

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

TS - RA35 - 29L - 35HK - XN - xx - xx - MW

Track light for accent, display and general illumination.

Test Number

TSRA35-3

Test Date

2/18/25

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

Summary of Results

Power

Input Watts	27.76 W
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Lumen Output

Output Lumens	2638
Efficacy	95.04 lm/W

Luminous Dimensions

0° - 180° Size	0
90° - 270° Size	0.23
Height	0.71

Spacing Criterion

Two luminaires, plane 0°	0.34
Two luminaires, plane 90°	0.34
Four luminaires	0.33

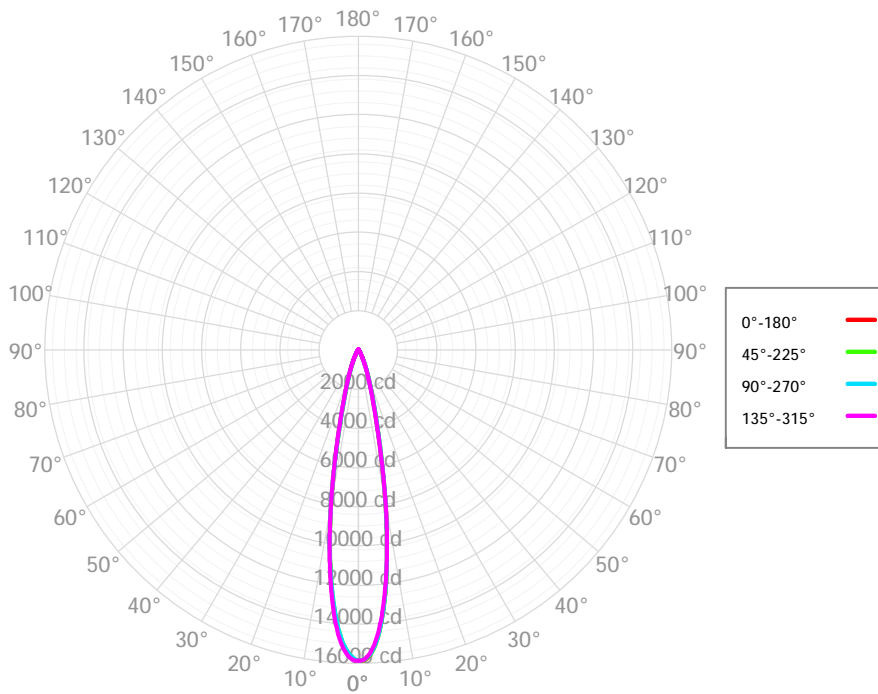
Full Beam Angle

0° - 180°	20°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	TSRA35-3
TESTLAB	Spectrum Lighting Photometric Lab.
MANUFAC	Spectrum Lighting
TESTDATE	2/18/25
ISSUEDATE	2/18/25
LUMCAT	TS - RA35 - 29L - 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°	1118.77	42.41%	90.00° - 100.00°	4.59	0.17%
10.00° - 20.00°	966.81	36.65%	100.00° - 110.00°	4.75	0.18%
20.00° - 30.00°	320.75	12.16%	100.00° - 120.00°	9.39	0.36%
30.00° - 40.00°	96.38	3.65%	120.00° - 130.00°	4.67	0.18%
40.00° - 50.00°	49.52	1.88%	130.00° - 140.00°	4.45	0.17%
50.00° - 60.00°	29.72	1.13%	140.00° - 150.00°	3.86	0.15%
60.00° - 70.00°	12.52	0.47%	150.00° - 160.00°	2.99	0.11%
70.00° - 80.00°	5.64	0.21%	160.00° - 170.00°	2.36	0.09%
80.00° - 90.00°	4.86	0.18%	170.00° - 180.00°	0.95	0.04%
0.00° - 90.00°	2604.96	98.74%	0.00° - 180.00°	2638.22	100.00%

