

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK WD xx xx MW NL

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

Test Number

SP-01457_2

Test Date

12/1/2022

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

STT3PC 40L 30HK WD xx xx MW NL

Summary of Results

Power

Input Watts	35 W
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Lumen Output

Output Lumens	2862
Efficacy	81.77 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.63
Four luminaires	0.64

Full Beam Angle

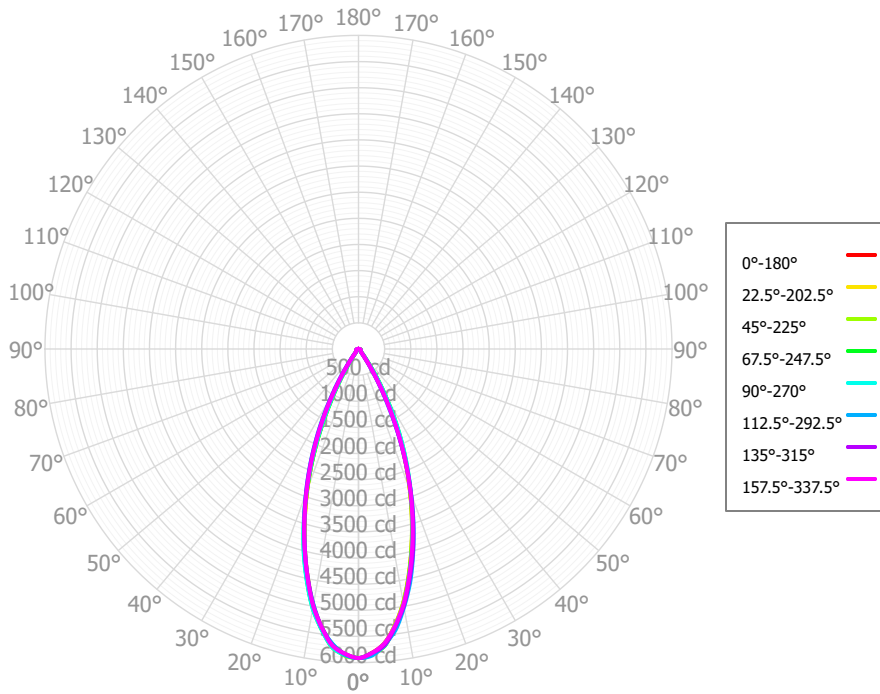
0° - 180°	39°
90° - 270°	40°

IES File Header Contents

Keyword	Value
TEST	SP-01457_2
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/1/2022
ISSUEDATE	12/2/2022
LUMCAT	STT3PC 40L 30HK WD xx xx MW NL
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and no lens
OTHER	Beam Angle: 39 deg
OTHER	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°	525.72	18.37%	90.00° - 100.00°	2.00	0.07%
10.00° - 20.00°	1087.09	37.98%	100.00° - 110.00°	1.75	0.06%
20.00° - 30.00°	828.00	28.93%	100.00° - 120.00°	3.44	0.12%
30.00° - 40.00°	216.52	7.57%	120.00° - 130.00°	1.70	0.06%
40.00° - 50.00°	48.56	1.70%	130.00° - 140.00°	1.58	0.06%
50.00° - 60.00°	44.88	1.57%	140.00° - 150.00°	1.45	0.05%
60.00° - 70.00°	45.67	1.60%	150.00° - 160.00°	1.12	0.04%
70.00° - 80.00°	39.77	1.39%	160.00° - 170.00°	0.68	0.02%
80.00° - 90.00°	13.67	0.48%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	2849.88	99.57%	0.00° - 180.00°	2862.07	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°	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52	5914.52
2.50°	5822.49	5827.82	5846.87	5840.65	5834.39	5859.42	5841.86	5840.47	5850.40	5846.17	5877.87	5863.44	5863.69	5873.36	5827.16	5827.14	5822.49
5.00°	5659.81	5679.01	5653.82	5710.05	5701.92	5668.13	5696.12	5702.67	5685.26	5736.32	5676.60	5733.13	5735.55	5678.83	5694.79	5657.06	5659.81
7.50°	5338.54	5330.09	5364.19	5353.47	5354.42	5387.10	5374.66	5381.87	5382.68	5375.43	5409.64	5411.04	5415.28	5426.64	5365.63	5351.65	5338.54
10.00°	4941.49	4940.10	4926.31	4973.28	4980.94	4963.68	4988.37	4990.94	4981.08	4995.77	4982.92	5040.86	5045.66	5017.13	4995.24	4960.05	4941.49
