

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01458_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	2203
Efficacy	62.94 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.88
Two luminaires, plane 90°	0.9
Four luminaires	0.86

Full Beam Angle

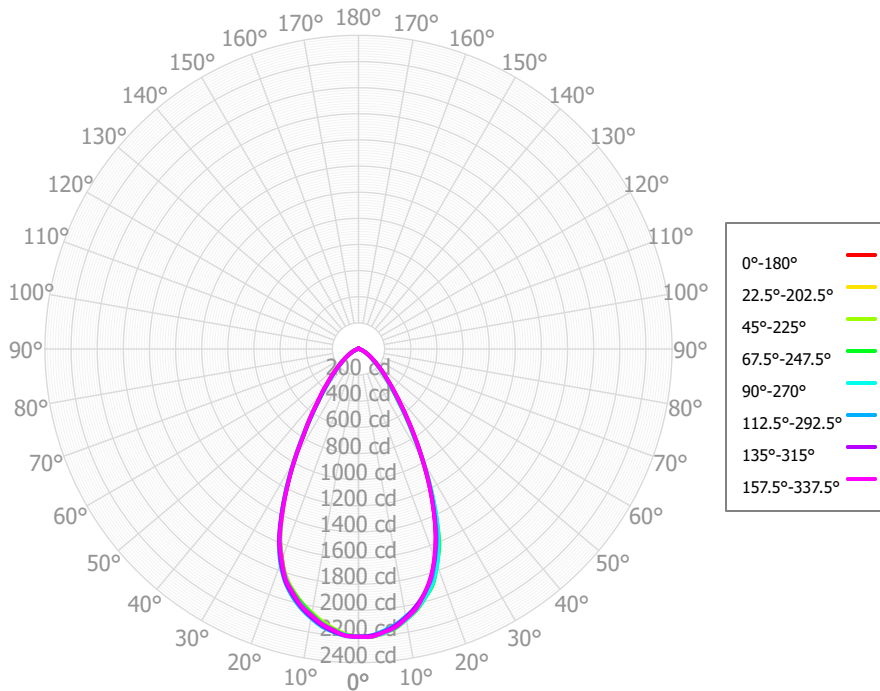
0° - 180°	57°
90° - 270°	57°

IES File Header Contents

Keyword	Value
TEST	SP-01458_1
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 LN3ASO
LUMINAIRE	Nom 3 inch dia Euro style tracklight with 90 CRI emitter and Solite lens
OTHER	Beam Angle: 57 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°	207.35	9.41%	90.00° - 100.00°	2.05	0.09%
10.00° - 20.00°	541.30	24.57%	100.00° - 110.00°	2.04	0.09%
20.00° - 30.00°	622.89	28.27%	100.00° - 120.00°	3.95	0.18%
30.00° - 40.00°	406.48	18.45%	120.00° - 130.00°	1.74	0.08%
40.00° - 50.00°	219.54	9.97%	130.00° - 140.00°	1.57	0.07%
50.00° - 60.00°	113.97	5.17%	140.00° - 150.00°	1.40	0.06%
60.00° - 70.00°	53.23	2.42%	150.00° - 160.00°	1.04	0.05%
70.00° - 80.00°	20.30	0.92%	160.00° - 170.00°	0.63	0.03%
80.00° - 90.00°	5.40	0.24%	170.00° - 180.00°	0.22	0.01%
0.00° - 90.00°	2190.46	99.43%	0.00° - 180.00°	2203.06	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°	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09	2202.09
2.50°	2201.80	2204.77	2202.27	2206.10	2201.35	2199.50	2195.66	2198.17	2189.13	2188.10	2185.39	2192.66	2190.46	2195.50	2197.34	2205.16	2201.80
5.00°	2178.67	2185.70	2179.77	2181.86	2184.84	2175.68	2171.08	2161.75	2156.19	2155.22	2149.73	2157.06	2164.76	2167.11	2175.91	2178.31	2178.67
7.50°	2147.19	2153.30	2148.35	2156.01	2149.30	2143.27	2133.54	2124.61	2116.49	2112.21	2104.64	2118.54	2122.53	2131.63	2139.03	2149.49	2147.19
10.00°	2097.30	2102.71	2103.02	2102.47	2102.74	2091.73	2082.54	2069.97	2062.55	2057.35	2050.21	2058.75	2072.21	2079.43	2086.94	2095.06	2097.30
12.50°	2035.09	2042.22	2044.24	2048.16	2041.94	2032.90	2022.69	2013.72	2004.95	1994.75	1992.09	1997.18	2010.23	2022.98	2020.64	2036.41	2035.09
15.00°	1949.30	1956.73	1967.03	1971.60	1969.39	1959.99	1946.96	1935.23	1927.48	1924.36	1919.57	1926.24	1943.47	1940.13	1942.35	1943.42	1949.30
17.50°	1843.46	1859.39	1869.31	1891.81	1883.85	1868.81	1862.11	1851.09	1846.06	1831.30	1842.40	1845.06	1841.89	1852.09	1834.87	1843.05	1843.46
20.00°	1705.14	1721.65	1747.51	1757.57	1760.43	1747.76	1734.68	1719.20	1712.12	1718.13	1715.59	1720.38	1728.13	1712.40	1706.30	1697.59	1705.14
22.50°	1547.33	1567.94	1588.81	1616.01	1599.97	1593.06	1586.59	1577.43	1570.23	1564.79	1575.88	1580.04	1566.17	1564.78	1544.81	1544.80	1547.33
25.00°	1362.61	1378.63	1392.41	1404.17	1409.34	1391.47	1391.82	1376.89	1376.51	1380.91	1384.01	1386.93	1390.55	1372.62	1362.43	1358.39	1362.61
27.50°	1175.24	1177.77	1186.21	1192.50	1193.39	1184.22	1177.43	1176.24	1177.24	1181.80	1181.06	1190.46	1189.61	1175.80	1172.17	1171.56	1175.24
30.00°	984.67	981.50	971.31	981.98	987.58	970.03	976.75	975.08	981.70	972.83	980.41	984.75	982.73	984.33	977.67	983.26	984.67
