

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK XW xx xx MW NL

Nom 3 inch dia Euro style tracklight with 90 CRI emitter and no lens

Test Number

SP-01458_2

Test Date

12/1/2022

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

STT3PC 40L 30HK XW xx xx MW NL

Summary of Results

Power

Input Watts	35 W
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Lumen Output

Output Lumens	2525
Efficacy	72.15 lm/W

Luminous Dimensions

0° - 180° Size	-0.25
90° - 270° Size	-0.25
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.93
Two luminaires, plane 90°	0.94
Four luminaires	0.85

Full Beam Angle

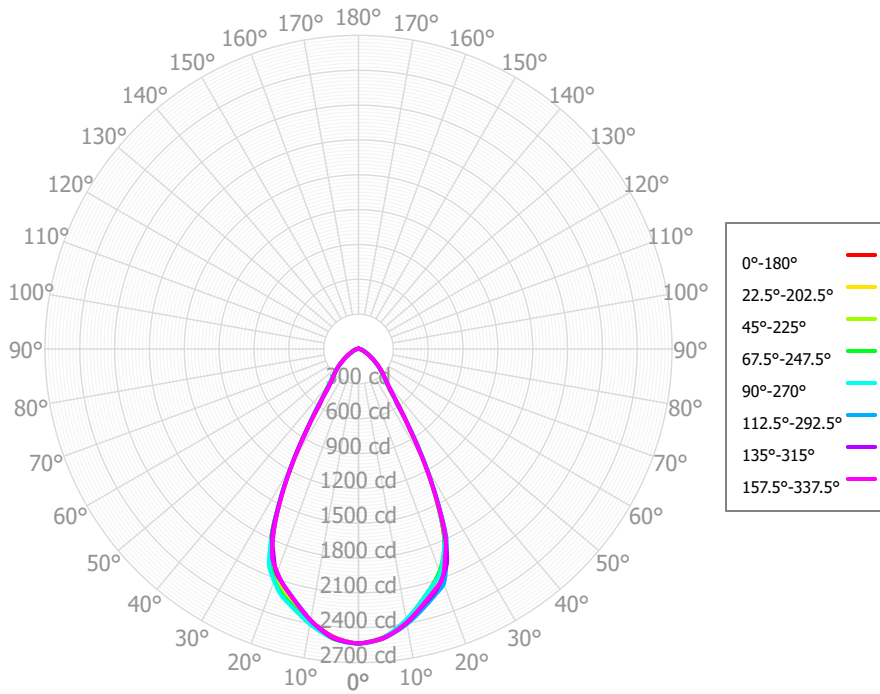
0° - 180°	58°
90° - 270°	58°

IES File Header Contents

Keyword	Value
TEST	SP-01458_2
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/1/2022
ISSUEDATE	12/2/2022
LUMCAT	STT3PC 40L 30HK XW xx xx MW NL
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and no lens
OTHER	Beam Angle: 58 deg
OTHER	Xtra Wide Beam
OTHER	Reference project SL474.1
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	90
_CCTMULT	27HK x 0.96, 35HK x 1.05, 40HK x 1.08
_LAMPMULT	10L x 0.24, 20L x 0.49, 30L x 0.73

