

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Track light for accent, display and general illumination.

Test Number

TSRA35-1

Test Date

2/18/25

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

Summary of Results

Power

Input Watts	28.04 W
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Lumen Output

Output Lumens	2777
Efficacy	99.03 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.63
Two luminaires, plane 90°	0.63
Four luminaires	0.59

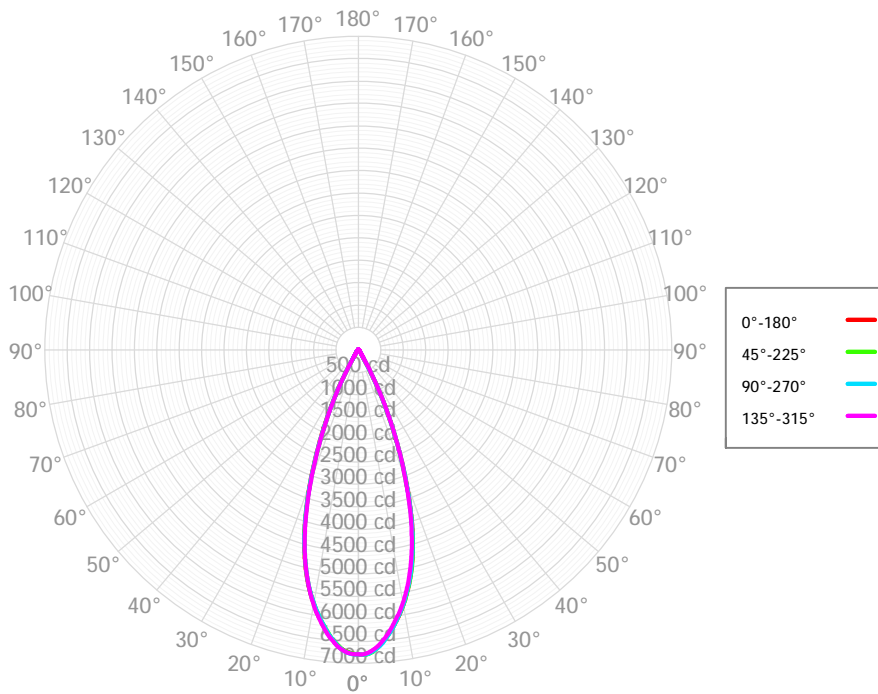
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	TSRA35-1
TESTLAB	Spectrum Lighting Photometric Lab.
MANUFAC	Spectrum Lighting
TESTDATE	2/18/25
ISSUEDATE	2/18/25
LUMCAT	TS - RA35 - 29L - 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°	598.14	21.54%	90.00° - 100.00°	4.73	0.17%
10.00° - 20.00°	1254.44	45.17%	100.00° - 110.00°	4.66	0.17%
20.00° - 30.00°	704.33	25.36%	100.00° - 120.00°	9.37	0.34%
30.00° - 40.00°	91.71	3.30%	120.00° - 130.00°	4.60	0.17%
40.00° - 50.00°	41.56	1.50%	130.00° - 140.00°	4.43	0.16%
50.00° - 60.00°	29.77	1.07%	140.00° - 150.00°	3.89	0.14%
60.00° - 70.00°	12.97	0.47%	150.00° - 160.00°	3.27	0.12%
70.00° - 80.00°	5.47	0.20%	160.00° - 170.00°	2.42	0.09%
80.00° - 90.00°	4.85	0.17%	170.00° - 180.00°	0.94	0.03%
0.00° - 90.00°	2743.24	98.79%	0.00° - 180.00°	2776.90	100.00%

