

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK WD xx xx MW LN3ASO
Nom 3 inch dia Euro style tracklight with 90 CRI emitter and Solite lens

Test Number

SP-01457_1

Test Date

12/1/2022

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

Summary of Results

Power

Input Watts	35 W
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Lumen Output

Output Lumens	2537
Efficacy	72.5 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.64
Two luminaires, plane 90°	0.63
Four luminaires	0.65

Full Beam Angle

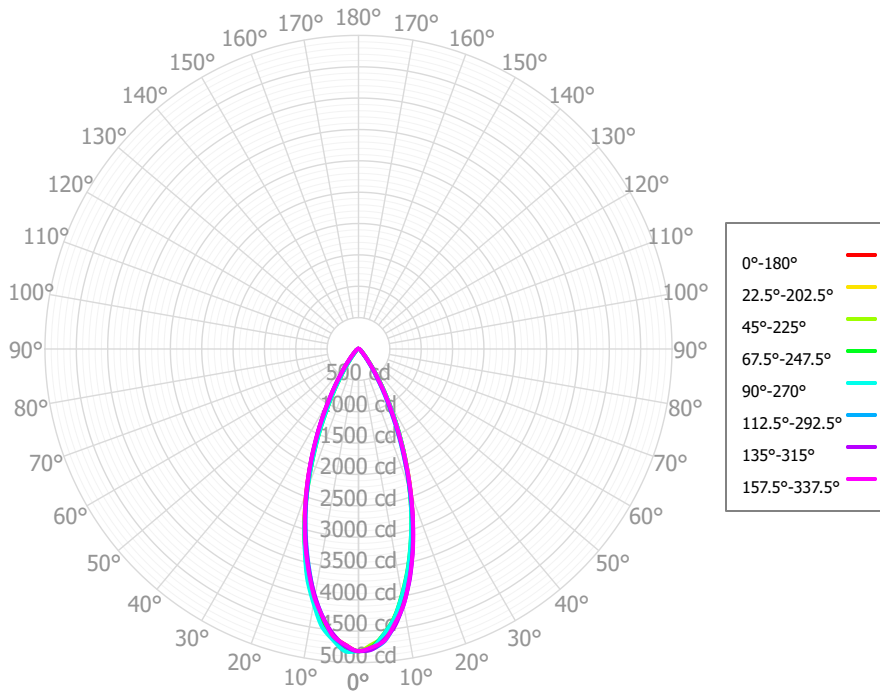
0° - 180°	40°
90° - 270°	40°

IES File Header Contents

Keyword	Value
TEST	SP-01457_1
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 LN3ASO
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and Solite lens
OTHER	Beam Angle: 40 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°	427.76	16.86%	90.00° - 100.00°	2.08	0.08%
10.00° - 20.00°	895.83	35.30%	100.00° - 110.00°	2.02	0.08%
20.00° - 30.00°	714.93	28.17%	100.00° - 120.00°	3.95	0.16%
30.00° - 40.00°	293.31	11.56%	120.00° - 130.00°	1.81	0.07%
40.00° - 50.00°	93.90	3.70%	130.00° - 140.00°	1.70	0.07%
50.00° - 60.00°	47.12	1.86%	140.00° - 150.00°	1.56	0.06%
60.00° - 70.00°	30.58	1.21%	150.00° - 160.00°	1.21	0.05%
70.00° - 80.00°	15.75	0.62%	160.00° - 170.00°	0.74	0.03%
80.00° - 90.00°	5.01	0.20%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	2524.20	99.48%	0.00° - 180.00°	2537.47	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°	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90	4818.90
2.50°	4748.39	4748.40	4721.43	4761.01	4776.42	4748.85	4748.64	4725.06	4723.84	4739.15	4739.07	4797.75	4826.88	4792.26	4799.78	4763.40	4748.39
5.00°	4633.75	4604.11	4607.08	4569.73	4575.46	4610.64	4571.34	4600.17	4594.34	4585.03	4637.07	4629.27	4660.21	4686.51	4656.89	4677.28	4633.75
7.50°	4390.86	4367.49	4327.27	4334.13	4336.42	4319.83	4327.81	4325.10	4332.18	4352.91	4371.49	4433.98	4468.79	4436.08	4454.17	4419.76	4390.86
10.00°	4100.32	4063.17	4035.57	3981.43	3989.70	4013.47	4000.76	4035.00	4046.62	4043.38	4085.09	4093.38	4123.90	4143.07	4131.57	4144.70	4100.32