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Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	237.86	9.42%	90.00° - 100.00°	1.87	0.07%
10.00° - 20.00°	628.45	24.89%	100.00° - 110.00°	1.68	0.07%
20.00° - 30.00°	767.63	30.40%	100.00° - 120.00°	3.27	0.13%
30.00° - 40.00°	407.18	16.12%	120.00° - 130.00°	1.48	0.06%
40.00° - 50.00°	222.84	8.82%	130.00° - 140.00°	1.39	0.05%
50.00° - 60.00°	134.61	5.33%	140.00° - 150.00°	1.20	0.05%
60.00° - 70.00°	68.02	2.69%	150.00° - 160.00°	0.91	0.04%
70.00° - 80.00°	35.36	1.40%	160.00° - 170.00°	0.60	0.02%
80.00° - 90.00°	12.51	0.50%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	2514.46	99.57%	0.00° - 180.00°	2525.37	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°	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43	2535.43
2.50°	2519.65	2526.07	2517.99	2519.62	2526.86	2523.77	2525.48	2520.14	2518.62	2524.19	2519.69	2519.91	2529.13	2521.30	2522.95	2521.63	2519.65
5.00°	2491.08	2498.71	2499.15	2500.58	2491.94	2495.30	2500.47	2492.17	2487.96	2494.65	2507.70	2500.69	2501.98	2499.86	2496.70	2500.25	2491.08
7.50°	2441.23	2442.48	2439.58	2437.70	2435.10	2440.72	2442.80	2438.83	2436.01	2443.17	2452.22	2454.65	2460.07	2457.09	2452.21	2449.93	2441.23
10.00°	2379.83	2376.81	2374.96	2372.67	2365.63	2370.87	2374.08	2373.01	2376.50	2383.14	2395.63	2404.67	2406.17	2405.07	2394.88	2390.24	2379.83
12.50°	2305.31	2298.22	2291.28	2288.21	2287.87	2286.30	2293.72	2291.56	2302.89	2312.79	2328.73	2336.39	2343.27	2342.88	2322.44	2318.95	2305.31
15.00°	2232.06	2216.75	2210.38	2204.83	2206.66	2209.24	2210.64	2213.19	2225.97	2242.67	2261.47	2269.59	2281.73	2277.62	2255.63	2245.23	2232.06
17.50°	2159.95	2144.88	2136.62	2126.93	2131.76	2137.77	2134.89	2137.73	2152.89	2172.75	2191.79	2207.47	2220.97	2214.09	2193.80	2177.23	2159.95
20.00°	2065.68	2074.19	2047.19	2038.48	2058.67	2047.76	2060.12	2045.84	2080.36	2078.91	2107.08	2120.93	2125.45	2150.91	2103.05	2109.87	2065.68
22.50°	1956.84	1923.12	1928.83	1915.67	1914.28	1947.51	1912.97	1942.37	1926.91	1968.28	1960.83	1980.75	2015.54	1976.60	1992.56	1946.25	1956.84
25.00°	1729.37	1764.84	1737.26	1740.35	1756.40	1725.39	1759.57	1722.89	1766.25	1737.05	1769.34	1773.37	1761.42	1790.43	1755.35	1773.77	1729.37
27.50°	1444.62	1449.44	1442.71	1446.02	1461.37	1454.76	1452.76	1440.97	1451.87	1443.37	1454.00	1458.17	1464.45	1469.53	1454.45	1453.41	1444.62
30.00°	1136.81	1136.48	1141.54	1147.59	1153.12	1147.84	1147.01	1135.48	1139.31	1134.37	1143.95	1146.85	1148.92	1146.47	1141.91	1136.30	1136.81
32.50°	820.83	846.51	833.39	842.20	862.28	830.64	852.25	820.89	847.91	819.69	844.25	840.30	829.90	856.74	825.22	847.17	820.83
35.00°	618.79	584.36	611.16	606.74	580.25	622.71	585.64	615.41	583.40	618.50	611.54	619.15	636.28	587.00	625.55	587.95	618.79
37.50°	443.55	469.09	457.04	459.82	467.53	434.00	467.17	438.52	470.29	446.75	478.21	477.14	454.58	479.13	455.01	476.85	443.55
40.00°	379.54	370.37	369.26	365.69	363.33	370.04	365.70	370.40	372.00	379.23	385.24	387.90	390.62	382.21	384.40	381.34	379.54
42.50°	330.59	326.96	321.84	321.77	322.56	317.76	323.24	320.53	327.92	327.94	337.11	335.29	330.41	334.85	328.47	335.39	330.59
45.00°	294.19	286.68	284.29	283.50	282.84	283.44	283.06	285.06	286.08	288.29	293.73	290.86	289.75	289.21	288.92	292.15	294.19
47.50°	258.47	253.67	251.12	249.39	247.86	249.34	248.35	250.72	249.83	249.43	254.44	250.76	249.18	248.85	250.48	255.15	258.47
50.00°	219.73	219.67	216.69	214.72	213.85	214.55	214.36	215.42	214.34	211.56	215.00	211.04	209.29	210.39	212.50	218.69	219.73
52.50°	181.76	183.95	181.87	179.73	182.69	180.51	181.68	180.49	180.19	174.30	175.47	171.46	170.90	176.06	175.22	183.14	181.76
55.00°	152.55	152.54	152.64	151.31	153.23	151.88	151.81	151.10	149.52	144.97	143.57	141.35	139.17	144.32	146.22	150.97	152.55
57.50°	124.49	126.70	124.59	125.54	127.29	124.79	125.66	122.96	123.65	116.67	115.25	113.77	110.28	116.81	118.30	123.00	124.49
60.00°	102.87	104.96	104.02	105.17	104.66	104.19	103.45	102.87	101.21	94.90	92.92	92.99	89.71	93.38	96.98	99.99	102.87
62.50°	82.92	87.19	84.29	86.29	87.23	85.64	85.14	83.92	82.32	75.15	72.66	73.31	71.53	74.91	77.26	81.76	82.92
65.00°	68.75	72.83	72.38	73.14	73.02	72.86	70.91	69.55	67.30	63.17	59.00	59.53	58.47	60.12	63.40	67.25	68.75
67.50°	56.24	61.02	60.85	60.96	62.60	61.50	59.83	56.65	55.28	51.98	46.84	46.18	47.07	48.68	51.04	55.43	56.24
70.00°	47.86	51.40	51.51	52.96	53.68	53.07	51.22	47.77	45.44	42.82	38.68	37.44	38.28	39.76	42.48	46.03	47.86
72.50°	40.13	42.99	42.63	45.33	46.13	46.11	44.02	40.09	36.89	34.68	31.04	28.96	30.82	32.61	34.84	37.93	40.13
75.00°	33.57	36.86	37.72	40.54	40.26	41.39	39.03	34.71	30.80	28.49	25.58	23.94	24.89	26.74	28.90	32.62	33.57
77.50°	28.02	31.65	32.68	35.70	35.53	36.78	34.96	29.62	25.77	23.22	20.29	19.11	20.36	21.55	23.85	28.41	28.02
80.00°	23.81	26.41	27.06	29.60	29.56	32.32	29.12	24.98	21.54	19.24	17.46	15.53	17.11	17.29	20.02	23.29	23.81
82.50°	17.65	21.18	20.59	23.07	22.95	24.15	22.77	18.85	17.56	14.46	14.37	11.69	12.80	13.39	15.00	17.92	17.65
85.00°	9.49	13.00	11.50	13.46	14.19	12.75	13.81	11.10	10.75	8.82	8.51	6.85	7.79	8.60	8.70	10.81	9.49
87.50°	4.64	4.30	4.62	5.30	4.63	6.17	4.36	5.88	3.37	4.92	3.41	3.07	4.53	3.57	4.61	3.39	4.64
90.00°	2.36	2.63	2.80	3.16	2.34	2.75	2.72	2.83	2.24	2.44	2.30	2.10	2.14	2.36	2.29	2.18	2.36
92.50°	1.58	1.63	1.57	1.59	1.85	1.58	1.89	1.60	1.77	1.44	1.46	1.41	1.50	1.76	1.63	1.50	1.58
95.00°	1.70	1.62	1.32	1.65	1.75	1.53	1.76	1.53	1.62	1.35	1.55	1.25	1.51	1.81	1.96	1.67	1.70
97.50°	1.60	1.60	1.22	1.67	1.70	1.76	1.65	1.57	1.50	1.48	1.59	1.17	1.54	1.91	1.78	1.83	1.60
100.00°	1.41	1.39	1.30	1.59	1.51	2.09	1.45	1.67	1.63	1.71	1.53	1.19	1.58	1.95	1.36	1.92	1.41

