

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Track light for accent, display and general illumination.

Test Number

TSRA25-1

Test Date

2/18/25

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

Summary of Results

Power

Input Watts	13.64 W
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Lumen Output

Output Lumens	1212
Efficacy	88.82 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.62
Four luminaires	0.6

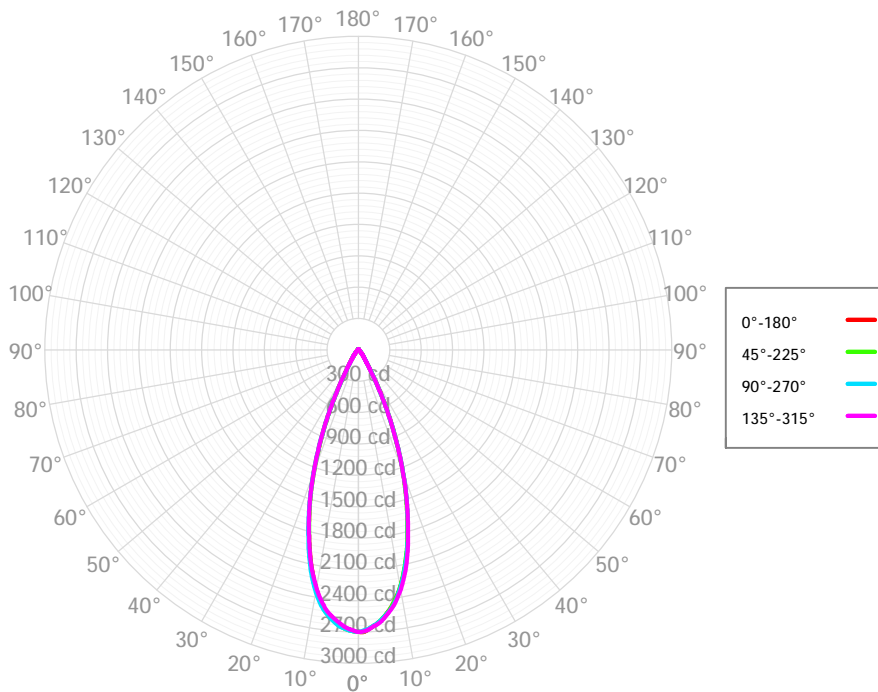
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	TSRA25-1
TESTLAB	Spectrum Lighting Photometric Lab.
MANUFAC	Spectrum Lighting
TESTDATE	2/18/25
ISSUEDATE	2/18/25
LUMCAT	TS - RA25 - 13L - 35HK - MD - 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°	239.81	19.79%	90.00° - 100.00°	4.91	0.41%
10.00° - 20.00°	497.76	41.08%	100.00° - 110.00°	4.95	0.41%
20.00° - 30.00°	308.21	25.44%	100.00° - 120.00°	9.55	0.79%
30.00° - 40.00°	76.15	6.29%	120.00° - 130.00°	4.40	0.36%
40.00° - 50.00°	28.55	2.36%	130.00° - 140.00°	3.86	0.32%
50.00° - 60.00°	13.07	1.08%	140.00° - 150.00°	3.28	0.27%
60.00° - 70.00°	7.12	0.59%	150.00° - 160.00°	2.50	0.21%
70.00° - 80.00°	5.14	0.42%	160.00° - 170.00°	1.63	0.13%
80.00° - 90.00°	5.03	0.41%	170.00° - 180.00°	0.60	0.05%
0.00° - 90.00°	1180.84	97.46%	0.00° - 180.00°	1211.56	100.00%

