

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 40L 35K MD XX AR8466XT SG SO
N/A

Test Number

SP-01205_2_M-40L

Test Date

2/11/2021

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

Summary of Results

Power

Input Watts	42.2 W
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Lumen Output

Output Lumens	2580
Efficacy	61.13 lm/W

Luminous Dimensions

0° - 180° Size	-0.63
90° - 270° Size	-0.63
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.62
Two luminaires, plane 90°	0.55
Four luminaires	0.71

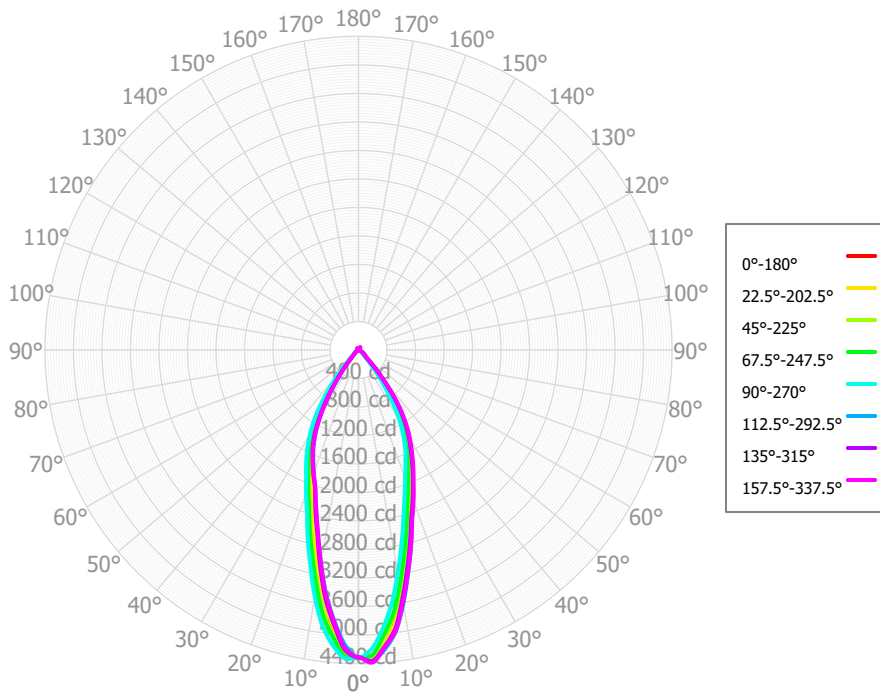
Full Beam Angle

0° - 180°	37°
90° - 270°	37°

IES File Header Contents

Keyword	Value
TEST	SP-01205_2_M-40L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/11/2021
ISSUEDATE	3/2/2021
LUMCAT	SGRTE8XT 40L 35K MD XX AR8466XT SG SO
LUMINAIRE	N/A
OTHER	Beam Angle: 37 degrees
LAMPCAT	N/A
LAMP	19mm LES
OTHER	LEDXT lumen output is the same for all available CCT's
OTHER	Total luminaire watts is approximate; includes 2 watts for thermal protector
OTHER	This report prepared by Spectrum Lighting, scaled from 50L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	367.31	14.24%	90.00° - 100.00°	1.19	0.05%
10.00° - 20.00°	721.59	27.97%	100.00° - 110.00°	1.12	0.04%
20.00° - 30.00°	750.93	29.11%	100.00° - 120.00°	2.50	0.10%
30.00° - 40.00°	495.49	19.21%	120.00° - 130.00°	2.63	0.10%
40.00° - 50.00°	133.20	5.16%	130.00° - 140.00°	5.32	0.21%
50.00° - 60.00°	55.68	2.16%	140.00° - 150.00°	14.45	0.56%
60.00° - 70.00°	14.72	0.57%	150.00° - 160.00°	8.81	0.34%
70.00° - 80.00°	1.18	0.05%	160.00° - 170.00°	3.39	0.13%
80.00° - 90.00°	1.20	0.05%	170.00° - 180.00°	0.26	0.01%
0.00° - 90.00°	2541.31	98.51%	0.00° - 180.00°	2579.86	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°	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10	4314.10
2.50°	4332.99	4313.47	4288.06	4291.22	4202.93	4156.27	4221.38	4198.27	4220.35	4201.58	4282.69	4308.34	4332.81	4366.96	4371.35	4390.21	4332.99
5.00°	4145.27	4143.06	4050.54	4020.21	3920.84	3831.26	3884.38	3847.55	3931.44	3924.16	4029.13	4055.71	4158.99	4219.21	4180.72	4193.58	4145.27
7.50°	3887.84	3887.11	3771.38	3733.85	3581.65	3463.99	3530.07	3482.84	3578.39	3584.61	3733.19	3776.59	3897.25	3990.75	3949.98	3982.39	3887.84
10.00°	3515.97	3536.66	3387.24	3339.47	3170.28	3034.11	3090.96	3039.45	3163.43	3171.85	3338.89	3375.90	3523.61	3619.32	3547.61	3593.18	3515.97
12.50°	3145.14	3150.77	3012.98	2948.37	2787.99	2642.75	2657.79	2621.54	2733.75	2787.11	2933.94	2986.42	3111.62	3208.34	3155.13	3206.72	3145.14
15.00°	2775.62	2797.98	2657.59	2602.70	2434.63	2295.47	2332.45	2297.11	2401.94	2428.37	2592.10	2631.99	2750.59	2845.78	2791.87	2846.35	2775.62
17.50°	2461.07	2453.97	2341.26	2270.84	2147.36	2028.58	2025.55	2014.42	2085.07	2148.24	2255.80	2310.41	2401.65	2492.24	2465.84	2503.96	2461.07
20.00°	2201.14	2194.56	2081.80	2030.98	1911.06	1833.11	1853.86	1840.42	1897.80	1924.54	2036.58	2064.77	2153.72	2240.56	2221.75	2256.94	2201.14
22.50°	1971.97	1949.63	1854.11	1803.32	1719.70	1658.59	1683.12	1668.45	1720.17	1734.08	1820.77	1843.60	1921.17	1999.41	1992.29	2020.12	1971.97
25.00°	1766.48	1752.49	1662.21	1626.42	1555.36	1498.66	1516.79	1500.47	1545.40	1562.15	1640.06	1664.98	1737.51	1801.98	1787.15	1819.82	1766.48
27.50°	1575.32	1559.86	1472.20	1442.69	1364.13	1298.56	1333.56	1304.29	1366.91	1357.03	1452.99	1475.41	1557.46	1606.49	1594.05	1625.22	1575.32
30.00°	1392.77	1365.06	1283.89	1238.85	1160.70	1077.08	1097.74	1065.91	1122.60	1138.04	1229.53	1271.05	1355.81	1424.76	1416.35	1445.16	1392.77
