

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGRTV12BX-60L35K-WD-DO101-AR12BX-SGWF
Nom. 12" Diam x 10" H open aperture

Test Number

SP-00686_6

Test Date

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

Summary of Results

Power

Input Watts	44 W
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Lumen Output

Output Lumens	4856
Efficacy	110.37 lm/W

Luminous Dimensions

0° - 180° Size	-0.97
90° - 270° Size	-0.97
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.89
Two luminaires, plane 90°	0.91
Four luminaires	0.9

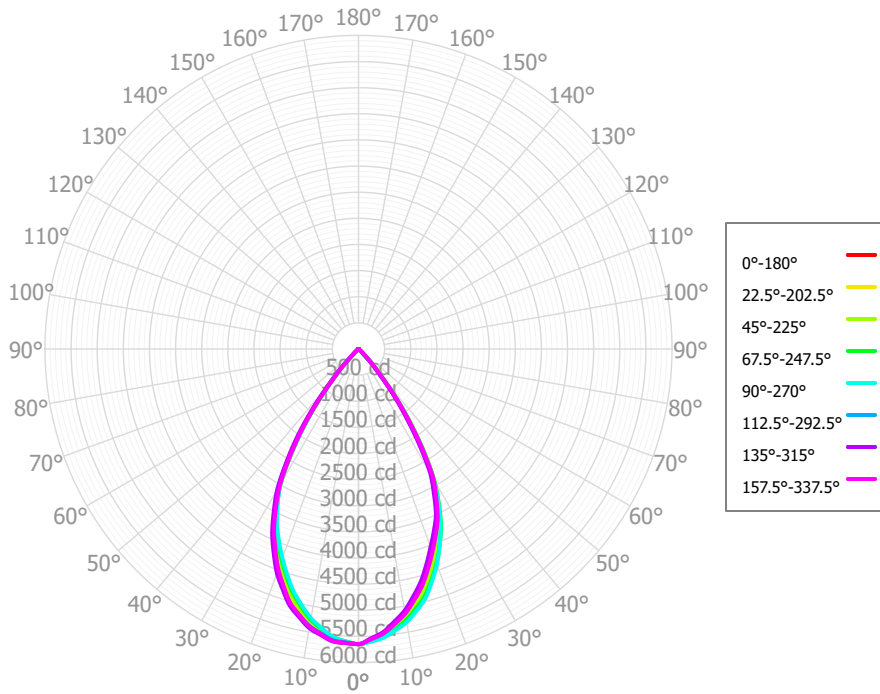
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00686_6
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	6/7/2018
UPDATE	6/29/2018
LUMCAT	SGRTV12BX-60L35K-WD-DO101-AR12BX-SGWF
LUMINAIRE	Nom. 12" Diam x 10" H open aperture
OTHER	Semi-diffuse clear anodized alum. reflector trim
OTHER	Deep regressed retrofit high output LED downlight
OTHER	BX Series, Wide Beam
OTHER	60.5 Deg Beam Angle
LAMPCAT	N/A
LAMP	N/A, Bridgelux Vero 29
OTHER	Dimmable driver tested at 100% output
OTHER	Tested CCT: 3500K
OTHER	CCT Output: 27K x 0.932, 30K x 1.00, 40K x 1.01
OTHER	This report prepared by Spectrum Lighting, scaled from 80L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	525.99	10.83%	90.00° - 100.00°	0.08	0.00%
10.00° - 20.00°	1352.25	27.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	1679.27	34.58%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	1106.06	22.78%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	184.99	3.81%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	5.36	0.11%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	0.99	0.02%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	0.71	0.01%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.70	0.01%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4856.33	100.00%	0.00° - 180.00°	4856.41	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14	5648.14
2.50°	5556.84	5575.40	5570.86	5598.84	5605.79	5619.35	5629.92	5628.99	5633.48	5619.92	5623.04	5599.87	5605.39	5555.48	5540.02	5558.80	5556.84
5.00°	5454.58	5481.57	5482.75	5527.46	5543.75	5590.32	5618.18	5607.03	5608.32	5575.87	5573.66	5536.04	5533.83	5462.36	5438.03	5465.76	5454.58
7.50°	5301.33	5343.53	5345.08	5402.94	5430.52	5488.29	5521.50	5501.13	5499.24	5462.61	5457.63	5403.33	5388.45	5293.74	5261.38	5307.85	5301.33
10.00°	5147.14	5190.70	5194.36	5268.50	5308.29	5386.10	5423.98	5391.50	5388.83	5331.80	5319.70	5258.70	5230.71	5124.82	5084.17	5146.53	5147.14
12.50°	4932.50	4996.72	5004.76	5088.42	5132.45	5222.62	5254.51	5216.48	5207.24	5149.62	5131.58	5051.96	5020.40	4888.34	4846.30	4924.27	4932.50
15.00°	4716.92	4789.14	4795.80	4899.76	4942.31	5059.04	5084.11	5035.86	5023.80	4944.73	4926.88	4835.60	4801.46	4651.71	4607.91	4698.74	4716.92
17.50°	4448.56	4531.38	4529.91	4639.94	4668.76	4794.82	4825.36	4761.58	4753.42	4673.02	4675.84	4568.72	4533.36	4371.78	4320.00	4418.77	4448.56
20.00°	4179.32	4256.95	4259.37	4366.99	4387.15	4530.37	4565.71	4484.37	4482.05	4394.63	4409.71	4298.00	4257.13	4091.93	4031.79	4136.03	4179.32
