

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SAFI4XT 20L 35K WD xx SA4FXT MW GLX (aimed at 0 deg - nadir)
Nom 4 inch square adj accent downlight (measured at nadir) with WD optic

Test Number

SP-01266_2

Test Date

8/4/2021

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

Summary of Results

Power

Input Watts	24.6 W
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Lumen Output

Output Lumens	1584
Efficacy	64.39 lm/W

Luminous Dimensions

0° - 180° Size	0.33
90° - 270° Size	0.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.73
Two luminaires, plane 90°	0.72
Four luminaires	0.78

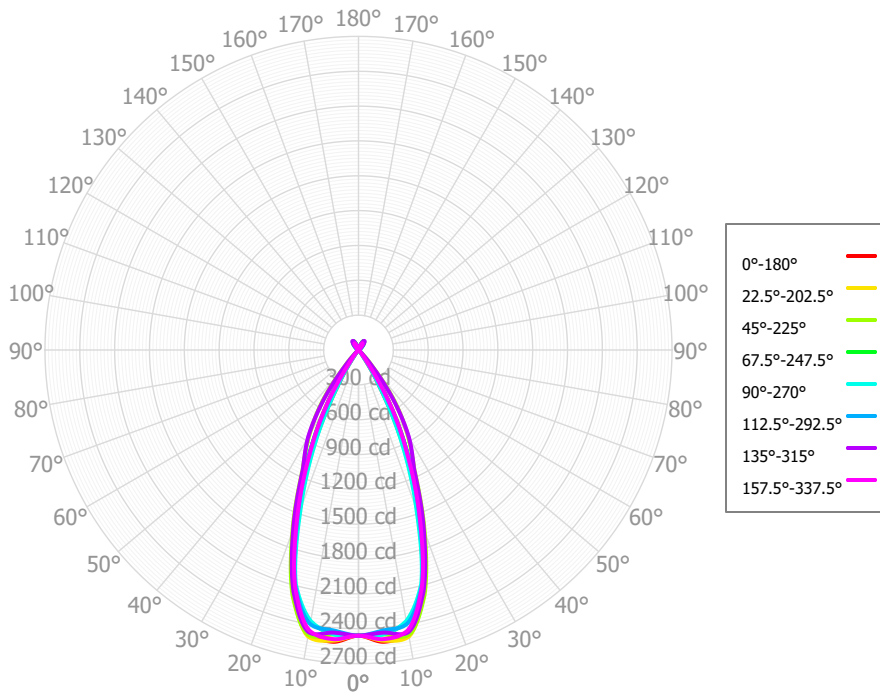
Full Beam Angle

0° - 180°	44°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01266_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	8/4/2021
ISSUEDATE	8/18/2021
LUMCAT	SAFI4XT 20L 35K WD xx SA4FXT MW GLX (aimed at 0 deg - nadir)
LUMINAIRE	Nom 4 inch square adj accent downlight (measured at nadir) with WD optic
OTHER	Matte white finish, Clear glass lens
OTHER	Beam Angle: 44 deg
LAMP	N/A
LAMPCAT	N/A, 19mm LES
OTHER	LEDXT lumen output is the same for all available CCT's
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	83
_CCTMULT	Same for all available CCT's
_LAMPMULT	10L x 0.48, 13L x 0.65