Candela Distribution

	0.00°	45.00°	90.00°	135.00°	180.00°	225.00°	270.00°	315.00°	360.00°
0.00°	15865.38	15865.38	15865.38	15865.38	15865.38	15865.38	15865.38	15865.38	15865.38
1.00°	15854.67	15834.67	15809.02	15823.20	15775.23	15718.38	15717.37	15811.35	15854.67
2.00°	15645.45	15640.14	15608.34	15593.96	15508.71	15430.49	15436.25	15562.17	15645.45
3.00°	15223.22	15251.27	15220.73	15188.22	15068.51	14975.94	14989.18	15117.89	15223.22
4.00°	14601.92	14634.18	14607.40	14590.45	14457.04	14333.74	14336.19	14481.41	14601.92
5.00°	13784.39	13822.40	13784.07	13763.36	13638.91	13528.07	13516.96	13662.44	13784.39
6.00°	12814.84	12832.61	12815.05	12794.14	12669.45	12585.13	12574.88	12692.30	12814.84
7.00°	11711.99	11713.93	11708.12	11696.57	11601.04	11535.18	11551.58	11631.98	11711.99
8.00°	10521.18	10496.65	10501.15	10530.57	10453.84	10411.45	10465.99	10480.61	10521.18
9.00°	9272.07	9243.83	9269.09	9289.68	9235.31	9225.55	9268.57	9285.48	9272.07
10.00°	7993.38	7996.06	8031.29	8037.56	7991.52	7995.56	8035.36	8040.92	7993.38
11.00°	6730.69	6777.73	6821.40	6833.26	6772.28	6789.44	6793.36	6791.79	6730.69
12.00°	5604.69	5670.21	5714.37	5722.23	5655.22	5637.22	5629.54	5616.83	5604.69
13.00°	4660.74	4722.76	4770.05	4740.74	4663.62	4622.08	4626.40	4639.49	4660.74
14.00°	3905.24	3953.62	3986.94	3924.21	3840.11	3789.10	3802.17	3838.81	3905.24
15.00°	3291.36	3334.22	3348.04	3279.51	3177.36	3130.44	3151.51	3208.35	3291.36
16.00°	2792.69	2821.69	2829.72	2756.97	2650.64	2608.72	2636.57	2702.67	2792.69
17.00°	2379.19	2408.59	2403.80	2328.41	2230.86	2184.92	2225.38	2293.69	2379.19
18.00°	2041.27	2061.71	2051.93	1970.36	1878.26	1843.24	1884.50	1951.39	2041.27
19.00°	1741.27	1767.01	1756.51	1678.75	1588.78	1557.86	1597.13	1662.12	1741.27
20.00°	1492.87	1517.14	1502.64	1436.72	1357.78	1329.31	1367.56	1422.06	1492.87
21.00°	1290.94	1308.17	1289.38	1232.49	1165.42	1133.98	1172.57	1221.84	1290.94
22.00°	1109.25	1125.17	1116.44	1060.85	998.15	980.42	1006.10	1051.26	1109.25
23.00°	958.70	969.94	965.32	912.38	856.02	836.00	866.81	907.19	958.70
24.00°	820.99	832.01	823.89	782.67	734.73	716.59	743.87	774.56	820.99
25.00°	704.10	712.22	700.61	663.68	623.59	607.17	630.46	662.21	704.10
26.00°	593.20	608.74	596.39	564.49	526.46	518.74	530.54	570.46	593.20
27.00°	506.20	512.61	502.52	475.85	449.73	434.03	450.89	479.67	506.20
28.00°	431.22	438.27	422.34	407.81	379.85	365.91	384.35	408.31	431.22
29.00°	370.18	367.74	362.25	342.66	320.12	311.94	323.11	348.09	370.18
30.00°	310.72	327.58	312.37	288.25	270.69	257.09	275.32	310.05	310.72
31.00°	264.12	280.45	261.09	246.23	233.46	216.18	233.82	257.14	264.12
32.00°	225.39	233.28	223.17	211.59	198.65	186.61	201.15	219.35	225.39
33.00°	196.42	197.44	196.82	182.46	172.50	165.23	170.29	187.69	196.42
34.00°	170.10	172.98	171.45	157.04	148.52	144.75	153.60	170.63	170.10
35.00°	150.17	151.35	150.33	136.89	130.79	125.73	133.39	146.57	150.17
36.00°	136.25	136.89	130.99	123.07	117.14	114.86	119.03	133.56	136.25
37.00°	120.26	121.88	117.24	110.74	106.54	106.42	111.38	114.85	120.26
38.00°	108.30	108.95	107.88	102.43	96.72	96.40	98.65	110.20	108.30
39.00°	101.57	98.43	96.94	94.32	89.66	85.49	89.77	98.28	101.57
40.00°	88.70	90.60	86.81	86.19	86.63	75.65	87.60	91.62	88.70
41.00°	84.69	85.33	81.10	80.49	79.26	76.75	80.76	78.75	84.69
42.00°	79.21	78.99	76.93	79.12	73.37	70.64	74.34	79.36	79.21
43.00°	78.11	72.17	72.08	69.67	70.10	67.16	70.82	73.12	78.11