22.50°	3889.99	3968.36	3975.10	4057.86	4059.46	4200.47	4237.31	4156.95	4168.57	4096.85	4117.76	4007.42	3977.64	3826.11	3769.60	3860.87	3889.99
25.00°	3600.39	3675.12	3661.01	3742.19	3718.19	3870.12	3907.86	3825.14	3853.41	3780.88	3817.35	3708.33	3697.62	3559.76	3507.50	3586.10	3600.39
27.50°	3216.69	3295.44	3259.86	3327.55	3298.65	3463.88	3511.69	3421.83	3464.67	3411.75	3452.60	3366.21	3355.19	3188.61	3127.50	3227.54	3216.69
30.00°	2831.91	2887.82	2814.19	2894.87	2855.45	3056.86	3113.36	3009.30	3071.67	2992.30	3067.06	2985.82	3002.86	2815.85	2746.97	2864.85	2831.91
32.50°	2242.95	2341.60	2240.21	2335.00	2278.52	2492.32	2568.34	2453.19	2510.57	2427.86	2528.79	2410.57	2450.94	2228.54	2158.92	2288.28	2242.95
35.00°	1651.42	1750.34	1673.64	1752.38	1704.64	1927.79	2022.74	1896.02	1949.16	1863.31	1941.82	1839.14	1867.08	1641.71	1570.45	1700.94	1651.42
37.50°	1141.08	1220.94	1128.52	1211.77	1148.11	1363.90	1443.67	1322.11	1375.20	1298.45	1388.25	1286.79	1328.51	1127.82	1067.83	1178.29	1141.08
40.00°	631.54	711.38	648.26	678.74	632.41	801.43	868.08	763.46	807.49	787.09	845.39	771.15	797.04	616.32	565.47	658.72	631.54
42.50°	374.88	405.69	353.42	387.12	344.89	461.19	507.98	436.47	470.97	428.67	490.38	440.39	473.80	369.09	340.77	397.40	374.88
45.00°	121.01	165.71	119.56	138.20	94.98	123.49	153.27	125.86	142.28	145.25	194.78	153.18	183.44	124.08	116.54	147.68	121.01
47.50°	67.09	71.72	60.90	63.29	51.19	70.06	86.31	68.33	78.15	73.50	82.18	81.45	90.40	71.21	65.30	78.11	67.09
50.00°	14.86	24.16	15.56	18.56	13.29	17.16	20.57	14.09	15.61	18.24	27.75	20.36	27.88	18.82	14.11	16.83	14.86
52.50°	8.80	8.69	7.99	8.10	7.97	9.47	11.52	8.46	8.99	9.76	10.37	10.99	12.44	10.78	8.18	8.66	8.80
55.00°	3.17	3.28	2.26	3.62	3.27	1.86	2.64	3.14	2.56	3.20	4.59	3.07	4.35	2.84	2.26	2.79	3.17
57.50°	2.40	1.78	1.79	2.21	1.97	1.69	2.18	2.36	2.13	2.02	2.31	2.28	2.74	2.08	1.99	2.07	2.40
60.00°	1.66	1.50	1.36	1.32	0.88	1.52	1.72	1.60	1.69	1.17	1.13	1.56	2.13	1.33	1.72	1.58	1.66
62.50°	1.22	1.16	1.07	1.12	0.91	1.40	1.50	1.12	1.28	1.25	0.75	1.24	1.72	0.91	1.38	1.11	1.22
65.00°	0.78	0.79	0.85	1.04	0.91	1.28	1.27	0.67	0.88	1.21	0.63	0.95	1.34	0.50	1.05	0.64	0.78
67.50°	0.84	0.81	0.82	0.86	0.83	0.98	0.84	0.62	0.66	0.86	0.54	0.84	1.13	0.53	0.82	0.66	0.84
70.00°	0.86	0.94	0.76	0.68	0.76	0.71	0.54	0.53	0.49	0.63	0.46	0.75	0.95	0.55	0.62	0.67	0.86
72.50°	0.59	0.63	0.62	0.67	0.69	0.68	1.13	0.33	0.61	0.65	0.87	0.73	0.74	0.61	0.67	0.58	0.59
75.00°	0.45	0.40	0.61	0.66	0.72	0.64	1.27	0.33	0.67	0.75	1.19	0.65	0.57	0.75	0.62	0.54	0.45
77.50°	0.51	0.68	0.68	0.65	0.82	0.58	0.78	0.58	0.65	0.86	0.96	0.54	0.46	1.03	0.40	0.58	0.51
80.00°	0.56	0.67	0.81	0.61	0.68	0.83	0.61	0.68	0.67	0.31	0.76	0.64	0.46	1.06	0.49	0.74	0.56
82.50°	0.74	0.63	0.56	0.69	0.51	0.74	0.66	0.58	0.58	0.50	0.70	0.61	0.50	0.70	0.50	0.74	0.74
85.00°	0.72	0.75	0.56	0.90	0.44	0.55	0.96	0.54	0.65	0.66	0.57	0.49	0.60	0.60	0.43	0.69	0.72
87.50°	0.90	1.02	0.72	0.84	0.67	0.74	0.66	0.69	0.68	0.35	0.42	1.08	0.69	0.81	0.36	0.68	0.90
90.00°	0.39	0.52	0.77	0.60	0.53	0.75	0.64	0.42	0.47	0.45	0.72	0.71	0.73	0.53	0.43	0.74	0.39
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SGRTV12BX-60L35K-WD-DO101-AR12BX-SGWF