Candela Distribution

	0.00°	45.00°	90.00°	135.00°	180.00°	225.00°	270.00°	315.00°	360.00°
0.00°	6799.18	6799.18	6799.18	6799.18	6799.18	6799.18	6799.18	6799.18	6799.18
1.00°	6810.77	6814.15	6805.91	6791.65	6790.48	6780.02	6798.48	6798.13	6810.77
2.00°	6776.00	6787.42	6783.72	6766.54	6748.51	6753.53	6767.80	6758.62	6776.00
3.00°	6704.40	6730.65	6720.96	6712.58	6700.24	6699.28	6710.18	6692.82	6704.40
4.00°	6632.91	6627.04	6644.82	6636.67	6622.98	6602.71	6621.18	6606.39	6632.91
5.00°	6522.29	6521.95	6537.11	6524.48	6511.04	6505.11	6500.66	6493.22	6522.29
6.00°	6390.64	6393.57	6401.51	6408.41	6390.17	6362.14	6375.93	6368.59	6390.64
7.00°	6258.99	6253.13	6264.34	6265.52	6245.52	6215.64	6223.85	6218.88	6258.99
8.00°	6109.66	6099.74	6107.87	6107.82	6092.32	6072.45	6070.75	6061.02	6109.66
9.00°	5956.93	5945.02	5943.75	5946.72	5935.34	5904.34	5904.03	5914.74	5956.93
10.00°	5789.23	5785.09	5777.25	5767.29	5745.59	5735.10	5730.54	5735.74	5789.23
11.00°	5588.91	5600.54	5576.70	5570.27	5568.14	5552.61	5550.10	5538.75	5588.91
12.00°	5402.06	5398.82	5380.23	5359.27	5371.78	5353.30	5350.61	5333.83	5402.06
13.00°	5178.88	5187.38	5165.02	5128.49	5144.27	5129.97	5125.04	5104.68	5178.88
14.00°	4944.00	4956.58	4929.06	4889.14	4907.39	4883.98	4886.68	4864.98	4944.00
15.00°	4693.76	4696.87	4669.59	4622.39	4645.97	4638.84	4632.07	4607.33	4693.76
16.00°	4408.50	4416.07	4395.46	4339.12	4380.60	4371.19	4366.15	4325.43	4408.50
17.00°	4117.26	4101.80	4100.53	4042.21	4089.93	4072.00	4081.15	4045.85	4117.26
18.00°	3798.75	3781.45	3787.39	3723.10	3771.96	3769.79	3769.43	3730.86	3798.75
19.00°	3453.90	3441.88	3447.43	3401.53	3451.42	3441.25	3446.73	3401.64	3453.90
20.00°	3116.15	3088.72	3108.19	3073.87	3132.36	3100.18	3118.56	3073.11	3116.15
21.00°	2773.16	2756.31	2769.28	2746.89	2808.03	2769.48	2789.74	2750.10	2773.16
22.00°	2440.39	2433.04	2439.09	2431.69	2485.66	2439.97	2467.44	2436.33	2440.39
23.00°	2110.72	2110.51	2121.06	2125.28	2177.73	2126.35	2147.67	2124.26	2110.72
24.00°	1802.39	1801.63	1812.72	1820.06	1881.08	1831.05	1850.06	1817.27	1802.39
25.00°	1510.79	1512.92	1517.81	1542.47	1603.56	1553.18	1566.64	1534.30	1510.79
26.00°	1229.07	1240.35	1242.22	1280.90	1328.44	1295.69	1304.90	1270.85	1229.07
27.00°	961.43	969.11	979.09	1036.05	1070.43	1052.39	1056.61	1009.05	961.43
28.00°	709.84	720.27	732.72	806.05	826.14	813.18	818.88	767.82	709.84
29.00°	498.19	512.72	523.75	608.09	601.48	588.34	604.22	561.40	498.19
30.00°	355.28	362.18	371.47	436.85	414.28	409.50	428.43	400.47	355.28
31.00°	265.40	259.76	264.85	309.55	291.80	282.83	302.64	284.24	265.40
32.00°	204.12	202.61	204.84	224.76	221.93	214.65	229.04	215.27	204.12
33.00°	165.60	157.58	160.50	177.94	174.77	168.36	177.38	171.58	165.60
34.00°	136.18	131.03	135.82	143.15	145.89	135.29	146.56	137.96	136.18
35.00°	115.98	112.51	113.48	120.64	121.83	114.57	120.82	119.06	115.98
36.00°	102.05	101.62	100.92	104.73	108.12	102.70	106.55	101.71	102.05
37.00°	92.11	87.87	90.66	90.52	95.62	90.68	97.56	90.49	92.11
38.00°	85.08	79.84	84.91	85.78	88.61	81.51	88.30	85.29	85.08
39.00°	75.75	78.21	77.95	79.40	80.38	78.52	82.47	75.46	75.75
40.00°	69.54	69.72	70.39	67.19	72.29	68.11	71.17	72.71	69.54
41.00°	63.28	65.05	61.16	64.70	63.43	61.17	66.44	61.53	63.28
42.00°	60.04	60.69	61.51	61.73	60.29	59.40	62.72	59.47	60.04
43.00°	56.40	58.07	60.38	59.16	60.37	57.52	58.98	59.08	56.40

