

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SS4MOx TD10L E1 SDD4x 30K MW FG
Nom 4" square recessed downlight

Test Number

SP-00788

Test Date

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

Summary of Results

Power

Input Watts	15.9 W
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Lumen Output

Output Lumens	597
Efficacy	37.53 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.01
Two luminaires, plane 90°	1.01
Four luminaires	1.04

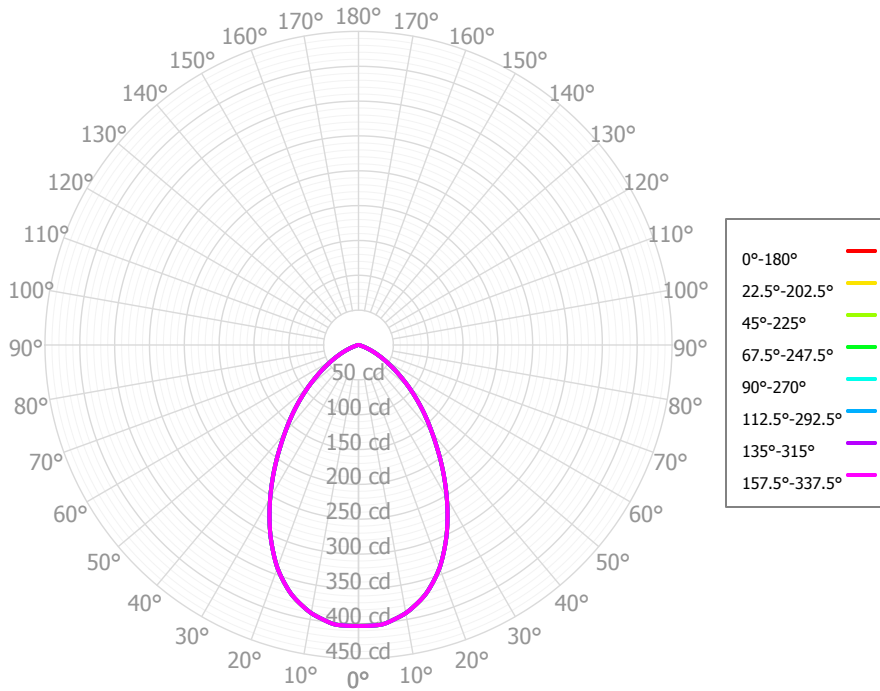
Full Beam Angle

0° - 180°	71°
90° - 270°	71°

IES File Header Contents

Keyword	Value
TEST	SP-00788
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	3/14/2019
UPDATE	4/23/2019
LUMCAT	SS4MOx TD10L E1 SDD4x 30K MW FG
LUMINAIRE	Nom 4" square recessed downlight
OTHER	Beam Angle: 71 degrees
OTHER	Matte white trim; Frosted glass lens
LAMPCAT	N/A
LAMP	N/A, White Light, CRI: 80
OTHER	CCT Output Multipliers: N/A, only 3000K available
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	only 30K available
_LAMPMULT	only 10L available

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	38.54	6.46%	90.00° - 100.00°	0.13	0.02%
10.00° - 20.00°	103.59	17.36%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	136.66	22.90%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	129.10	21.64%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	98.52	16.51%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	59.51	9.97%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	24.99	4.19%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.33	0.73%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.33	0.22%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	596.58	99.98%	0.00° - 180.00°	596.71	100.00%

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	710	710	710	710	694	694	694	694	663	663	663	635	635	635	609	609	597
	1	668	647	629	612	652	634	617	602	609	596	583	587	576	566	566	557	549
	2	623	586	556	531	609	576	548	524	556	533	513	537	518	501	520	504	494
	3	581	532	495	465	568	524	489	461	507	478	453	492	467	446	477	457	447
	4	542	485	443	412	530	478	439	409	464	430	404	451	422	399	439	414	406
	5	506	444	400	368	495	437	397	366	426	390	363	415	384	359	405	378	370
	6	473	407	363	332	463	402	361	330	392	355	328	383	350	325	375	346	339
	7	444	376	332	301	435	371	330	300	363	326	298	355	322	296	348	318	312
	8	417	348	305	275	409	344	303	274	337	300	273	330	296	272	324	293	288
	9	393	324	281	253	385	320	280	252	314	277	251	308	274	250	303	272	267
	10	371	302	261	233	364	299	260	233	294	257	232	289	255	231	284	253	249

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.3 fc	7.9 ft
6.5 ft	9.5 fc	9.3 ft
7.5 ft	7.2 fc	10.7 ft
8.0 ft	6.3 fc	11.5 ft
10.0 ft	4.0 fc	14.3 ft
12.0 ft	2.8 fc	17.2 ft
14.0 ft	2.1 fc	20.1 ft
16.0 ft	1.6 fc	22.9 ft
20.0 ft	1.0 fc	28.6 ft
24.0 ft	0.7 fc	34.4 ft
28.0 ft	0.5 fc	40.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	39,859	39,859	39,859
45.00°	17,867	17,867	17,867
55.00°	11,374	11,374	11,374
65.00°	5,796	5,796	5,796
75.00°	1,158	1,158	1,158
85.00°	1,340	1,340	1,340

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	18.4	19.7	18.7	20.0	20.3	18.4	19.7	18.7	20.0	20.3
	3H	18.7	19.8	19.0	20.2	20.5	18.7	19.8	19.0	20.2	20.5
	4H	18.6	19.7	19.0	20.1	20.4	18.6	19.7	19.0	20.1	20.4
	6H	18.6	19.5	19.0	19.9	20.3	18.6	19.5	19.0	19.9	20.3
	8H	18.5	19.5	18.9	19.8	20.3	18.5	19.5	18.9	19.8	20.3
	12H	18.5	19.4	18.9	19.8	20.2	18.5	19.4	18.9	19.8	20.2
4H	2H	18.5	19.6	18.9	19.9	20.3	18.5	19.6	18.9	19.9	20.3
	3H	18.8	19.7	19.3	20.1	20.5	18.8	19.7	19.3	20.1	20.5
	4H	18.8	19.6	19.2	20.0	20.4	18.8	19.6	19.2	20.0	20.4
	6H	18.7	19.4	19.2	19.9	20.3	18.7	19.4	19.2	19.9	20.3
	8H	18.7	19.3	19.2	19.8	20.2	18.7	19.3	19.2	19.8	20.2
	12H	18.7	19.2	19.2	19.7	20.2	18.7	19.2	19.2	19.7	20.2
8H	4H	18.7	19.3	19.2	19.8	20.2	18.7	19.3	19.2	19.8	20.2
	6H	18.6	19.1	19.1	19.6	20.1	18.6	19.1	19.1	19.6	20.1
	8H	18.6	19.0	19.1	19.6	20.0	18.6	19.0	19.1	19.6	20.0
	12H	18.6	19.0	19.1	19.5	20.0	18.6	19.0	19.1	19.5	20.0
12H	4H	18.6	19.2	19.1	19.7	20.2	18.6	19.2	19.1	19.7	20.2
	6H	18.6	19.0	19.1	19.5	20.0	18.6	19.0	19.1	19.5	20.0
	8H	18.5	18.9	19.1	19.4	20.0	18.5	18.9	19.1	19.4	20.0

Corrected UGR values based on total output lumens

SHR = 1.0