

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

TS - RA25 - 13L - 35HK - XN - xx -xx - MW

Track light for accent, display and general illumination.

Test Number

TSRA25-3

Test Date

2/18/25

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

Summary of Results

Power

Input Watts	13.71 W
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Lumen Output

Output Lumens	1186
Efficacy	86.47 lm/W

Luminous Dimensions

0° - 180° Size	0
90° - 270° Size	0.15
Height	0.46

Spacing Criterion

Two luminaires, plane 0°	0.33
Two luminaires, plane 90°	0.33
Four luminaires	0.33

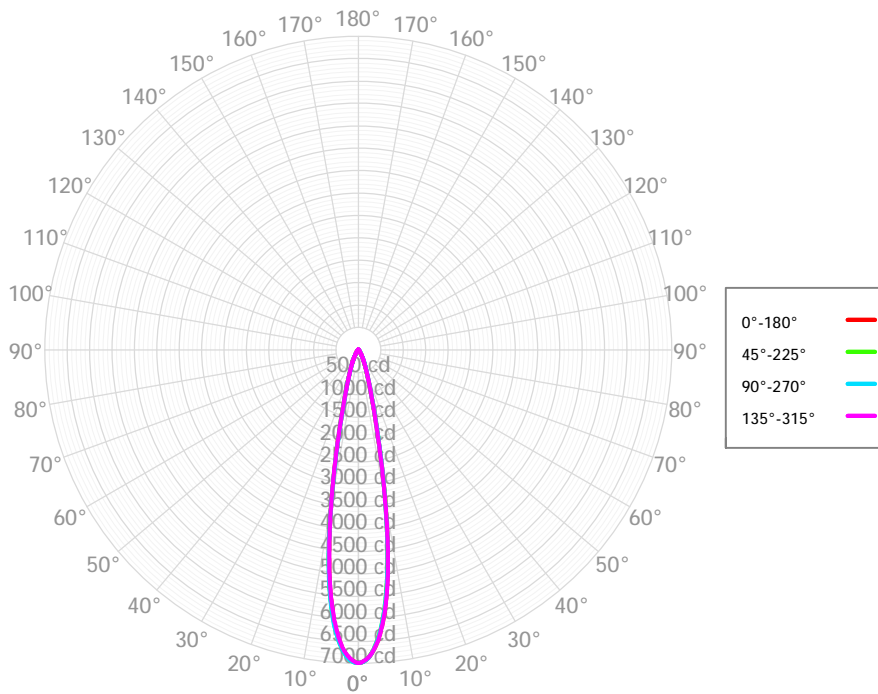
Full Beam Angle

0° - 180°	20°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	TSRA25-3
TESTLAB	Spectrum Lighting Photometric Lab.
MANUFAC	Spectrum Lighting
TESTDATE	2/18/25
ISSUEDATE	2/18/25
LUMCAT	TS - RA25 - 13L - 35HK - XN - xx -xx - MW
LUMINAIRE	Track light for accent, display and general illumination.

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	499.17	42.10%	90.00° - 100.00°	4.93	0.42%
10.00° - 20.00°	394.29	33.26%	100.00° - 110.00°	5.05	0.43%
20.00° - 30.00°	146.97	12.40%	100.00° - 120.00°	9.90	0.83%
30.00° - 40.00°	57.65	4.86%	120.00° - 130.00°	4.64	0.39%
40.00° - 50.00°	26.32	2.22%	130.00° - 140.00°	4.16	0.35%
50.00° - 60.00°	12.32	1.04%	140.00° - 150.00°	3.36	0.28%
60.00° - 70.00°	6.81	0.57%	150.00° - 160.00°	2.53	0.21%
70.00° - 80.00°	5.17	0.44%	160.00° - 170.00°	1.69	0.14%
80.00° - 90.00°	5.03	0.42%	170.00° - 180.00°	0.62	0.05%
0.00° - 90.00°	1153.72	97.31%	0.00° - 180.00°	1185.55	100.00%

