

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK XW xx xx MW LN3AGL

Nom 3 inch dia Euro style tracklight with 90 CRI emitter and clear glass lens

Test Number

SP-01458

Test Date

12/1/2022

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

STT3PC 40L 30HK XW xx xx MW LN3AGL

Summary of Results

Power

Input Watts	35 W
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Lumen Output

Output Lumens	2284
Efficacy	65.26 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.95
Two luminaires, plane 90°	0.94
Four luminaires	0.86

Full Beam Angle

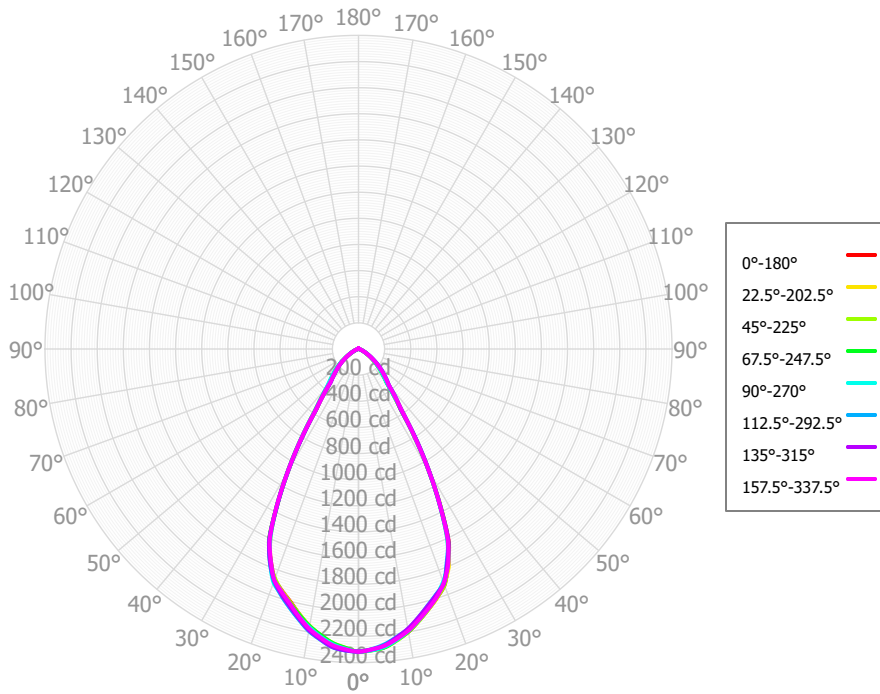
0° - 180°	59°
90° - 270°	59°

IES File Header Contents

Keyword	Value
TEST	SP-01458
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 LN3AGL
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and clear glass lens
OTHER	Beam Angle: 59 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°	217.16	9.51%	90.00° - 100.00°	2.06	0.09%
10.00° - 20.00°	573.23	25.10%	100.00° - 110.00°	2.00	0.09%
20.00° - 30.00°	707.51	30.98%	100.00° - 120.00°	3.92	0.17%
30.00° - 40.00°	389.21	17.04%	120.00° - 130.00°	1.85	0.08%
40.00° - 50.00°	202.40	8.86%	130.00° - 140.00°	1.67	0.07%
50.00° - 60.00°	115.65	5.06%	140.00° - 150.00°	1.44	0.06%
60.00° - 70.00°	46.85	2.05%	150.00° - 160.00°	1.06	0.05%
70.00° - 80.00°	14.68	0.64%	160.00° - 170.00°	0.68	0.03%
80.00° - 90.00°	4.44	0.19%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	2271.14	99.43%	0.00° - 180.00°	2284.05	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°	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81	2316.81
2.50°	2305.81	2309.82	2307.66	2306.91	2309.15	2310.16	2309.11	2300.37	2297.33	2297.44	2289.25	2290.79	2296.78	2299.92	2303.15	2301.65	2305.81
5.00°	2290.32	2287.81	2293.00	2292.53	2288.59	2291.64	2289.81	2276.20	2273.81	2263.26	2258.70	2260.84	2268.07	2270.55	2278.20	2280.37	2290.32
7.50°	2245.04	2246.52	2250.90	2245.74	2245.37	2243.80	2239.96	2228.80	2217.90	2214.36	2209.43	2209.51	2221.69	2224.89	2228.13	2239.31	2245.04
10.00°	2198.50	2194.02	2198.72	2195.04	2191.82	2191.73	2186.21	2172.92	2161.41	2153.72	2153.02	2155.30	2163.48	2177.17	2175.25	2190.58	2198.50
12.50°	2129.99	2130.04	2133.74	2126.12	2126.09	2119.15	2111.85	2099.92	2083.53	2085.31	2081.89	2087.79	2100.03	2108.23	2107.97	2126.02	2129.99
15.00°	2061.67	2064.90	2064.40	2056.93	2056.83	2046.61	2037.93	2021.12	2006.26	2011.24	2012.73	2018.86	2033.36	2037.00	2039.45	2060.05	2061.67
17.50°	1995.87	1998.67	1994.53	1986.62	1983.76	1974.23	1966.20	1950.98	1942.96	1944.35	1947.20	1953.46	1967.53	1971.81	1975.80	1991.45	1995.87
20.00°	1923.84	1911.37	1924.49	1905.18	1895.49	1891.96	1885.39	1883.46	1876.00	1882.25	1868.92	1888.37	1902.17	1907.12	1912.47	1906.41	1923.84
22.50°	1789.04	1806.00	1784.63	1782.68	1791.78	1771.81	1767.25	1753.92	1754.62	1758.65	1768.29	1757.54	1767.29	1765.87	1773.70	1792.46	1789.04
25.00°	1637.85	1613.81	1626.16	1624.41	1607.60	1617.52	1616.72	1607.94	1620.57	1596.55	1606.37	1622.52	1596.16	1620.25	1631.59	1618.98	1637.85
27.50°	1356.91	1351.35	1364.75	1349.72	1348.46	1348.30	1349.65	1355.86	1349.80	1358.62	1346.71	1351.16	1354.56	1351.48	1356.92	1350.21	1356.91
