

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE6LEDOS 30L 35K DS101 AR6223OS MW SO 1CFG
Nom 6" diam illumitech decorative trim recessed downlight

Test Number

SP-00920

Test Date

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

Summary of Results

Power

Input Watts	29.6 W
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Lumen Output

Output Lumens	1924
Efficacy	65 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.93
Two luminaires, plane 90°	0.92
Four luminaires	0.93

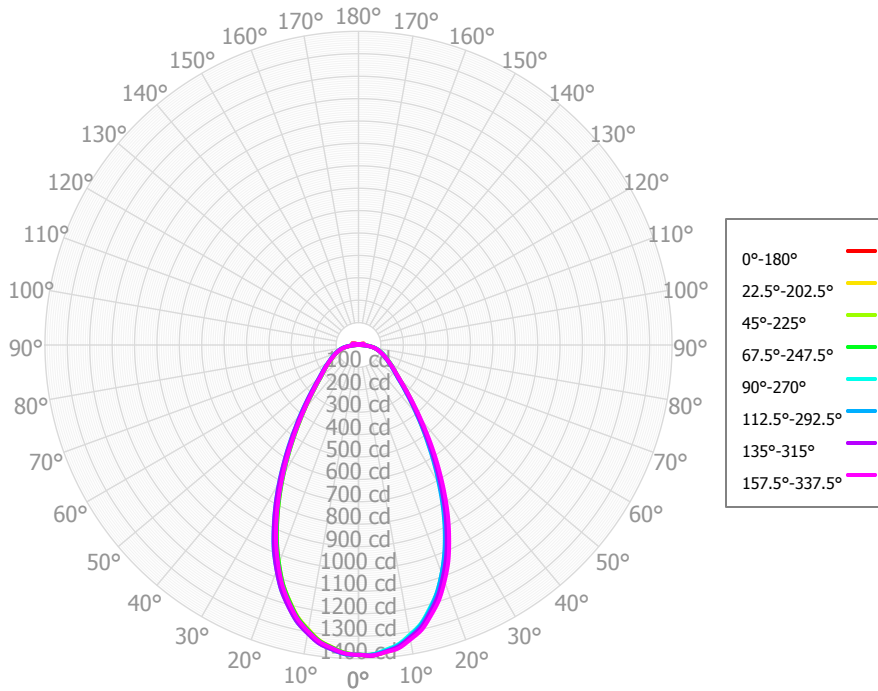
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00920
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	10/22/2018
UPDATE	8/19/2019
LUMCAT	SGE6LEDOS 30L 35K DS101 AR6223OS MW SO 1CFG
LUMINAIRE	Nom 6" diam illumitech decorative trim recessed downlight
OTHER	Solite lens, Center Frosted Glass Tier
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.89, 30K x 0.95, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	130.71	6.79%	90.00° - 100.00°	12.82	0.67%
10.00° - 20.00°	338.61	17.60%	100.00° - 110.00°	13.23	0.69%
20.00° - 30.00°	410.70	21.35%	100.00° - 120.00°	18.30	0.95%
30.00° - 40.00°	338.46	17.59%	120.00° - 130.00°	1.58	0.08%
40.00° - 50.00°	234.10	12.17%	130.00° - 140.00°	0.97	0.05%
50.00° - 60.00°	169.54	8.81%	140.00° - 150.00°	0.80	0.04%
60.00° - 70.00°	130.26	6.77%	150.00° - 160.00°	0.63	0.03%
70.00° - 80.00°	94.97	4.94%	160.00° - 170.00°	0.38	0.02%
80.00° - 90.00°	41.04	2.13%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	1,888.40	98.15%	0.00° - 180.00°	1,924.01	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°	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49	1,383.49
2.50°	1,388.69	1,386.24	1,384.12	1,383.93	1,383.85	1,382.24	1,380.12	1,377.98	1,379.81	1,377.29	1,375.09	1,376.83	1,379.60	1,384.39	1,389.05	1,387.62	1,388.69
5.00°	1,376.47	1,377.08	1,371.54	1,370.95	1,367.23	1,364.73	1,364.35	1,358.61	1,360.67	1,354.68	1,358.55	1,355.87	1,362.16	1,372.32	1,374.64	1,377.52	1,376.47
7.50°	1,361.27	1,364.44	1,353.08	1,355.80	1,349.39	1,343.82	1,344.77	1,336.03	1,336.18	1,330.83	1,333.80	1,333.02	1,341.76	1,354.03	1,359.03	1,366.27	1,361.27
10.00°	1,330.26	1,331.78	1,319.48	1,320.81	1,314.61	1,306.67	1,308.18	1,297.46	1,298.95	1,289.52	1,297.49	1,292.65	1,304.31	1,322.31	1,325.97	1,335.72	1,330.26
12.50°	1,297.49	1,295.06	1,281.60	1,282.99	1,277.34	1,267.27	1,266.63	1,253.81	1,254.22	1,245.93	1,251.49	1,248.74	1,262.07	1,281.70	1,291.13	1,303.15	1,297.49
15.00°	1,243.18	1,243.25	1,226.20	1,230.96	1,220.97	1,208.00	1,209.98	1,193.67	1,196.17	1,184.89	1,195.12	1,186.84	1,202.32	1,226.86	1,235.59	1,250.55	1,243.18
17.50°	1,187.54	1,185.10	1,167.64	1,173.87	1,161.19	1,147.47	1,146.85	1,127.35	1,129.57	1,120.30	1,127.44	1,120.31	1,136.34	1,162.40	1,177.19	1,195.02	1,187.54
20.00°	1,111.10	1,110.30	1,089.37	1,099.49	1,085.39	1,069.20	1,069.35	1,046.31	1,051.35	1,039.01	1,050.27	1,037.82	1,054.00	1,085.93	1,101.68	1,123.52	1,111.10
22.50°	1,033.30	1,029.79	1,009.09	1,021.11	1,006.44	989.76	986.03	960.52	966.07	954.22	964.36	951.87	967.19	1,002.05	1,022.80	1,047.89	1,033.30
25.00°	942.48	938.36	916.63	933.15	917.68	895.54	893.16	866.42	873.48	858.54	872.87	857.53	871.80	911.09	931.03	957.85	942.48
27.50°	850.54	844.42	823.76	842.92	827.16	801.50	799.53	772.33	779.27	764.19	779.67	763.86	776.66	816.48	837.85	865.94	850.54
30.00°	752.81	746.80	728.88	748.61	732.64	708.47	704.93	678.24	683.77	672.82	685.64	671.37	681.87	719.18	740.94	769.36	752.81
32.50°	657.38	654.06	635.21	657.37	641.86	617.82	615.36	590.58	596.23	585.17	598.99	584.21	593.54	629.32	647.32	675.52	657.38
