

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
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### Spectrum Lighting Photometric Lab

#### Luminaire

STL4 - 40L - 35HK - NF - xx - xx - MW

Track light for accent, display and general illumination.

#### Test Number

STL4-9

#### Test Date

2/18/25

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

## Summary of Results

### Power

Input Watts	37.67 W
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### Lumen Output

Output Lumens	3617
Efficacy	96.02 lm/W

### Luminous Dimensions

0° - 180° Size	0.1
90° - 270° Size	3.7
Height	0.1

### Spacing Criterion

Two luminaires, plane 0°	0.57
Two luminaires, plane 90°	1.15
Four luminaires	0.8

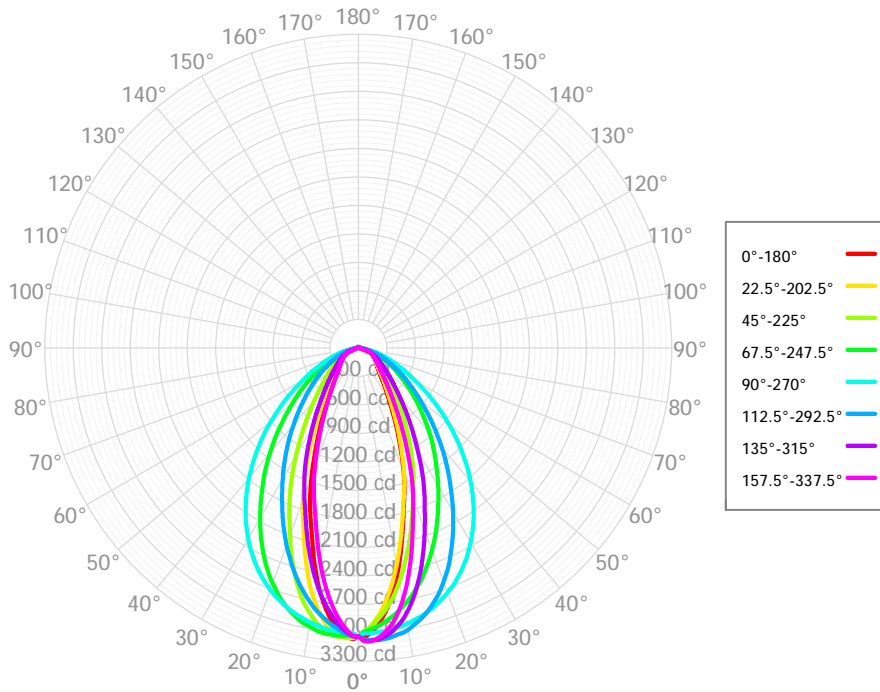
### Full Beam Angle

0° - 180°	37°
90° - 270°	89°

## IES File Header Contents

Keyword	Value
TEST	STL4-9
TESTLAB	Spectrum Lighting Photometric Lab.
MANUFAC	Spectrum Lighting
TESTDATE	2/18/25
ISSUEDATE	2/18/25
LUMCAT	STL4 - 40L - 35HK - NF - 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°	273.32	7.56%	90.00° - 100.00°	7.05	0.19%
10.00° - 20.00°	650.28	17.98%	100.00° - 110.00°	7.03	0.19%
20.00° - 30.00°	746.05	20.63%	100.00° - 120.00°	13.88	0.38%
30.00° - 40.00°	659.34	18.23%	120.00° - 130.00°	6.45	0.18%
40.00° - 50.00°	520.39	14.39%	130.00° - 140.00°	5.83	0.16%
50.00° - 60.00°	375.68	10.39%	140.00° - 150.00°	4.97	0.14%
60.00° - 70.00°	236.76	6.55%	150.00° - 160.00°	3.89	0.11%
70.00° - 80.00°	92.98	2.57%	160.00° - 170.00°	2.50	0.07%
80.00° - 90.00°	16.73	0.46%	170.00° - 180.00°	0.86	0.02%
0.00° - 90.00°	3571.51	98.74%	0.00° - 180.00°	3616.94	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°	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89	3038.89
1.00°	3055.59	3001.18	2988.91	2993.32	3007.14	3035.95	3037.05	3032.16	3064.63	3052.66	3035.02	3020.37	3005.21	3065.63	3078.28	3082.39	3055.59
2.00°	3019.46	2959.56	2957.67	2975.66	3005.79	3020.91	3006.01	2988.82	3049.66	3057.10	3048.23	3030.25	3002.68	3073.59	3086.97	3090.16	3019.46
3.00°	2976.52	2906.24	2923.38	2955.40	3003.82	3001.83	2968.29	2933.83	3020.00	3049.73	3045.69	3031.40	2998.50	3076.32	3083.29	3081.86	2976.52
4.00°	2922.57	2845.69	2869.58	2937.09	3001.87	2972.35	2920.82	2868.39	2975.50	3034.29	3048.13	3035.19	2993.10	3083.00	3074.17	3057.79	2922.57
5.00°	2858.03	2778.80	2821.96	2912.22	2996.13	2944.13	2869.57	2792.16	2917.66	3003.23	3033.46	3031.37	2987.98	3075.80	3055.84	3022.09	2858.03
6.00°	2784.68	2697.99	2769.20	2883.38	2988.64	2912.03	2805.86	2705.26	2853.67	2958.47	3011.89	3029.76	2978.13	3070.83	3032.78	2979.21	2784.68
7.00°	2699.68	2613.64	2705.67	2855.12	2976.86	2877.78	2743.31	2613.32	2775.34	2905.84	2984.58	3023.19	2973.49	3057.75	2998.99	2925.96	2699.68
8.00°	2602.88	2522.68	2643.23	2826.26	2970.16	2840.08	2670.46	2516.22	2686.61	2842.58	2952.74	3014.22	2957.98	3043.23	2956.78	2858.52	2602.88
9.00°	2498.24	2423.21	2571.56	2789.96	2961.15	2801.26	2597.94	2412.09	2593.34	2770.13	2910.42	2996.23	2945.62	3033.93	2913.63	2779.26	2498.24
10.00°	2393.23	2322.25	2494.06	2752.45	2949.49	2758.69	2516.58	2301.38	2483.58	2686.78	2856.68	2975.85	2931.59	3013.25	2855.50	2693.71	2393.23
11.00°	2279.79	2217.91	2416.31	2715.57	2934.99	2711.84	2434.33	2189.70	2369.40	2598.14	2804.94	2959.97	2917.19	2983.75	2793.33	2598.74	2279.79
12.00°	2164.83	2113.41	2333.90	2673.88	2917.04	2664.37	2345.35	2073.79	2255.51	2502.58	2745.79	2938.88	2898.24	2956.66	2723.66	2497.04	2164.83
13.00°	2051.00	2008.88	2249.81	2629.14	2905.03	2611.95	2253.97	1963.07	2137.06	2394.79	2682.53	2908.77	2882.26	2926.44	2651.81	2390.23	2051.00
14.00°	1940.85	1907.82	2170.58	2581.18	2884.70	2561.72	2166.24	1858.20	2022.47	2289.67	2607.51	2878.04	2861.75	2894.61	2570.00	2284.01	1940.85
15.00°	1834.08	1809.53	2082.64	2539.69	2868.27	2506.33	2073.77	1768.40	1925.42	2179.76	2529.96	2845.91	2840.27	2856.81	2487.79	2177.17	1834.08