30.00°	1077.64	1076.76	1078.28	1075.63	1078.29	1078.69	1081.19	1078.09	1079.50	1077.45	1083.12	1074.41	1079.69	1077.65	1079.46	1078.87	1077.64
32.50°	809.85	793.18	816.18	803.33	798.42	807.90	808.14	820.34	813.56	821.18	813.81	820.23	828.76	822.36	821.43	803.78	809.85
35.00°	565.37	587.68	559.21	569.56	586.62	573.40	571.05	566.78	565.14	577.82	597.04	566.59	588.40	568.06	565.96	588.47	565.37
37.50°	454.42	434.99	438.84	439.13	429.57	439.33	439.57	440.13	443.78	439.12	452.27	460.11	458.59	465.44	461.83	455.39	454.42
40.00°	353.93	344.24	342.95	333.46	335.65	331.73	332.12	337.38	333.97	351.20	351.49	355.15	372.69	363.92	360.04	360.52	353.93
42.50°	307.01	292.90	292.90	287.38	288.18	289.78	290.12	290.55	293.29	297.73	305.85	312.36	319.98	319.61	317.73	313.73	307.01
45.00°	262.10	251.75	250.15	245.31	248.46	250.73	250.85	252.56	254.02	259.37	265.15	269.87	279.54	275.63	275.68	271.46	262.10
47.50°	226.08	216.50	213.98	212.25	214.13	218.16	218.24	219.44	222.28	224.06	230.13	235.44	241.44	239.34	238.40	234.39	226.08
50.00°	190.58	182.11	178.67	179.74	181.01	185.81	186.14	186.95	190.25	190.00	195.24	201.00	204.11	203.18	201.30	197.97	190.58
52.50°	157.10	148.17	148.86	148.36	148.66	153.93	155.17	157.44	156.93	158.19	160.50	166.51	169.88	169.12	166.44	162.26	157.10
55.00°	125.58	119.50	119.66	119.20	121.96	124.69	126.04	128.25	125.27	127.20	129.40	132.55	136.57	135.58	132.35	130.46	125.58
57.50°	100.95	93.43	95.55	94.26	98.52	100.43	100.69	103.44	100.22	101.63	101.89	105.38	109.51	108.18	105.57	102.53	100.95
60.00°	78.01	72.45	71.88	73.18	78.71	78.50	78.27	78.99	76.95	77.84	78.80	79.09	84.13	81.69	79.73	79.68	78.01
62.50°	60.28	53.74	57.00	58.79	60.88	60.70	61.28	61.92	60.17	60.28	59.84	61.30	64.39	63.42	61.46	61.44	60.28
65.00°	44.54	40.52	42.65	45.56	46.48	45.74	46.74	45.28	44.72	44.61	44.49	44.32	45.96	45.90	44.23	46.45	44.54
67.50°	34.30	29.58	32.74	34.15	33.76	35.39	36.36	36.01	33.50	34.02	32.23	33.59	34.28	34.25	33.84	34.25	34.30
70.00°	25.14	21.72	23.02	24.92	25.26	26.97	27.39	27.06	23.79	24.79	23.08	23.32	23.95	23.35	23.88	25.01	25.14
72.50°	18.77	15.01	17.38	18.91	18.70	21.38	20.68	20.98	18.54	17.95	16.36	16.18	17.15	17.29	16.41	18.08	18.77
75.00°	13.27	11.27	11.82	13.90	14.00	16.35	15.16	14.95	13.81	11.66	11.51	9.83	10.98	11.63	9.84	13.07	13.27
77.50°	9.79	8.53	8.79	10.25	10.08	12.09	11.36	11.12	10.45	8.89	8.05	7.99	7.77	8.08	7.75	9.47	9.79
80.00°	6.94	6.36	5.78	7.51	7.92	8.56	8.37	7.34	7.56	6.86	5.97	6.16	5.01	5.05	5.84	6.76	6.94
82.50°	5.39	4.36	4.74	5.92	6.41	5.98	6.44	6.20	5.79	5.18	4.83	4.40	4.30	4.50	4.67	4.64	5.39
85.00°	4.05	3.34	3.69	4.37	4.66	4.04	4.52	5.04	4.19	3.57	3.64	2.86	3.85	3.82	3.60	3.46	4.05
87.50°	3.09	2.58	2.68	2.86	2.82	2.84	2.62	3.62	2.96	2.59	2.42	2.18	3.02	2.60	2.86	2.87	3.09
90.00°	2.43	2.14	1.73	2.04	2.24	2.04	1.82	2.25	2.09	1.71	1.81	1.65	2.14	1.63	2.21	2.45	2.43
92.50°	2.27	1.77	1.78	1.95	2.03	1.68	2.29	1.95	1.94	1.77	1.55	1.61	1.74	1.61	1.88	2.12	2.27
95.00°	2.17	1.90	1.82	1.93	1.78	1.69	2.24	1.69	1.98	1.95	1.59	1.59	1.38	1.61	1.61	2.12	2.17
97.50°	2.16	2.15	1.71	1.98	1.52	2.08	1.63	2.01	2.37	1.89	1.78	1.66	1.75	1.67	1.49	2.28	2.16
100.00°	2.15	2.09	1.62	1.98	1.58	2.15	1.45	2.29	2.53	1.81	1.76	1.72	2.16	1.74	1.47	2.28	2.15

