

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK MD xx xx MW LN3AGL

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

Test Number

SP-01455

Test Date

12/1/2022

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

STT3PC 40L 30HK MD xx xx MW LN3AGL

Summary of Results

Power

Input Watts	35 W
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Lumen Output

Output Lumens	2532
Efficacy	72.34 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.49
Two luminaires, plane 90°	0.49
Four luminaires	0.49

Full Beam Angle

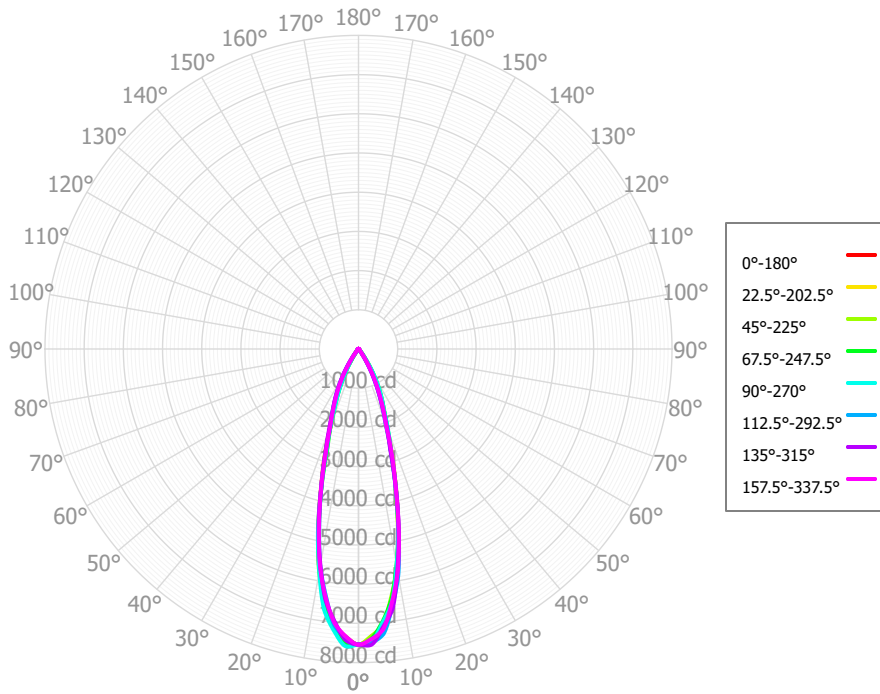
0° - 180°	30°
90° - 270°	29°

IES File Header Contents

Keyword	Value
TEST	SP-01455
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/1/2022
ISSUEDATE	12/2/2022
LUMCAT	STT3PC 40L 30HK MD xx xx MW LN3AGL
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and clear glass lens
OTHER	Beam Angle: 30 deg
OTHER	Medium 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°	638.03	25.20%	90.00° - 100.00°	2.08	0.08%
10.00° - 20.00°	1002.51	39.60%	100.00° - 110.00°	1.98	0.08%
20.00° - 30.00°	596.83	23.57%	100.00° - 120.00°	3.81	0.15%
30.00° - 40.00°	181.94	7.19%	120.00° - 130.00°	1.72	0.07%
40.00° - 50.00°	34.93	1.38%	130.00° - 140.00°	1.67	0.07%
50.00° - 60.00°	21.12	0.83%	140.00° - 150.00°	1.48	0.06%
60.00° - 70.00°	23.46	0.93%	150.00° - 160.00°	1.13	0.04%
70.00° - 80.00°	14.91	0.59%	160.00° - 170.00°	0.68	0.03%
80.00° - 90.00°	5.30	0.21%	170.00° - 180.00°	0.22	0.01%
0.00° - 90.00°	2519.02	99.49%	0.00° - 180.00°	2531.81	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°	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34	7543.34
2.50°	7389.07	7350.14	7340.06	7404.68	7485.50	7377.93	7435.96	7345.31	7356.30	7361.26	7387.72	7511.05	7590.80	7498.99	7552.64	7413.16	7389.07
5.00°	7071.56	7080.79	7078.74	6994.32	7022.62	7078.74	6984.28	7023.00	7075.62	7054.64	7178.43	7121.51	7212.65	7301.68	7133.27	7190.19	7071.56
7.50°	6449.43	6450.67	6391.46	6442.04	6529.79	6367.85	6456.24	6401.73	6466.27	6474.16	6505.34	6642.67	6715.33	6610.17	6679.92	6525.60	6449.43
10.00°	5655.53	5691.94	5656.13	5590.78	5606.77	5624.12	5600.73	5644.61	5740.39	5687.60	5781.22	5698.33	5768.76	5850.64	5714.73	5775.56	5655.53
12.50°	4666.07	4710.33	4641.91	4675.54	4677.99	4628.53	4703.71	4650.57	4749.85	4664.03	4700.32	4692.89	4777.62	4725.33	4741.86	4739.97	4666.07
15.00°	3703.42	3675.41	3660.96	3659.43	3687.31	3661.88	3687.88	3692.15	3694.99	3683.38	3659.27	3657.45	3671.56	3653.33	3684.20	3675.34	3703.42
17.50°	2764.19	2854.53	2800.24	2813.25	2753.41	2825.68	2807.38	2780.12	2872.77	2740.06	2786.65	2630.27	2727.41	2763.27	2696.67	2846.54	2764.19
20.00°	2113.86	2063.73	2077.96	2168.20	2203.79	2108.30	2203.25	2121.62	2084.00	2101.21	2035.22	2084.72	2084.95	2009.66	2108.73	2042.13	2113.86
22.50°	1653.22	1680.55	1700.34	1706.94	1705.16	1744.78	1720.84	1712.57	1710.01	1664.37	1626.61	1556.12	1555.90	1579.98	1569.77	1633.10	1653.22
25.00°	1275.41	1322.65	1351.80	1410.14	1412.37	1404.63	1424.89	1368.08	1361.00	1296.97	1244.73	1199.34	1186.39	1186.42	1205.37	1233.89	1275.41
27.50°	937.74	1015.55	1056.62	1116.92	1120.93	1113.90	1129.05	1072.23	1053.34	963.64	916.88	855.33	856.10	856.34	862.82	911.26	937.74
