

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGECS4FX 10L 35K XX AR4FX60 SO SG

Nom 4" diam Chicago Plenum downlight, Solite lens, Soft glow finish

Test Number

SP-01169_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
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Lumen Output

Output Lumens	720
Efficacy	109.14 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.84
Two luminaires, plane 90°	0.84
Four luminaires	0.87

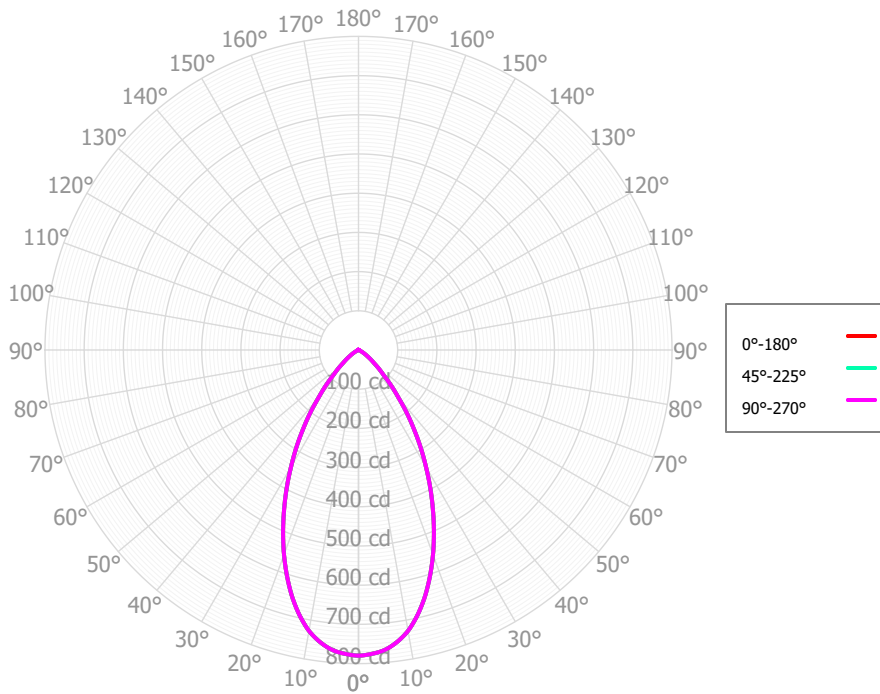
Full Beam Angle

0° - 180°	56°
90° - 270°	56°

IES File Header Contents

Keyword	Value
TEST	SP-01169_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 SO SG
LUMINAIRE	Nom 4" diam Chicago Plenum downlight, Solite lens, Soft glow finish
OTHER	Beam angle: 55.6 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°	74.97	10.38%	90.00° - 100.00°	0.25	0.03%
10.00° - 20.00°	180.83	25.04%	100.00° - 110.00°	0.26	0.04%
20.00° - 30.00°	204.66	28.34%	100.00° - 120.00°	0.54	0.07%
30.00° - 40.00°	153.63	21.27%	120.00° - 130.00°	0.24	0.03%
40.00° - 50.00°	74.24	10.28%	130.00° - 140.00°	0.29	0.04%
50.00° - 60.00°	26.22	3.63%	140.00° - 150.00°	0.25	0.03%
60.00° - 70.00°	5.20	0.72%	150.00° - 160.00°	0.19	0.03%
70.00° - 80.00°	0.30	0.04%	160.00° - 170.00°	0.13	0.02%
80.00° - 90.00°	0.25	0.04%	170.00° - 180.00°	0.05	0.01%
0.00° - 90.00°	720.31	99.73%	0.00° - 180.00°	722.24	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	779.90	779.90	779.90
2.50°	776.15	776.15	776.15
5.00°	768.29	768.29	768.29
7.50°	751.75	751.75	751.75
10.00°	727.83	727.83	727.83
12.50°	693.77	693.77	693.77
15.00°	653.02	653.02	653.02
17.50°	605.98	605.98	605.98
20.00°	555.78	555.78	555.78
22.50°	502.98	502.98	502.98
25.00°	449.20	449.20	449.20
27.50°	396.60	396.60	396.60
30.00°	344.30	344.30	344.30
32.50°	295.26	295.26	295.26
35.00°	246.77	246.77	246.77
37.50°	202.42	202.42	202.42
40.00°	158.43	158.43	158.43
42.50°	124.36	124.36	124.36
45.00°	91.05	91.05	91.05
47.50°	70.54	70.54	70.54
50.00°	50.93	50.93	50.93
52.50°	38.79	38.79	38.79
55.00°	27.48	27.48	27.48
57.50°	20.21	20.21	20.21
60.00°	13.45	13.45	13.45
62.50°	8.38	8.38	8.38
65.00°	4.15	4.15	4.15
67.50°	1.91	1.91	1.91
70.00°	0.43	0.43	0.43
72.50°	0.32	0.32	0.32
75.00°	0.25	0.25	0.25
77.50°	0.24	0.24	0.24
80.00°	0.24	0.24	0.24
82.50°	0.23	0.23	0.23
85.00°	0.23	0.23	0.23
87.50°	0.23	0.23	0.23
90.00°	0.23	0.23	0.23
92.50°	0.23	0.23	0.23
95.00°	0.23	0.23	0.23
97.50°	0.22	0.22	0.22
100.00°	0.23	0.23	0.23
102.50°	0.23	0.23	0.23
105.00°	0.25	0.25	0.25
107.50°	0.27	0.27	0.27
110.00°	0.27	0.27	0.27
112.50°	0.28	0.28	0.28

