

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE8LEDFX-30L35KDX-AR8223FX-MW-SO

Nom 8" diam recessed downlight

Test Number

SP-00746

Test Date

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

Summary of Results

Power

Input Watts	25 W
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Lumen Output

Output Lumens	2552
Efficacy	102.1 lm/W

Luminous Dimensions

0° - 180° Size	-0.63
90° - 270° Size	-0.63
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.2
Two luminaires, plane 90°	1.2
Four luminaires	1.19

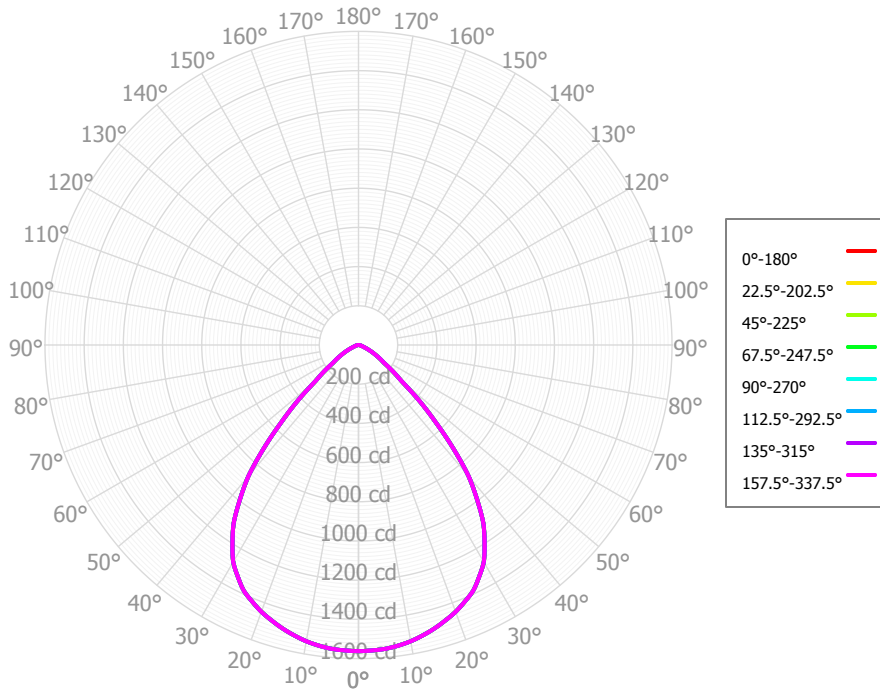
Full Beam Angle

0° - 180°	83°
90° - 270°	83°

IES File Header Contents

Keyword	Value
TEST	SP-00746
TESTLAB	Spectrum Lighting Photometric Lab
MANUFAC	Spectrum Lighting
ISSUEDATE	12/28/2018
UPDATE	3/4/2019
LUMCAT	SGE8LEDFX-30L35KDX-AR8223FX-MW-SO
LUMINAIRE	Nom 8" diam recessed downlight
OTHER	Trim: AR8223FX, Matte White
OTHER	Regressed Integral Solite lens
OTHER	Data for New Construction: SGE8LEDFX-series w/AR8223FX-MW-SO
OTHER	Data for Retrofit: SGRTE8LEDFX-series w/AR8223FX-MW-SO
OTHER	Beam Angle: 83 deg
LAMPCAT	N/A
LAMP	N/A, Philips LED, Min CRI: 80+, Gen: 80G1
OTHER	CCT Tested: 3500K
OTHER	CCT Multipliers: 27K x 0.95, 30K x 1.0, 40K x 1.08
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	150.10	5.88%	90.00° - 100.00°	0.12	0.00%
10.00° - 20.00°	422.29	16.54%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	633.41	24.82%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	681.56	26.70%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	432.32	16.94%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	155.58	6.10%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	56.91	2.23%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	16.36	0.64%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.90	0.15%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2,552.44	100.00%	0.00° - 180.00°	2,552.44	100.00%