16.00°	1734.15	1717.09	2002.69	2484.64	2846.98	2448.61	1982.06	1681.47	1830.56	2075.25	2449.10	2811.56	2817.79	2814.94	2403.96	2065.58	1734.15
17.00°	1651.34	1637.86	1917.45	2431.82	2819.99	2391.50	1892.56	1600.22	1736.07	1976.41	2365.63	2771.40	2790.77	2773.06	2311.30	1961.32	1651.34
18.00°	1570.44	1563.95	1836.10	2378.01	2794.98	2327.20	1806.36	1515.35	1639.82	1883.60	2277.64	2729.34	2768.32	2727.17	2222.73	1862.63	1570.44
19.00°	1487.22	1489.16	1759.21	2322.65	2770.64	2269.59	1731.33	1428.36	1540.82	1796.98	2192.55	2681.88	2738.90	2677.52	2134.03	1774.03	1487.22
20.00°	1397.20	1408.13	1681.42	2265.41	2741.90	2210.48	1663.34	1333.88	1436.50	1703.69	2099.00	2637.04	2710.65	2621.67	2040.03	1688.06	1397.20
21.00°	1305.65	1328.07	1611.72	2210.55	2713.58	2145.09	1589.53	1247.13	1337.49	1615.26	2014.61	2590.15	2677.07	2567.22	1955.73	1599.90	1305.65
22.00°	1217.99	1241.73	1544.65	2151.24	2686.30	2082.05	1518.16	1162.13	1236.77	1517.29	1935.45	2537.26	2644.04	2512.96	1868.57	1510.10	1217.99
23.00°	1128.68	1164.26	1485.09	2094.08	2648.68	2021.10	1448.77	1076.91	1147.15	1414.28	1857.78	2484.39	2609.62	2452.31	1790.07	1415.83	1128.68
24.00°	1049.70	1087.50	1420.71	2031.84	2612.14	1956.73	1376.88	998.40	1060.50	1328.81	1780.80	2427.63	2573.22	2384.69	1714.87	1325.29	1049.70
25.00°	975.55	1016.52	1356.87	1971.71	2576.49	1892.33	1304.13	926.26	980.71	1236.47	1700.11	2372.86	2534.62	2322.72	1636.55	1234.78	975.55
26.00°	901.80	949.91	1290.83	1914.08	2536.27	1829.11	1230.74	854.79	905.10	1147.79	1625.99	2309.62	2493.61	2257.57	1563.48	1153.06	901.80
27.00°	834.19	881.91	1226.42	1851.57	2497.86	1768.88	1162.87	795.00	836.42	1065.61	1546.05	2254.88	2450.58	2193.67	1484.32	1074.82	834.19
28.00°	771.43	818.78	1160.95	1796.43	2454.07	1708.01	1091.65	733.85	770.86	993.85	1467.69	2191.40	2410.33	2128.26	1406.92	1000.32	771.43
29.00°	716.23	764.72	1096.26	1736.91	2407.90	1650.78	1028.47	684.71	716.79	920.72	1390.01	2130.47	2365.92	2059.37	1328.61	930.46	716.23
30.00°	661.12	710.43	1036.70	1681.95	2365.01	1589.26	964.99	636.94	662.92	857.23	1312.23	2066.78	2317.62	1995.60	1254.71	864.68	661.12
31.00°	620.67	661.90	977.11	1626.64	2317.45	1537.85	906.01	591.11	614.87	789.31	1241.47	2002.91	2269.68	1927.34	1184.47	803.91	620.67
32.00°	576.48	618.63	925.34	1568.59	2268.48	1481.17	853.22	552.23	569.52	736.84	1170.32	1940.99	2221.65	1858.71	1114.58	745.06	576.48
33.00°	539.15	579.24	874.80	1513.05	2222.03	1425.32	800.70	517.56	529.85	687.58	1100.21	1876.15	2172.64	1792.39	1052.23	689.39	539.15
34.00°	506.95	541.95	827.24	1461.67	2168.56	1370.59	751.08	483.61	493.27	634.91	1036.85	1811.80	2119.27	1728.32	991.26	646.84	506.95
35.00°	472.34	508.04	777.27	1409.79	2118.55	1317.33	701.43	452.93	463.25	593.45	975.19	1751.95	2065.83	1668.09	932.98	601.52	472.34
36.00°	442.36	478.50	732.40	1361.68	2064.75	1266.13	659.33	427.11	436.75	554.07	920.06	1692.28	2012.11	1607.25	879.37	563.61	442.36
37.00°	417.13	453.32	691.58	1309.83	2005.82	1213.22	619.89	400.94	407.83	517.50	860.81	1633.21	1959.49	1544.61	827.15	527.40	417.13
38.00°	392.85	427.66	654.28	1263.81	1953.72	1165.29	585.21	381.78	382.57	483.04	810.49	1568.83	1905.66	1485.34	775.01	494.52	392.85
39.00°	367.10	402.72	614.94	1213.90	1896.31	1112.49	552.69	354.13	361.62	452.71	759.70	1508.89	1846.27	1427.76	729.32	466.44	367.10
40.00°	350.40	380.84	579.64	1165.07	1839.30	1059.78	520.27	337.78	346.33	426.74	714.83	1448.22	1791.54	1365.27	685.11	435.07	350.40
41.00°	334.45	358.48	549.21	1115.61	1779.88	1018.38	492.33	323.97	332.05	402.82	672.14	1387.02	1729.92	1307.38	644.58	411.49	334.45
42.00°	315.29	345.09	518.77	1063.39	1724.92	971.33	467.05	312.11	318.96	379.45	633.04	1330.34	1672.30	1248.10	607.48	388.94	315.29
43.00°	305.26	325.89	491.56	1021.03	1662.73	926.84	440.99	298.08	306.74	362.90	596.86	1273.20	1612.09	1194.64	569.63	367.55	305.26

