

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00917

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	2124
Efficacy	71.75 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.96
Two luminaires, plane 90°	0.93
Four luminaires	1.05

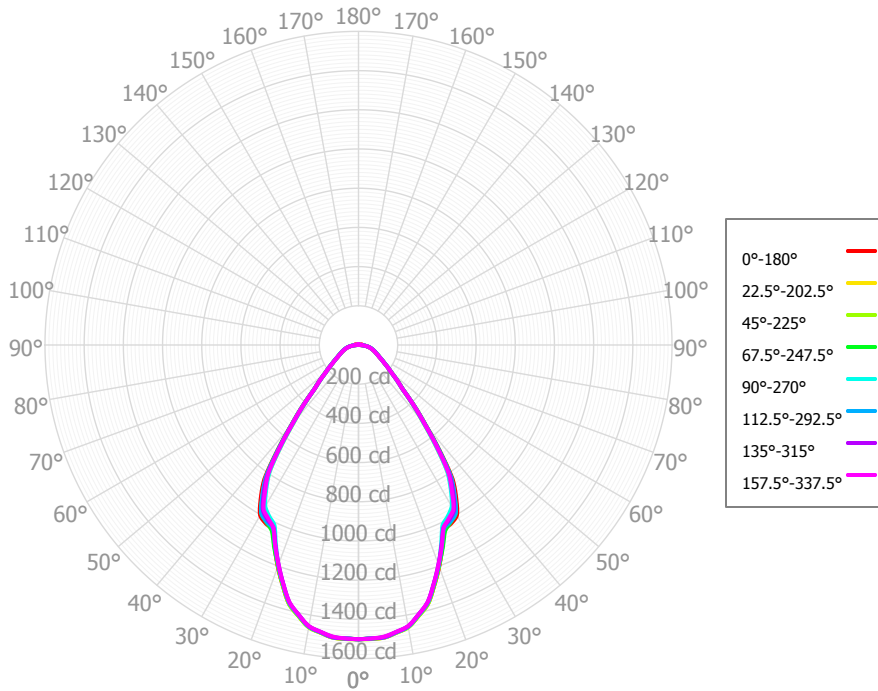
Full Beam Angle

0° - 180°	73°
90° - 270°	71°

IES File Header Contents

Keyword	Value
TEST	SP-00917
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	10/18/2018
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°	143.62	6.76%	90.00° - 100.00°	6.70	0.32%
10.00° - 20.00°	377.18	17.76%	100.00° - 110.00°	7.12	0.34%
20.00° - 30.00°	487.51	22.95%	100.00° - 120.00°	10.24	0.48%
30.00° - 40.00°	485.15	22.84%	120.00° - 130.00°	1.32	0.06%
40.00° - 50.00°	261.69	12.32%	130.00° - 140.00°	0.91	0.04%
50.00° - 60.00°	148.18	6.98%	140.00° - 150.00°	0.77	0.04%
60.00° - 70.00°	100.45	4.73%	150.00° - 160.00°	0.60	0.03%
70.00° - 80.00°	69.83	3.29%	160.00° - 170.00°	0.35	0.02%
80.00° - 90.00°	29.29	1.38%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	2,102.91	99.01%	0.00° - 180.00°	2,123.92	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°	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56	1,501.56
2.50°	1,497.88	1,501.48	1,502.28	1,499.54	1,497.66	1,498.93	1,499.44	1,498.92	1,497.88	1,501.48	1,502.28	1,499.54	1,497.66	1,498.93	1,499.44	1,498.92	1,497.88
5.00°	1,499.05	1,498.13	1,499.06	1,495.61	1,497.92	1,496.18	1,497.54	1,493.67	1,499.05	1,498.13	1,499.06	1,495.61	1,497.92	1,496.18	1,497.54	1,493.67	1,499.05
7.50°	1,480.65	1,480.71	1,481.33	1,478.33	1,479.44	1,477.82	1,478.32	1,476.20	1,480.65	1,480.71	1,481.33	1,478.33	1,479.44	1,477.82	1,478.32	1,476.20	1,480.65
10.00°	1,461.47	1,462.72	1,463.09	1,458.06	1,460.19	1,458.82	1,458.42	1,456.24	1,461.47	1,462.72	1,463.09	1,458.06	1,460.19	1,458.82	1,458.42	1,456.24	1,461.47
12.50°	1,415.35	1,415.63	1,417.24	1,412.85	1,412.72	1,411.19	1,410.39	1,409.99	1,415.35	1,415.63	1,417.24	1,412.85	1,412.72	1,411.19	1,410.39	1,409.99	1,415.35
15.00°	1,368.03	1,367.21	1,369.76	1,363.37	1,363.93	1,362.54	1,360.83	1,359.62	1,368.03	1,367.21	1,369.76	1,363.37	1,363.93	1,362.54	1,360.83	1,359.62	1,368.03
17.50°	1,286.28	1,283.22	1,285.66	1,283.03	1,279.61	1,279.50	1,276.94	1,277.92	1,286.28	1,283.22	1,285.66	1,283.03	1,279.61	1,279.50	1,276.94	1,277.92	1,286.28
20.00°	1,204.20	1,199.16	1,201.55	1,198.62	1,194.72	1,196.35	1,192.83	1,192.66	1,204.20	1,199.16	1,201.55	1,198.62	1,194.72	1,196.35	1,192.83	1,192.66	1,204.20
22.50°	1,117.78	1,114.25	1,117.26	1,122.36	1,101.53	1,111.57	1,106.24	1,110.63	1,117.78	1,114.25	1,117.26	1,122.36	1,101.53	1,111.57	1,106.24	1,110.63	1,117.78
25.00°	1,039.19	1,034.96	1,039.80	1,046.81	1,014.79	1,033.59	1,026.92	1,028.82	1,039.19	1,034.96	1,039.80	1,046.81	1,014.79	1,033.59	1,026.92	1,028.82	1,039.19
27.50°	1,025.83	1,006.19	1,018.33	1,018.68	986.10	1,016.89	1,005.04	997.75	1,025.83	1,006.19	1,018.33	1,018.68	986.10	1,016.89	1,005.04	997.75	1,025.83
30.00°	1,004.01	970.03	988.76	992.70	951.35	992.31	975.52	968.34	1,004.01	970.03	988.76	992.70	951.35	992.31	975.52	968.34	1,004.01
32.50°	928.71	887.20	911.61	909.60	877.20	914.76	901.18	887.06	928.71	887.20	911.61	909.60	877.20	914.76	901.18	887.06	928.71
35.00°	838.95	793.79	821.35	824.24	791.38	824.77	813.27	803.55	838.95	793.79	821.35	824.24	791.38	824.77	813.27	803.55	838.95
