

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 835 10 xx xx RD2XF RB2BD xx xx

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

Test Number

SP-01580_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	907
Efficacy	76.86 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.91
Two luminaires, plane 90°	0.91
Four luminaires	0.78

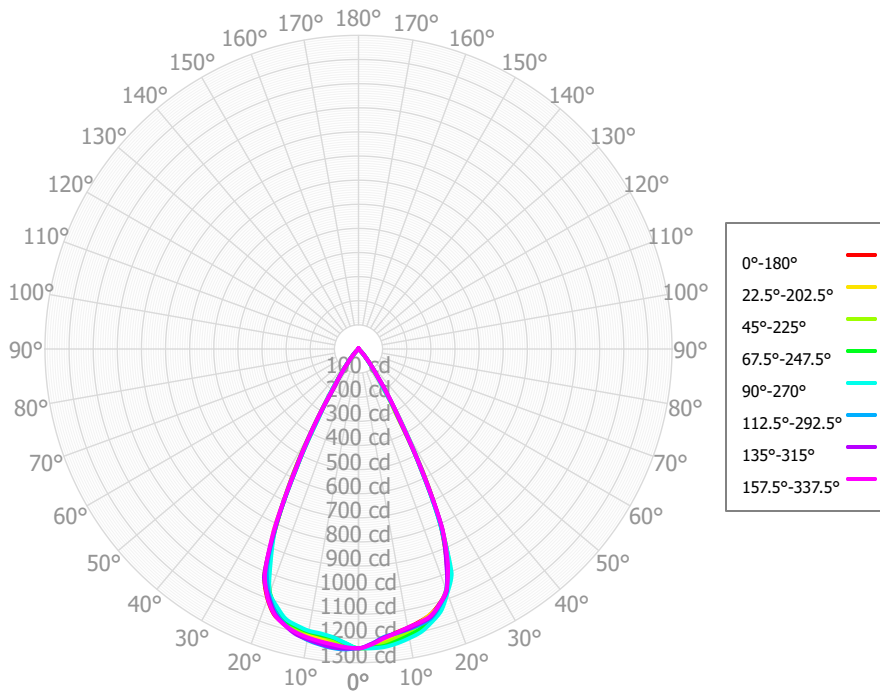
Full Beam Angle

0° - 180°	54°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-01580_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 RD2XF RB2BD xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic and snoot/deep cutoff bezel
OTHER	Beam Angle: 54 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°	117.37	12.94%	90.00° - 100.00°	1.34	0.15%
10.00° - 20.00°	325.16	35.85%	100.00° - 110.00°	1.34	0.15%
20.00° - 30.00°	344.77	38.02%	100.00° - 120.00°	2.57	0.28%
30.00° - 40.00°	91.86	10.13%	120.00° - 130.00°	1.18	0.13%
40.00° - 50.00°	14.11	1.56%	130.00° - 140.00°	1.05	0.12%
50.00° - 60.00°	1.46	0.16%	140.00° - 150.00°	0.88	0.10%
60.00° - 70.00°	1.25	0.14%	150.00° - 160.00°	0.69	0.08%
70.00° - 80.00°	1.28	0.14%	160.00° - 170.00°	0.42	0.05%
80.00° - 90.00°	1.36	0.15%	170.00° - 180.00°	0.14	0.02%
0.00° - 90.00°	898.62	99.09%	0.00° - 180.00°	906.90	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°	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95	1240.95
2.50°	1232.70	1230.95	1239.72	1239.22	1242.17	1246.84	1243.77	1237.57	1238.06	1232.14	1226.69	1222.32	1220.59	1224.60	1223.74	1226.74	1232.70
5.00°	1207.47	1217.11	1225.37	1235.69	1240.26	1244.65	1241.75	1229.67	1226.21	1216.58	1211.95	1202.34	1200.30	1199.38	1201.65	1204.50	1207.47
7.50°	1186.64	1197.86	1209.04	1221.26	1230.90	1236.02	1232.86	1222.69	1211.97	1208.34	1195.81	1196.29	1190.26	1190.20	1188.18	1188.56	1186.64
10.00°	1174.09	1179.38	1190.71	1206.00	1217.43	1224.85	1222.14	1214.45	1204.93	1200.82	1191.58	1190.04	1186.41	1181.03	1179.15	1173.10	1174.09
