

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SAZI4XT 20L 35K MD xx SA4NXT MW PGX (aimed at 0 deg - nadir)
Nom 4 inch square adj accent downlight (measured at nadir) with MD optic

Test Number

SP-01256_3

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
-------------	--------

Lumen Output

Output Lumens	1244
Efficacy	50.55 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.69
Two luminaires, plane 90°	0.67
Four luminaires	0.73

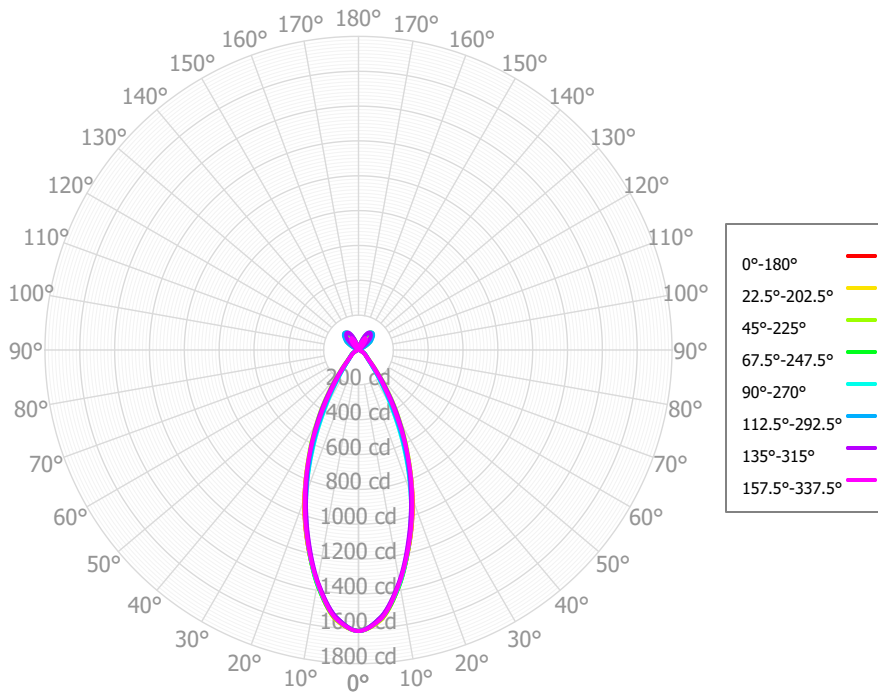
Full Beam Angle

0° - 180°	44°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01256_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	8/4/2021
ISSUEDATE	8/5/2021
LUMCAT	SAZI4XT 20L 35K MD xx SA4NXT MW PGX (aimed at 0 deg - nadir)
LUMINAIRE	Nom 4 inch square adj accent downlight (measured at nadir) with MD optic
OTHER	Matte white finish, Prismatic 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°	147.93	11.90%	90.00° - 100.00°	1.64	0.13%
10.00° - 20.00°	308.44	24.80%	100.00° - 110.00°	1.67	0.13%
20.00° - 30.00°	294.16	23.66%	100.00° - 120.00°	9.26	0.74%
30.00° - 40.00°	164.07	13.19%	120.00° - 130.00°	28.07	2.26%
40.00° - 50.00°	72.16	5.80%	130.00° - 140.00°	47.91	3.85%
50.00° - 60.00°	43.82	3.52%	140.00° - 150.00°	52.99	4.26%
60.00° - 70.00°	24.19	1.95%	150.00° - 160.00°	31.27	2.51%
70.00° - 80.00°	7.48	0.60%	160.00° - 170.00°	7.26	0.58%
80.00° - 90.00°	2.50	0.20%	170.00° - 180.00°	0.37	0.03%
0.00° - 90.00°	1064.75	85.62%	0.00° - 180.00°	1243.53	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°	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11	1613.11
5.00°	1535.75	1551.36	1547.57	1544.70	1537.93	1534.60	1533.49	1544.29	1535.75	1551.36	1547.57	1544.70	1537.93	1534.60	1533.49	1544.29	1535.75
10.00°	1354.38	1361.43	1364.45	1366.65	1361.07	1355.61	1348.37	1356.49	1354.38	1361.43	1364.45	1366.65	1361.07	1355.61	1348.37	1356.49	1354.38
15.00°	1138.44	1137.59	1133.27	1130.38	1126.56	1121.26	1114.64	1132.04	1138.44	1137.59	1133.27	1130.38	1126.56	1121.26	1114.64	1132.04	1138.44
20.00°	909.03	906.84	896.39	887.02	875.46	876.37	879.95	901.95	909.03	906.84	896.39	887.02	875.46	876.37	879.95	901.95	909.03
25.00°	661.52	671.21	676.27	648.12	615.86	634.57	663.30	668.07	661.52	671.21	676.27	648.12	615.86	634.57	663.30	668.07	661.52
30.00°	421.41	437.78	474.87	417.57	376.90	405.28	465.02	438.46	421.41	437.78	474.87	417.57	376.90	405.28	465.02	438.46	421.41
35.00°	246.24	256.35	300.60	239.09	212.64	230.75	288.09	255.74	246.24	256.35	300.60	239.09	212.64	230.75	288.09	255.74	246.24
40.00°	143.70	146.44	171.70	133.18	124.11	128.76	161.60	145.32	143.70	146.44	171.70	133.18	124.11	128.76	161.60	145.32	143.70
45.00°	87.97	86.67	99.25	83.67	79.96	79.81	92.22	86.13	87.97	86.67	99.25	83.67	79.96	79.81	92.22	86.13	87.97