37.50°	680.27	647.24	670.74	676.56	646.99	672.35	664.35	662.54	680.27	647.24	670.74	676.56	646.99	672.35	664.35	662.54	680.27
40.00°	531.23	509.38	528.14	531.14	510.79	528.45	523.61	523.91	531.23	509.38	528.14	531.14	510.79	528.45	523.61	523.91	531.23
42.50°	418.46	405.64	415.41	424.10	406.74	418.00	412.76	418.69	418.46	405.64	415.41	424.10	406.74	418.00	412.76	418.69	418.46
45.00°	319.91	314.83	317.75	322.07	315.17	320.83	316.63	319.10	319.91	314.83	317.75	322.07	315.17	320.83	316.63	319.10	319.91
47.50°	266.47	265.06	265.79	271.21	264.01	267.58	265.15	268.46	266.47	265.06	265.79	271.21	264.01	267.58	265.15	268.46	266.47
50.00°	219.39	220.27	219.81	222.92	218.71	220.41	219.54	220.58	219.39	220.27	219.81	222.92	218.71	220.41	219.54	220.58	219.39
52.50°	188.98	189.01	189.12	192.47	189.35	189.75	188.66	189.64	188.98	189.01	189.12	192.47	189.35	189.75	188.66	189.64	188.98
55.00°	161.50	161.14	161.66	163.76	162.77	162.24	161.11	160.70	161.50	161.14	161.66	163.76	162.77	162.24	161.11	160.70	161.50
57.50°	140.49	140.99	141.23	144.25	142.49	141.86	140.70	141.56	140.49	140.99	141.23	144.25	142.49	141.86	140.70	141.56	140.49
60.00°	122.49	123.40	123.66	126.12	124.67	124.25	123.24	123.74	122.49	123.40	123.66	126.12	124.67	124.25	123.24	123.74	122.49
62.50°	110.30	110.84	111.39	113.84	111.65	112.10	111.20	111.03	110.30	110.84	111.39	113.84	111.65	112.10	111.20	111.03	110.30
65.00°	99.27	99.54	100.41	102.19	100.27	100.96	100.41	99.13	99.27	99.54	100.41	102.19	100.27	100.96	100.41	99.13	99.27
67.50°	90.17	90.37	91.48	92.67	91.69	91.49	91.58	89.73	90.17	90.37	91.48	92.67	91.69	91.49	91.58	89.73	90.17
70.00°	81.24	81.71	82.82	83.51	83.53	82.72	83.06	80.75	81.24	81.71	82.82	83.51	83.53	82.72	83.06	80.75	81.24
72.50°	72.54	73.76	74.51	75.40	76.02	74.97	74.95	72.91	72.54	73.76	74.51	75.40	76.02	74.97	74.95	72.91	72.54
75.00°	64.26	65.81	66.61	67.08	68.03	67.25	66.61	65.06	64.26	65.81	66.61	67.08	68.03	67.25	66.61	65.06	64.26
77.50°	56.52	57.85	59.20	58.29	59.46	59.57	57.99	57.22	56.52	57.85	59.20	58.29	59.46	59.57	57.99	57.22	56.52
80.00°	47.37	48.56	49.97	48.99	50.33	50.01	48.38	48.31	47.37	48.56	49.97	48.99	50.33	50.01	48.38	48.31	47.37
82.50°	36.71	37.81	38.79	38.66	40.60	38.35	37.73	37.40	36.71	37.81	38.79	38.66	40.60	38.35	37.73	37.40	36.71
85.00°	25.26	26.51	27.05	27.89	28.65	26.27	26.02	26.33	25.26	26.51	27.05	27.89	28.65	26.27	26.02	26.33	25.26
87.50°	13.08	14.68	14.80	16.38	14.60	13.79	13.32	14.99	13.08	14.68	14.80	16.38	14.60	13.79	13.32	14.99	13.08
90.00°	6.59	8.01	8.07	8.41	7.02	6.83	6.74	7.56	6.59	8.01	8.07	8.41	7.02	6.83	6.74	7.56	6.59
92.50°	4.80	5.67	5.76	5.80	4.96	4.57	5.04	5.74	4.80	5.67	5.76	5.80	4.96	4.57	5.04	5.74	4.80
95.00°	5.59	6.21	6.05	4.28	4.24	3.85	5.34	5.83	5.59	6.21	6.05	4.28	4.24	3.85	5.34	5.83	5.59
97.50°	8.22	8.86	8.18	4.19	4.51	4.25	7.00	8.33	8.22	8.86	8.18	4.19	4.51	4.25	7.00	8.33	8.22
100.00°	11.01	11.20	8.46	3.44	3.56	3.43	7.55	10.61	11.01	11.20	8.46	3.44	3.56	3.43	7.55	10.61	11.01
102.50°	13.89	13.35	7.62	1.94	1.84	1.82	7.43	12.65	13.89	13.35	7.62	1.94	1.84	1.82	7.43	12.65	13.89
105.00°	15.01	12.98	6.06	1.14	1.15	1.22	6.00	12.74	15.01	12.98	6.06	1.14	1.15	1.22	6.00	12.74	15.01
107.50°	15.17	11.22	4.13	1.01	1.02	1.16	3.90	10.98	15.17	11.22	4.13	1.01	1.02	1.16	3.90	10.98	15.17
110.00°	12.86	8.99	3.08	0.94	1.08	1.14	2.77	8.99	12.86	8.99	3.08	0.94	1.08	1.14	2.77	8.99	12.86
112.50°	9.43	6.55	2.43	0.90	1.22	1.12	2.08	6.81	9.43	6.55	2.43	0.90	1.22	1.12	2.08	6.81	9.43