35.00°	569.99	566.82	552.15	570.35	557.45	536.62	530.71	509.62	513.59	503.84	514.94	504.41	512.46	543.65	560.21	586.77	569.99
37.50°	488.91	489.34	472.73	492.14	481.05	460.96	458.08	438.91	444.33	432.11	445.23	434.33	441.86	470.67	480.68	504.89	488.91
40.00°	423.30	420.24	411.03	423.13	414.94	400.35	394.39	376.34	381.19	372.71	378.96	374.47	380.25	402.94	412.39	432.60	423.30
42.50°	363.80	363.01	353.15	365.39	357.54	344.77	341.91	325.80	330.89	321.99	330.92	323.54	329.64	349.62	353.97	370.83	363.80
45.00°	315.28	313.63	307.57	316.78	308.80	299.13	295.89	282.48	284.86	279.75	285.61	279.87	286.30	300.56	306.68	320.36	315.28
47.50°	272.64	273.88	266.66	276.25	269.26	260.00	260.00	249.16	250.65	246.05	251.33	246.14	251.59	263.64	266.98	278.27	272.64
50.00°	238.17	238.97	236.80	240.75	236.79	230.77	228.42	220.43	219.13	218.89	217.86	218.62	221.22	229.10	234.02	243.16	238.17
52.50°	211.51	214.99	211.19	215.46	212.96	206.96	206.16	199.46	200.73	197.75	199.56	198.44	200.75	207.80	209.42	216.71	211.51
55.00°	193.14	194.99	192.99	194.90	194.15	189.43	186.71	181.04	184.09	180.09	181.47	181.69	183.88	187.94	190.46	195.72	193.14
57.50°	176.00	176.94	175.58	178.67	177.09	172.21	169.22	166.02	167.25	163.67	166.46	165.91	168.23	172.04	173.61	177.60	176.00
60.00°	159.85	159.40	159.23	163.90	160.80	155.27	152.14	151.76	150.45	147.77	151.59	150.45	152.88	156.36	157.82	160.86	159.85
62.50°	145.99	146.07	145.57	149.86	147.50	142.19	139.64	138.82	138.59	136.16	137.77	138.18	140.92	143.46	144.44	147.42	145.99
65.00°	133.59	133.41	134.69	136.00	135.14	131.77	127.68	126.07	126.83	125.89	124.90	126.65	129.50	130.76	131.97	135.12	133.59
67.50°	122.60	123.65	124.30	125.50	125.57	121.11	117.66	116.52	116.26	114.76	115.92	116.60	119.16	119.95	121.18	123.41	122.60
70.00°	112.27	114.10	114.30	115.47	116.57	110.32	107.71	107.13	105.87	103.45	106.99	106.75	108.89	109.45	110.82	111.84	112.27
72.50°	101.38	104.67	103.66	105.75	105.96	100.27	97.85	96.24	96.57	93.86	98.22	98.40	98.84	100.63	100.58	102.28	101.38
75.00°	90.30	95.13	92.65	96.03	95.14	90.51	87.97	85.39	86.92	84.47	88.67	90.12	88.80	91.49	90.36	93.03	90.30
77.50°	79.89	83.61	82.02	85.10	84.62	80.26	77.92	74.87	75.90	73.31	77.50	78.08	78.88	81.25	80.10	82.85	79.89
80.00°	69.65	71.94	71.57	73.93	73.98	69.89	66.95	63.57	63.53	61.94	64.82	65.71	68.31	69.90	69.85	72.58	69.65
82.50°	55.33	59.20	57.21	59.62	57.63	53.36	51.13	47.52	47.55	45.04	49.80	49.24	53.11	55.91	54.86	57.33	55.33
85.00°	40.44	45.24	41.59	44.69	41.17	35.79	35.23	31.80	31.87	28.54	33.85	33.08	37.60	40.16	39.75	41.94	40.44
87.50°	24.01	25.86	25.30	25.79	23.51	20.73	19.02	17.33	16.81	16.27	16.77	18.86	20.71	21.19	23.36	24.44	24.01
90.00°	7.54	11.09	8.85	10.61	8.67	5.90	7.85	7.71	8.57	6.49	8.67	7.89	8.44	9.74	9.02	9.23	7.54
92.50°	9.45	10.03	8.95	10.10	9.67	8.89	9.21	11.13	10.56	10.68	8.85	9.81	9.89	8.64	10.31	9.13	9.45
95.00°	11.61	10.80	11.24	9.29	10.18	11.91	12.11	14.99	14.17	15.13	11.64	10.73	10.46	8.34	11.88	10.25	11.61
97.50°	17.03	15.48	12.87	7.68	8.92	9.37	17.85	19.72	19.62	20.52	16.26	8.88	9.11	8.87	14.70	16.23	17.03
100.00°	21.95	19.64	14.41	5.74	7.01	6.79	20.29	23.86	24.03	25.03	16.85	6.59	6.93	7.17	16.20	21.14	21.95
102.50°	23.66	22.95	11.79	3.11	3.40	3.98	18.07	27.15	27.52	27.35	15.24	3.44	3.41	3.62	13.69	22.96	23.66
105.00°	24.27	22.86	9.11	1.50	1.07	1.63	14.89	26.96	28.36	27.45	11.94	1.46	1.40	1.93	10.69	22.82	24.27
107.50°	20.39	18.56	5.81	1.41	1.14	1.40	10.66	22.80	27.41	23.38	7.96	1.30	1.28	1.38	6.59	18.61	20.39
110.00°	16.54	14.39	2.92	1.27	1.17	1.19	7.26	18.79	24.65	18.94	5.87	1.22	1.18	1.15	3.70	14.28	16.54
112.50°	12.78	10.32	2.48	1.08	1.16	1.02	4.57	14.90	20.98	14.00	4.30	1.26	1.10	1.08	2.80	9.77	12.78

