

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STR2 9DW 10 xx xx RD2XF RB2BS xx xx

2" Adjustable Track Luminaire with extra wide flood optic and standard
bezel

Test Number

SP-01599

Test Date

9/28/2023

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

Summary of Results

Power

Input Watts	14.3 W
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Lumen Output

Output Lumens	1064
Efficacy	74.4 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.02
Two luminaires, plane 90°	1.02
Four luminaires	0.89

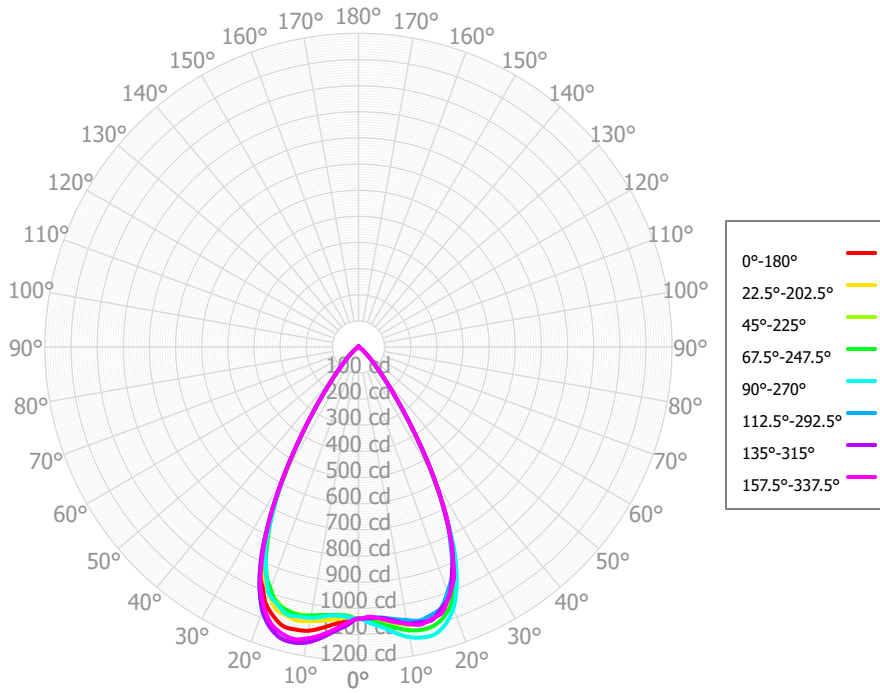
Full Beam Angle

0° - 180°	60°
90° - 270°	60°

IES File Header Contents

Keyword	Value
TEST	SP-01599
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/28/2023
ISSUEDATE	10/03/2023
LUMCAT	STR2 9DW 10 xx xx RD2XF RB2BS xx xx
LUMINAIRE	2" Adjustable Track Luminaire with extra wide flood optic and standard bezel
OTHER	Beam Angle: 60 deg
OTHER	90 CRI, Dim to Warm 3000K to 1800K tested
OTHER	CCT Output Multipliers: N/A, dim to warm
OTHER	Only available in 1000 lumens
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°	103.57	9.73%	90.00° - 100.00°	1.48	0.14%
10.00° - 20.00°	304.64	28.63%	100.00° - 110.00°	1.46	0.14%
20.00° - 30.00°	377.37	35.47%	100.00° - 120.00°	2.85	0.27%
30.00° - 40.00°	193.10	18.15%	120.00° - 130.00°	1.28	0.12%
40.00° - 50.00°	54.42	5.12%	130.00° - 140.00°	1.16	0.11%
50.00° - 60.00°	14.53	1.37%	140.00° - 150.00°	0.98	0.09%
60.00° - 70.00°	4.10	0.39%	150.00° - 160.00°	0.73	0.07%
70.00° - 80.00°	1.65	0.15%	160.00° - 170.00°	0.44	0.04%
80.00° - 90.00°	1.47	0.14%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	1054.85	99.15%	0.00° - 180.00°	1063.92	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°	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19	1040.19
2.50°	1041.37	1039.22	1043.48	1048.73	1058.19	1063.64	1067.56	1057.55	1051.13	1036.87	1032.60	1029.15	1034.57	1035.80	1039.37	1033.47	1041.37
5.00°	1045.65	1051.42	1053.12	1066.20	1078.01	1093.99	1093.85	1086.14	1065.01	1046.35	1031.17	1030.27	1031.20	1039.87	1041.48	1046.09	1045.65
7.50°	1062.22	1063.28	1067.56	1083.58	1105.06	1122.02	1124.79	1112.86	1085.05	1056.32	1038.07	1034.73	1040.98	1050.36	1056.93	1061.77	1062.22