32.50°	810.15	786.47	786.61	781.25	789.27	783.81	780.82	787.12	786.38	795.13	780.13	794.40	805.47	793.19	806.70	805.03	810.15
35.00°	652.40	639.05	624.94	630.58	634.46	627.04	638.82	647.86	649.07	635.21	636.60	640.24	633.51	648.96	646.76	657.30	652.40
37.50°	524.37	501.78	502.09	492.51	507.07	504.15	511.96	520.92	513.96	516.37	499.79	506.50	515.12	506.69	526.63	524.85	524.37
40.00°	423.75	412.18	405.28	404.18	411.56	411.86	423.05	430.60	429.94	417.22	416.04	413.08	403.57	420.48	422.04	430.44	423.75
42.50°	343.21	330.16	331.07	323.44	333.09	337.78	342.94	348.76	347.26	344.88	336.13	333.53	335.58	335.73	348.06	346.65	343.21
45.00°	278.55	273.96	269.74	267.72	272.76	278.20	285.46	288.48	290.30	283.28	282.17	277.84	271.49	282.81	283.89	285.69	278.55
47.50°	227.56	220.83	222.30	216.93	220.87	228.67	231.96	233.93	234.60	235.16	229.01	228.59	227.13	230.97	234.86	231.91	227.56
50.00°	185.79	183.66	181.54	179.39	181.43	185.97	192.65	191.51	193.47	191.64	191.54	188.77	183.68	191.03	189.90	191.11	185.79
52.50°	152.08	147.65	148.85	145.56	146.81	152.38	155.12	154.14	154.09	157.15	154.52	154.55	152.86	152.78	156.49	155.82	152.08
55.00°	123.13	122.67	119.52	120.02	121.25	124.06	128.00	125.78	127.69	125.14	127.95	127.34	122.34	126.85	125.50	128.99	123.13
57.50°	100.56	98.11	97.92	97.15	98.57	100.74	101.80	101.02	102.44	101.60	101.99	103.59	100.85	101.85	103.44	105.43	100.56
60.00°	81.18	80.77	78.96	79.45	80.64	79.97	84.05	81.87	83.39	80.00	83.20	83.65	79.87	82.03	82.77	86.31	81.18
62.50°	66.32	63.62	64.25	63.75	63.99	64.94	66.67	65.50	65.64	65.46	65.20	66.54	66.44	63.72	67.23	68.98	66.32
65.00°	53.36	51.28	50.71	51.32	51.81	52.36	53.43	52.83	53.50	52.14	53.59	52.11	53.25	51.82	52.28	53.74	53.36
67.50°	42.83	39.34	41.19	40.18	40.56	41.65	40.36	41.74	41.81	40.88	42.29	40.82	42.15	40.54	41.42	41.74	42.83
70.00°	33.18	32.71	32.58	30.89	32.07	31.62	32.61	32.50	31.64	29.86	32.71	32.10	31.49	31.38	30.84	32.95	33.18
72.50°	25.76	26.11	26.15	23.28	24.01	24.27	24.98	24.62	22.99	24.55	23.88	25.03	23.70	23.02	24.10	25.45	25.76
75.00°	18.99	19.79	20.11	17.70	18.42	17.71	19.23	18.10	18.73	19.73	18.31	19.14	16.43	16.95	17.47	19.07	18.99
77.50°	14.15	13.88	14.88	12.83	13.13	12.77	13.74	13.32	14.41	14.49	13.24	14.56	11.66	11.82	12.49	14.22	14.15
80.00°	9.75	10.29	9.75	8.69	9.16	8.22	10.86	10.03	9.98	9.24	10.00	10.77	7.45	8.90	7.65	10.52	9.75
82.50°	6.77	6.89	7.16	5.92	5.28	6.08	7.97	7.20	6.45	7.03	7.03	7.56	5.45	6.32	5.97	7.36	6.77
85.00°	4.06	4.34	4.78	4.44	3.68	4.40	5.00	4.72	4.74	4.83	4.89	4.63	3.72	4.44	4.33	4.55	4.06
87.50°	2.83	2.26	3.26	3.26	2.17	3.11	2.46	3.11	3.33	3.34	3.13	3.05	2.83	3.02	3.01	3.06	2.83
90.00°	1.80	1.89	1.77	2.33	1.92	1.86	2.00	2.07	2.46	1.94	2.29	2.07	2.12	2.41	1.83	2.31	1.80
92.50°	1.64	1.68	1.87	1.99	1.69	1.63	1.67	1.75	1.94	1.85	1.76	1.71	1.89	1.97	1.74	2.06	1.64
95.00°	1.56	1.95	1.99	2.07	2.06	1.49	1.82	1.81	1.95	1.76	1.87	1.57	1.72	1.78	1.66	2.05	1.56
97.50°	1.92	2.11	2.02	2.17	2.37	1.70	1.95	1.83	1.95	1.69	1.92	1.92	1.66	1.71	1.56	1.91	1.92
100.00°	2.30	1.97	2.06	2.30	2.04	1.93	1.96	1.83	1.93	1.69	1.89	2.42	1.64	1.78	1.49	1.72	2.30

