

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 35HK XX AR4FX60 SO MW
Nom 4" diam Chicago Plenum downlight, Solite lens, Matte white finish

Test Number

SP-01179_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	8.1 W
-------------	-------

Lumen Output

Output Lumens	839
Efficacy	103.62 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.98
Two luminaires, plane 90°	0.98
Four luminaires	0.96

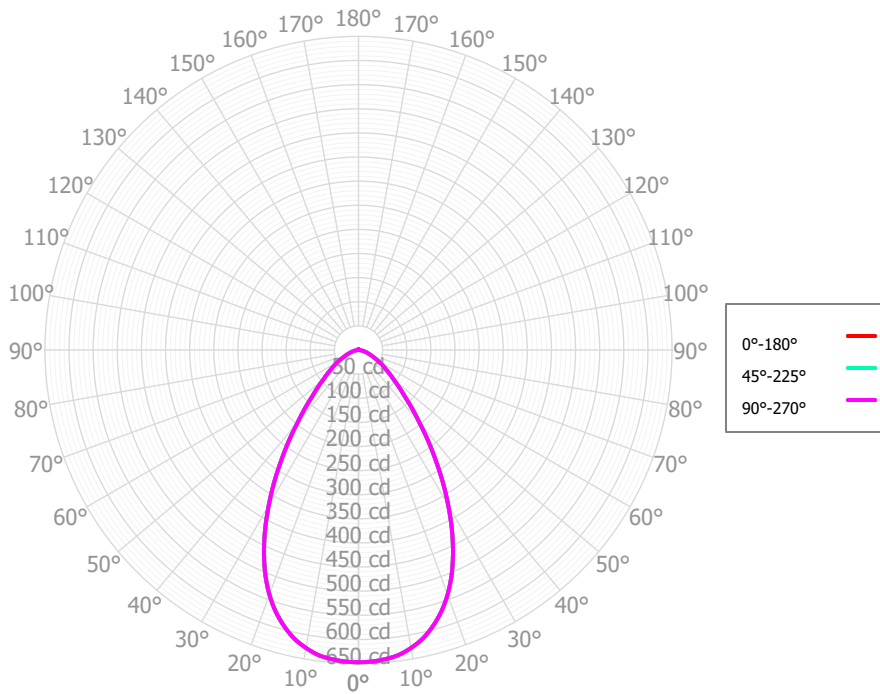
Full Beam Angle

0° - 180°	65°
90° - 270°	65°

IES File Header Contents

Keyword	Value
TEST	SP-01179_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/16/2020
ISSUEDATE	7/20/2020
LUMCAT	SGECS4FX 10L 35HK XX AR4FX60 SO MW
LUMINAIRE	Nom 4" diam Chicago Plenum downlight, Solite lens, Matte white finish
OTHER	Beam angle: 65.2 deg
LAMPCAT	N/A
LAMP	N/A, 90CRI/35HK
OTHER	Total luminaire wattage is approximate
OTHER	CCT Output Multipliers: 27HK x 0.93, 30HK x 0.97, 35HK x 1.0, 40HK x 1.02
OTHER	This report prepared by Spectrum Lighting, scaled from 20L, 27HK

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	63.43	7.54%	90.00° - 100.00°	0.70	0.08%
10.00° - 20.00°	165.71	19.70%	100.00° - 110.00°	0.75	0.09%
20.00° - 30.00°	210.55	25.04%	100.00° - 120.00°	1.43	0.17%
30.00° - 40.00°	174.11	20.70%	120.00° - 130.00°	0.64	0.08%
40.00° - 50.00°	106.99	12.72%	130.00° - 140.00°	0.54	0.06%
50.00° - 60.00°	62.94	7.48%	140.00° - 150.00°	0.48	0.06%
60.00° - 70.00°	33.87	4.03%	150.00° - 160.00°	0.35	0.04%
70.00° - 80.00°	15.20	1.81%	160.00° - 170.00°	0.23	0.03%
80.00° - 90.00°	3.73	0.44%	170.00° - 180.00°	0.07	0.01%
0.00° - 90.00°	836.53	99.47%	0.00° - 180.00°	840.97	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	647.32	647.32	647.32
2.50°	646.55	646.55	646.55
5.00°	643.28	643.28	643.28
7.50°	637.81	637.81	637.81
10.00°	627.22	627.22	627.22
12.50°	613.32	613.32	613.32
15.00°	593.61	593.61	593.61
17.50°	569.65	569.65	569.65
20.00°	539.95	539.95	539.95
22.50°	504.69	504.69	504.69
25.00°	463.66	463.66	463.66
27.50°	419.26	419.26	419.26
30.00°	372.15	372.15	372.15
32.50°	325.43	325.43	325.43
35.00°	278.97	278.97	278.97
37.50°	236.70	236.70	236.70
40.00°	196.38	196.38	196.38
42.50°	164.34	164.34	164.34
45.00°	135.14	135.14	135.14
47.50°	114.14	114.14	114.14
50.00°	95.09	95.09	95.09
52.50°	81.74	81.74	81.74
55.00°	69.22	69.22	69.22
57.50°	59.38	59.38	59.38
60.00°	49.72	49.72	49.72
62.50°	41.20	41.20	41.20
65.00°	32.88	32.88	32.88
67.50°	27.39	27.39	27.39
70.00°	22.08	22.08	22.08
72.50°	18.04	18.04	18.04
75.00°	14.13	14.13	14.13
77.50°	10.76	10.76	10.76
80.00°	7.58	7.58	7.58
82.50°	4.99	4.99	4.99
85.00°	2.85	2.85	2.85
87.50°	1.67	1.67	1.67
90.00°	0.87	0.87	0.87
92.50°	0.69	0.69	0.69
95.00°	0.58	0.58	0.58
97.50°	0.57	0.57	0.57
100.00°	0.61	0.61	0.61
102.50°	0.70	0.70	0.70
105.00°	0.74	0.74	0.74
107.50°	0.73	0.73	0.73
110.00°	0.70	0.70	0.70
112.50°	0.66	0.66	0.66

