	4H	1.6	2.1	2.1	2.6	3.1	1.8	2.3	2.2	2.7	3.2
	6H	3.6	4.0	4.1	4.5	5.0	3.9	4.4	4.4	4.8	5.4
	8H	4.8	5.2	5.3	5.6	6.2	5.1	5.5	5.6	6.0	6.5
	12H	6.4	6.8	6.9	7.3	7.8	6.3	6.6	6.8	7.1	7.6
8H	4H	2.4	2.9	2.9	3.3	3.8	2.5	2.9	3.0	3.4	3.9
	6H	4.7	5.0	5.3	5.6	6.1	5.0	5.3	5.5	5.8	6.4
	8H	6.1	6.4	6.7	6.9	7.5	6.3	6.6	6.9	7.2	7.7
	12H	7.9	8.2	8.5	8.7	9.3	7.7	7.9	8.2	8.4	9.1
12H	4H	2.7	3.0	3.2	3.6	4.1	2.7	3.0	3.2	3.5	4.0
	6H	5.1	5.4	5.7	5.9	6.5	5.3	5.6	5.9	6.1	6.7
	8H	6.6	6.9	7.2	7.4	8.0	6.8	7.1	7.4	7.6	8.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0