

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

GL04IND4GL 05L 35K xx DW xx FS xx

4" Wide x 48" linear pendant or surface mount for semi-direct illumination

Test Number

SP-01618

Test Date

11/15/2023

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

Summary of Results

Power

Input Watts	15.2 W
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Lumen Output

Output Lumens	1548
Efficacy	101.84 lm/W

Luminous Dimensions

0° - 180° Size	0.33
90° - 270° Size	4
Height	0.19

Spacing Criterion

Two luminaires, plane 0°	1.41
Two luminaires, plane 90°	1.18
Four luminaires	1.45

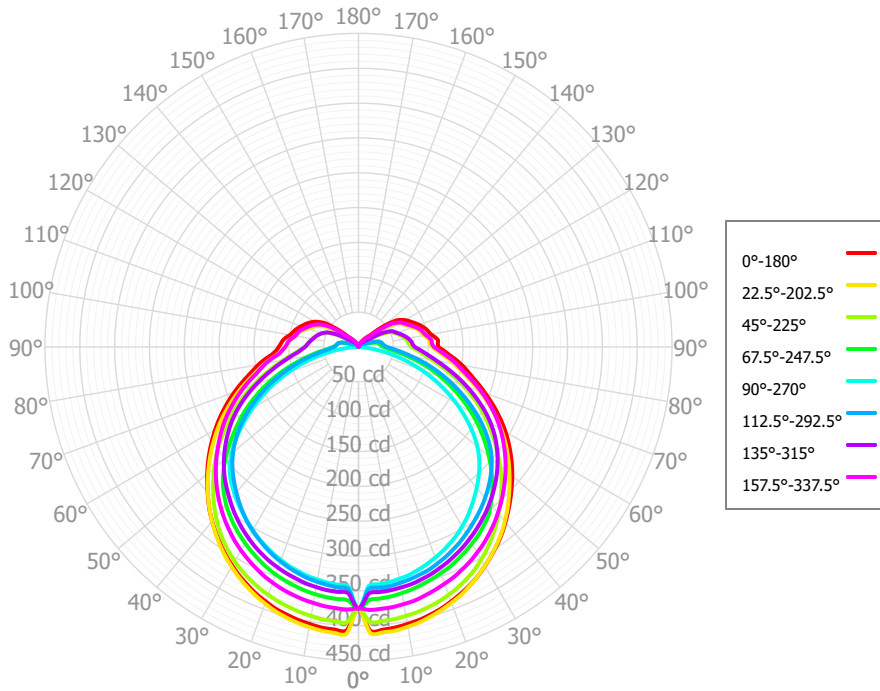
Full Beam Angle

0° - 180°	134°
90° - 270°	108°

IES File Header Contents

Keyword	Value
TEST	SP-01618
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/15/2023
ISSUEDATE	11/16/2023
LUMCAT	GL04IND4GL 05L 35K xx DW xx FS xx
LUMINAIRE	4" Wide x 48" linear pendant or surface mount for semi-direct illumination
OTHER	Diffuse White Acrylic Lens and Wire Guard
OTHER	Matte White interior finish
OTHER	Beam Angle 134 deg x 108 deg
OTHER	2000 Source Lms/Ft
OTHER	80+ CRI
OTHER	CCT Output Multipliers: 30K x 0.98, 40K x 1.0
OTHER	Total Luminaire Watts 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°	36.18	2.34%	90.00° - 100.00°	71.66	4.63%
10.00° - 20.00°	103.17	6.67%	100.00° - 110.00°	59.62	3.85%
20.00° - 30.00°	159.80	10.32%	100.00° - 120.00°	103.08	6.66%
30.00° - 40.00°	199.41	12.88%	120.00° - 130.00°	24.52	1.58%
40.00° - 50.00°	217.55	14.05%	130.00° - 140.00°	9.08	0.59%
50.00° - 60.00°	210.95	13.63%	140.00° - 150.00°	3.72	0.24%
60.00° - 70.00°	180.65	11.67%	150.00° - 160.00°	1.41	0.09%
70.00° - 80.00°	134.72	8.70%	160.00° - 170.00°	0.36	0.02%
80.00° - 90.00°	91.62	5.92%	170.00° - 180.00°	0.06	0.00%
0.00° - 90.00°	1334.06	86.18%	0.00° - 180.00°	1547.93	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°	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22	375.22
2.50°	408.37	411.75	395.22	363.46	343.24	347.28	353.36	377.13	407.69	412.55	395.70	363.77	343.99	347.31	353.92	377.76	408.37
5.00°	407.28	411.12	394.71	362.35	341.78	345.94	352.74	376.26	406.97	411.73	395.02	363.08	342.59	346.73	353.08	377.17	407.28
7.50°	406.03	410.48	394.01	360.94	340.26	344.45	351.91	375.17	406.22	410.56	394.30	361.97	341.14	346.11	352.17	376.48	406.03
10.00°	403.86	407.78	391.97	358.69	337.85	342.18	349.92	373.10	403.74	408.13	391.99	360.14	338.97	343.82	350.52	374.67	403.86