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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	3004	3004	3004	3004	2933	2933	2933	2933	2800	2800	2800	2678	2678	2678	2567	2567	2567	2514
	1	2839	2759	2687	2622	2774	2703	2638	2579	2597	2545	2497	2501	2459	2420	2411	2379	2348	2330
	2	2676	2536	2420	2322	2617	2490	2385	2295	2405	2318	2242	2327	2255	2192	2254	2196	2144	2151
	3	2522	2339	2198	2085	2469	2302	2172	2067	2233	2123	2032	2168	2076	1998	2109	2031	1965	1991
	4	2380	2167	2011	1892	2331	2136	1992	1880	2079	1954	1856	2025	1919	1832	1976	1885	1809	1848
	5	2248	2015	1852	1731	2203	1989	1837	1723	1941	1808	1706	1896	1780	1689	1854	1754	1673	1721
	6	2126	1880	1714	1595	2086	1858	1702	1589	1818	1680	1577	1780	1658	1565	1744	1637	1553	1607
	7	2014	1759	1594	1478	1978	1741	1585	1473	1707	1567	1464	1674	1549	1456	1644	1532	1447	1505
	8	1911	1651	1488	1376	1878	1636	1481	1373	1606	1466	1366	1579	1452	1359	1553	1438	1352	1414
	9	1816	1555	1395	1286	1786	1541	1388	1284	1516	1376	1279	1492	1365	1273	1469	1353	1268	1332
	10	1728	1467	1311	1207	1701	1456	1306	1205	1433	1296	1201	1412	1286	1197	1393	1277	1193	1257