12.50°	1159.44	1162.34	1170.73	1188.43	1201.59	1206.37	1210.16	1202.90	1198.58	1191.71	1191.12	1180.01	1174.78	1171.94	1165.89	1162.00	1159.44
15.00°	1142.08	1141.20	1149.59	1164.07	1172.75	1181.49	1184.32	1185.01	1179.50	1180.38	1171.05	1165.48	1159.89	1157.54	1151.22	1147.46	1142.08
17.50°	1110.62	1114.74	1114.13	1126.97	1138.90	1144.10	1151.93	1156.16	1157.48	1143.61	1147.45	1128.62	1121.63	1118.47	1112.83	1113.19	1110.62
20.00°	1065.93	1063.26	1071.55	1070.80	1077.46	1084.26	1092.00	1100.99	1102.83	1094.85	1088.19	1074.66	1077.28	1063.01	1069.81	1064.83	1065.93
22.50°	956.54	989.00	955.52	989.96	1009.55	994.24	1023.69	1014.26	1021.40	983.70	1023.53	968.95	950.70	960.47	949.49	969.28	956.54
25.00°	804.78	811.89	815.80	817.05	799.95	816.72	812.37	831.70	807.76	832.63	802.58	813.31	812.29	807.08	821.51	823.10	804.78
27.50°	588.96	567.46	574.06	558.14	573.11	554.27	575.39	566.08	591.48	561.44	583.22	559.32	568.50	557.75	573.08	568.44	588.96
30.00°	344.70	375.88	312.49	359.70	374.34	355.42	375.57	364.79	367.26	338.19	378.48	354.28	327.72	356.73	336.60	361.96	344.70
32.50°	219.10	207.74	205.22	200.68	184.67	199.71	181.71	202.28	195.27	208.91	199.42	217.41	220.22	220.37	225.19	225.82	219.10
35.00°	128.20	130.57	111.23	120.93	126.39	119.91	125.79	121.37	125.66	116.22	132.67	126.07	121.63	129.88	126.29	132.47	128.20
37.50°	84.93	79.99	78.01	76.19	73.38	75.18	73.30	74.61	73.78	74.29	77.05	79.17	81.75	82.44	86.21	84.10	84.93
40.00°	49.28	52.36	46.36	49.98	50.41	48.58	49.88	47.68	46.48	44.48	50.88	47.74	46.61	50.78	51.32	51.80	49.28
42.50°	30.25	28.40	29.65	29.15	29.69	27.55	28.57	25.93	26.49	26.45	28.76	26.86	28.30	29.47	30.95	31.33	30.25
45.00°	12.62	16.39	14.76	16.60	16.19	15.56	16.04	15.01	13.63	14.30	13.97	14.25	13.58	16.10	14.92	17.38	12.62
47.50°	7.33	5.31	7.98	5.36	6.11	5.11	6.27	5.54	6.36	6.13	4.85	5.63	7.03	6.38	7.15	6.82	7.33
50.00°	2.59	3.41	2.82	3.17	3.32	3.08	3.75	3.26	2.91	2.76	2.85	2.86	2.69	3.13	2.38	3.07	2.59
52.50°	1.94	1.70	2.05	1.49	1.60	1.60	2.02	1.35	1.58	1.69	1.69	1.91	1.83	1.78	1.53	1.64	1.94