10.00°	1078.10	1073.23	1079.44	1100.80	1127.55	1146.70	1148.87	1132.94	1102.84	1065.14	1045.92	1042.95	1052.65	1061.34	1074.84	1075.29	1078.10
12.50°	1081.00	1079.69	1083.81	1109.32	1138.49	1157.75	1157.73	1144.80	1108.22	1073.00	1047.18	1052.18	1056.50	1072.49	1079.50	1088.64	1081.00
15.00°	1080.91	1072.24	1080.29	1105.72	1137.09	1153.01	1153.24	1134.90	1107.14	1064.52	1048.08	1043.78	1059.70	1063.05	1082.57	1078.11	1080.91
17.50°	1054.41	1055.78	1059.13	1084.36	1110.83	1125.68	1125.26	1111.14	1081.16	1051.66	1023.73	1032.10	1032.90	1048.29	1050.77	1065.71	1054.41
20.00°	1020.25	1012.56	1020.68	1042.70	1063.73	1076.86	1073.98	1058.34	1041.38	1003.22	996.70	983.85	1004.00	997.21	1017.03	1013.30	1020.25
22.50°	944.54	950.45	951.19	968.32	983.13	991.91	989.74	981.70	961.83	945.13	921.75	931.19	924.12	939.54	935.41	955.75	944.54
25.00°	855.85	845.07	852.91	863.85	872.83	879.35	876.62	865.71	862.73	835.94	840.37	824.70	839.90	833.97	850.88	844.67	855.85
27.50°	716.70	721.13	713.53	726.15	723.97	736.10	730.37	730.70	720.00	717.17	704.03	715.19	706.81	722.96	715.38	727.20	716.70
30.00°	574.21	563.55	567.68	563.37	572.20	573.72	578.61	570.12	574.13	563.05	566.34	562.87	572.25	574.16	578.83	570.20	574.21
32.50°	422.12	419.07	414.26	419.74	417.37	427.81	421.67	425.18	422.70	418.01	421.37	412.24	427.83	423.36	432.97	420.25	422.12
35.00°	289.85	293.67	291.65	287.76	294.02	289.99	298.21	297.16	296.25	298.55	289.01	299.12	294.48	308.30	296.36	300.67	289.85
37.50°	202.10	197.89	198.02	199.54	197.67	200.99	200.12	202.12	205.75	198.12	204.67	192.05	209.89	196.52	210.49	196.37	202.10
40.00°	132.43	137.06	133.55	132.55	132.96	131.02	135.55	136.35	137.87	139.28	132.67	139.92	136.04	142.56	134.62	139.72	132.43
42.50°	94.55	93.10	91.58	92.72	90.48	91.81	91.70	92.57	96.09	92.53	95.83	91.90	97.34	91.72	97.90	92.10	94.55
45.00°	65.08	65.34	63.84	63.19	62.90	61.60	63.27	64.46	65.74	66.75	64.99	67.05	64.76	68.30	65.94	66.37	65.08
47.50°	47.67	45.74	44.96	45.28	43.62	44.02	42.35	45.00	46.22	45.95	47.45	44.89	47.46	46.54	47.67	45.09	47.67