12.50°	4451.23	4433.42	4446.19	4463.24	4475.70	4492.14	4490.07	4495.17	4486.87	4483.80	4516.00	4551.76	4561.54	4569.96	4516.07	4471.44	4451.23
15.00°	3928.41	3920.32	3916.26	3948.86	3964.32	3962.06	3980.35	3971.09	3963.66	3968.85	3981.36	4035.55	4049.46	4041.06	4023.63	3961.94	3928.41
17.50°	3406.16	3393.89	3394.96	3425.99	3444.39	3444.36	3455.54	3438.08	3419.56	3417.63	3435.77	3468.97	3488.86	3499.79	3479.79	3434.28	3406.16
20.00°	2884.04	2874.52	2881.51	2906.64	2927.08	2938.30	2935.29	2903.49	2882.38	2865.11	2874.45	2894.47	2918.72	2935.68	2933.30	2903.74	2884.04
22.50°	2359.01	2366.23	2384.02	2419.29	2437.73	2432.98	2419.71	2381.18	2349.00	2303.50	2311.87	2308.78	2335.91	2369.92	2371.11	2371.27	2359.01
25.00°	1833.55	1868.88	1897.71	1934.50	1949.65	1928.20	1911.73	1860.02	1821.70	1752.77	1742.61	1745.36	1773.96	1799.18	1813.06	1834.27	1833.55
27.50°	1353.51	1384.71	1438.53	1462.79	1468.84	1451.58	1409.79	1375.90	1296.89	1248.96	1182.12	1206.20	1233.54	1237.86	1301.30	1294.99	1353.51
30.00°	876.64	961.02	993.98	1017.03	1014.66	990.48	978.26	899.22	875.51	789.96	776.07	768.29	793.53	819.11	816.93	865.91	876.64
32.50°	556.10	593.57	646.95	659.25	657.96	636.30	589.55	571.16	484.22	463.43	398.87	415.51	433.55	431.27	492.16	477.93	556.10
35.00°	250.31	342.60	338.95	360.01	356.91	325.99	342.71	267.73	283.32	214.72	235.96	217.19	230.80	256.78	219.30	274.28	250.31
37.50°	159.76	175.03	197.53	202.56	199.66	185.04	160.71	169.70	119.64	133.48	99.31	118.57	124.03	110.67	140.62	118.79	159.76
40.00°	79.35	97.88	103.47	93.47	89.72	93.68	95.59	86.13	84.59	79.06	79.84	77.57	79.67	84.78	80.24	81.55	79.35
42.50°	69.72	70.59	75.32	71.56	70.24	70.66	69.27	72.38	63.69	68.09	63.95	64.66	63.95	64.19	68.01	63.98	69.72
45.00°	61.36	60.46	59.44	57.22	57.19	60.86	60.88	60.97	59.36	60.12	58.94	57.27	56.80	59.03	59.03	60.54	61.36
47.50°	58.38	57.37	55.84	53.25	53.48	56.63	56.55	57.12	55.69	55.88	54.72	51.86	52.50	54.50	56.37	58.30	58.38
50.00°	55.63	54.95	53.49	51.25	51.21	53.02	55.57	54.08	53.86	53.55	52.28	50.25	50.96	51.35	54.15	55.20	55.63