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	2,282	2,282	2,282	2,282	2,225	2,225	2,225	2,225	2,118	2,118	2,118	2,020	2,020	2,020	1,931	1,931	1,888
	1	2,113	2,033	1,962	1,897	2,058	1,987	1,922	1,863	1,900	1,847	1,798	1,820	1,777	1,738	1,746	1,712	1,673
	2	1,957	1,822	1,710	1,616	1,906	1,783	1,681	1,594	1,711	1,626	1,552	1,645	1,575	1,513	1,584	1,526	1,475
	3	1,817	1,644	1,511	1,405	1,770	1,613	1,489	1,390	1,553	1,448	1,362	1,497	1,409	1,335	1,446	1,372	1,309
	4	1,692	1,496	1,351	1,241	1,649	1,469	1,335	1,231	1,419	1,303	1,212	1,372	1,273	1,192	1,329	1,244	1,174
	5	1,581	1,369	1,221	1,111	1,542	1,347	1,208	1,104	1,304	1,183	1,090	1,265	1,159	1,076	1,228	1,136	1,062
	6	1,481	1,260	1,111	1,005	1,445	1,241	1,101	999	1,205	1,081	989	1,171	1,062	978	1,140	1,043	968
	7	1,391	1,165	1,019	916	1,359	1,149	1,010	912	1,118	994	904	1,090	979	896	1,063	964	888
	8	1,310	1,083	939	841	1,281	1,069	933	838	1,042	919	831	1,017	906	825	994	894	819
	9	1,237	1,010	871	777	1,210	998	865	774	975	854	769	953	843	764	933	833	759
	10	1,171	945	811	721	1,146	935	806	719	915	797	715	896	787	711	878	779	707