30.00°	651.09	713.22	774.07	826.13	833.18	830.55	833.35	789.12	749.76	676.30	621.76	580.33	568.03	566.57	574.96	605.08	651.09
32.50°	382.38	466.60	508.79	564.65	565.07	558.88	565.61	513.17	493.00	405.07	376.28	335.57	347.72	329.69	336.63	373.92	382.38
35.00°	228.71	242.81	303.39	318.24	336.05	337.23	322.23	313.18	258.79	241.19	202.66	194.45	182.50	175.63	188.20	182.69	228.71
37.50°	102.09	149.48	159.73	183.70	170.33	175.81	175.53	144.79	156.05	102.99	112.22	88.00	99.16	103.64	91.88	113.83	102.09
40.00°	68.14	72.70	81.54	90.51	97.86	85.26	93.09	83.94	71.72	70.24	62.44	65.54	65.73	63.95	67.11	63.39	68.14
42.50°	47.34	56.24	55.06	61.39	54.39	59.23	57.11	54.12	54.11	52.80	48.25	48.36	49.89	48.79	50.70	52.82	47.34
45.00°	41.44	42.28	40.20	48.29	43.09	44.61	44.33	42.66	39.79	43.55	39.68	40.47	42.04	39.77	42.97	43.46	41.44
47.50°	36.39	34.55	32.31	40.52	34.61	37.83	35.98	34.63	33.82	34.84	34.81	33.94	35.34	34.28	35.49	35.99	36.39
50.00°	30.58	28.08	27.73	33.58	28.53	31.89	29.22	29.63	28.58	29.23	29.16	29.20	29.01	30.47	28.20	29.20	30.58
52.50°	24.98	23.88	24.59	28.32	25.24	26.38	27.28	24.92	24.69	23.85	23.13	25.03	24.65	27.37	24.46	23.21	24.98
55.00°	21.80	22.40	22.07	23.19	23.76	23.83	26.50	23.80	22.36	21.18	20.58	21.43	20.70	23.46	22.84	20.18	21.80
57.50°	19.37	24.64	19.74	23.05	23.52	22.38	25.48	22.87	22.17	18.78	19.26	19.78	19.57	19.31	20.97	19.84	19.37
60.00°	21.03	25.14	20.43	23.07	23.88	24.54	24.42	24.46	23.00	17.93	21.47	19.61	18.78	19.58	19.00	21.10	21.03
62.50°	22.60	23.84	21.74	25.13	24.11	27.63	26.10	26.13	24.91	18.09	24.51	21.49	22.35	20.68	20.57	23.46	22.60
65.00°	23.79	23.25	22.33	27.01	24.30	27.76	27.90	28.35	25.13	21.86	23.44	24.56	25.93	21.77	23.23	24.83	23.79
67.50°	23.70	23.22	22.84	27.73	25.89	27.43	26.39	29.32	23.98	23.54	21.79	23.46	23.88	22.87	21.10	25.67	23.70
70.00°	20.39	20.74	21.49	27.15	27.81	25.20	24.66	24.80	21.53	19.95	18.25	20.61	21.39	19.13	18.01	22.41	20.39
72.50°	16.54	16.80	19.98	21.62	22.88	22.81	20.26	20.28	18.31	16.07	14.62	14.98	14.93	15.30	13.30	17.58	16.54
75.00°	11.71	13.03	15.85	16.97	17.04	17.76	15.99	15.79	14.60	11.66	12.71	8.52	9.18	11.44	8.40	13.23	11.71
77.50°	8.08	9.32	11.94	14.58	14.13	12.95	12.54	11.66	10.67	8.59	10.77	7.21	7.01	7.87	6.71	9.01	8.08
80.00°	6.08	7.61	9.99	12.05	11.36	11.38	9.64	8.32	8.48	7.35	8.60	6.86	5.06	6.61	5.14	7.66	6.08
82.50°	4.57	6.52	7.83	9.26	8.66	9.56	8.70	5.94	6.84	5.91	6.49	5.08	3.85	5.23	4.11	6.75	4.57
85.00°	3.56	5.23	4.64	6.41	6.00	6.20	7.06	5.05	5.41	4.23	4.70	3.15	2.76	3.29	3.12	4.51	3.56
87.50°	2.79	3.89	2.23	3.48	3.74	3.40	3.67	3.84	4.02	2.99	3.12	2.24	1.94	1.84	2.57	2.17	2.79
90.00°	2.22	3.08	2.22	1.89	1.85	2.77	1.61	2.26	2.82	2.07	2.34	1.40	1.54	1.83	2.08	1.91	2.22
92.50°	1.94	2.33	2.15	1.73	1.96	2.25	2.02	1.72	1.64	1.83	1.73	1.59	1.85	1.78	1.90	1.70	1.94
95.00°	1.84	2.03	1.97	1.78	1.99	2.06	2.09	2.12	1.75	2.00	1.56	1.75	2.20	1.66	1.73	2.02	1.84
97.50°	1.69	1.77	1.82	2.01	1.71	1.91	1.70	2.10	1.90	1.95	1.50	1.70	2.61	1.71	1.59	2.25	1.69
100.00°	1.53	2.03	1.71	2.12	1.62	1.86	1.67	1.78	1.72	1.82	1.67	1.66	2.48	2.03	1.63	1.89	1.53