32.50°	1190.06	1169.30	1074.69	1026.11	927.50	833.46	857.67	825.18	879.83	896.33	1001.96	1044.58	1151.63	1238.67	1222.79	1253.95	1190.06
35.00°	978.21	949.73	851.19	794.14	684.45	580.90	607.85	581.68	648.55	647.65	759.11	794.93	906.97	1008.23	1013.30	1041.24	978.21
37.50°	747.11	729.19	626.52	569.00	474.60	385.78	392.61	381.67	430.30	455.75	532.94	568.49	664.77	775.83	778.52	812.76	747.11
40.00°	509.52	499.86	401.25	355.16	272.52	207.26	237.24	221.24	272.58	275.64	351.49	360.93	441.68	532.57	524.05	561.07	509.52
42.50°	332.91	292.80	258.83	203.74	181.04	139.95	133.60	130.41	143.27	181.66	207.25	220.82	243.76	318.07	341.71	359.66	332.91
45.00°	170.51	202.83	149.20	131.76	105.50	94.53	99.70	89.28	103.74	98.16	136.89	123.57	162.66	208.08	202.57	215.42	170.51
47.50°	131.79	129.72	113.09	89.62	90.84	79.01	76.63	66.68	72.66	81.50	88.91	82.73	98.14	125.68	148.10	137.55	131.79
50.00°	110.85	115.36	98.17	77.37	80.50	66.86	64.85	54.21	60.99	68.29	75.27	69.10	85.95	115.81	132.54	119.07	110.85
52.50°	94.63	100.97	84.65	66.39	68.86	56.18	54.41	44.31	49.84	56.78	62.83	57.41	74.26	104.15	113.68	101.45	94.63
55.00°	78.74	86.54	71.39	56.38	57.28	45.59	45.06	35.47	39.61	45.53	51.80	46.41	63.73	89.01	93.72	84.43	78.74
57.50°	65.28	72.22	59.75	46.44	46.77	36.40	35.85	28.81	31.09	37.46	41.95	37.91	52.66	73.48	76.12	69.01	65.28
60.00°	51.48	58.11	48.28	36.54	35.67	26.89	26.73	22.80	24.88	28.89	33.17	30.03	40.67	57.37	59.08	54.45	51.48
62.50°	31.83	40.22	28.98	23.28	20.21	13.94	16.60	13.96	16.84	17.17	22.08	18.77	27.48	39.38	38.26	36.33	31.83
65.00°	13.72	16.91	9.76	8.47	6.98	2.72	6.00	4.55	6.89	7.12	9.31	6.94	12.69	19.19	16.89	16.77	13.72
67.50°	6.84	3.70	5.02	3.28	3.70	1.68	2.36	2.43	2.05	3.86	3.58	3.53	4.05	7.24	8.78	7.73	6.84
70.00°	1.21	1.92	0.74	1.30	1.22	0.88	1.17	1.19	1.38	1.41	1.75	0.85	1.89	2.73	1.65	1.75	1.21
72.50°	1.27	1.13	1.13	0.88	1.22	1.01	0.98	0.98	1.08	1.25	1.07	0.82	0.91	0.96	1.51	0.72	1.27
75.00°	1.31	1.22	1.46	0.82	1.20	1.13	1.04	0.82	1.00	1.08	0.87	0.84	0.90	1.13	1.40	0.64	1.31
77.50°	1.26	1.21	1.46	1.07	1.15	1.26	0.95	0.80	1.00	0.91	1.00	0.93	0.91	1.14	1.28	0.88	1.26
80.00°	1.16	1.12	1.41	1.37	1.15	1.28	0.83	0.80	1.02	0.92	1.24	1.02	0.93	1.05	1.17	1.16	1.16
82.50°	0.95	1.04	1.14	1.17	1.26	1.11	1.09	1.08	1.01	1.21	1.28	1.12	1.07	1.01	1.10	1.07	0.95
85.00°	0.79	0.97	0.94	0.94	1.22	1.13	1.38	1.27	1.00	1.33	1.28	1.21	1.28	0.98	1.03	0.96	0.79
87.50°	0.73	0.96	0.92	1.09	0.97	1.43	1.24	0.97	1.15	1.25	1.11	1.22	1.22	1.18	0.97	1.03	0.73
90.00°	0.78	0.98	0.98	1.22	0.95	1.44	1.10	0.79	1.35	1.21	0.93	1.24	1.08	1.46	0.94	1.10	0.78
92.50°	0.98	0.94	1.19	1.06	1.15	1.12	0.84	1.11	1.14	1.22	0.79	1.30	0.96	1.42	1.00	1.21	0.98
95.00°	1.15	0.88	1.33	0.90	1.28	1.03	0.65	1.32	0.86	1.06	0.66	1.29	0.86	1.32	0.99	1.31	1.15
97.50°	1.29	0.89	1.36	0.81	1.35	1.16	1.12	1.23	0.95	0.75	0.89	1.07	1.05	1.38	0.83	1.40	1.29
100.00°	1.26	0.91	1.42	0.72	1.27	1.20	1.45	1.15	1.07	0.88	1.11	0.97	1.30	1.46	0.75	1.42	1.26
102.50°	1.10	0.98	1.50	0.58	1.10	1.17	1.17	1.09	1.00	1.25	1.07	1.06	1.01	1.31	0.81	1.17	1.10
105.00°	1.00	1.05	1.34	0.54	1.12	1.13	0.92	1.08	0.94	1.29	1.02	1.09	0.67	1.14	0.96	1.03	1.00
107.50°	0.92	0.84	0.96	0.80	1.24	1.07	0.79	1.13	1.21	1.17	0.94	1.04	0.94	0.90	1.26	1.17	0.92
110.00°	1.02	0.64	0.95	1.03	1.22	1.15	0.75	1.06	1.44	0.98	0.89	1.19	1.21	0.70	1.34	1.20	1.02
112.50°	1.21	0.96	1.22	1.19	1.16	1.30	0.92	0.83	1.44	0.77	0.99	1.54	1.03	1.01	1.22	1.03	1.21