50.00°	33.77	32.58	31.92	30.71	30.94	29.16	29.27	30.55	31.75	32.10	32.77	33.33	32.63	33.78	32.20	32.21	33.77
52.50°	23.95	22.98	21.79	21.55	21.22	20.30	19.23	20.85	21.12	21.53	23.18	22.83	22.61	22.38	23.07	21.92	23.95
55.00°	16.09	15.62	14.94	13.52	14.59	12.29	13.13	13.33	14.36	14.67	15.47	15.46	14.73	16.18	15.41	15.62	16.09
57.50°	10.05	10.68	9.37	9.92	9.03	9.50	8.16	9.32	10.00	9.84	10.40	9.62	10.20	10.93	10.39	10.58	10.05
60.00°	6.56	6.98	7.11	6.91	6.79	7.13	6.25	6.56	7.51	6.87	6.91	7.22	6.80	8.35	6.83	7.08	6.56
62.50°	5.01	5.14	5.85	5.48	5.41	5.44	4.99	5.06	5.95	4.87	5.25	5.26	4.84	6.09	5.37	4.77	5.01
65.00°	3.68	4.05	4.19	4.17	4.22	3.79	3.84	3.89	4.32	3.58	3.88	4.09	3.48	4.55	4.12	3.67	3.68
67.50°	2.48	2.95	2.45	3.06	3.07	3.00	2.72	2.85	2.68	2.68	2.80	3.12	2.76	3.28	3.11	2.69	2.48
70.00°	1.88	1.86	1.91	1.97	2.38	2.25	2.04	1.85	1.93	2.01	2.11	2.44	2.26	2.49	2.34	1.81	1.88
72.50°	1.59	1.46	1.54	1.70	1.75	1.91	1.40	1.60	1.45	1.59	1.73	1.88	1.93	1.96	1.79	1.38	1.59
75.00°	1.39	1.22	1.37	1.45	1.45	1.64	1.38	1.46	1.28	1.29	1.51	1.44	1.64	1.82	1.58	1.26	1.39
77.50°	1.24	1.19	1.21	1.40	1.17	1.78	1.38	1.48	1.19	1.33	1.38	1.30	1.37	1.69	1.64	1.27	1.24
80.00°	1.26	1.18	1.16	1.35	1.38	1.86	1.53	1.51	1.19	1.51	1.37	1.44	1.33	1.60	1.52	1.35	1.26
82.50°	1.34	1.21	1.11	1.31	1.58	1.63	1.67	1.39	1.20	1.35	1.41	1.44	1.43	1.47	1.29	1.41	1.34
85.00°	1.25	1.23	1.14	1.29	1.53	1.47	1.53	1.28	1.32	1.11	1.31	1.32	1.39	1.32	1.24	1.46	1.25
87.50°	1.13	1.22	1.17	1.38	1.49	1.50	1.40	1.30	1.44	1.11	1.15	1.39	1.30	1.33	1.30	1.27	1.13
90.00°	1.10	1.21	1.17	1.43	1.54	1.52	1.34	1.32	1.45	1.16	1.12	1.56	1.31	1.47	1.38	0.99	1.10
92.50°	1.08	1.26	1.19	1.36	1.59	1.48	1.29	1.35	1.46	1.32	1.13	1.52	1.35	1.51	1.48	1.07	1.08
95.00°	1.16	1.32	1.30	1.29	1.60	1.47	1.31	1.39	1.35	1.49	1.27	1.37	1.34	1.50	1.38	1.24	1.16
97.50°	1.25	1.49	1.37	1.19	1.61	1.52	1.33	1.40	1.25	1.34	1.44	1.31	1.31	1.46	1.21	1.36	1.25
100.00°	1.24	1.64	1.29	1.14	1.56	1.52	1.35	1.40	1.30	1.17	1.46	1.28	1.32	1.41	1.32	1.47	1.24
102.50°	1.22	1.58	1.23	1.15	1.52	1.44	1.34	1.34	1.33	1.29	1.46	1.33	1.34	1.39	1.49	1.36	1.22
105.00°	1.25	1.49	1.26	1.27	1.48	1.47	1.27	1.29	1.21	1.41	1.49	1.39	1.41	1.38	1.60	1.24	1.25

