

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SGECS4FX 10L 35K XX AR4FX60 FO SG
Nom 4" diam Chicago Plenum downlight, Fusion Optix lens, Soft glow finish

Test Number

SP-01171_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	662
Efficacy	100.23 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.09
Two luminaires, plane 90°	1.09
Four luminaires	1.09

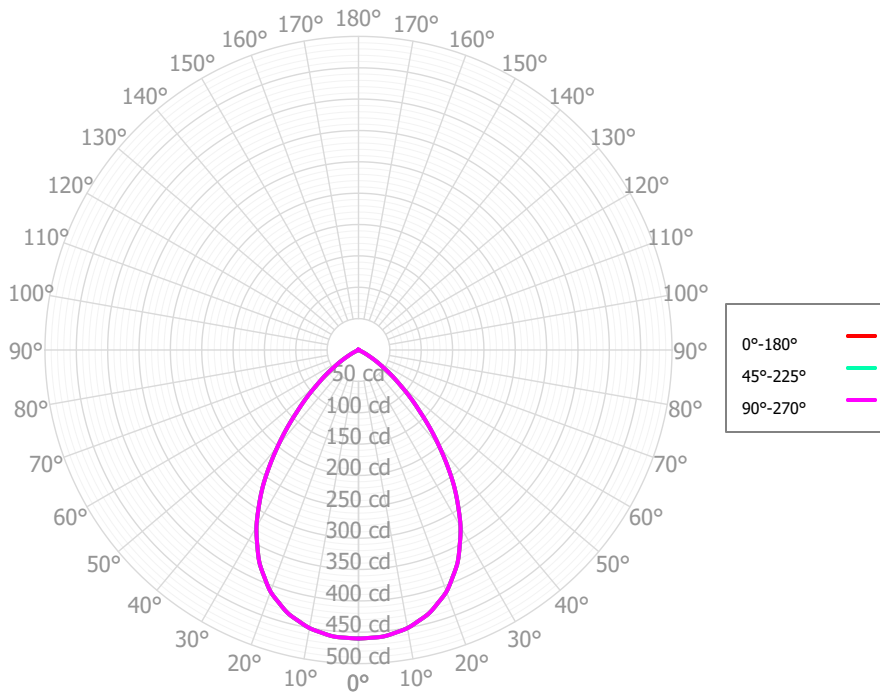
Full Beam Angle

0° - 180°	75°
90° - 270°	75°

IES File Header Contents

Keyword	Value
TEST	SP-01171_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/16/2020
ISSUEDATE	7/16/2020
LUMCAT	SGECS4FX 10L 35K XX AR4FX60 FO SG
LUMINAIRE	Nom 4" diam Chicago Plenum downlight, Fusion Optix lens, Soft glow finish
OTHER	Beam angle: 75.5 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°	45.27	6.83%	90.00° - 100.00°	0.29	0.04%
10.00° - 20.00°	121.88	18.39%	100.00° - 110.00°	0.28	0.04%
20.00° - 30.00°	170.29	25.70%	100.00° - 120.00°	0.56	0.08%
30.00° - 40.00°	164.27	24.79%	120.00° - 130.00°	0.29	0.04%
40.00° - 50.00°	107.21	16.18%	130.00° - 140.00°	0.26	0.04%
50.00° - 60.00°	44.46	6.71%	140.00° - 150.00°	0.23	0.03%
60.00° - 70.00°	6.78	1.02%	150.00° - 160.00°	0.18	0.03%
70.00° - 80.00°	0.30	0.05%	160.00° - 170.00°	0.11	0.02%
80.00° - 90.00°	0.28	0.04%	170.00° - 180.00°	0.04	0.01%
0.00° - 90.00°	660.74	99.71%	0.00° - 180.00°	662.68	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	460.11	460.11	460.11
2.50°	459.40	459.40	459.40
5.00°	458.57	458.57	458.57
7.50°	454.61	454.61	454.61
10.00°	450.29	450.29	450.29
12.50°	442.63	442.63	442.63
15.00°	434.68	434.68	434.68
17.50°	422.55	422.55	422.55
20.00°	410.14	410.14	410.14
22.50°	392.17	392.17	392.17
25.00°	373.99	373.99	373.99
27.50°	349.81	349.81	349.81
30.00°	325.52	325.52	325.52
32.50°	295.93	295.93	295.93
35.00°	266.22	266.22	266.22
37.50°	233.05	233.05	233.05
40.00°	199.98	199.98	199.98
42.50°	168.55	168.55	168.55
45.00°	137.54	137.54	137.54
47.50°	111.85	111.85	111.85
50.00°	86.73	86.73	86.73
52.50°	66.81	66.81	66.81
55.00°	47.60	47.60	47.60
57.50°	33.49	33.49	33.49
60.00°	20.17	20.17	20.17
62.50°	11.57	11.57	11.57
65.00°	4.07	4.07	4.07
67.50°	2.03	2.03	2.03
70.00°	0.36	0.36	0.36
72.50°	0.31	0.31	0.31
75.00°	0.27	0.27	0.27
77.50°	0.26	0.26	0.26
80.00°	0.25	0.25	0.25
82.50°	0.27	0.27	0.27
85.00°	0.28	0.28	0.28
87.50°	0.25	0.25	0.25
90.00°	0.23	0.23	0.23
92.50°	0.25	0.25	0.25
95.00°	0.26	0.26	0.26
97.50°	0.28	0.28	0.28
100.00°	0.29	0.29	0.29
102.50°	0.27	0.27	0.27
105.00°	0.26	0.26	0.26
107.50°	0.26	0.26	0.26
110.00°	0.26	0.26	0.26
112.50°	0.26	0.26	0.26