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	45.7 fc	6.7 ft
6.5 ft	32.7 fc	7.9 ft
7.5 ft	24.6 fc	9.1 ft
8.0 ft	21.6 fc	9.7 ft
10.0 ft	13.8 fc	12.2 ft
12.0 ft	9.6 fc	14.6 ft
14.0 ft	7.1 fc	17.0 ft
16.0 ft	5.4 fc	19.4 ft
20.0 ft	3.5 fc	24.3 ft
24.0 ft	2.4 fc	29.2 ft
28.0 ft	1.8 fc	34.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	75,843	75,843	75,843
45.00°	24,443	23,845	23,940
55.00°	18,460	18,445	18,556
65.00°	17,328	17,472	17,530
75.00°	19,125	19,624	20,152
85.00°	25,434	26,159	25,898

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	19.6	20.9	20.0	21.3	21.7	19.3	20.6	19.7	21.0	21.4
	3H	21.6	22.8	22.0	23.2	23.6	21.4	22.6	21.8	23.0	23.4
	4H	22.6	23.7	23.0	24.1	24.5	22.4	23.5	22.8	23.9	24.4
	6H	23.5	24.6	23.9	25.0	25.4	23.4	24.4	23.8	24.8	25.3
	8H	23.9	24.9	24.4	25.3	25.8	23.8	24.8	24.2	25.2	25.7
	12H	24.2	25.2	24.7	25.6	26.1	24.1	25.1	24.6	25.5	26.0
4H	2H	20.2	21.3	20.6	21.7	22.1	19.9	21.0	20.3	21.4	21.8
	3H	22.5	23.5	22.9	23.9	24.3	22.3	23.2	22.7	23.7	24.1
	4H	23.7	24.5	24.1	25.0	25.5	23.4	24.3	23.9	24.8	25.2
	6H	24.8	25.5	25.3	26.0	26.5	24.6	25.4	25.1	25.8	26.3
	8H	25.3	26.0	25.8	26.5	27.0	25.1	25.8	25.6	26.3	26.8
	12H	25.7	26.3	26.2	26.8	27.4	25.5	26.1	26.0	26.6	27.1
8H	4H	24.1	24.8	24.6	25.3	25.8	23.9	24.6	24.4	25.1	25.6
	6H	25.4	26.0	26.0	26.6	27.1	25.2	25.8	25.7	26.3	26.9
	8H	26.1	26.6	26.6	27.1	27.7	25.8	26.3	26.4	26.9	27.4
	12H	26.7	27.1	27.2	27.6	28.3	26.3	26.8	26.9	27.3	27.9
12H	4H	24.2	24.8	24.7	25.3	25.8	23.9	24.6	24.4	25.1	25.6
	6H	25.6	26.1	26.1	26.6	27.2	25.3	25.9	25.9	26.4	26.9
	8H	26.3	26.8	26.8	27.3	27.9	26.0	26.5	26.5	27.0	27.6

Corrected UGR values based on total output lumens

SHR = 1.0