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	<b>ρ<sub>fc</sub></b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>ρ<sub>cc</sub></b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>ρ<sub>w</sub></b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	4295	4295	4295	4295	4190	4190	4190	4190	3994	3994	3994	3814	3814	3814	3649	3649	3572
	1	4015	3881	3761	3653	3917	3797	3688	3590	3638	3550	3470	3493	3422	3357	3359	3303	3232
	2	3731	3495	3300	3136	3640	3426	3247	3096	3296	3147	3019	3176	3054	2946	3065	2965	2900
	3	3470	3162	2923	2734	3384	3104	2884	2707	2996	2810	2656	2896	2739	2607	2804	2672	2614
	4	3232	2876	2615	2416	3154	2828	2586	2398	2738	2528	2363	2654	2474	2328	2576	2422	2370
	5	3019	2631	2360	2160	2947	2591	2337	2148	2515	2293	2122	2444	2250	2098	2377	2209	2163
	6	2827	2420	2147	1951	2762	2386	2129	1942	2321	2093	1923	2261	2059	1905	2204	2026	1986
	7	2654	2237	1966	1777	2595	2208	1952	1770	2152	1923	1756	2101	1895	1742	2052	1868	1833
	8	2499	2077	1812	1630	2445	2052	1800	1624	2004	1776	1613	1960	1754	1603	1918	1731	1700
	9	2358	1937	1679	1504	2310	1915	1669	1500	1874	1649	1491	1835	1630	1483	1798	1612	1584
	10	2231	1813	1563	1396	2187	1794	1554	1392	1758	1538	1386	1724	1522	1379	1692	1506	1481