12.50°	3723.50	3692.79	3644.77	3611.77	3621.12	3616.20	3635.75	3655.08	3670.59	3688.18	3693.18	3741.46	3768.31	3749.95	3771.13	3751.02	3723.50
15.00°	3319.01	3285.75	3247.98	3209.85	3208.39	3216.24	3234.58	3267.31	3286.29	3286.28	3289.20	3296.44	3313.55	3327.98	3334.88	3345.21	3319.01
17.50°	2876.65	2858.00	2822.71	2800.32	2796.54	2803.92	2827.40	2850.51	2860.77	2863.91	2845.06	2849.48	2857.12	2855.76	2883.08	2889.39	2876.65
20.00°	2436.03	2421.92	2400.49	2379.87	2386.03	2393.16	2415.88	2434.76	2435.02	2422.22	2399.40	2377.34	2381.62	2386.58	2417.01	2436.02	2436.03
22.50°	1997.26	2003.33	1987.81	1975.98	1985.06	1994.54	2016.45	2021.68	2015.32	1974.59	1950.19	1912.22	1914.55	1921.44	1949.28	1989.49	1997.26
25.00°	1595.14	1589.68	1592.60	1590.02	1594.98	1604.60	1623.58	1627.53	1603.89	1573.30	1527.08	1492.68	1496.39	1498.02	1543.72	1569.37	1595.14
27.50°	1222.04	1241.06	1235.74	1238.60	1242.94	1254.31	1274.32	1268.65	1251.80	1181.19	1148.32	1097.27	1103.51	1116.20	1144.40	1202.60	1222.04
30.00°	918.99	904.00	917.13	915.84	924.18	929.76	942.19	953.53	921.05	888.33	826.74	798.51	803.91	809.97	860.03	884.60	918.99
32.50°	657.43	670.54	661.12	664.14	672.20	682.67	699.40	700.01	682.25	606.37	578.85	535.84	541.42	560.66	588.01	639.51	657.43
35.00°	470.08	446.67	458.13	456.64	464.14	471.71	481.19	501.28	472.44	447.27	393.87	370.90	372.97	386.30	424.86	444.81	470.08
37.50°	315.41	327.95	320.13	318.95	325.96	339.08	354.33	360.70	345.93	295.35	271.00	238.09	238.20	254.68	276.50	306.80	315.41
40.00°	224.03	214.22	221.30	213.69	222.30	233.47	243.10	258.49	240.86	221.72	188.53	167.78	165.25	176.07	201.27	210.85	224.03
42.50°	152.57	163.07	159.27	154.05	160.17	170.95	185.93	187.49	179.68	152.45	136.19	114.73	111.54	119.86	136.74	151.16	152.57
45.00°	115.36	115.29	119.20	109.40	112.70	124.28	133.44	140.06	131.16	119.56	102.67	86.94	84.51	91.01	107.13	112.15	115.36
47.50°	85.14	91.95	94.71	85.66	87.42	96.86	108.21	107.00	102.09	89.62	79.63	67.23	65.57	70.21	82.24	86.74	85.14
50.00°	70.39	71.19	77.54	66.56	67.51	77.54	83.96	86.00	79.94	73.80	65.90	56.56	55.21	59.90	68.12	69.50	70.39