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	2,523	2,523	2,523	2,523	2,462	2,462	2,462	2,462	2,348	2,348	2,348	2,244	2,244	2,244	2,148	2,148	2,103
	1	2,355	2,275	2,203	2,139	2,298	2,226	2,161	2,102	2,134	2,081	2,033	2,049	2,007	1,968	1,972	1,938	1,906
	2	2,194	2,056	1,942	1,846	2,141	2,016	1,912	1,823	1,941	1,854	1,779	1,871	1,799	1,736	1,807	1,748	1,696
	3	2,046	1,868	1,730	1,620	1,997	1,835	1,707	1,605	1,772	1,664	1,575	1,715	1,623	1,547	1,661	1,585	1,519
	4	1,911	1,706	1,555	1,440	1,866	1,678	1,538	1,430	1,626	1,505	1,410	1,578	1,474	1,390	1,533	1,444	1,371
	5	1,789	1,565	1,409	1,294	1,748	1,542	1,396	1,287	1,498	1,370	1,272	1,458	1,346	1,258	1,419	1,322	1,244
	6	1,677	1,443	1,285	1,172	1,640	1,423	1,275	1,167	1,386	1,254	1,156	1,351	1,235	1,146	1,319	1,216	1,136
	7	1,576	1,335	1,179	1,069	1,542	1,318	1,170	1,065	1,287	1,154	1,057	1,257	1,138	1,049	1,229	1,123	1,042
	8	1,484	1,240	1,087	981	1,454	1,226	1,080	978	1,198	1,066	972	1,173	1,053	966	1,149	1,041	960
	9	1,401	1,156	1,006	905	1,373	1,144	1,000	903	1,120	989	898	1,098	979	893	1,077	968	888
	10	1,324	1,081	935	838	1,299	1,070	931	837	1,050	921	833	1,030	912	829	1,012	903	825