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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	5781	5781	5781	5781	5647	5647	5647	5647	5396	5396	5396	5166	5166	5166	4955	4955	4856
	1	5521	5390	5272	5167	5402	5285	5180	5085	5089	5005	4928	4909	4843	4781	4743	4691	4598
	2	5257	5028	4838	4678	5151	4944	4772	4626	4788	4647	4524	4644	4529	4428	4510	4418	4335
	3	5001	4699	4464	4278	4906	4631	4416	4243	4505	4324	4175	4388	4237	4110	4279	4154	4074
	4	4755	4399	4138	3939	4669	4344	4102	3915	4240	4033	3869	4144	3967	3824	4054	3904	3780
	5	4521	4126	3850	3647	4443	4081	3823	3630	3995	3770	3598	3914	3719	3566	3839	3671	3535
	6	4299	3877	3594	3390	4229	3839	3573	3379	3767	3531	3356	3699	3492	3333	3636	3454	3311
	7	4090	3650	3364	3164	4026	3617	3347	3155	3556	3314	3138	3499	3283	3122	3445	3252	3105
	8	3894	3441	3157	2961	3836	3414	3143	2955	3362	3117	2942	3312	3091	2930	3266	3067	2918
	9	3711	3251	2969	2779	3658	3227	2958	2774	3182	2937	2765	3139	2916	2756	3099	2896	2746
	10	3539	3076	2799	2615	3491	3056	2790	2611	3017	2772	2604	2979	2755	2597	2944	2738	2590