55.00°	1.42	1.39	1.49	1.54	1.44	1.50	1.67	1.30	1.27	1.54	1.30	1.52	1.30	1.37	1.12	1.40	1.42
57.50°	1.39	1.15	1.31	1.57	1.27	1.39	1.56	1.27	1.16	1.68	1.26	1.23	1.12	1.12	1.11	1.41	1.39
60.00°	1.33	1.20	1.24	1.38	1.09	1.21	1.75	1.41	1.11	1.52	1.46	1.26	1.14	1.17	1.14	1.44	1.33
62.50°	1.20	1.22	1.30	1.22	1.10	1.07	1.64	1.48	1.18	1.30	1.36	1.31	1.30	1.24	1.21	1.49	1.20
65.00°	1.17	1.18	1.28	1.20	1.24	1.08	1.25	1.27	1.26	1.31	1.12	1.24	1.30	1.24	1.17	1.48	1.17
67.50°	1.31	1.21	1.19	1.18	1.20	1.11	1.17	1.20	1.40	1.33	1.21	1.17	1.21	1.22	1.08	1.46	1.31
70.00°	1.31	1.37	1.18	1.18	1.05	1.20	1.27	1.40	1.53	1.27	1.40	1.18	1.19	1.07	1.08	1.29	1.31
72.50°	1.14	1.38	1.22	1.17	1.06	1.23	1.30	1.48	1.27	1.23	1.44	1.19	1.18	0.95	1.10	1.17	1.14
75.00°	1.10	1.24	1.20	1.17	1.12	1.18	1.28	1.34	1.03	1.34	1.45	1.22	1.14	0.89	1.07	1.25	1.10
77.50°	1.17	1.20	1.17	1.21	1.25	1.17	1.30	1.35	1.07	1.41	1.27	1.22	1.10	0.90	1.02	1.31	1.17
80.00°	1.32	1.26	1.05	1.31	1.39	1.23	1.32	1.51	1.11	1.27	1.10	1.15	1.14	1.09	1.20	1.31	1.32
82.50°	1.50	1.32	0.91	1.35	1.18	1.22	1.35	1.51	1.12	1.18	1.18	1.14	1.20	1.18	1.39	1.27	1.50
85.00°	1.44	1.40	1.03	1.35	0.95	1.15	1.38	1.40	1.17	1.23	1.26	1.25	1.28	1.09	1.40	1.15	1.44
87.50°	1.30	1.35	1.19	1.33	1.02	1.17	1.39	1.29	1.28	1.26	1.35	1.27	1.35	1.08	1.41	1.14	1.30
90.00°	1.14	1.26	1.30	1.29	1.09	1.25	1.38	1.17	1.32	1.25	1.38	1.19	1.28	1.17	1.34	1.28	1.14
92.50°	0.99	1.31	1.41	1.24	1.06	1.22	1.29	1.12	1.25	1.20	1.21	1.11	1.22	1.28	1.29	1.25	0.99
95.00°	1.21	1.40	1.31	1.18	1.07	1.16	1.23	1.08	1.20	1.11	1.09	1.01	1.19	1.42	1.35	1.05	1.21
97.50°	1.49	1.16	1.23	1.20	1.32	1.30	1.36	1.08	1.18	1.14	1.08	1.13	1.16	1.47	1.43	1.06	1.49
100.00°	1.47	0.88	1.21	1.25	1.48	1.49	1.40	1.09	1.22	1.26	1.10	1.38	1.17	1.46	1.53	1.21	1.47
102.50°	1.43	1.06	1.21	1.27	1.39	1.38	1.15	1.29	1.30	1.14	1.16	1.26	1.18	1.44	1.47	1.40	1.43
105.00°	1.34	1.23	1.23	1.29	1.34	1.23	1.12	1.50	1.30	0.86	1.18	0.99	1.21	1.42	1.13	1.60	1.34