Candela Distribution

	0.00°	45.00°	90.00°	135.00°	180.00°	225.00°	270.00°	315.00°	360.00°
0.00°	6991.62	6991.62	6991.62	6991.62	6991.62	6991.62	6991.62	6991.62	6991.62
1.00°	6956.87	6958.28	6960.30	6939.79	6940.24	6961.37	6970.36	6951.00	6956.87
2.00°	6866.25	6857.83	6866.49	6833.57	6846.14	6873.94	6880.09	6857.96	6866.25
3.00°	6698.05	6675.05	6682.09	6667.09	6676.37	6704.07	6712.45	6693.67	6698.05
4.00°	6470.36	6429.14	6435.84	6409.34	6427.88	6472.60	6480.79	6474.51	6470.36
5.00°	6148.17	6111.84	6113.64	6086.11	6108.83	6159.56	6179.13	6152.48	6148.17
6.00°	5766.61	5703.89	5721.50	5685.21	5697.56	5763.48	5776.84	5778.35	5766.61
7.00°	5284.60	5229.75	5241.15	5218.46	5233.04	5291.96	5314.52	5307.07	5284.60
8.00°	4733.80	4677.74	4687.28	4671.83	4684.04	4745.97	4750.17	4762.40	4733.80
9.00°	4116.92	4091.06	4089.55	4074.58	4098.01	4119.47	4125.47	4126.98	4116.92
10.00°	3481.32	3478.95	3468.80	3477.38	3479.01	3478.88	3468.46	3476.50	3481.32
11.00°	2867.88	2888.35	2894.97	2903.32	2906.52	2886.43	2857.92	2864.88	2867.88
12.00°	2329.41	2361.66	2380.41	2384.61	2380.23	2361.37	2325.80	2318.36	2329.41
13.00°	1887.91	1914.71	1943.99	1935.70	1927.37	1931.09	1887.97	1876.83	1887.91
14.00°	1541.16	1549.09	1578.27	1581.69	1572.72	1581.38	1535.94	1531.56	1541.16
15.00°	1265.84	1258.59	1296.91	1301.76	1296.91	1316.18	1266.95	1266.08	1265.84
16.00°	1049.20	1044.11	1080.06	1084.11	1089.51	1104.55	1068.26	1050.98	1049.20
17.00°	883.36	875.72	910.90	916.66	920.25	929.38	902.32	889.48	883.36
18.00°	749.76	747.66	778.68	783.11	790.25	800.57	774.74	762.85	749.76
19.00°	638.85	642.71	668.10	676.23	682.19	685.90	670.38	654.32	638.85
20.00°	554.58	562.68	587.51	588.59	592.33	598.05	580.73	570.21	554.58
21.00°	485.40	493.22	513.68	520.37	521.15	531.01	508.07	495.75	485.40
22.00°	431.63	435.27	456.55	457.41	457.01	465.84	451.56	434.55	431.63
23.00°	379.32	387.50	403.42	406.36	405.69	409.44	400.27	386.02	379.32
24.00°	335.55	341.06	359.77	357.37	357.62	363.32	353.67	343.79	335.55
25.00°	293.69	300.48	319.92	317.27	318.86	321.87	315.70	303.09	293.69
26.00°	260.55	268.53	278.74	278.87	281.94	281.27	276.05	263.34	260.55
27.00°	231.20	229.85	246.50	250.44	248.96	247.16	245.86	233.81	231.20
28.00°	207.19	206.47	219.89	212.28	222.69	219.48	214.72	202.19	207.19
29.00°	182.74	180.23	191.49	184.81	193.39	189.17	190.33	178.76	182.74
30.00°	156.68	159.76	164.49	165.14	164.38	167.00	167.14	164.22	156.68
31.00°	134.83	135.73	145.64	143.87	148.15	145.68	149.12	141.64	134.83
32.00°	119.73	119.90	126.55	127.93	125.51	129.60	126.23	121.60	119.73
33.00°	104.70	108.46	111.65	110.22	115.99	117.71	111.44	105.12	104.70
34.00°	91.24	95.15	103.11	98.31	98.95	100.40	105.94	95.54	91.24
35.00°	82.55	83.76	86.25	87.19	91.96	89.21	86.54	83.38	82.55
36.00°	76.60	75.53	84.41	79.34	81.75	78.39	78.60	78.62	76.60
37.00°	67.93	66.19	72.06	70.82	71.13	72.89	73.23	68.18	67.93
38.00°	60.42	61.73	63.08	63.04	60.29	68.37	64.85	61.62	60.42
39.00°	55.05	59.52	58.36	57.58	54.90	57.87	57.37	55.41	55.05
40.00°	48.96	49.65	49.52	50.84	59.53	52.05	51.64	53.58	48.96
41.00°	44.22	41.33	50.55	45.43	45.32	47.65	47.41	49.32	44.22
42.00°	41.66	43.23	43.93	44.48	46.11	41.92	43.43	45.68	41.66
43.00°	38.39	39.67	38.65	39.46	39.90	38.90	39.71	38.49	38.39