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	1264	1264	1264	1264	1234	1234	1234	1234	1177	1177	1177	1125	1125	1125	1077	1077	1055
	1	1205	1176	1149	1125	1178	1152	1128	1106	1107	1088	1071	1066	1051	1037	1028	1016	995
	2	1146	1094	1051	1015	1121	1075	1036	1003	1039	1007	980	1006	980	957	975	955	936
	3	1088	1020	968	926	1066	1005	956	918	976	935	902	949	915	886	924	896	872
	4	1034	954	895	851	1014	941	887	845	917	871	834	895	855	823	874	841	813
	5	982	893	832	786	964	883	825	782	863	813	774	844	801	767	827	789	759
	6	933	839	775	730	917	830	770	727	813	761	722	797	751	716	782	742	710
	7	887	789	725	681	872	781	721	679	767	713	674	754	706	670	741	698	666
	8	844	744	680	637	831	737	677	635	725	671	632	713	664	629	702	658	626
	9	804	702	640	597	792	697	637	596	686	632	594	676	627	591	666	622	589
	10	767	664	603	562	756	659	601	561	650	596	559	641	592	557	633	588	555

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	34.4 fc	6.3 ft
6.5 ft	24.6 fc	7.5 ft
7.5 ft	18.5 fc	8.6 ft
8.0 ft	16.3 fc	9.2 ft
10.0 ft	10.4 fc	11.5 ft
12.0 ft	7.2 fc	13.8 ft
14.0 ft	5.3 fc	16.1 ft
16.0 ft	4.1 fc	18.4 ft
20.0 ft	2.6 fc	23.0 ft
24.0 ft	1.8 fc	27.6 ft
28.0 ft	1.3 fc	32.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	323261	323261	323261
45.00°	28605	28056	27643
55.00°	8715	8095	7907
65.00°	2705	3082	3104
75.00°	1673	1643	1743
85.00°	4466	4063	5453

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	8.5	9.4	8.9	9.8	10.1	7.9	8.8	8.2	9.2	9.5
	3H	8.6	9.4	9.0	9.8	10.2	8.2	9.0	8.6	9.4	9.8
	4H	8.6	9.4	9.1	9.8	10.2	8.3	9.1	8.7	9.4	9.8
	6H	8.7	9.4	9.2	9.8	10.2	8.4	9.1	8.9	9.5	10.0
	8H	8.8	9.5	9.3	9.9	10.4	8.6	9.3	9.1	9.7	10.1
	12H	9.1	9.7	9.5	10.1	10.6	8.9	9.6	9.4	10.0	10.4
4H	2H	8.4	9.2	8.9	9.6	10.0	7.8	8.6	8.3	9.0	9.4
	3H	8.6	9.3	9.1	9.7	10.1	8.3	8.9	8.7	9.3	9.8
	4H	8.7	9.3	9.2	9.7	10.2	8.4	9.0	8.9	9.4	9.9
	6H	8.9	9.4	9.4	9.9	10.4	8.8	9.3	9.3	9.7	10.2
	8H	9.1	9.6	9.6	10.0	10.5	9.1	9.5	9.6	10.0	10.5
	12H	9.5	9.9	10.0	10.4	10.9	9.6	10.0	10.1	10.5	11.0
8H	4H	8.7	9.1	9.2	9.6	10.1	8.4	8.9	8.9	9.3	9.8
	6H	9.0	9.4	9.5	9.9	10.4	9.0	9.3	9.5	9.8	10.3
	8H	9.4	9.7	9.9	10.2	10.8	9.5	9.8	10.0	10.3	10.8
	12H	10.0	10.3	10.5	10.8	11.4	10.2	10.5	10.8	11.0	11.6
12H	4H	8.6	9.0	9.2	9.5	10.0	8.4	8.8	8.9	9.3	9.8
	6H	9.0	9.4	9.6	9.9	10.4	9.0	9.3	9.6	9.8	10.4
	8H	9.5	9.8	10.0	10.3	10.9	9.7	9.9	10.2	10.4	11.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0