52.50°	57.36	61.64	64.28	57.89	59.58	65.65	71.75	70.38	65.78	59.91	55.98	48.54	48.10	51.55	56.39	56.24	57.36
55.00°	50.60	52.93	54.88	50.54	53.37	56.88	60.24	60.26	55.02	52.18	48.27	42.77	43.58	45.43	48.65	48.81	50.60
57.50°	44.09	46.66	46.96	46.31	48.81	50.30	53.58	51.91	47.27	45.05	41.20	37.80	37.98	39.54	42.26	43.40	44.09
60.00°	38.63	40.94	41.65	42.23	44.36	46.12	47.30	46.04	42.27	39.27	37.31	33.32	31.72	34.88	37.58	38.48	38.63
62.50°	33.30	36.37	37.03	37.73	40.05	43.18	42.61	40.70	39.09	34.09	34.01	28.89	27.43	30.24	32.32	33.66	33.30
65.00°	29.07	32.11	32.93	33.25	35.67	37.08	37.49	35.14	34.58	29.87	28.25	24.48	24.03	25.48	26.51	28.98	29.07
67.50°	24.98	28.33	28.92	28.88	30.51	29.78	31.19	29.56	29.39	25.60	22.26	22.11	20.02	20.98	21.69	24.32	24.98
70.00°	21.50	24.68	24.67	24.48	25.53	24.63	25.91	23.92	24.04	21.25	18.56	20.45	15.83	18.51	17.59	20.20	21.50
72.50°	18.39	21.20	20.39	19.91	21.60	20.05	22.72	18.37	18.64	17.35	14.92	16.64	13.09	15.84	14.75	16.13	18.39
75.00°	16.48	17.05	16.46	15.62	17.62	17.10	18.83	15.50	15.90	13.90	11.56	12.34	10.66	12.28	12.61	13.00	16.48
77.50°	13.92	12.31	12.59	12.28	13.51	14.41	13.88	12.60	13.82	10.55	8.42	9.30	8.35	9.04	10.59	9.97	13.92
80.00°	9.88	9.08	9.65	9.13	9.87	10.93	9.84	9.28	9.62	7.28	6.90	6.43	6.06	6.75	8.62	8.02	9.88
82.50°	6.47	6.86	6.83	6.40	7.42	7.39	6.84	6.25	5.10	5.22	5.38	4.48	4.81	4.69	6.12	6.09	6.47
85.00°	4.14	4.90	4.83	4.17	5.17	5.05	4.79	4.70	4.20	3.81	3.82	2.60	3.60	3.16	3.47	4.22	4.14
87.50°	2.55	3.06	3.08	2.80	3.26	2.84	3.58	3.32	3.53	2.83	2.55	2.03	2.63	2.15	2.74	2.64	2.55
90.00°	1.91	2.31	2.34	1.93	2.07	2.28	2.68	2.52	2.73	2.02	2.10	1.51	1.76	1.94	2.35	2.16	1.91
92.50°	1.81	1.95	1.79	1.70	1.87	1.78	1.98	1.95	1.99	1.94	1.77	1.58	1.87	1.76	2.09	1.91	1.81
95.00°	2.24	1.75	1.80	1.61	1.81	1.69	1.70	1.88	2.10	2.05	1.65	1.67	1.95	1.59	1.83	2.25	2.24
97.50°	2.26	1.59	1.72	1.67	1.92	1.69	1.62	1.97	2.17	1.95	1.58	1.90	1.95	1.70	1.86	2.48	2.26
100.00°	1.99	1.60	1.47	1.80	1.98	2.01	1.60	2.34	2.08	1.82	1.59	2.08	1.94	2.05	1.88	2.52	1.99