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%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1404	1404	1404	1404	1367	1367	1367	1367	1300	1300	1300	1238	1238	1238	1181	1181	1181	1154
	1	1352	1324	1300	1278	1320	1296	1275	1255	1243	1226	1211	1194	1181	1170	1149	1140	1131	1114
	2	1304	1258	1221	1189	1276	1236	1202	1174	1194	1167	1144	1155	1133	1115	1119	1102	1087	1079
	3	1260	1202	1157	1121	1236	1184	1143	1110	1150	1117	1089	1119	1092	1069	1089	1068	1049	1046
	4	1220	1153	1104	1067	1199	1139	1094	1059	1111	1074	1044	1085	1054	1029	1061	1036	1015	1016
	5	1183	1110	1060	1023	1164	1098	1052	1017	1076	1036	1005	1054	1021	994	1035	1006	984	988
	6	1149	1073	1022	985	1132	1063	1015	981	1044	1003	972	1026	991	964	1009	979	955	962
	7	1117	1039	988	952	1102	1030	983	949	1014	973	942	999	963	936	985	954	929	937
	8	1087	1008	958	924	1074	1001	954	921	987	946	916	974	938	911	962	930	906	915
	9	1060	980	931	898	1048	974	928	896	962	921	892	951	914	888	941	908	884	894
	10	1034	954	907	875	1023	949	904	873	939	898	870	930	893	867	921	887	863	874

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	231.1 fc	1.9 ft
6.5 ft	165.5 fc	2.3 ft
7.5 ft	124.3 fc	2.6 ft
8.0 ft	109.2 fc	2.8 ft
10.0 ft	69.9 fc	3.5 ft
12.0 ft	48.6 fc	4.2 ft
14.0 ft	35.7 fc	4.9 ft
16.0 ft	27.3 fc	5.6 ft
20.0 ft	17.5 fc	7.0 ft
24.0 ft	12.1 fc	8.4 ft
28.0 ft	8.9 fc	9.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	0	0	0
45.00°	7484	10507	137766483007564709888
55.00°	2772	3643	42992652671778029568
65.00°	1189	1694	18992171317585293312
75.00°	800	1090	14534746374417442816
85.00°	811	913	12986337242426177536

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		Viewing C0-180					Viewing C90-270				
2H	2H	5.6	6.6	6.1	6.9	7.3	9.5	10.4	9.9	10.8	11.2
	3H	6.4	7.3	6.9	7.6	8.1	10.9	11.7	11.3	12.1	12.5
	4H	6.8	7.6	7.3	8.0	8.4	11.6	12.4	12.1	12.8	13.3
	6H	7.2	7.9	7.7	8.4	8.8	12.6	13.2	13.0	13.7	14.1
	8H	7.5	8.2	8.0	8.6	9.1	13.3	14.0	13.8	14.4	14.9
	12H	7.9	8.6	8.4	9.0	9.5	14.2	14.8	14.7	15.2	15.7
4H	2H	5.9	6.7	6.4	7.1	7.5	9.3	10.1	9.8	10.5	10.9
	3H	7.0	7.6	7.4	8.0	8.5	10.8	11.5	11.3	11.9	12.4
	4H	7.4	8.0	7.9	8.5	9.0	11.7	12.2	12.2	12.7	13.2
	6H	8.1	8.5	8.6	9.0	9.6	12.7	13.2	13.2	13.7	14.2
	8H	8.4	8.9	9.0	9.4	9.9	13.6	14.0	14.1	14.5	15.1
	12H	9.0	9.4	9.5	9.9	10.4	14.5	14.9	15.0	15.4	16.0
8H	4H	7.7	8.1	8.2	8.6	9.2	11.6	12.1	12.1	12.6	13.1
	6H	8.5	8.8	9.1	9.4	9.9	12.8	13.1	13.3	13.7	14.2
	8H	9.0	9.3	9.6	9.9	10.5	13.7	14.0	14.3	14.6	15.1
	12H	9.8	10.0	10.3	10.6	11.2	14.7	15.0	15.3	15.5	16.2
12H	4H	7.7	8.1	8.3	8.7	9.2	11.6	12.0	12.1	12.5	13.0
	6H	8.6	8.9	9.2	9.5	10.1	12.7	13.0	13.3	13.6	14.2
	8H	9.3	9.5	9.8	10.1	10.7	13.7	14.0	14.3	14.5	15.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0