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	49.6 fc	8.0 ft
6.5 ft	35.5 fc	9.5 ft
7.5 ft	26.7 fc	10.9 ft
8.0 ft	23.5 fc	11.6 ft
10.0 ft	15.0 fc	14.6 ft
12.0 ft	10.4 fc	17.5 ft
14.0 ft	7.7 fc	20.4 ft
16.0 ft	5.9 fc	23.3 ft
20.0 ft	3.8 fc	29.1 ft
24.0 ft	2.6 fc	34.9 ft
28.0 ft	1.9 fc	40.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	82,316	82,316	82,316
45.00°	24,802	24,635	24,434
55.00°	15,436	15,451	15,557
65.00°	12,877	13,024	13,007
75.00°	13,612	14,108	14,410
85.00°	15,890	17,015	18,023

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	17.8	19.1	18.2	19.4	19.8	17.9	19.2	18.3	19.5	19.8
	3H	19.5	20.7	19.9	21.0	21.4	19.7	20.8	20.1	21.2	21.5
	4H	20.4	21.4	20.8	21.8	22.2	20.5	21.6	21.0	22.0	22.4
	6H	21.2	22.2	21.6	22.5	23.0	21.4	22.4	21.8	22.7	23.2
	8H	21.5	22.4	21.9	22.8	23.3	21.7	22.7	22.2	23.1	23.5
	12H	21.7	22.6	22.2	23.0	23.5	22.0	22.9	22.5	23.3	23.8
4H	2H	18.3	19.4	18.7	19.8	20.2	18.4	19.5	18.8	19.8	20.2
	3H	20.4	21.2	20.8	21.7	22.1	20.5	21.3	20.9	21.8	22.2
	4H	21.4	22.2	21.8	22.6	23.1	21.5	22.3	22.0	22.7	23.2
	6H	22.3	23.0	22.8	23.5	24.0	22.5	23.2	23.0	23.7	24.2
	8H	22.7	23.4	23.2	23.8	24.3	23.0	23.6	23.4	24.1	24.6
	12H	23.1	23.6	23.6	24.1	24.6	23.3	23.9	23.8	24.4	24.9
8H	4H	21.8	22.4	22.3	22.9	23.4	21.9	22.5	22.4	23.0	23.5
	6H	22.9	23.5	23.5	24.0	24.5	23.1	23.6	23.6	24.1	24.6
	8H	23.5	23.9	24.0	24.5	25.0	23.6	24.1	24.2	24.6	25.2
	12H	23.9	24.3	24.4	24.8	25.4	24.1	24.6	24.7	25.1	25.7
12H	4H	21.8	22.4	22.3	22.9	23.4	21.9	22.5	22.4	23.0	23.5
	6H	23.1	23.5	23.6	24.0	24.6	23.2	23.7	23.7	24.2	24.7
	8H	23.6	24.1	24.2	24.6	25.2	23.8	24.2	24.4	24.8	25.3

Corrected UGR values based on total output lumens

SHR = 1.0