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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	2620	2620	2620	2620	2557	2557	2557	2557	2441	2441	2441	2334	2334	2334	2236	2236	2190
	1	2479	2411	2349	2294	2423	2362	2306	2256	2269	2225	2184	2185	2149	2116	2106	2079	2036
	2	2338	2217	2117	2033	2286	2177	2086	2009	2103	2027	1962	2034	1972	1918	1970	1920	1881
	3	2203	2044	1922	1824	2156	2012	1899	1808	1951	1856	1777	1894	1814	1747	1842	1775	1740
	4	2077	1892	1757	1653	2034	1865	1740	1642	1815	1707	1621	1768	1675	1600	1724	1645	1613
	5	1961	1757	1615	1510	1922	1735	1602	1503	1693	1577	1488	1653	1552	1473	1617	1529	1500
	6	1853	1638	1493	1389	1818	1619	1483	1384	1583	1463	1373	1550	1443	1362	1519	1425	1399
	7	1754	1531	1386	1285	1722	1515	1378	1281	1484	1362	1273	1456	1347	1265	1429	1332	1308
	8	1663	1435	1293	1194	1634	1422	1286	1191	1396	1273	1185	1371	1260	1179	1348	1248	1227
	9	1579	1350	1210	1115	1552	1338	1204	1112	1315	1193	1108	1294	1183	1103	1274	1173	1154
	10	1501	1273	1136	1044	1477	1262	1131	1043	1243	1122	1039	1224	1113	1035	1207	1105	1088