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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	2716	2716	2716	2716	2651	2651	2651	2651	2531	2531	2531	2420	2420	2420	2319	2319	2319	2271
	1	2575	2505	2443	2387	2516	2454	2398	2348	2359	2314	2273	2271	2236	2203	2190	2163	2137	2118
	2	2432	2309	2208	2123	2378	2268	2176	2098	2191	2115	2050	2120	2058	2004	2055	2004	1960	1963
	3	2295	2134	2010	1911	2247	2101	1987	1894	2038	1941	1862	1980	1899	1831	1926	1858	1801	1821
	4	2167	1979	1842	1737	2123	1952	1824	1725	1900	1790	1703	1851	1757	1681	1806	1726	1660	1693
	5	2048	1841	1697	1590	2008	1818	1683	1582	1775	1657	1567	1734	1632	1551	1697	1608	1536	1577
	6	1938	1719	1571	1466	1902	1699	1561	1460	1663	1540	1449	1628	1520	1438	1596	1501	1427	1474
	7	1836	1609	1462	1358	1803	1592	1453	1354	1561	1437	1346	1532	1421	1337	1504	1405	1329	1381
	8	1742	1510	1365	1265	1712	1496	1358	1261	1470	1344	1255	1444	1331	1249	1421	1319	1243	1297
	9	1655	1422	1279	1182	1628	1410	1273	1179	1386	1262	1175	1365	1251	1170	1344	1241	1165	1221
	10	1575	1342	1202	1109	1551	1331	1197	1107	1311	1188	1103	1292	1179	1099	1274	1170	1095	1152

