

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SGECS4SQFX 10L 35K XX CA4FX SO SG
Nom 4" square Chicago Plenum downlight, Solite lens, Soft glow finish

Test Number

SP-01175_M-10L

Test Date

6/16/2020

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

Summary of Results

Power

Input Watts	6.6 W
-------------	-------

Lumen Output

Output Lumens	750
Efficacy	113.68 lm/W

Luminous Dimensions

0° - 180° Size	0.3
90° - 270° Size	0.3
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.15

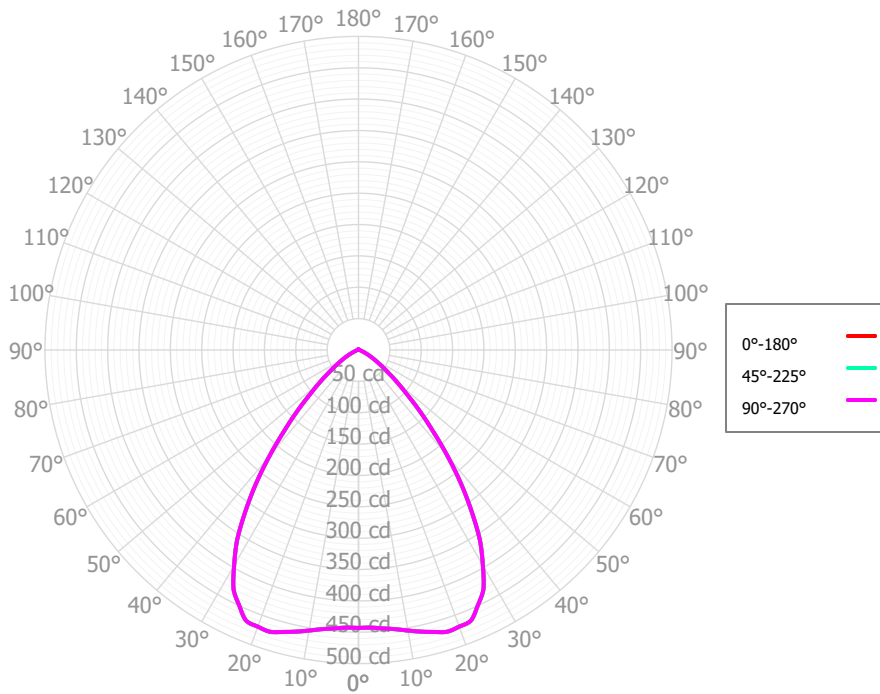
Full Beam Angle

0° - 180°	78°
90° - 270°	78°

IES File Header Contents

Keyword	Value
TEST	SP-01175_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/16/2020
ISSUEDATE	7/16/2020
LUMCAT	SGECS4SQFX 10L 35K XX CA4FX SO SG
LUMINAIRE	Nom 4" square Chicago Plenum downlight, Solite lens, Soft glow finish
OTHER	Beam angle: 78.5 deg
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	CCT Output Multipliers: 30K x 0.97, 40K x 1.03, 50K x 1.03
OTHER	This report prepared by Spectrum Lighting, scaled from 40L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	44.60	5.94%	90.00° - 100.00°	0.37	0.05%
10.00° - 20.00°	131.99	17.57%	100.00° - 110.00°	0.32	0.04%
20.00° - 30.00°	204.97	27.28%	100.00° - 120.00°	0.64	0.09%
30.00° - 40.00°	194.08	25.83%	120.00° - 130.00°	0.32	0.04%
40.00° - 50.00°	108.83	14.48%	130.00° - 140.00°	0.31	0.04%
50.00° - 60.00°	43.63	5.81%	140.00° - 150.00°	0.27	0.04%
60.00° - 70.00°	14.66	1.95%	150.00° - 160.00°	0.20	0.03%
70.00° - 80.00°	4.56	0.61%	160.00° - 170.00°	0.13	0.02%
80.00° - 90.00°	1.79	0.24%	170.00° - 180.00°	0.04	0.01%
0.00° - 90.00°	749.10	99.70%	0.00° - 180.00°	751.38	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	443.27	443.27	443.27
2.50°	443.27	443.27	443.27
5.00°	445.74	445.74	445.74
7.50°	449.09	449.09	449.09
10.00°	454.36	454.36	454.36
12.50°	460.10	460.10	460.10
15.00°	465.58	465.58	465.58
17.50°	471.02	471.02	471.02
20.00°	469.55	469.55	469.55
22.50°	467.52	467.52	467.52
25.00°	449.93	449.93	449.93
27.50°	431.30	431.30	431.30
30.00°	396.72	396.72	396.72
32.50°	360.79	360.79	360.79
35.00°	314.71	314.71	314.71
37.50°	268.40	268.40	268.40
40.00°	221.03	221.03	221.03
42.50°	176.09	176.09	176.09
45.00°	138.68	138.68	138.68
47.50°	105.42	105.42	105.42
50.00°	81.46	81.46	81.46
52.50°	61.11	61.11	61.11
55.00°	46.87	46.87	46.87
57.50°	35.09	35.09	35.09
60.00°	26.50	26.50	26.50
62.50°	19.42	19.42	19.42
65.00°	13.85	13.85	13.85
67.50°	9.76	9.76	9.76
70.00°	6.82	6.82	6.82
72.50°	5.09	5.09	5.09
75.00°	4.09	4.09	4.09
77.50°	3.35	3.35	3.35
80.00°	2.73	2.73	2.73
82.50°	2.18	2.18	2.18
85.00°	1.64	1.64	1.64
87.50°	1.11	1.11	1.11
90.00°	0.58	0.58	0.58
92.50°	0.40	0.40	0.40
95.00°	0.27	0.27	0.27
97.50°	0.26	0.26	0.26
100.00°	0.25	0.25	0.25
102.50°	0.28	0.28	0.28
105.00°	0.31	0.31	0.31
107.50°	0.33	0.33	0.33
110.00°	0.35	0.35	0.35
112.50°	0.31	0.31	0.31