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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%	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	3011	3011	3011	3011	2940	2940	2940	2940	2806	2806	2806	2684	2684	2684	2572	2572	2519
	1	2890	2828	2772	2722	2827	2772	2723	2678	2668	2629	2593	2573	2542	2514	2485	2461	2412
	2	2774	2668	2581	2507	2719	2625	2546	2478	2542	2478	2423	2467	2415	2370	2396	2355	2309
	3	2667	2530	2424	2339	2618	2495	2398	2320	2429	2348	2282	2368	2301	2245	2311	2257	2213
	4	2566	2407	2291	2202	2523	2379	2272	2189	2325	2234	2162	2276	2199	2137	2229	2165	2125
	5	2471	2298	2176	2087	2433	2274	2162	2077	2230	2133	2058	2190	2106	2040	2151	2080	2043
	6	2382	2199	2076	1987	2348	2180	2064	1980	2143	2042	1966	2109	2021	1953	2077	2000	1966
	7	2299	2109	1986	1899	2269	2093	1977	1894	2062	1959	1884	2034	1942	1874	2007	1926	1894
	8	2221	2027	1905	1821	2194	2013	1897	1817	1987	1883	1809	1963	1870	1801	1940	1856	1827
	9	2147	1951	1831	1750	2123	1940	1825	1747	1917	1814	1741	1896	1802	1735	1877	1792	1765
	10	2078	1881	1764	1685	2056	1871	1759	1683	1852	1749	1678	1834	1740	1673	1817	1731	1706