52.50°	53.50	52.74	52.07	51.34	50.55	52.05	55.05	52.99	52.08	53.06	50.13	49.60	50.04	48.67	52.57	52.17	53.50
55.00°	51.65	51.79	50.68	50.09	49.74	51.16	52.44	51.85	50.82	51.79	48.44	47.72	47.08	46.78	50.55	50.52	51.65
57.50°	50.39	51.09	49.34	47.76	48.81	49.79	49.72	50.60	49.59	49.95	46.40	45.65	43.83	44.48	48.03	48.91	50.39
60.00°	49.50	50.89	48.17	46.78	47.60	48.58	48.80	49.58	48.47	47.98	43.91	43.90	41.72	41.69	45.83	47.59	49.50
62.50°	49.22	50.76	48.62	46.64	46.20	48.86	48.00	48.86	47.52	45.94	42.41	42.17	39.68	40.30	43.92	46.63	49.22
65.00°	49.27	51.26	49.00	48.34	47.12	49.09	48.61	48.22	47.11	45.20	41.89	40.61	39.52	40.23	43.33	47.34	49.27
67.50°	49.74	51.73	49.11	50.92	49.23	49.11	49.08	47.66	46.27	45.01	41.06	39.03	39.32	39.71	43.63	47.62	49.74
70.00°	48.88	50.35	48.92	49.55	48.37	48.58	48.64	46.67	44.30	43.39	39.99	37.24	38.51	38.86	42.10	46.57	48.88
72.50°	46.74	48.66	47.75	46.81	46.39	46.15	47.27	45.32	41.48	41.34	36.51	34.98	36.92	36.09	39.64	44.46	46.74
75.00°	43.11	44.03	45.17	43.90	42.52	43.05	42.22	41.61	37.07	35.37	31.65	29.37	30.29	32.24	35.15	39.94	43.11
77.50°	38.38	38.99	39.16	40.95	38.16	38.26	36.99	36.46	31.70	28.60	26.78	23.74	23.88	26.99	29.90	34.44	38.38
80.00°	31.12	31.87	32.46	32.91	31.67	32.51	31.22	29.13	24.97	22.51	21.91	17.98	18.29	21.16	22.58	27.30	31.12
82.50°	22.42	24.13	24.51	24.10	24.83	24.96	23.98	20.79	17.40	16.49	14.07	12.16	12.65	14.11	14.71	19.19	22.42
85.00°	13.83	14.24	16.19	15.21	15.89	16.90	13.74	12.64	8.93	9.54	5.32	6.17	6.91	6.69	8.88	9.83	13.83
87.50°	5.29	6.44	7.39	6.31	6.77	8.12	6.36	4.56	4.02	2.72	2.81	2.01	2.86	3.58	3.40	4.21	5.29
90.00°	2.67	3.78	2.63	4.01	4.06	3.06	3.43	2.45	2.11	2.32	1.62	1.86	2.33	1.33	2.50	2.36	2.67
92.50°	1.84	2.03	2.10	1.85	1.60	2.05	1.93	1.71	1.33	1.94	1.48	1.76	1.97	1.42	2.01	1.65	1.84
95.00°	1.44	1.94	1.77	1.66	1.86	1.62	2.14	1.82	1.29	1.65	1.48	1.73	1.89	1.77	1.93	1.83	1.44
97.50°	1.13	1.79	1.60	1.49	2.08	1.69	2.10	2.05	1.27	1.42	1.51	1.59	1.75	1.61	1.87	1.93	1.13
100.00°	1.21	1.56	1.61	1.40	1.94	1.73	1.83	1.92	1.25	1.51	1.55	1.32	1.52	1.43	1.85	1.98	1.21