Candela Distribution

	0.00°	45.00°	90.00°	135.00°	180.00°	225.00°	270.00°	315.00°	360.00°
0.00°	2699.14	2699.14	2699.14	2699.14	2699.14	2699.14	2699.14	2699.14	2699.14
1.00°	2701.11	2696.42	2687.13	2686.13	2689.98	2694.20	2692.89	2695.27	2701.11
2.00°	2678.91	2676.02	2671.46	2670.88	2672.79	2682.85	2684.10	2679.83	2678.91
3.00°	2650.00	2649.83	2646.21	2648.71	2658.08	2667.37	2666.57	2652.57	2650.00
4.00°	2624.70	2624.37	2621.86	2617.11	2631.71	2640.49	2650.04	2632.76	2624.70
5.00°	2592.28	2583.64	2586.54	2585.18	2601.71	2612.04	2615.31	2599.55	2592.28
6.00°	2546.03	2542.36	2547.91	2550.21	2564.34	2573.71	2579.06	2556.86	2546.03
7.00°	2495.87	2496.40	2506.72	2508.25	2523.68	2532.46	2536.52	2511.67	2495.87
8.00°	2440.44	2436.58	2454.89	2449.41	2462.15	2472.81	2487.20	2463.66	2440.44
9.00°	2379.10	2376.24	2386.26	2387.03	2395.73	2404.12	2424.97	2400.31	2379.10
10.00°	2305.42	2302.69	2312.71	2311.32	2317.03	2324.14	2349.80	2331.89	2305.42
11.00°	2222.94	2217.48	2229.46	2227.19	2232.83	2244.72	2266.81	2250.16	2222.94
12.00°	2136.27	2126.19	2137.18	2141.76	2140.14	2151.29	2176.21	2164.96	2136.27
13.00°	2040.48	2026.99	2042.29	2044.30	2039.40	2046.80	2070.65	2065.81	2040.48
14.00°	1942.57	1929.09	1938.46	1932.93	1931.22	1935.09	1965.01	1957.23	1942.57
15.00°	1827.18	1811.43	1826.98	1825.19	1824.46	1820.60	1847.88	1840.37	1827.18
16.00°	1714.16	1701.73	1713.64	1718.07	1713.63	1707.64	1734.25	1722.00	1714.16
17.00°	1601.31	1587.16	1603.18	1605.87	1603.14	1597.31	1617.17	1605.42	1601.31
18.00°	1486.50	1477.87	1491.42	1491.39	1489.54	1479.80	1497.45	1489.05	1486.50
19.00°	1372.45	1361.40	1378.02	1370.86	1371.21	1361.78	1378.50	1372.29	1372.45
20.00°	1251.40	1251.28	1257.49	1247.22	1253.76	1236.01	1258.73	1247.94	1251.40
21.00°	1133.43	1127.07	1138.88	1128.84	1130.48	1113.96	1135.24	1131.28	1133.43
22.00°	1015.56	1013.37	1023.33	1007.68	1006.01	992.09	1015.05	1013.24	1015.56
23.00°	901.75	898.72	905.67	889.17	893.17	875.76	894.89	899.32	901.75
24.00°	791.80	788.76	790.05	778.80	778.14	761.67	779.44	786.16	791.80
25.00°	685.91	682.99	682.77	665.35	666.14	650.29	671.14	675.70	685.91
26.00°	586.34	579.78	579.92	560.99	562.82	548.73	566.44	575.66	586.34
27.00°	495.22	482.70	483.87	465.70	464.90	450.04	466.52	478.88	495.22
28.00°	407.25	399.15	399.60	382.00	381.36	363.53	376.47	393.92	407.25
29.00°	328.73	322.55	324.02	305.43	308.89	290.44	298.75	315.21	328.73
30.00°	267.60	261.89	264.86	251.82	253.17	234.48	239.07	249.57	267.60
31.00°	215.39	216.50	214.48	209.43	207.62	191.85	194.96	204.67	215.39
32.00°	178.30	177.64	180.54	177.50	170.17	160.16	162.99	167.54	178.30
33.00°	149.37	150.26	151.27	146.32	145.07	136.09	140.29	142.79	149.37
34.00°	128.63	125.06	130.88	125.65	123.17	120.52	122.06	123.29	128.63
35.00°	109.05	110.45	117.53	108.88	110.26	104.22	106.93	108.63	109.05
36.00°	99.22	96.33	98.44	95.79	96.90	92.16	95.50	93.46	99.22
37.00°	88.36	86.69	91.22	89.49	85.30	86.22	83.31	87.93	88.36
38.00°	80.75	78.10	82.87	78.23	77.18	73.74	79.84	78.27	80.75
39.00°	72.14	71.62	70.18	71.06	71.85	68.27	68.41	71.77	72.14
40.00°	65.12	63.10	62.23	59.50	61.74	59.99	63.41	63.51	65.12
41.00°	57.02	55.57	56.77	52.33	52.14	54.19	56.59	58.37	57.02
42.00°	51.67	50.27	48.81	48.48	49.97	48.74	49.12	48.38	51.67
43.00°	46.03	45.63	44.26	41.47	40.51	43.29	44.18	48.90	46.03