50.00°	60.55	62.63	65.30	64.89	60.01	60.89	61.70	60.50	60.55	62.63	65.30	64.89	60.01	60.89	61.70	60.50	60.55
55.00°	48.23	47.75	50.10	51.63	50.30	50.18	47.70	44.91	48.23	47.75	50.10	51.63	50.30	50.18	47.70	44.91	48.23
60.00°	36.29	35.29	38.17	39.75	39.37	38.03	36.58	34.96	36.29	35.29	38.17	39.75	39.37	38.03	36.58	34.96	36.29
65.00°	22.89	23.44	24.58	25.83	25.16	25.59	23.75	23.33	22.89	23.44	24.58	25.83	25.16	25.59	23.75	23.33	22.89
70.00°	11.66	11.69	14.25	13.19	11.54	13.69	12.69	12.42	11.66	11.69	14.25	13.19	11.54	13.69	12.69	12.42	11.66
75.00°	6.07	5.22	6.87	6.55	5.84	6.08	6.61	6.20	6.07	5.22	6.87	6.55	5.84	6.08	6.61	6.20	6.07
80.00°	3.56	3.35	4.18	3.73	3.24	3.57	3.23	3.39	3.56	3.35	4.18	3.73	3.24	3.57	3.23	3.39	3.56
85.00°	1.98	1.93	2.24	2.24	1.99	2.01	2.11	2.13	1.98	1.93	2.24	2.24	1.99	2.01	2.11	2.13	1.98
90.00°	1.41	1.41	1.44	1.50	1.62	1.62	1.48	1.54	1.41	1.41	1.44	1.50	1.62	1.62	1.48	1.54	1.41
95.00°	1.53	1.28	1.40	1.65	1.46	1.57	1.56	1.63	1.53	1.28	1.40	1.65	1.46	1.57	1.56	1.63	1.53
100.00°	1.56	1.42	1.38	1.63	1.82	1.42	1.20	1.62	1.56	1.42	1.38	1.63	1.82	1.42	1.20	1.62	1.56
105.00°	1.30	1.55	1.57	1.61	1.46	1.55	1.23	1.70	1.30	1.55	1.57	1.61	1.46	1.55	1.23	1.70	1.30
110.00°	1.24	1.68	1.47	2.25	1.64	2.73	1.81	1.90	1.24	1.68	1.47	2.25	1.64	2.73	1.81	1.90	1.24
115.00°	1.50	1.68	1.67	14.90	5.06	16.84	2.40	1.87	1.50	1.68	1.67	14.90	5.06	16.84	2.40	1.87	1.50
120.00°	1.52	1.76	3.79	51.77	23.74	53.80	5.42	1.75	1.52	1.76	3.79	51.77	23.74	53.80	5.42	1.75	1.52
125.00°	1.57	2.16	12.50	82.71	48.25	85.53	19.85	2.69	1.57	2.16	12.50	82.71	48.25	85.53	19.85	2.69	1.57
130.00°	2.31	4.89	34.25	97.01	60.11	102.26	53.76	6.79	2.31	4.89	34.25	97.01	60.11	102.26	53.76	6.79	2.31
135.00°	7.20	12.67	71.33	114.80	66.94	118.52	92.49	20.78	7.20	12.67	71.33	114.80	66.94	118.52	92.49	20.78	7.20
140.00°	19.74	30.00	101.79	125.02	71.17	125.98	110.10	50.83	19.74	30.00	101.79	125.02	71.17	125.98	110.10	50.83	19.74
145.00°	30.95	44.51	111.63	122.29	73.72	123.46	118.24	74.81	30.95	44.51	111.63	122.29	73.72	123.46	118.24	74.81	30.95
150.00°	31.87	46.44	107.10	110.95	70.50	112.33	114.86	78.65	31.87	46.44	107.10	110.95	70.50	112.33	114.86	78.65	31.87
155.00°	27.16	38.32	85.94	86.64	56.54	86.19	94.40	62.19	27.16	38.32	85.94	86.64	56.54	86.19	94.40	62.19	27.16
160.00°	20.06	28.15	56.23	55.93	38.66	54.18	60.86	43.29	20.06	28.15	56.23	55.93	38.66	54.18	60.86	43.29	20.06
165.00°	11.13	14.17	24.07	24.34	18.73	22.46	25.69	18.54	11.13	14.17	24.07	24.34	18.73	22.46	25.69	18.54	11.13
170.00°	3.63	4.46	5.48	5.84	4.49	5.85	6.63	5.95	3.63	4.46	5.48	5.84	4.49	5.85	6.63	5.95	3.63
175.00°	2.48	2.20	2.16	2.31	2.24	2.53	2.15	2.14	2.48	2.20	2.16	2.31	2.24	2.53	2.15	2.14	2.48
180.00°	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