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	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%
RCR	0	3,039	3,039	3,039	3,039	2,968	2,968	2,968	2,968	2,836	2,836	2,836	2,715	2,715	2,715	2,605	2,605	2,552
	1	2,865	2,780	2,704	2,636	2,800	2,724	2,656	2,594	2,619	2,564	2,513	2,523	2,479	2,438	2,434	2,400	2,351
	2	2,683	2,532	2,408	2,303	2,623	2,487	2,373	2,277	2,402	2,307	2,226	2,324	2,246	2,177	2,251	2,187	2,143
	3	2,509	2,309	2,155	2,032	2,454	2,272	2,130	2,015	2,202	2,081	1,982	2,137	2,035	1,949	2,077	1,991	1,918
	4	2,345	2,111	1,939	1,808	2,294	2,080	1,920	1,797	2,022	1,884	1,775	1,967	1,849	1,753	1,917	1,815	1,732
	5	2,193	1,935	1,755	1,622	2,147	1,909	1,740	1,614	1,860	1,712	1,598	1,814	1,685	1,583	1,772	1,659	1,568
	6	2,054	1,780	1,596	1,463	2,011	1,758	1,584	1,458	1,716	1,562	1,447	1,677	1,541	1,436	1,641	1,520	1,426
	7	1,926	1,642	1,458	1,329	1,887	1,623	1,448	1,324	1,587	1,431	1,316	1,554	1,414	1,309	1,523	1,397	1,301
	8	1,809	1,519	1,337	1,212	1,774	1,503	1,330	1,209	1,473	1,316	1,203	1,444	1,302	1,198	1,417	1,288	1,192
	9	1,702	1,411	1,232	1,112	1,670	1,397	1,226	1,109	1,370	1,214	1,105	1,345	1,203	1,100	1,322	1,192	1,096
	10	1,605	1,314	1,140	1,024	1,576	1,302	1,135	1,022	1,279	1,125	1,018	1,257	1,115	1,015	1,236	1,106	1,012

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	51.7 fc	9.7 ft
6.5 ft	37.0 fc	11.5 ft
7.5 ft	27.8 fc	13.3 ft
8.0 ft	24.4 fc	14.1 ft
10.0 ft	15.6 fc	17.7 ft
12.0 ft	10.9 fc	21.2 ft
14.0 ft	8.0 fc	24.7 ft
16.0 ft	6.1 fc	28.3 ft
20.0 ft	3.9 fc	35.3 ft
24.0 ft	2.7 fc	42.4 ft
28.0 ft	2.0 fc	49.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	53,954	53,954	53,954
45.00°	27,152	27,152	27,152
55.00°	9,563	9,563	9,563
65.00°	4,434	4,434	4,434
75.00°	1,985	1,985	1,985
85.00°	1,257	1,257	1,257

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	15.0	16.2	15.4	16.6	16.9	15.0	16.2	15.4	16.6	16.9
	3H	15.3	16.4	15.7	16.7	17.1	15.3	16.4	15.7	16.7	17.1
	4H	15.3	16.3	15.7	16.7	17.0	15.3	16.3	15.7	16.7	17.0
	6H	15.3	16.2	15.7	16.6	17.0	15.3	16.2	15.7	16.6	17.0
	8H	15.3	16.1	15.7	16.5	16.9	15.3	16.1	15.7	16.5	16.9
	12H	15.2	16.1	15.7	16.5	16.9	15.2	16.1	15.7	16.5	16.9
4H	2H	15.1	16.1	15.5	16.4	16.8	15.1	16.1	15.5	16.4	16.8
	3H	15.4	16.2	15.8	16.6	17.0	15.4	16.2	15.8	16.6	17.0
	4H	15.5	16.2	15.9	16.6	17.1	15.5	16.2	15.9	16.6	17.1
	6H	15.5	16.1	16.0	16.6	17.0	15.5	16.1	16.0	16.6	17.0
	8H	15.5	16.1	15.9	16.5	17.0	15.5	16.1	15.9	16.5	17.0
	12H	15.5	16.0	15.9	16.4	16.9	15.5	16.0	15.9	16.4	16.9
8H	4H	15.4	16.0	15.9	16.4	16.9	15.4	16.0	15.9	16.4	16.9
	6H	15.4	15.9	16.0	16.4	16.9	15.4	15.9	16.0	16.4	16.9
	8H	15.4	15.9	16.0	16.4	16.9	15.4	15.9	16.0	16.4	16.9
	12H	15.4	15.8	16.0	16.3	16.9	15.4	15.8	16.0	16.3	16.9
12H	4H	15.4	15.9	15.8	16.4	16.8	15.4	15.9	15.8	16.4	16.8
	6H	15.4	15.8	15.9	16.3	16.8	15.4	15.8	15.9	16.3	16.8
	8H	15.4	15.8	15.9	16.3	16.9	15.4	15.8	15.9	16.3	16.9

Corrected UGR values based on total output lumens

SHR = 1.0