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	1078	1078	1078	1078	1052	1052	1052	1052	1003	1003	1003	959	959	959	918	918	899
	1	1032	1008	987	969	1009	988	969	952	950	935	922	915	904	893	883	874	856
	2	987	946	913	885	966	930	900	875	900	876	854	872	852	835	846	831	814
	3	944	891	850	818	925	878	841	811	854	822	797	831	805	784	810	789	773
	4	902	841	796	761	886	830	789	756	810	775	747	792	762	737	774	749	735
	5	863	795	748	713	849	786	742	709	770	732	702	754	721	695	740	712	699
	6	826	753	705	670	813	746	700	667	732	692	662	719	684	657	707	676	665
	7	791	715	666	632	779	709	663	630	697	656	626	686	650	622	676	643	633
	8	757	680	631	597	747	674	628	596	664	623	593	655	618	590	646	613	603
	9	726	647	599	566	716	643	597	565	634	592	563	626	588	561	618	584	575
	10	696	617	569	538	688	613	568	537	605	564	535	598	560	533	592	557	549

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	41.0 fc	5.6 ft
6.5 ft	29.4 fc	6.7 ft
7.5 ft	22.1 fc	7.7 ft
8.0 ft	19.4 fc	8.2 ft
10.0 ft	12.4 fc	10.2 ft
12.0 ft	8.6 fc	12.3 ft
14.0 ft	6.3 fc	14.3 ft
16.0 ft	4.8 fc	16.4 ft
20.0 ft	3.1 fc	20.5 ft
24.0 ft	2.2 fc	24.6 ft
28.0 ft	1.6 fc	28.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	385652	385652	385652
45.00°	5547	6489	7117
55.00°	770	808	780
65.00°	862	942	915
75.00°	1322	1447	1346
85.00°	5150	3675	3380

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	-5.2	-4.3	-4.8	-4.0	-3.6	-5.3	-4.4	-4.9	-4.1	-3.7
	3H	-1.6	-0.9	-1.2	-0.5	-0.1	-2.2	-1.5	-1.8	-1.1	-0.7
	4H	-0.1	0.6	0.3	1.0	1.4	-0.5	0.2	-0.1	0.6	1.0
	6H	2.0	2.6	2.4	3.0	3.4	1.7	2.3	2.1	2.7	3.1
	8H	3.4	4.0	3.8	4.4	4.9	2.8	3.4	3.3	3.8	4.3
	12H	4.9	5.5	5.4	5.9	6.4	4.0	4.6	4.5	5.0	5.5
4H	2H	-4.3	-3.6	-3.9	-3.2	-2.8	-4.4	-3.7	-4.0	-3.3	-2.9
	3H	-0.6	0.0	-0.1	0.5	0.9	-0.9	-0.3	-0.5	0.1	0.5
	4H	1.2	1.8	1.7	2.2	2.7	1.0	1.5	1.4	1.9	2.4
	6H	3.5	4.0	4.0	4.4	4.9	3.2	3.7	3.7	4.2	4.6
	8H	5.0	5.4	5.5	5.9	6.4	4.4	4.9	4.9	5.3	5.8
	12H	6.6	7.0	7.1	7.5	8.0	5.8	6.1	6.3	6.6	7.1
8H	4H	1.8	2.3	2.3	2.7	3.2	1.9	2.3	2.4	2.8	3.3
	6H	4.4	4.8	5.0	5.3	5.8	4.3	4.6	4.8	5.2	5.7
	8H	6.1	6.4	6.6	6.9	7.4	5.7	6.0	6.2	6.5	7.0
	12H	7.9	8.2	8.5	8.7	9.3	7.2	7.5	7.8	8.0	8.6
12H	4H	2.0	2.4	2.6	2.9	3.4	2.1	2.5	2.6	3.0	3.5
	6H	4.7	5.0	5.3	5.5	6.1	4.7	5.0	5.2	5.5	6.0
	8H	6.5	6.7	7.0	7.3	7.9	6.2	6.4	6.7	6.9	7.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0