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	248.98	15.72%	90.00° - 100.00°	1.40	0.09%
10.00° - 20.00°	564.72	35.65%	100.00° - 110.00°	1.44	0.09%
20.00° - 30.00°	460.75	29.09%	100.00° - 120.00°	4.43	0.28%
30.00° - 40.00°	164.29	10.37%	120.00° - 130.00°	9.33	0.59%
40.00° - 50.00°	23.41	1.48%	130.00° - 140.00°	23.39	1.48%
50.00° - 60.00°	8.39	0.53%	140.00° - 150.00°	37.31	2.36%
60.00° - 70.00°	5.57	0.35%	150.00° - 160.00°	22.73	1.44%
70.00° - 80.00°	3.33	0.21%	160.00° - 170.00°	3.74	0.24%
80.00° - 90.00°	1.84	0.12%	170.00° - 180.00°	0.27	0.02%
0.00° - 90.00°	1481.29	93.52%	0.00° - 180.00°	1583.88	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°	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22	2460.22
5.00°	2522.19	2512.47	2460.35	2453.52	2458.70	2425.48	2443.46	2499.42	2522.19	2512.47	2460.35	2453.52	2458.70	2425.48	2443.46	2499.42	2522.19
10.00°	2469.23	2504.33	2490.60	2379.38	2369.81	2396.43	2467.98	2450.92	2469.23	2504.33	2490.60	2379.38	2369.81	2396.43	2467.98	2450.92	2469.23
15.00°	2110.72	2159.36	2191.90	2116.71	2086.68	2105.70	2159.63	2110.18	2110.72	2159.36	2191.90	2116.71	2086.68	2105.70	2159.63	2110.18	2110.72
20.00°	1489.24	1575.78	1663.76	1576.27	1458.82	1535.88	1644.49	1546.11	1489.24	1575.78	1663.76	1576.27	1458.82	1535.88	1644.49	1546.11	1489.24
25.00°	920.35	1003.08	1139.45	1018.25	882.64	1022.88	1133.25	1001.39	920.35	1003.08	1139.45	1018.25	882.64	1022.88	1133.25	1001.39	920.35
30.00°	363.74	561.62	848.98	545.79	354.74	524.68	868.95	557.35	363.74	561.62	848.98	545.79	354.74	524.68	868.95	557.35	363.74
35.00°	78.22	145.96	548.87	179.23	71.43	168.10	523.09	132.14	78.22	145.96	548.87	179.23	71.43	168.10	523.09	132.14	78.22
40.00°	24.02	33.22	196.30	40.04	22.36	41.06	181.75	27.17	24.02	33.22	196.30	40.04	22.36	41.06	181.75	27.17	24.02
45.00°	15.78	16.46	41.43	17.98	20.17	19.11	24.20	16.07	15.78	16.46	41.43	17.98	20.17	19.11	24.20	16.07	15.78
50.00°	11.35	11.74	13.67	12.87	15.92	12.95	11.46	11.03	11.35	11.74	13.67	12.87	15.92	12.95	11.46	11.03	11.35
55.00°	7.90	9.04	10.59	9.12	10.18	8.51	9.40	9.12	7.90	9.04	10.59	9.12	10.18	8.51	9.40	9.12	7.90
60.00°	6.86	6.79	7.52	6.95	6.32	6.54	6.65	6.24	6.86	6.79	7.52	6.95	6.32	6.54	6.65	6.24	6.86
65.00°	5.99	5.45	5.54	6.14	5.79	6.00	5.18	5.92	5.99	5.45	5.54	6.14	5.79	6.00	5.18	5.92	5.99
70.00°	4.44	4.17	4.19	4.80	4.25	4.96	3.81	4.13	4.44	4.17	4.19	4.80	4.25	4.96	3.81	4.13	4.44
75.00°	3.69	3.00	2.78	3.22	2.79	3.12	2.92	3.05	3.69	3.00	2.78	3.22	2.79	3.12	2.92	3.05	3.69
80.00°	2.25	2.18	2.11	2.20	2.08	2.31	2.23	2.09	2.25	2.18	2.11	2.20	2.08	2.31	2.23	2.09	2.25
85.00°	1.81	1.49	1.52	1.61	1.94	1.42	1.63	1.53	1.81	1.49	1.52	1.61	1.94	1.42	1.63	1.53	1.81
90.00°	1.56	1.20	1.13	1.58	1.53	1.24	1.25	1.27	1.56	1.20	1.13	1.58	1.53	1.24	1.25	1.27	1.56
95.00°	1.48	1.21	1.06	1.29	1.64	1.26	1.16	1.01	1.48	1.21	1.06	1.29	1.64	1.26	1.16	1.01	1.48
100.00°	1.35	1.13	1.20	1.10	1.50	1.18	1.36	1.18	1.35	1.13	1.20	1.10	1.50	1.18	1.36	1.18	1.35
105.00°	1.38	1.18	1.35	1.37	1.49	1.35	1.37	1.38	1.38	1.18	1.35	1.37	1.49	1.35	1.37	1.38	1.38
110.00°	1.36	1.44	1.46	1.38	1.69	1.90	1.37	1.40	1.36	1.44	1.46	1.38	1.69	1.90	1.37	1.40	1.36
115.00°	1.33	1.52	1.40	3.51	3.52	5.24	1.96	1.38	1.33	1.52	1.40	3.51	3.52	5.24	1.96	1.38	1.33
120.00°	1.40	1.65	2.36	12.34	9.49	13.88	3.22	1.66	1.40	1.65	2.36	12.34	9.49	13.88	3.22	1.66	1.40
125.00°	1.35	1.85	4.87	22.45	17.49	24.55	6.17	2.14	1.35	1.85	4.87	22.45	17.49	24.55	6.17	2.14	1.35
130.00°	2.00	3.00	13.27	31.56	23.95	36.86	16.13	3.60	2.00	3.00	13.27	31.56	23.95	36.86	16.13	3.60	2.00
135.00°	5.45	6.68	44.67	49.92	30.24	52.20	40.53	8.51	5.45	6.68	44.67	49.92	30.24	52.20	40.53	8.51	5.45
140.00°	13.57	18.72	70.00	70.41	38.88	68.88	72.70	29.69	13.57	18.72	70.00	70.41	38.88	68.88	72.70	29.69	13.57
145.00°	19.78	37.17	85.74	85.15	46.08	83.65	92.29	61.49	19.78	37.17	85.74	85.15	46.08	83.65	92.29	61.49	19.78
150.00°	18.63	33.84	87.15	88.51	42.79	84.91	89.59	67.13	18.63	33.84	87.15	88.51	42.79	84.91	89.59	67.13	18.63
155.00°	14.69	25.64	76.05	71.77	34.39	65.02	66.58	45.99	14.69	25.64	76.05	71.77	34.39	65.02	66.58	45.99	14.69
160.00°	11.00	15.53	32.33	34.12	21.05	31.66	32.93	23.03	11.00	15.53	32.33	34.12	21.05	31.66	32.93	23.03	11.00
165.00°	6.53	6.45	8.15	10.45	8.78	10.40	9.60	8.34	6.53	6.45	8.15	10.45	8.78	10.40	9.60	8.34	6.53
170.00°	3.06	2.65	3.37	4.12	3.00	3.41	3.29	3.58	3.06	2.65	3.37	4.12	3.00	3.41	3.29	3.58	3.06
175.00°	2.06	2.16	2.32	1.86	2.19	1.97	2.01	2.21	2.06	2.16	2.32	1.86	2.19	1.97	2.01	2.21	2.06
180.00°	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82