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	1438	1438	1438	1438	1384	1384	1384	1384	1282	1282	1282	1190	1190	1190	1105	1105	1065
	1	1360	1321	1287	1256	1310	1277	1247	1220	1194	1171	1150	1117	1100	1084	1047	1034	998
	2	1283	1217	1162	1116	1238	1180	1131	1089	1110	1072	1039	1046	1016	990	987	964	932
	3	1211	1125	1058	1005	1170	1094	1033	985	1035	987	947	981	942	910	931	900	871
	4	1144	1044	970	914	1107	1018	951	899	968	913	870	922	877	841	879	842	817
	5	1083	973	896	839	1049	950	880	827	908	849	804	868	819	781	831	791	768
	6	1026	910	832	776	995	890	819	767	853	793	747	819	768	729	787	744	723
	7	974	854	776	722	946	837	765	714	805	743	698	775	722	683	746	702	683
	8	926	804	728	675	901	789	718	668	761	699	655	734	681	642	709	664	647
	9	882	759	684	634	859	746	676	628	721	660	617	698	644	606	675	629	614
	10	841	719	646	597	820	707	639	592	685	625	583	664	611	573	644	598	584

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	53.3 fc	4.4 ft
6.5 ft	38.2 fc	5.2 ft
7.5 ft	28.7 fc	6.0 ft
8.0 ft	25.2 fc	6.4 ft
10.0 ft	16.1 fc	8.0 ft
12.0 ft	11.2 fc	9.6 ft
14.0 ft	8.2 fc	11.1 ft
16.0 ft	6.3 fc	12.7 ft
20.0 ft	4.0 fc	15.9 ft
24.0 ft	2.8 fc	19.1 ft
28.0 ft	2.1 fc	22.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	159443	159443	159443
45.00°	12297	13874	11177
55.00°	8312	8634	8669
65.00°	5355	5748	5885
75.00°	2316	2622	2229
85.00°	2249	2535	2254

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	13.6	14.5	14.2	15.1	15.8	14.2	15.2	14.9	15.8	16.4
	3H	14.2	15.1	14.9	15.7	16.4	14.8	15.7	15.5	16.3	17.0
	4H	14.3	15.1	15.0	15.7	16.4	14.9	15.7	15.5	16.3	17.0
	6H	14.3	15.0	15.0	15.7	16.4	14.9	15.6	15.5	16.2	16.9
	8H	14.3	15.0	15.0	15.6	16.4	14.9	15.5	15.5	16.2	16.9
	12H	14.3	14.9	15.0	15.6	16.3	14.9	15.5	15.5	16.1	16.9
4H	2H	13.9	14.6	14.5	15.3	16.0	14.4	15.2	15.1	15.8	16.5
	3H	14.6	15.2	15.3	15.9	16.6	15.1	15.8	15.8	16.4	17.1
	4H	14.7	15.3	15.4	15.9	16.7	15.2	15.8	15.9	16.4	17.2
	6H	14.8	15.2	15.5	15.9	16.7	15.3	15.7	16.0	16.4	17.2
	8H	14.8	15.2	15.5	15.9	16.7	15.3	15.7	16.0	16.4	17.2
	12H	14.8	15.2	15.5	15.9	16.7	15.3	15.7	16.0	16.4	17.2
8H	4H	14.7	15.1	15.4	15.8	16.6	15.2	15.6	15.9	16.3	17.1
	6H	14.8	15.1	15.5	15.9	16.7	15.3	15.6	16.0	16.4	17.1
	8H	14.8	15.2	15.6	15.9	16.7	15.3	15.6	16.0	16.4	17.2
	12H	14.9	15.2	15.6	15.9	16.8	15.4	15.6	16.1	16.4	17.2
12H	4H	14.6	15.0	15.3	15.7	16.5	15.1	15.5	15.8	16.2	17.0
	6H	14.8	15.1	15.5	15.8	16.6	15.2	15.5	16.0	16.2	17.1
	8H	14.8	15.1	15.6	15.8	16.7	15.3	15.6	16.0	16.3	17.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0