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	100.5 fc	3.7 ft
6.5 ft	71.9 fc	4.4 ft
7.5 ft	54.0 fc	5.1 ft
8.0 ft	47.5 fc	5.4 ft
10.0 ft	30.4 fc	6.7 ft
12.0 ft	21.1 fc	8.1 ft
14.0 ft	15.5 fc	9.4 ft
16.0 ft	11.9 fc	10.8 ft
20.0 ft	7.6 fc	13.5 ft
24.0 ft	5.3 fc	16.2 ft
28.0 ft	3.9 fc	18.9 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
0.00°	90210	90210	90210
45.00°	5993	10720	63013
55.00°	4626	6861	47480
65.00°	3909	4376	32665
75.00°	781	2099	20230
85.00°	259	401	7048

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	13.9	15.2	14.2	15.5	15.9	22.8	24.1	23.2	24.5	24.8
	3H	15.3	16.5	15.7	16.8	17.2	24.1	25.3	24.5	25.7	26.1
	4H	15.3	16.4	15.7	16.8	17.2	24.5	25.7	25.0	26.0	26.5
	6H	15.3	16.3	15.7	16.7	17.1	24.8	25.8	25.2	26.2	26.6
	8H	15.2	16.2	15.7	16.6	17.1	24.8	25.8	25.2	26.2	26.6
	12H	15.2	16.1	15.6	16.5	17.0	24.8	25.7	25.2	26.1	26.6
4H	2H	14.7	15.8	15.1	16.1	16.6	22.7	23.8	23.1	24.1	24.6
	3H	16.1	17.0	16.5	17.4	17.9	24.1	25.0	24.5	25.4	25.9
	4H	16.1	17.0	16.6	17.4	17.9	24.6	25.4	25.0	25.8	26.3
	6H	16.1	16.8	16.6	17.3	17.8	24.8	25.5	25.3	26.0	26.5
	8H	16.1	16.7	16.5	17.2	17.7	24.9	25.5	25.3	26.0	26.5
	12H	16.0	16.6	16.5	17.1	17.6	24.9	25.4	25.4	25.9	26.4
8H	4H	16.5	17.2	17.0	17.6	18.1	24.4	25.1	24.9	25.6	26.1
	6H	16.5	17.0	17.0	17.5	18.0	24.7	25.2	25.2	25.8	26.3
	8H	16.4	16.9	17.0	17.4	18.0	24.7	25.2	25.3	25.8	26.3
	12H	16.4	16.8	16.9	17.3	17.9	24.7	25.2	25.3	25.7	26.3
12H	4H	16.5	17.1	17.1	17.6	18.1	24.4	25.0	24.9	25.5	26.0
	6H	16.5	17.0	17.0	17.5	18.0	24.7	25.1	25.2	25.6	26.2
	8H	16.5	16.9	17.0	17.4	18.0	24.7	25.1	25.2	25.6	26.2

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0