12.50°	401.41	404.84	389.75	356.18	335.26	339.65	347.70	370.80	401.19	405.38	389.63	357.84	336.67	341.48	348.83	372.80	401.41
15.00°	397.81	400.43	386.59	352.88	331.03	336.01	344.49	367.74	397.72	401.76	386.32	354.84	333.31	338.46	345.72	369.20	397.81
17.50°	393.84	395.92	383.13	349.39	326.71	332.15	341.13	364.35	394.17	397.54	382.93	351.43	329.79	335.35	342.56	365.55	393.84
20.00°	388.68	390.57	378.44	345.57	321.80	327.53	337.23	360.04	388.89	392.00	378.55	347.51	325.30	330.81	338.43	361.55	388.68
22.50°	383.30	385.17	373.41	341.69	316.71	322.57	333.01	355.29	383.49	386.05	374.01	342.83	320.66	326.20	334.21	357.46	383.30
25.00°	377.38	378.01	367.31	336.63	310.84	316.69	327.94	349.55	376.86	379.32	368.32	337.34	315.37	320.95	329.25	352.28	377.38
27.50°	370.85	370.80	360.59	331.40	304.68	310.64	322.51	343.58	370.08	372.15	362.37	331.49	309.80	315.55	324.18	346.98	370.85
30.00°	362.97	362.75	352.29	325.82	297.49	304.23	316.29	337.19	362.36	364.30	355.10	325.32	303.22	309.24	318.45	340.77	362.97
32.50°	354.98	354.62	343.54	320.21	289.94	297.31	309.74	330.26	354.41	355.90	347.48	318.64	296.69	302.90	312.60	334.38	354.98
35.00°	346.78	345.83	333.82	313.13	281.38	289.44	302.58	322.47	345.40	346.79	338.54	311.59	290.30	296.45	306.25	327.05	346.78
37.50°	337.95	336.86	323.67	305.96	272.76	281.27	295.07	314.35	336.26	337.17	329.12	303.80	283.64	289.86	299.73	319.54	337.95
40.00°	328.17	326.70	312.75	295.11	264.00	272.67	286.99	305.76	326.64	327.00	318.20	295.54	276.36	282.70	292.62	311.23	328.17
42.50°	318.29	316.36	301.64	284.18	254.95	264.00	278.88	296.77	316.63	316.32	306.94	285.82	268.79	275.33	285.33	302.79	318.29
45.00°	308.29	305.11	290.25	271.25	245.38	255.23	270.71	287.32	305.47	305.15	294.78	275.32	260.65	267.35	277.49	293.88	308.29
47.50°	298.22	293.91	278.14	258.24	234.81	245.58	261.83	277.43	294.38	293.61	282.64	262.69	250.59	258.91	269.35	284.84	298.22
50.00°	288.08	282.85	265.14	244.29	222.68	234.98	252.13	267.11	283.46	281.76	270.53	249.08	237.48	249.40	260.53	275.49	288.08
52.50°	277.50	271.72	252.10	230.31	209.25	223.35	241.94	256.53	272.33	269.72	257.76	234.64	223.30	238.72	251.34	265.91	277.50
55.00°	266.51	260.36	239.01	216.04	194.07	210.74	231.29	245.73	260.77	257.56	243.89	219.89	207.71	225.77	241.45	255.86	266.51
57.50°	255.20	248.75	226.04	201.62	178.45	196.99	220.24	234.94	249.18	245.33	230.15	205.28	191.72	212.08	230.86	245.61	255.20
60.00°	243.66	236.55	213.18	186.43	162.35	182.31	208.86	224.17	237.54	233.07	216.60	190.70	175.27	197.21	219.14	235.00	243.66