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	859	859	859	859	839	839	839	839	801	801	801	767	767	767	735	735	720
	1	817	796	777	760	799	780	763	748	751	737	725	723	713	703	698	690	676
	2	773	736	706	680	757	724	696	672	700	677	657	678	659	642	657	642	629
	3	731	682	644	614	716	672	637	609	652	623	599	634	610	589	618	597	585
	4	691	634	591	559	678	625	586	556	609	575	549	594	565	542	580	556	545
	5	654	590	545	513	641	583	541	510	569	533	505	557	525	501	545	518	508
	6	619	551	505	473	608	545	502	471	534	496	467	523	489	464	513	484	475
	7	586	516	470	438	576	511	467	436	501	462	434	492	457	431	484	453	445
	8	556	484	439	407	547	480	436	406	471	432	404	464	428	403	456	425	418
	9	528	455	411	380	520	452	409	380	445	406	378	438	402	377	432	399	393
	10	503	430	386	357	495	426	384	356	420	382	355	414	379	354	409	376	371

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	25.8 fc	5.8 ft
6.5 ft	18.5 fc	6.9 ft
7.5 ft	13.9 fc	7.9 ft
8.0 ft	12.2 fc	8.4 ft
10.0 ft	7.8 fc	10.6 ft
12.0 ft	5.4 fc	12.7 ft
14.0 ft	4.0 fc	14.8 ft
16.0 ft	3.0 fc	16.9 ft
20.0 ft	1.9 fc	21.1 ft
24.0 ft	1.4 fc	25.3 ft
28.0 ft	1.0 fc	29.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	118,762	118,762	118,762
45.00°	19,609	19,609	19,609
55.00°	7,294	7,294	7,294
65.00°	1,494	1,494	1,494
75.00°	148	148	148
85.00°	403	403	403

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	11.8	12.9	12.2	13.2	13.5	11.8	12.9	12.2	13.2	13.5
	3H	11.6	12.6	12.0	12.9	13.3	11.6	12.6	12.0	12.9	13.3
	4H	11.5	12.4	12.0	12.8	13.2	11.5	12.4	12.0	12.8	13.2
	6H	11.4	12.2	11.9	12.6	13.0	11.4	12.2	11.9	12.6	13.0
	8H	11.4	12.1	11.8	12.5	13.0	11.4	12.1	11.8	12.5	13.0
	12H	11.3	12.1	11.8	12.5	12.9	11.3	12.1	11.8	12.5	12.9
4H	2H	11.6	12.5	12.0	12.8	13.2	11.6	12.5	12.0	12.8	13.2
	3H	11.4	12.2	11.9	12.6	13.0	11.4	12.2	11.9	12.6	13.0
	4H	11.3	12.0	11.8	12.4	12.8	11.3	12.0	11.8	12.4	12.8
	6H	11.2	11.8	11.7	12.2	12.7	11.2	11.8	11.7	12.2	12.7
	8H	11.2	11.7	11.6	12.1	12.6	11.2	11.7	11.6	12.1	12.6
	12H	11.1	11.5	11.6	12.0	12.5	11.1	11.5	11.6	12.0	12.5
8H	4H	11.2	11.7	11.6	12.1	12.6	11.2	11.7	11.6	12.1	12.6
	6H	11.0	11.4	11.6	12.0	12.4	11.0	11.4	11.6	12.0	12.4
	8H	11.0	11.3	11.5	11.9	12.4	11.0	11.3	11.5	11.9	12.4
	12H	10.9	11.2	11.5	11.8	12.3	10.9	11.2	11.5	11.8	12.3
12H	4H	11.1	11.5	11.6	12.0	12.5	11.1	11.5	11.6	12.0	12.5
	6H	11.0	11.3	11.5	11.8	12.4	11.0	11.3	11.5	11.8	12.4
	8H	10.9	11.2	11.5	11.7	12.3	10.9	11.2	11.5	11.7	12.3

Corrected UGR values based on total output lumens

SHR = 1.0