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	249.4 fc	2.9 ft
6.5 ft	178.5 fc	3.4 ft
7.5 ft	134.1 fc	4.0 ft
8.0 ft	117.9 fc	4.2 ft
10.0 ft	75.4 fc	5.3 ft
12.0 ft	52.4 fc	6.3 ft
14.0 ft	38.5 fc	7.4 ft
16.0 ft	29.5 fc	8.4 ft
20.0 ft	18.9 fc	10.5 ft
24.0 ft	13.1 fc	12.6 ft
28.0 ft	9.6 fc	14.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1654108	1654108	1654108
45.00°	12850	12466	13363
55.00°	8336	8438	9083
65.00°	12341	11587	12609
75.00°	9920	13427	14440
85.00°	8950	11684	15101

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	9.6	10.5	10.0	10.8	11.2	9.4	10.3	9.8	10.6	11.0
	3H	13.3	14.1	13.7	14.4	14.8	13.6	14.4	14.0	14.8	15.2
	4H	14.0	14.8	14.5	15.2	15.6	14.5	15.3	14.9	15.6	16.0
	6H	14.4	15.1	14.8	15.5	15.9	15.1	15.8	15.5	16.1	16.6
	8H	14.5	15.2	14.9	15.6	16.0	15.3	15.9	15.7	16.3	16.8
	12H	14.6	15.2	15.0	15.6	16.1	15.5	16.1	15.9	16.5	16.9
4H	2H	10.7	11.4	11.1	11.8	12.2	10.9	11.7	11.3	12.0	12.4
	3H	14.3	14.9	14.7	15.3	15.7	14.7	15.3	15.1	15.7	16.2
	4H	15.1	15.7	15.5	16.1	16.6	15.6	16.2	16.1	16.6	17.1
	6H	15.5	16.0	16.0	16.5	17.0	16.3	16.7	16.7	17.2	17.7
	8H	15.7	16.1	16.2	16.6	17.1	16.5	17.0	17.0	17.4	17.9
	12H	15.9	16.2	16.4	16.7	17.2	16.8	17.1	17.3	17.6	18.1
8H	4H	15.4	15.8	15.9	16.3	16.8	15.9	16.3	16.4	16.8	17.3
	6H	16.0	16.3	16.5	16.8	17.3	16.7	17.1	17.2	17.6	18.1
	8H	16.3	16.6	16.8	17.1	17.6	17.1	17.4	17.7	18.0	18.5
	12H	16.6	16.8	17.1	17.3	17.9	17.5	17.7	18.0	18.2	18.8
12H	4H	15.4	15.8	15.9	16.3	16.8	15.9	16.3	16.4	16.8	17.3
	6H	16.0	16.3	16.6	16.8	17.4	16.8	17.1	17.3	17.6	18.1
	8H	16.4	16.7	16.9	17.2	17.8	17.3	17.5	17.8	18.0	18.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0