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	3062	3062	3062	3062	2986	2986	2986	2986	2845	2845	2845	2716	2716	2716	2597	2597	2541
	1	2921	2850	2787	2730	2854	2791	2734	2683	2680	2635	2594	2577	2542	2510	2483	2456	2404
	2	2779	2655	2553	2467	2718	2607	2515	2436	2518	2442	2377	2435	2374	2320	2359	2310	2266
	3	2642	2479	2353	2253	2587	2440	2325	2232	2367	2271	2191	2300	2220	2152	2237	2171	2115
	4	2511	2321	2181	2074	2462	2289	2159	2060	2229	2118	2031	2173	2079	2003	2121	2042	1977
	5	2389	2178	2031	1922	2345	2152	2014	1912	2101	1982	1891	2055	1952	1871	2011	1923	1852
	6	2274	2049	1899	1791	2234	2027	1886	1783	1985	1861	1768	1945	1836	1753	1909	1813	1738
	7	2167	1933	1782	1676	2130	1914	1771	1670	1878	1751	1659	1845	1732	1647	1813	1713	1636
	8	2067	1828	1677	1574	2034	1812	1669	1570	1781	1652	1561	1752	1636	1552	1724	1621	1544
	9	1974	1732	1584	1484	1944	1718	1577	1480	1691	1563	1473	1666	1550	1466	1642	1537	1460
	10	1887	1645	1499	1403	1860	1633	1494	1400	1609	1482	1394	1587	1471	1389	1566	1460	1383

