

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE8LEDFX-40L35KDX-AR8223FX-MW-SO

Nom 8" diam recessed downlight

Test Number

SP-00746_M-40L

Test Date

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

Summary of Results

Power

Input Watts	34.6 W
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Lumen Output

Output Lumens	3446
Efficacy	99.59 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

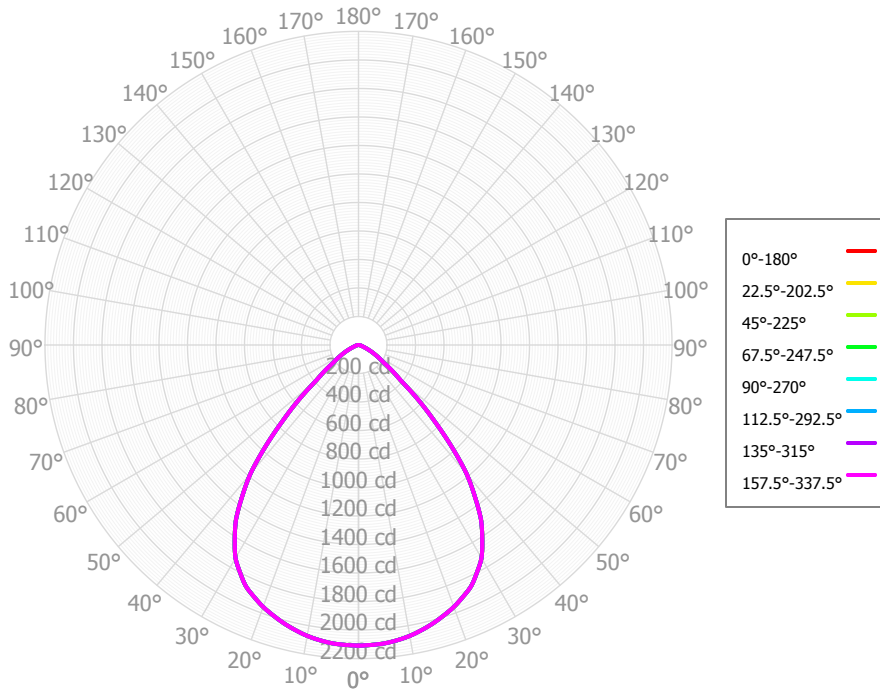
Full Beam Angle

0° - 180°	83°
90° - 270°	83°

IES File Header Contents

Keyword	Value
TEST	SP-00746_M-40L
TESTLAB	Spectrum Lighting Photometric Lab
MANUFAC	Spectrum Lighting
ISSUEDATE	12/28/2018
UPDATE	3/4/2019
LUMCAT	SGE8LEDFX-40L35KDX-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, Min CRI: 80+, Gen: 80G1
OTHER	CCT Multipliers: 27K x 0.95, 30K x 1.0, 40K x 1.08
OTHER	This report prepared by Spectrum Lighting, scaled from 30L
_CRI	80+
_CCTMULT	27K x 0.95, 30K x 1.0, 40K x 1.08
_LAMPMULT	10L x 0.33, 15L x 0.51, 20L x 0.68, 30L x 1.0, 40L x 1.35

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	202.64	5.88%	90.00° - 100.00°	0.16	0.00%
10.00° - 20.00°	570.09	16.54%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	855.11	24.82%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	920.11	26.70%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	583.63	16.94%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	210.03	6.10%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	76.83	2.23%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	22.08	0.64%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	5.27	0.15%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	3,445.79	100.00%	0.00° - 180.00°	3,445.79	100.00%

Candela Distribution

[illegible]