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	3133	3133	3133	3133	3056	3056	3056	3056	2913	2913	2913	2782	2782	2782	2662	2662	2605
	1	3024	2966	2915	2869	2957	2907	2861	2820	2796	2760	2728	2694	2667	2642	2600	2579	2526
	2	2922	2825	2745	2678	2865	2779	2707	2646	2691	2634	2584	2611	2565	2525	2536	2500	2450
	3	2829	2705	2609	2532	2779	2668	2581	2510	2598	2526	2467	2533	2475	2426	2473	2426	2379
	4	2743	2600	2495	2416	2699	2570	2474	2400	2514	2433	2370	2461	2394	2340	2413	2357	2313
	5	2663	2508	2399	2319	2624	2483	2383	2308	2437	2351	2286	2394	2321	2264	2354	2293	2252
	6	2589	2425	2316	2237	2555	2405	2303	2229	2367	2279	2213	2332	2255	2196	2299	2232	2195
	7	2520	2352	2243	2166	2490	2335	2233	2160	2303	2213	2148	2274	2194	2135	2246	2176	2141
	8	2456	2285	2177	2104	2429	2271	2169	2099	2244	2154	2089	2219	2138	2080	2195	2124	2091
	9	2396	2224	2119	2047	2372	2212	2112	2044	2189	2099	2036	2168	2087	2029	2147	2075	2044
	10	2340	2168	2065	1997	2318	2158	2060	1994	2138	2049	1988	2119	2039	1982	2102	2029	2000

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	524.5 fc	1.9 ft
6.5 ft	375.5 fc	2.3 ft
7.5 ft	282.1 fc	2.7 ft
8.0 ft	247.9 fc	2.8 ft
10.0 ft	158.7 fc	3.5 ft
12.0 ft	110.2 fc	4.3 ft
14.0 ft	80.9 fc	5.0 ft
16.0 ft	62.0 fc	5.7 ft
20.0 ft	39.7 fc	7.1 ft
24.0 ft	27.5 fc	8.5 ft
28.0 ft	20.2 fc	9.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	0	0	0
45.00°	6094	8831	100048944031807160320
55.00°	3032	3905	43592490350023507968
65.00°	782	1160	14429936871714213888
75.00°	283	637	5227628728854120448
85.00°	263	406	4640770874665897984

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	6.3	7.2	6.7	7.6	7.9	10.0	10.9	10.4	11.2	11.6
	3H	6.5	7.3	6.9	7.6	8.0	10.3	11.1	10.7	11.5	11.9
	4H	6.5	7.2	6.9	7.6	8.0	10.5	11.2	10.9	11.6	12.0
	6H	6.4	7.1	6.9	7.5	8.0	10.8	11.5	11.2	11.9	12.3
	8H	6.5	7.1	6.9	7.5	8.0	11.0	11.7	11.5	12.1	12.5
	12H	6.5	7.1	6.9	7.5	7.9	11.3	11.9	11.8	12.3	12.8
4H	2H	6.3	7.0	6.7	7.4	7.8	9.7	10.5	10.2	10.9	11.3
	3H	6.5	7.1	6.9	7.6	8.0	10.1	10.8	10.6	11.2	11.6
	4H	6.5	7.1	7.0	7.5	8.0	10.3	10.9	10.8	11.3	11.8
	6H	6.6	7.0	7.1	7.5	8.0	10.7	11.1	11.2	11.6	12.1
	8H	6.6	7.0	7.1	7.5	8.0	11.0	11.4	11.5	11.9	12.4
	12H	6.6	7.0	7.2	7.5	8.0	11.3	11.7	11.8	12.2	12.7
8H	4H	6.5	6.9	7.0	7.4	7.9	10.2	10.6	10.7	11.1	11.6
	6H	6.6	6.9	7.1	7.4	8.0	10.6	10.9	11.1	11.4	12.0
	8H	6.7	7.0	7.2	7.5	8.0	10.9	11.2	11.5	11.8	12.3
	12H	6.8	7.0	7.3	7.6	8.2	11.3	11.6	11.9	12.1	12.7
12H	4H	6.4	6.8	7.0	7.3	7.8	10.1	10.5	10.6	11.0	11.5
	6H	6.6	6.9	7.1	7.4	7.9	10.5	10.8	11.1	11.3	11.9
	8H	6.7	7.0	7.3	7.5	8.1	10.9	11.1	11.4	11.7	12.3

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0