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	83.8 fc	6.1 ft
6.5 ft	60.0 fc	7.2 ft
7.5 ft	45.1 fc	8.3 ft
8.0 ft	39.6 fc	8.9 ft
10.0 ft	25.4 fc	11.1 ft
12.0 ft	17.6 fc	13.3 ft
14.0 ft	12.9 fc	15.5 ft
16.0 ft	9.9 fc	17.7 ft
20.0 ft	6.3 fc	22.1 ft
24.0 ft	4.4 fc	26.6 ft
28.0 ft	3.2 fc	31.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	555970	555970	555970
45.00°	91230	88162	87711
55.00°	58321	58357	58579
65.00°	35673	37557	37888
75.00°	28441	31955	34109
85.00°	23873	28932	35703

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		Viewed crosswise					Viewed endwise				
2H	2H	21.3	22.5	21.7	22.8	23.1	21.0	22.2	21.4	22.5	22.8
	3H	22.2	23.2	22.6	23.6	24.0	21.9	22.9	22.3	23.3	23.7
	4H	22.6	23.5	23.0	23.9	24.3	22.3	23.3	22.7	23.6	24.0
	6H	23.0	23.8	23.4	24.2	24.6	22.7	23.6	23.1	24.0	24.4
	8H	23.1	23.9	23.5	24.3	24.7	22.9	23.7	23.3	24.1	24.5
	12H	23.2	24.0	23.6	24.3	24.8	23.0	23.8	23.4	24.2	24.6
4H	2H	21.6	22.5	22.0	22.9	23.3	21.2	22.2	21.7	22.6	23.0
	3H	22.7	23.4	23.1	23.8	24.3	22.4	23.1	22.8	23.5	24.0
	4H	23.2	23.9	23.6	24.3	24.7	22.9	23.6	23.3	24.0	24.5
	6H	23.7	24.3	24.2	24.7	25.2	23.5	24.1	23.9	24.5	25.0
	8H	23.9	24.4	24.4	24.9	25.4	23.7	24.3	24.2	24.7	25.2
	12H	24.0	24.5	24.5	25.0	25.5	23.9	24.3	24.4	24.8	25.3
8H	4H	23.3	23.9	23.8	24.3	24.8	23.0	23.6	23.5	24.0	24.5
	6H	24.0	24.4	24.5	24.9	25.4	23.8	24.2	24.3	24.7	25.2
	8H	24.3	24.7	24.8	25.2	25.7	24.1	24.5	24.7	25.1	25.6
	12H	24.5	24.9	25.1	25.4	26.0	24.4	24.7	24.9	25.2	25.8
12H	4H	23.3	23.8	23.8	24.3	24.8	23.0	23.5	23.5	24.0	24.5
	6H	24.0	24.4	24.6	24.9	25.5	23.8	24.2	24.4	24.7	25.3
	8H	24.4	24.8	24.9	25.3	25.8	24.2	24.6	24.8	25.1	25.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0