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	186.7 fc	6.5 ft
6.5 ft	133.7 fc	7.7 ft
7.5 ft	100.4 fc	8.9 ft
8.0 ft	88.3 fc	9.5 ft
10.0 ft	56.5 fc	11.8 ft
12.0 ft	39.2 fc	14.2 ft
14.0 ft	28.8 fc	16.5 ft
16.0 ft	22.1 fc	18.9 ft
20.0 ft	14.1 fc	23.6 ft
24.0 ft	9.8 fc	28.4 ft
28.0 ft	7.2 fc	33.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	82270	82270	82270
45.00°	2493	2463	1957
55.00°	81	58	83
65.00°	27	29	32
75.00°	25	34	40
85.00°	120	94	73

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	-18.8	-17.8	-18.4	-17.5	-17.2	-18.6	-17.6	-18.2	-17.3	-17.0
	3H	-18.0	-17.2	-17.6	-16.8	-16.5	-17.7	-16.9	-17.3	-16.6	-16.2
	4H	-17.7	-17.0	-17.3	-16.6	-16.2	-17.2	-16.5	-16.8	-16.1	-15.7
	6H	-17.1	-16.4	-16.6	-16.0	-15.6	-16.5	-15.8	-16.1	-15.5	-15.1
	8H	-16.3	-15.7	-15.9	-15.3	-14.9	-16.1	-15.5	-15.7	-15.1	-14.7
	12H	-15.2	-14.6	-14.8	-14.3	-13.8	-15.6	-15.0	-15.1	-14.6	-14.1
4H	2H	-18.7	-17.9	-18.3	-17.6	-17.2	-18.5	-17.7	-18.1	-17.4	-17.0
	3H	-17.7	-17.1	-17.3	-16.7	-16.3	-17.4	-16.8	-17.0	-16.4	-16.0
	4H	-17.3	-16.8	-16.9	-16.3	-15.9	-16.8	-16.2	-16.3	-15.8	-15.3
	6H	-16.2	-15.8	-15.7	-15.3	-14.8	-15.7	-15.2	-15.2	-14.8	-14.3
	8H	-15.2	-14.8	-14.7	-14.3	-13.9	-15.1	-14.7	-14.6	-14.2	-13.7
	12H	-13.9	-13.5	-13.4	-13.1	-12.6	-14.4	-14.0	-13.9	-13.5	-13.0
8H	4H	-17.0	-16.6	-16.6	-16.2	-15.7	-16.2	-15.8	-15.7	-15.3	-14.8
	6H	-15.5	-15.2	-15.0	-14.7	-14.2	-14.8	-14.5	-14.3	-14.0	-13.5
	8H	-14.3	-14.0	-13.7	-13.5	-13.0	-14.0	-13.7	-13.5	-13.2	-12.7
	12H	-12.7	-12.4	-12.1	-11.9	-11.3	-13.1	-12.8	-12.6	-12.3	-11.7
12H	4H	-16.9	-16.5	-16.4	-16.0	-15.6	-16.1	-15.8	-15.6	-15.3	-14.8
	6H	-15.3	-15.0	-14.8	-14.5	-14.0	-14.7	-14.4	-14.1	-13.9	-13.3
	8H	-14.0	-13.7	-13.4	-13.2	-12.6	-13.7	-13.4	-13.1	-12.9	-12.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0