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	1861	1861	1861	1861	1806	1806	1806	1806	1703	1703	1703	1609	1609	1609	1522	1522	1481
	1	1779	1737	1700	1667	1730	1693	1661	1631	1611	1585	1562	1535	1516	1498	1465	1451	1437
	2	1699	1628	1569	1519	1655	1592	1539	1495	1525	1483	1447	1463	1430	1401	1406	1380	1357
	3	1624	1531	1459	1402	1584	1501	1436	1384	1446	1393	1349	1395	1352	1316	1348	1313	1283
	4	1552	1444	1365	1304	1517	1420	1347	1291	1374	1313	1265	1331	1281	1240	1291	1250	1221
	5	1485	1366	1283	1221	1453	1345	1269	1211	1306	1241	1192	1270	1215	1172	1237	1190	1153
	6	1421	1295	1210	1149	1393	1278	1199	1141	1245	1177	1126	1214	1155	1111	1185	1135	1096
	7	1362	1231	1145	1086	1336	1216	1136	1079	1187	1118	1067	1161	1100	1055	1136	1083	1043
	8	1306	1172	1087	1029	1283	1159	1079	1024	1134	1064	1014	1111	1049	1004	1089	1035	994
	9	1254	1118	1034	978	1232	1106	1028	974	1085	1015	965	1064	1002	957	1045	990	949
	10	1205	1068	986	932	1185	1058	980	928	1039	969	921	1021	958	914	1004	948	907

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	81.3 fc	4.4 ft
6.5 ft	58.2 fc	5.2 ft
7.5 ft	43.7 fc	6.0 ft
8.0 ft	38.4 fc	6.4 ft
10.0 ft	24.6 fc	8.0 ft
12.0 ft	17.1 fc	9.6 ft
14.0 ft	12.6 fc	11.2 ft
16.0 ft	9.6 fc	12.8 ft
20.0 ft	6.2 fc	16.0 ft
24.0 ft	4.3 fc	19.3 ft
28.0 ft	3.1 fc	22.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	243173	243173	243173
45.00°	2206	5792	2819
55.00°	1361	1825	1754
65.00°	1401	1296	1353
75.00°	1411	1061	1066
85.00°	2051	1721	2201

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	1.7	2.5	2.2	3.0	3.5	1.8	2.7	2.3	3.1	3.6
	3H	3.4	4.2	3.9	4.6	5.2	3.6	4.4	4.1	4.8	5.4
	4H	4.2	4.9	4.7	5.3	5.9	4.2	4.9	4.7	5.3	5.9
	6H	4.8	5.4	5.3	5.9	6.5	4.7	5.3	5.2	5.8	6.4
	8H	5.1	5.7	5.6	6.2	6.8	4.9	5.5	5.5	6.1	6.6
	12H	5.4	6.0	6.0	6.5	7.1	5.3	5.9	5.9	6.4	7.0
4H	2H	2.1	2.8	2.6	3.3	3.8	2.2	2.9	2.7	3.4	4.0
	3H	4.0	4.6	4.5	5.1	5.7	4.3	4.8	4.8	5.4	5.9
	4H	4.9	5.4	5.4	5.9	6.5	5.0	5.5	5.5	6.0	6.6
	6H	5.6	6.1	6.2	6.6	7.3	5.6	6.1	6.2	6.6	7.3
	8H	6.0	6.4	6.6	7.0	7.6	6.0	6.4	6.6	7.0	7.6
	12H	6.5	6.8	7.1	7.4	8.0	6.5	6.8	7.1	7.4	8.1
8H	4H	5.1	5.5	5.7	6.1	6.7	5.2	5.6	5.7	6.1	6.8
	6H	6.0	6.3	6.6	7.0	7.6	6.0	6.4	6.6	7.0	7.6
	8H	6.5	6.8	7.2	7.4	8.1	6.5	6.8	7.2	7.5	8.1
	12H	7.2	7.4	7.8	8.0	8.7	7.2	7.5	7.8	8.1	8.8
12H	4H	5.1	5.4	5.7	6.0	6.7	5.2	5.5	5.8	6.1	6.7
	6H	6.1	6.4	6.7	7.0	7.7	6.1	6.4	6.7	7.0	7.7
	8H	6.7	6.9	7.3	7.5	8.3	6.7	6.9	7.3	7.6	8.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0