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	142.6 fc	3.7 ft
6.5 ft	102.1 fc	4.4 ft
7.5 ft	76.7 fc	5.0 ft
8.0 ft	67.4 fc	5.4 ft
10.0 ft	43.1 fc	6.7 ft
12.0 ft	30.0 fc	8.1 ft
14.0 ft	22.0 fc	9.4 ft
16.0 ft	16.9 fc	10.8 ft
20.0 ft	10.8 fc	13.5 ft
24.0 ft	7.5 fc	16.1 ft
28.0 ft	5.5 fc	18.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	148967	148967	148967
45.00°	8327	7286	5152
55.00°	4740	4298	3448
65.00°	1121	797	570
75.00°	175	195	161
85.00°	313	374	482

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	10.9	11.9	11.3	12.2	12.6	7.0	7.9	7.3	8.3	8.6
	3H	10.8	11.6	11.2	12.0	12.4	6.8	7.6	7.2	8.0	8.4
	4H	10.6	11.4	11.1	11.8	12.3	6.7	7.5	7.1	7.9	8.3
	6H	10.5	11.3	11.0	11.7	12.1	6.6	7.3	7.0	7.7	8.1
	8H	10.5	11.2	11.0	11.6	12.0	6.5	7.2	7.0	7.6	8.1
	12H	10.4	11.1	10.9	11.5	12.0	6.5	7.1	7.0	7.6	8.0
4H	2H	10.7	11.5	11.1	11.9	12.3	6.7	7.5	7.2	7.9	8.3
	3H	10.5	11.2	11.0	11.6	12.0	6.6	7.2	7.0	7.6	8.1
	4H	10.4	11.0	10.9	11.4	11.9	6.4	7.0	6.9	7.5	8.0
	6H	10.3	10.8	10.8	11.3	11.8	6.4	6.8	6.9	7.3	7.8
	8H	10.2	10.7	10.7	11.2	11.7	6.3	6.8	6.8	7.2	7.8
	12H	10.2	10.6	10.7	11.1	11.6	6.3	6.7	6.8	7.2	7.7
8H	4H	10.2	10.7	10.7	11.2	11.7	6.3	6.7	6.8	7.2	7.7
	6H	10.1	10.5	10.6	11.0	11.5	6.2	6.5	6.7	7.1	7.6
	8H	10.0	10.4	10.6	10.9	11.4	6.1	6.5	6.7	7.0	7.5
	12H	10.0	10.3	10.6	10.8	11.4	6.2	6.4	6.7	7.0	7.6
12H	4H	10.2	10.6	10.7	11.1	11.6	6.2	6.6	6.7	7.1	7.6
	6H	10.0	10.4	10.6	10.9	11.4	6.1	6.4	6.7	6.9	7.5
	8H	10.0	10.3	10.5	10.8	11.4	6.1	6.4	6.6	6.9	7.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0