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	3298	3298	3298	3298	3217	3217	3217	3217	3067	3067	3067	2929	2929	2929	2803	2803	2743
	1	3168	3101	3041	2987	3097	3038	2985	2937	2921	2879	2841	2813	2781	2751	2714	2689	2633
	2	3044	2930	2836	2756	2982	2880	2795	2723	2787	2718	2659	2701	2646	2598	2622	2578	2526
	3	2927	2780	2665	2574	2873	2740	2636	2552	2665	2579	2507	2596	2525	2465	2531	2473	2425
	4	2817	2646	2520	2425	2769	2614	2498	2409	2553	2455	2377	2496	2414	2347	2443	2375	2330
	5	2714	2526	2394	2297	2671	2499	2377	2286	2449	2344	2263	2402	2312	2241	2359	2282	2240
	6	2616	2417	2283	2187	2578	2395	2270	2179	2353	2244	2162	2314	2219	2146	2277	2194	2156
	7	2524	2317	2183	2089	2490	2299	2173	2083	2264	2152	2070	2231	2132	2058	2200	2113	2077
	8	2437	2226	2093	2001	2407	2210	2084	1997	2180	2067	1987	2152	2051	1977	2126	2036	2003
	9	2356	2142	2010	1922	2328	2128	2003	1918	2102	1989	1910	2078	1976	1903	2055	1963	1933
	10	2279	2063	1934	1849	2253	2052	1929	1846	2029	1917	1840	2008	1906	1834	1988	1895	1868

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	224.8 fc	3.8 ft
6.5 ft	160.9 fc	4.5 ft
7.5 ft	120.9 fc	5.2 ft
8.0 ft	106.2 fc	5.6 ft
10.0 ft	68.0 fc	6.9 ft
12.0 ft	47.2 fc	8.3 ft
14.0 ft	34.7 fc	9.7 ft
16.0 ft	26.6 fc	11.1 ft
20.0 ft	17.0 fc	13.9 ft
24.0 ft	11.8 fc	16.7 ft
28.0 ft	8.7 fc	19.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	0	0	0
45.00°	5105	7214	86416461209588826112
55.00°	2881	3572	48640506395075223552
65.00°	784	965	13622233322533597184
75.00°	376	490	4401353395538741760
85.00°	251	371	4681211893616565248

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	6.0	6.9	6.4	7.3	7.6	9.9	10.8	10.3	11.1	11.5
	3H	6.1	6.9	6.5	7.3	7.7	10.2	11.0	10.6	11.4	11.8
	4H	6.1	6.9	6.6	7.3	7.7	10.3	11.0	10.7	11.4	11.8
	6H	6.1	6.8	6.6	7.2	7.6	10.5	11.2	10.9	11.6	12.0
	8H	6.1	6.8	6.6	7.2	7.6	10.7	11.3	11.1	11.7	12.2
	12H	6.1	6.7	6.6	7.1	7.6	11.0	11.7	11.5	12.1	12.5
4H	2H	6.0	6.7	6.4	7.1	7.5	9.7	10.4	10.1	10.8	11.2
	3H	6.2	6.8	6.6	7.2	7.7	10.0	10.6	10.5	11.1	11.5
	4H	6.2	6.8	6.7	7.2	7.7	10.1	10.7	10.6	11.1	11.6
	6H	6.3	6.7	6.8	7.2	7.7	10.4	10.9	10.9	11.3	11.8
	8H	6.3	6.7	6.8	7.2	7.7	10.6	11.0	11.1	11.5	12.0
	12H	6.3	6.7	6.9	7.2	7.7	11.1	11.4	11.6	11.9	12.4
8H	4H	6.2	6.6	6.7	7.1	7.6	10.0	10.4	10.5	10.9	11.4
	6H	6.3	6.6	6.8	7.2	7.7	10.3	10.6	10.8	11.1	11.6
	8H	6.4	6.7	6.9	7.2	7.8	10.5	10.8	11.1	11.4	11.9
	12H	6.5	6.8	7.1	7.3	7.9	11.1	11.3	11.6	11.8	12.4
12H	4H	6.2	6.5	6.7	7.0	7.5	9.9	10.3	10.4	10.8	11.3
	6H	6.3	6.6	6.9	7.1	7.7	10.2	10.5	10.8	11.0	11.6
	8H	6.4	6.7	7.0	7.2	7.8	10.5	10.8	11.1	11.3	11.9

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0