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	1,000	1,000	1,000	1,000	976	976	976	976	932	932	932	891	891	891	854	854	837
	1	940	911	885	862	918	892	869	848	857	838	821	824	809	795	794	782	766
	2	880	829	786	751	859	813	775	742	784	752	725	758	731	708	733	712	697
	3	823	756	705	663	804	744	696	658	720	679	646	698	664	635	677	649	635
	4	770	693	636	593	753	682	630	589	663	617	581	644	605	573	627	594	582
	5	723	638	579	535	707	629	574	532	612	564	527	597	554	521	582	546	535
	6	679	589	529	486	665	582	525	484	568	518	480	555	510	476	542	503	494
	7	639	547	487	445	626	541	484	444	529	478	441	517	472	438	507	466	458
	8	603	509	450	410	591	504	448	409	493	443	406	484	438	404	475	433	426
	9	570	476	418	379	559	471	416	378	462	412	377	454	408	375	446	404	397
	10	540	446	390	353	530	442	388	352	434	385	350	427	381	349	420	378	372

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	21.4 fc	7.0 ft
6.5 ft	15.3 fc	8.3 ft
7.5 ft	11.5 fc	9.6 ft
8.0 ft	10.1 fc	10.2 ft
10.0 ft	6.5 fc	12.8 ft
12.0 ft	4.5 fc	15.3 ft
14.0 ft	3.3 fc	17.9 ft
16.0 ft	2.5 fc	20.5 ft
20.0 ft	1.6 fc	25.6 ft
24.0 ft	1.1 fc	30.7 ft
28.0 ft	0.8 fc	35.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	98,573	98,573	98,573
45.00°	29,103	29,103	29,103
55.00°	18,378	18,378	18,378
65.00°	11,849	11,849	11,849
75.00°	8,314	8,314	8,314
85.00°	4,975	4,975	4,975

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	18.6	19.9	19.0	20.2	20.5	18.6	19.9	19.0	20.2	20.5
	3H	19.5	20.6	19.9	20.9	21.3	19.5	20.6	19.9	20.9	21.3
	4H	19.8	20.8	20.2	21.2	21.6	19.8	20.8	20.2	21.2	21.6
	6H	20.0	20.9	20.4	21.3	21.7	20.0	20.9	20.4	21.3	21.7
	8H	20.0	20.9	20.4	21.3	21.7	20.0	20.9	20.4	21.3	21.7
	12H	20.0	20.9	20.4	21.3	21.7	20.0	20.9	20.4	21.3	21.7
4H	2H	18.9	19.9	19.3	20.3	20.7	18.9	19.9	19.3	20.3	20.7
	3H	19.9	20.8	20.4	21.2	21.6	19.9	20.8	20.4	21.2	21.6
	4H	20.3	21.1	20.8	21.5	22.0	20.3	21.1	20.8	21.5	22.0
	6H	20.6	21.2	21.1	21.7	22.2	20.6	21.2	21.1	21.7	22.2
	8H	20.6	21.3	21.1	21.7	22.2	20.6	21.3	21.1	21.7	22.2
	12H	20.7	21.2	21.2	21.7	22.2	20.7	21.2	21.2	21.7	22.2
8H	4H	20.4	21.0	20.9	21.5	22.0	20.4	21.0	20.9	21.5	22.0
	6H	20.8	21.2	21.3	21.8	22.2	20.8	21.2	21.3	21.8	22.2
	8H	20.8	21.3	21.4	21.8	22.3	20.8	21.3	21.4	21.8	22.3
	12H	20.9	21.3	21.4	21.8	22.4	20.9	21.3	21.4	21.8	22.4
12H	4H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9
	6H	20.7	21.2	21.3	21.7	22.2	20.7	21.2	21.3	21.7	22.2
	8H	20.9	21.3	21.4	21.8	22.4	20.9	21.3	21.4	21.8	22.4

Corrected UGR values based on total output lumens

SHR = 1.0