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	72.8 fc	6.0 ft
6.5 ft	52.1 fc	7.0 ft
7.5 ft	39.1 fc	8.1 ft
8.0 ft	34.4 fc	8.7 ft
10.0 ft	22.0 fc	10.8 ft
12.0 ft	15.3 fc	13.0 ft
14.0 ft	11.2 fc	15.2 ft
16.0 ft	8.6 fc	17.3 ft
20.0 ft	5.5 fc	21.7 ft
24.0 ft	3.8 fc	26.0 ft
28.0 ft	2.8 fc	30.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	482875	482875	482875
45.00°	86382	83648	84586
55.00°	47074	45694	46354
65.00°	27686	26313	26882
75.00°	16088	17037	15610
85.00°	10213	12036	9269

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	20.4	21.5	20.8	21.8	22.2	20.4	21.5	20.8	21.8	22.2
	3H	21.1	22.1	21.4	22.4	22.8	21.0	22.0	21.4	22.4	22.8
	4H	21.2	22.2	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9
	6H	21.3	22.2	21.7	22.5	23.0	21.2	22.1	21.6	22.4	22.9
	8H	21.3	22.1	21.8	22.5	22.9	21.2	22.0	21.6	22.4	22.8
	12H	21.3	22.1	21.7	22.5	22.9	21.2	21.9	21.6	22.3	22.8
4H	2H	20.5	21.5	21.0	21.8	22.2	20.6	21.5	21.0	21.9	22.3
	3H	21.4	22.1	21.8	22.5	23.0	21.4	22.1	21.8	22.5	22.9
	4H	21.6	22.3	22.1	22.7	23.2	21.6	22.2	22.0	22.7	23.1
	6H	21.8	22.3	22.2	22.8	23.3	21.7	22.2	22.1	22.7	23.2
	8H	21.8	22.3	22.3	22.8	23.3	21.7	22.2	22.1	22.7	23.2
	12H	21.8	22.2	22.3	22.7	23.2	21.7	22.1	22.2	22.6	23.1
8H	4H	21.6	22.1	22.1	22.6	23.1	21.6	22.1	22.0	22.6	23.0
	6H	21.8	22.2	22.3	22.7	23.2	21.7	22.2	22.2	22.7	23.2
	8H	21.9	22.2	22.4	22.8	23.3	21.8	22.1	22.3	22.7	23.2
	12H	21.9	22.2	22.4	22.8	23.3	21.8	22.1	22.3	22.6	23.2
12H	4H	21.6	22.0	22.1	22.5	23.0	21.5	22.0	22.0	22.5	23.0
	6H	21.8	22.2	22.3	22.6	23.2	21.7	22.1	22.2	22.6	23.1
	8H	21.9	22.2	22.4	22.7	23.3	21.8	22.1	22.3	22.6	23.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0