STT3PC 40L 30HK WD xx xx MW LN3ASO

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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%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
	0	3018	3018	3018	3018	2946	2946	2946	2946	2812	2812	2812	2690	2690	2690	2577	2577	2577
	1	2882	2814	2753	2699	2819	2758	2704	2654	2654	2610	2570	2557	2523	2492	2468	2442	2417
	2	2750	2632	2535	2454	2693	2588	2500	2425	2504	2432	2370	2427	2369	2317	2356	2309	2267
	3	2625	2472	2353	2259	2574	2436	2327	2240	2368	2277	2203	2306	2230	2167	2248	2185	2132
	4	2507	2329	2198	2099	2462	2300	2179	2086	2245	2141	2060	2193	2106	2035	2145	2071	2010
	5	2397	2201	2064	1963	2357	2177	2050	1954	2131	2021	1936	2089	1993	1918	2049	1967	1900
	6	2294	2086	1947	1847	2257	2066	1935	1840	2028	1913	1827	1992	1891	1814	1959	1870	1801
	7	2197	1982	1842	1744	2165	1965	1833	1739	1933	1815	1730	1903	1798	1720	1874	1781	1710
	8	2107	1887	1749	1653	2078	1873	1741	1650	1845	1727	1642	1819	1713	1635	1795	1699	1628
	9	2023	1800	1664	1572	1996	1788	1658	1569	1764	1646	1563	1742	1635	1558	1721	1624	1552
	10	1944	1721	1587	1498	1920	1710	1582	1496	1690	1573	1492	1670	1563	1487	1652	1554	1483

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	159.3 fc	4.0 ft
6.5 ft	114.1 fc	4.8 ft
7.5 ft	85.7 fc	5.5 ft
8.0 ft	75.3 fc	5.9 ft
10.0 ft	48.2 fc	7.3 ft
12.0 ft	33.5 fc	8.8 ft
14.0 ft	24.6 fc	10.3 ft
16.0 ft	18.8 fc	11.7 ft
20.0 ft	12.0 fc	14.7 ft
24.0 ft	8.4 fc	17.6 ft
28.0 ft	6.1 fc	20.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1056692	1056692	1056692
45.00°	35773	36966	34949
55.00°	19343	20981	20404
65.00°	15085	17088	18506
75.00°	13966	13947	14931
85.00°	10404	12161	12996

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	14.4	15.4	14.8	15.8	16.1	14.4	15.4	14.7	15.7	16.0
	3H	15.8	16.7	16.2	17.0	17.4	15.8	16.6	16.2	17.0	17.4
	4H	16.3	17.1	16.8	17.5	17.9	16.2	17.0	16.7	17.4	17.8
	6H	16.8	17.5	17.2	17.9	18.3	16.6	17.3	17.0	17.7	18.1
	8H	16.9	17.6	17.3	18.0	18.4	16.7	17.3	17.1	17.7	18.2
	12H	16.9	17.6	17.4	18.0	18.4	16.7	17.4	17.2	17.8	18.2
4H	2H	14.8	15.6	15.2	16.0	16.4	14.9	15.7	15.3	16.1	16.5
	3H	16.4	17.0	16.8	17.5	17.9	16.5	17.1	16.9	17.5	18.0
	4H	17.0	17.6	17.5	18.1	18.5	17.0	17.6	17.5	18.1	18.5
	6H	17.6	18.1	18.0	18.5	19.0	17.5	18.0	18.0	18.4	18.9
	8H	17.7	18.2	18.2	18.6	19.1	17.6	18.1	18.1	18.5	19.0
	12H	17.8	18.2	18.3	18.7	19.2	17.7	18.1	18.2	18.6	19.1
8H	4H	17.2	17.6	17.7	18.1	18.6	17.2	17.7	17.7	18.1	18.6
	6H	17.8	18.2	18.3	18.7	19.2	17.8	18.1	18.3	18.6	19.1
	8H	18.0	18.4	18.6	18.9	19.4	18.0	18.3	18.5	18.8	19.3
	12H	18.2	18.5	18.8	19.0	19.6	18.1	18.4	18.7	18.9	19.5
12H	4H	17.2	17.6	17.7	18.1	18.6	17.2	17.6	17.7	18.1	18.6
	6H	17.8	18.1	18.4	18.6	19.2	17.8	18.1	18.3	18.6	19.1
	8H	18.1	18.4	18.6	18.9	19.5	18.0	18.3	18.5	18.8	19.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0