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	788	788	788	788	770	770	770	770	735	735	735	704	704	704	674	674	661
	1	746	725	706	689	729	710	693	678	682	669	656	657	646	636	634	625	617
	2	700	663	632	606	685	651	623	599	629	605	585	608	589	572	589	574	560
	3	657	607	568	538	642	597	562	533	579	549	524	562	537	515	546	525	507
	4	615	557	514	481	602	549	509	478	533	499	472	519	490	466	506	481	460
	5	577	512	467	433	565	505	463	431	492	455	427	480	448	422	469	441	418
	6	541	472	426	393	530	466	423	391	456	417	388	445	411	385	436	406	382
	7	508	437	390	358	499	432	388	357	423	383	354	414	379	352	406	374	350
	8	479	405	359	328	469	401	357	327	393	354	325	386	350	324	379	346	322
	9	451	378	332	302	443	374	331	301	367	328	300	360	324	299	354	322	297
	10	426	353	308	279	419	349	307	279	343	304	278	338	302	277	332	299	276

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	15.2 fc	8.5 ft
6.5 ft	10.9 fc	10.1 ft
7.5 ft	8.2 fc	11.6 ft
8.0 ft	7.2 fc	12.4 ft
10.0 ft	4.6 fc	15.5 ft
12.0 ft	3.2 fc	18.6 ft
14.0 ft	2.3 fc	21.7 ft
16.0 ft	1.8 fc	24.8 ft
20.0 ft	1.2 fc	30.9 ft
24.0 ft	0.8 fc	37.1 ft
28.0 ft	0.6 fc	43.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	70,065	70,065	70,065
45.00°	29,620	29,620	29,620
55.00°	12,637	12,637	12,637
65.00°	1,467	1,467	1,467
75.00°	160	160	160
85.00°	484	484	484

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	17.3	15.4	16.6	15.8	16.9	17.3
	3H	15.3	16.3	15.7	16.7	17.0	15.3	16.3	15.7	16.7	17.0
	4H	15.2	16.2	15.6	16.5	16.9	15.2	16.2	15.6	16.5	16.9
	6H	15.1	16.0	15.5	16.4	16.8	15.1	16.0	15.5	16.4	16.8
	8H	15.0	15.9	15.5	16.3	16.7	15.0	15.9	15.5	16.3	16.7
	12H	15.0	15.8	15.4	16.2	16.6	15.0	15.8	15.4	16.2	16.6
4H	2H	15.2	16.2	15.6	16.5	16.9	15.2	16.2	15.6	16.5	16.9
	3H	15.1	15.8	15.5	16.3	16.7	15.1	15.8	15.5	16.3	16.7
	4H	15.0	15.6	15.4	16.1	16.5	15.0	15.6	15.4	16.1	16.5
	6H	14.9	15.5	15.3	15.9	16.4	14.9	15.5	15.3	15.9	16.4
	8H	14.8	15.4	15.3	15.8	16.3	14.8	15.4	15.3	15.8	16.3
	12H	14.7	15.2	15.2	15.7	16.2	14.7	15.2	15.2	15.7	16.2
8H	4H	14.8	15.4	15.3	15.8	16.3	14.8	15.4	15.3	15.8	16.3
	6H	14.7	15.1	15.2	15.6	16.1	14.7	15.1	15.2	15.6	16.1
	8H	14.6	15.0	15.1	15.5	16.0	14.6	15.0	15.1	15.5	16.0
	12H	14.6	14.9	15.1	15.4	16.0	14.6	14.9	15.1	15.4	16.0
12H	4H	14.7	15.2	15.2	15.7	16.2	14.7	15.2	15.2	15.7	16.2
	6H	14.6	15.0	15.2	15.5	16.1	14.6	15.0	15.2	15.5	16.1
	8H	14.6	14.9	15.1	15.4	16.0	14.6	14.9	15.1	15.4	16.0

Corrected UGR values based on total output lumens

SHR = 1.0