STT3PC 40L 30HK WD xx xx MW NL

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Page 4 of 6

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	3404	3404	3404	3404	3324	3324	3324	3324	3173	3173	3173	3036	3036	3036	2909	2909	2909	2850
	1	3249	3172	3102	3039	3178	3109	3046	2990	2991	2941	2896	2882	2843	2807	2783	2752	2724	2697
	2	3103	2971	2861	2769	3040	2921	2822	2737	2827	2746	2676	2740	2675	2617	2660	2608	2561	2556
	3	2968	2797	2665	2560	2911	2757	2636	2538	2681	2580	2497	2611	2527	2456	2546	2477	2417	2429
	4	2842	2645	2500	2390	2791	2612	2478	2375	2550	2436	2346	2493	2396	2318	2440	2358	2291	2314
	5	2724	2509	2359	2248	2679	2482	2342	2237	2431	2310	2216	2384	2279	2196	2340	2249	2177	2209
	6	2615	2387	2234	2125	2574	2365	2221	2117	2322	2196	2102	2283	2172	2087	2246	2149	2073	2112
	7	2512	2276	2124	2017	2476	2258	2114	2011	2222	2094	2000	2189	2074	1989	2157	2056	1978	2022
	8	2415	2175	2024	1920	2383	2159	2016	1916	2129	2000	1908	2101	1985	1900	2074	1970	1891	1938
	9	2325	2083	1934	1834	2296	2069	1927	1830	2043	1914	1824	2018	1902	1818	1995	1889	1811	1861
	10	2240	1997	1852	1755	2214	1985	1846	1752	1963	1835	1747	1942	1825	1742	1922	1815	1737	1788

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	195.5 fc	3.9 ft
6.5 ft	140.0 fc	4.6 ft
7.5 ft	105.1 fc	5.4 ft
8.0 ft	92.4 fc	5.7 ft
10.0 ft	59.1 fc	7.1 ft
12.0 ft	41.1 fc	8.6 ft
14.0 ft	30.2 fc	10.0 ft
16.0 ft	23.1 fc	11.4 ft
20.0 ft	14.8 fc	14.3 ft
24.0 ft	10.3 fc	17.1 ft
28.0 ft	7.5 fc	20.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1296939	1296939	1296939
45.00°	19027	18433	17735
55.00°	19747	19376	19018
65.00°	25565	25427	24450
75.00°	36527	38266	36028
85.00°	34790	40744	39981

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	14.9	15.8	15.2	16.2	16.5	14.5	15.5	14.9	15.8	16.1
	3H	18.3	19.2	18.7	19.5	19.9	17.7	18.5	18.1	18.9	19.3
	4H	19.8	20.7	20.3	21.0	21.4	19.1	19.9	19.5	20.3	20.7
	6H	21.1	21.8	21.5	22.2	22.6	20.2	20.9	20.6	21.3	21.7
	8H	21.5	22.2	21.9	22.6	23.0	20.6	21.3	21.0	21.7	22.1
	12H	21.8	22.4	22.2	22.8	23.3	20.9	21.5	21.3	21.9	22.4
4H	2H	15.7	16.5	16.1	16.9	17.3	15.4	16.2	15.8	16.6	17.0
	3H	19.4	20.0	19.8	20.5	20.9	18.8	19.5	19.2	19.9	20.3
	4H	21.0	21.6	21.5	22.1	22.5	20.3	20.9	20.8	21.4	21.8
	6H	22.4	22.9	22.9	23.4	23.9	21.6	22.1	22.0	22.5	23.0
	8H	22.9	23.3	23.3	23.8	24.3	22.0	22.5	22.5	22.9	23.4
	12H	23.2	23.6	23.7	24.1	24.5	22.3	22.7	22.8	23.2	23.7
8H	4H	21.5	22.0	22.0	22.5	22.9	20.9	21.3	21.3	21.8	22.3
	6H	23.0	23.4	23.6	23.9	24.4	22.3	22.6	22.8	23.1	23.6
	8H	23.6	23.9	24.1	24.5	25.0	22.8	23.1	23.3	23.7	24.2
	12H	24.0	24.3	24.5	24.8	25.4	23.2	23.5	23.8	24.0	24.6
12H	4H	21.6	22.0	22.1	22.5	23.0	20.9	21.3	21.4	21.8	22.3
	6H	23.1	23.5	23.7	24.0	24.5	22.4	22.7	22.9	23.2	23.7
	8H	23.8	24.0	24.3	24.6	25.1	23.0	23.3	23.5	23.8	24.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0