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	76.6 fc	6.2 ft
6.5 ft	54.8 fc	7.3 ft
7.5 ft	41.2 fc	8.4 ft
8.0 ft	36.2 fc	9.0 ft
10.0 ft	23.2 fc	11.2 ft
12.0 ft	16.1 fc	13.5 ft
14.0 ft	11.8 fc	15.7 ft
16.0 ft	9.1 fc	17.9 ft
20.0 ft	5.8 fc	22.4 ft
24.0 ft	4.0 fc	26.9 ft
28.0 ft	3.0 fc	31.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	508031	508031	508031
45.00°	81280	77574	77051
55.00°	48008	45747	46626
65.00°	23112	22132	24115
75.00°	11243	10015	11860
85.00°	10192	9289	11722

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	20.1	21.2	20.4	21.5	21.8	20.4	21.5	20.7	21.8	22.1
	3H	20.4	21.4	20.8	21.8	22.1	20.7	21.7	21.1	22.1	22.4
	4H	20.5	21.4	20.9	21.8	22.2	20.8	21.7	21.2	22.1	22.5
	6H	20.5	21.3	20.9	21.7	22.1	20.8	21.6	21.2	22.0	22.4
	8H	20.5	21.3	20.9	21.7	22.1	20.8	21.5	21.2	21.9	22.4
	12H	20.5	21.2	20.9	21.6	22.1	20.7	21.5	21.2	21.9	22.3
4H	2H	20.1	21.0	20.5	21.4	21.8	20.4	21.3	20.9	21.7	22.1
	3H	20.6	21.3	21.0	21.8	22.2	20.9	21.6	21.3	22.1	22.5
	4H	20.7	21.3	21.1	21.8	22.2	21.0	21.6	21.4	22.1	22.5
	6H	20.7	21.3	21.2	21.7	22.2	21.0	21.6	21.5	22.0	22.5
	8H	20.7	21.2	21.2	21.7	22.2	21.0	21.5	21.5	22.0	22.5
	12H	20.7	21.2	21.2	21.7	22.2	21.0	21.5	21.5	22.0	22.5
8H	4H	20.6	21.1	21.1	21.6	22.1	20.9	21.5	21.4	21.9	22.4
	6H	20.7	21.1	21.2	21.6	22.1	21.0	21.4	21.5	21.9	22.4
	8H	20.7	21.0	21.2	21.6	22.1	21.0	21.4	21.5	21.9	22.4
	12H	20.7	21.0	21.2	21.5	22.1	21.0	21.4	21.6	21.9	22.5
12H	4H	20.5	21.0	21.0	21.5	22.0	20.9	21.3	21.4	21.8	22.3
	6H	20.6	21.0	21.2	21.5	22.0	21.0	21.3	21.5	21.8	22.4
	8H	20.7	21.0	21.2	21.5	22.1	21.0	21.3	21.5	21.8	22.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0