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	4,102	4,102	4,102	4,102	4,007	4,007	4,007	4,007	3,829	3,829	3,829	3,666	3,666	3,666	3,516	3,516	3,446
	1	3,867	3,753	3,651	3,559	3,780	3,678	3,585	3,502	3,536	3,462	3,393	3,406	3,347	3,291	3,286	3,239	3,174
	2	3,622	3,419	3,250	3,109	3,542	3,358	3,204	3,073	3,243	3,115	3,005	3,137	3,031	2,939	3,039	2,953	2,876
	3	3,387	3,118	2,909	2,743	3,313	3,067	2,875	2,720	2,973	2,809	2,675	2,885	2,747	2,632	2,804	2,689	2,590
	4	3,166	2,850	2,618	2,441	3,098	2,808	2,592	2,426	2,729	2,543	2,396	2,656	2,496	2,366	2,588	2,451	2,338
	5	2,961	2,612	2,369	2,189	2,898	2,577	2,349	2,178	2,511	2,311	2,157	2,449	2,274	2,137	2,392	2,239	2,117
	6	2,772	2,402	2,154	1,976	2,715	2,373	2,138	1,968	2,317	2,109	1,953	2,264	2,080	1,939	2,215	2,052	1,924
	7	2,600	2,216	1,968	1,793	2,548	2,191	1,955	1,788	2,143	1,931	1,777	2,098	1,908	1,767	2,056	1,886	1,756
	8	2,442	2,051	1,805	1,637	2,394	2,030	1,795	1,633	1,988	1,776	1,625	1,950	1,757	1,617	1,913	1,739	1,609
	9	2,298	1,904	1,663	1,501	2,255	1,886	1,655	1,498	1,850	1,639	1,491	1,816	1,624	1,485	1,785	1,609	1,479
	10	2,167	1,774	1,539	1,382	2,127	1,757	1,532	1,380	1,726	1,518	1,375	1,697	1,505	1,370	1,669	1,493	1,366

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	69.7 fc	9.7 ft
6.5 ft	49.9 fc	11.5 ft
7.5 ft	37.5 fc	13.3 ft
8.0 ft	33.0 fc	14.1 ft
10.0 ft	21.1 fc	17.7 ft
12.0 ft	14.6 fc	21.2 ft
14.0 ft	10.8 fc	24.7 ft
16.0 ft	8.2 fc	28.3 ft
20.0 ft	5.3 fc	35.3 ft
24.0 ft	3.7 fc	42.4 ft
28.0 ft	2.7 fc	49.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	72,838	72,838	72,838
45.00°	36,655	36,655	36,655
55.00°	12,910	12,910	12,910
65.00°	5,985	5,985	5,985
75.00°	2,680	2,680	2,680
85.00°	1,697	1,697	1,697

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	16.0	17.3	16.4	17.6	17.9	16.0	17.3	16.4	17.6	17.9
	3H	16.3	17.4	16.7	17.7	18.1	16.3	17.4	16.7	17.7	18.1
	4H	16.3	17.4	16.7	17.7	18.1	16.3	17.4	16.7	17.7	18.1
	6H	16.3	17.3	16.7	17.6	18.0	16.3	17.3	16.7	17.6	18.0
	8H	16.3	17.2	16.7	17.6	18.0	16.3	17.2	16.7	17.6	18.0
	12H	16.3	17.1	16.7	17.5	17.9	16.3	17.1	16.7	17.5	17.9
4H	2H	16.1	17.1	16.5	17.5	17.9	16.1	17.1	16.5	17.5	17.9
	3H	16.5	17.3	16.9	17.7	18.1	16.5	17.3	16.9	17.7	18.1
	4H	16.5	17.2	17.0	17.7	18.1	16.5	17.2	17.0	17.7	18.1
	6H	16.5	17.2	17.0	17.6	18.1	16.5	17.2	17.0	17.6	18.1
	8H	16.5	17.1	17.0	17.5	18.0	16.5	17.1	17.0	17.5	18.0
	12H	16.5	17.0	17.0	17.5	18.0	16.5	17.0	17.0	17.5	18.0
8H	4H	16.4	17.0	16.9	17.5	17.9	16.4	17.0	16.9	17.5	17.9
	6H	16.5	17.0	17.0	17.5	17.9	16.5	17.0	17.0	17.5	17.9
	8H	16.5	16.9	17.0	17.4	17.9	16.5	16.9	17.0	17.4	17.9
	12H	16.5	16.9	17.0	17.3	17.9	16.5	16.9	17.0	17.3	17.9
12H	4H	16.4	16.9	16.9	17.4	17.9	16.4	16.9	16.9	17.4	17.9
	6H	16.4	16.9	17.0	17.3	17.9	16.4	16.9	17.0	17.3	17.9
	8H	16.5	16.8	17.0	17.3	17.9	16.5	16.8	17.0	17.3	17.9

Corrected UGR values based on total output lumens

SHR = 1.0