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	894	894	894	894	873	873	873	873	834	834	834	798	798	798	765	765	749
	1	843	819	797	777	824	802	782	764	771	755	740	742	730	718	716	706	691
	2	791	748	712	681	774	734	701	673	709	682	658	686	663	643	664	646	632
	3	741	684	639	604	725	673	632	598	652	617	588	632	603	578	615	590	578
	4	694	627	577	539	679	617	571	536	600	560	529	584	550	522	569	540	529
	5	650	576	524	485	637	568	519	483	554	511	478	540	503	473	527	495	485
	6	610	531	478	440	598	524	474	438	512	468	435	501	461	431	490	455	446
	7	573	491	438	400	562	485	435	399	475	430	397	465	424	394	456	419	412
	8	539	455	403	367	529	451	400	366	441	396	364	433	392	362	425	388	381
	9	508	424	372	337	498	419	370	336	412	366	335	404	363	333	397	360	354
	10	479	395	345	311	471	392	343	311	385	340	309	378	337	308	372	334	329

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	14.7 fc	9.0 ft
6.5 ft	10.5 fc	10.6 ft
7.5 ft	7.9 fc	12.2 ft
8.0 ft	6.9 fc	13.1 ft
10.0 ft	4.4 fc	16.3 ft
12.0 ft	3.1 fc	19.6 ft
14.0 ft	2.3 fc	22.9 ft
16.0 ft	1.7 fc	26.1 ft
20.0 ft	1.1 fc	32.7 ft
24.0 ft	0.8 fc	39.2 ft
28.0 ft	0.6 fc	45.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	53,014	53,014	53,014
45.00°	23,456	23,456	23,456
55.00°	9,774	9,774	9,774
65.00°	3,921	3,921	3,921
75.00°	1,888	1,888	1,888
85.00°	2,252	2,252	2,252

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	15.4	16.6	15.8	16.9	17.2	15.4	16.6	15.8	16.9	17.2
	3H	15.6	16.7	16.0	17.0	17.4	15.6	16.7	16.0	17.0	17.4
	4H	15.6	16.6	16.0	17.0	17.4	15.6	16.6	16.0	17.0	17.4
	6H	15.7	16.5	16.1	16.9	17.3	15.7	16.5	16.1	16.9	17.3
	8H	15.7	16.5	16.1	16.9	17.3	15.7	16.5	16.1	16.9	17.3
	12H	15.7	16.5	16.1	16.9	17.3	15.7	16.5	16.1	16.9	17.3
4H	2H	15.4	16.4	15.8	16.7	17.1	15.4	16.4	15.8	16.7	17.1
	3H	15.7	16.5	16.1	16.9	17.3	15.7	16.5	16.1	16.9	17.3
	4H	15.8	16.5	16.2	16.9	17.3	15.8	16.5	16.2	16.9	17.3
	6H	15.8	16.4	16.3	16.9	17.4	15.8	16.4	16.3	16.9	17.4
	8H	15.9	16.4	16.3	16.9	17.4	15.9	16.4	16.3	16.9	17.4
	12H	15.9	16.4	16.4	16.9	17.4	15.9	16.4	16.4	16.9	17.4
8H	4H	15.7	16.3	16.2	16.7	17.2	15.7	16.3	16.2	16.7	17.2
	6H	15.8	16.3	16.3	16.8	17.3	15.8	16.3	16.3	16.8	17.3
	8H	15.9	16.3	16.4	16.8	17.3	15.9	16.3	16.4	16.8	17.3
	12H	16.0	16.3	16.5	16.8	17.4	16.0	16.3	16.5	16.8	17.4
12H	4H	15.7	16.2	16.2	16.6	17.1	15.7	16.2	16.2	16.6	17.1
	6H	15.8	16.2	16.3	16.7	17.2	15.8	16.2	16.3	16.7	17.2
	8H	15.9	16.2	16.4	16.8	17.3	15.9	16.2	16.4	16.8	17.3

Corrected UGR values based on total output lumens

SHR = 1.0