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	1435	1435	1435	1435	1398	1398	1398	1398	1329	1329	1329	1266	1266	1266	1208	1208	1181
	1	1374	1343	1315	1290	1341	1314	1289	1267	1259	1240	1222	1210	1194	1180	1163	1152	1141
	2	1316	1263	1220	1183	1287	1240	1201	1167	1197	1165	1137	1157	1131	1109	1119	1099	1081
	3	1262	1194	1141	1099	1236	1175	1127	1088	1140	1100	1067	1107	1074	1047	1077	1050	1027
	4	1211	1132	1074	1029	1188	1116	1063	1022	1087	1042	1007	1060	1023	992	1035	1004	978
	5	1163	1076	1016	971	1143	1063	1007	965	1039	991	954	1017	976	943	996	961	933
	6	1118	1026	964	920	1100	1015	958	916	995	945	908	976	933	899	959	921	891
	7	1076	980	919	875	1059	971	913	872	954	903	866	938	893	859	923	884	853
	8	1036	939	878	835	1021	931	873	833	916	865	828	903	857	823	890	849	818
	9	999	900	840	799	985	894	837	797	881	829	793	869	823	789	858	816	785
	10	964	865	806	767	952	859	803	765	848	797	762	838	791	758	828	786	755

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	89.2 fc	3.8 ft
6.5 ft	63.9 fc	4.5 ft
7.5 ft	48.0 fc	5.2 ft
8.0 ft	42.2 fc	5.6 ft
10.0 ft	27.0 fc	7.0 ft
12.0 ft	18.7 fc	8.3 ft
14.0 ft	13.8 fc	9.7 ft
16.0 ft	10.5 fc	11.1 ft
20.0 ft	6.7 fc	13.9 ft
24.0 ft	4.7 fc	16.7 ft
28.0 ft	3.4 fc	19.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	0	0	0
45.00°	8830	11217	132953469337161465856
55.00°	2695	3703	45793078093265608704
65.00°	1369	1773	21155912818878877696
75.00°	784	1209	12034698791570143232
85.00°	601	1087	13767777061992181760

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	6.1	7.0	6.5	7.4	7.8	10.1	11.0	10.5	11.4	11.8
	3H	6.8	7.6	7.2	8.0	8.4	11.1	11.9	11.5	12.3	12.7
	4H	7.0	7.8	7.5	8.2	8.6	11.7	12.4	12.1	12.8	13.3
	6H	7.4	8.1	7.9	8.6	9.0	12.7	13.4	13.2	13.8	14.3
	8H	7.7	8.3	8.1	8.7	9.2	13.4	14.0	13.9	14.5	14.9
	12H	7.8	8.4	8.3	8.9	9.4	14.3	14.9	14.8	15.4	15.9
4H	2H	6.4	7.2	6.9	7.6	8.0	10.0	10.7	10.4	11.1	11.6
	3H	7.2	7.8	7.7	8.3	8.7	11.0	11.7	11.5	12.1	12.6
	4H	7.6	8.1	8.1	8.6	9.1	11.7	12.3	12.2	12.7	13.3
	6H	8.2	8.6	8.7	9.1	9.7	12.9	13.3	13.4	13.8	14.4
	8H	8.5	8.9	9.0	9.4	10.0	13.6	14.1	14.1	14.6	15.1
	12H	8.7	9.1	9.2	9.6	10.2	14.7	15.0	15.2	15.6	16.1
8H	4H	7.8	8.3	8.3	8.8	9.3	11.7	12.1	12.2	12.6	13.1
	6H	8.6	8.9	9.1	9.5	10.0	12.9	13.3	13.5	13.8	14.4
	8H	9.0	9.3	9.6	9.9	10.5	13.7	14.0	14.3	14.6	15.2
	12H	9.4	9.7	10.0	10.2	10.9	14.9	15.1	15.4	15.7	16.3
12H	4H	7.9	8.2	8.4	8.8	9.3	11.6	12.0	12.2	12.5	13.1
	6H	8.7	9.0	9.3	9.5	10.2	12.9	13.2	13.5	13.7	14.3
	8H	9.3	9.5	9.8	10.1	10.7	13.8	14.0	14.3	14.6	15.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0