62.50°	231.43	224.09	200.03	171.22	145.97	167.11	196.43	212.65	225.72	220.30	202.92	175.41	158.67	182.05	206.60	223.96	231.43
65.00°	218.75	211.10	186.66	155.93	129.32	151.56	183.29	200.67	213.63	207.28	189.09	159.93	141.94	166.50	192.96	212.22	218.75
67.50°	206.06	198.06	172.80	140.79	112.65	136.11	169.67	188.84	201.54	194.44	175.06	144.38	125.11	151.08	179.23	200.20	206.06
70.00°	193.37	184.92	158.64	126.09	95.96	120.72	155.77	177.08	189.45	181.67	160.82	128.81	108.20	135.81	165.39	187.80	193.37
72.50°	181.49	172.12	144.72	111.32	79.55	105.73	142.49	165.16	177.45	169.08	147.17	113.17	91.39	120.76	151.69	175.49	181.49
75.00°	170.00	159.80	130.95	96.39	63.32	90.95	129.50	153.16	165.53	156.55	134.03	97.52	74.64	105.93	138.11	163.28	170.00
77.50°	160.19	148.90	118.70	82.02	47.80	77.42	117.53	143.66	155.01	146.10	121.66	83.70	58.70	91.49	125.56	152.62	160.19
80.00°	151.03	139.66	107.13	68.80	32.71	64.37	105.96	134.99	145.64	136.18	109.87	70.02	43.23	77.38	113.86	143.43	151.03
82.50°	141.10	129.99	97.76	57.05	20.47	54.17	96.41	125.02	135.49	126.01	99.47	59.36	29.64	65.63	103.92	133.99	141.10
85.00°	130.93	119.91	89.22	47.83	9.62	44.88	87.51	114.68	124.75	115.79	89.96	48.82	16.98	55.54	95.20	124.36	130.93
87.50°	122.72	111.93	82.39	40.53	4.32	39.55	81.73	109.49	118.31	109.81	83.20	42.24	8.79	47.73	87.74	115.99	122.72
90.00°	114.96	105.73	76.06	35.98	1.21	35.22	76.73	105.35	114.48	104.39	77.90	35.93	2.38	41.27	81.01	108.48	114.96
92.50°	114.03	102.85	73.49	32.87	0.43	33.09	73.95	102.73	111.49	102.02	74.56	34.11	0.71	37.87	78.00	105.56	114.03
95.00°	114.36	102.30	71.81	31.50	0.40	31.40	71.61	100.32	108.94	99.89	72.08	32.37	0.61	35.99	76.82	105.27	114.36
97.50°	110.18	99.59	70.19	30.49	0.41	30.62	69.16	96.29	104.74	95.57	69.72	31.32	0.58	34.82	74.69	102.37	110.18
100.00°	105.43	95.55	68.57	29.85	0.43	29.95	66.69	92.10	99.85	91.18	67.41	30.06	0.57	33.92	72.17	98.24	105.43
102.50°	102.69	92.78	65.78	27.56	0.51	27.60	64.44	90.12	96.65	88.74	64.93	27.45	0.57	32.37	69.10	95.44	102.69
105.00°	100.12	90.65	62.85	23.85	0.61	25.11	62.21	88.25	94.02	86.21	62.40	24.20	0.58	30.59	65.84	93.16	100.12

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	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	1792	1792	1792	1792	1725	1725	1725	1725	1601	1601	1601	1487	1487	1487	1383	1383	1334
	1	1600	1512	1434	1363	1534	1456	1385	1320	1349	1292	1239	1252	1206	1163	1162	1092	1082
	2	1441	1299	1182	1083	1379	1251	1144	1053	1160	1072	996	1076	1004	941	999	941	889
	3	1306	1130	993	885	1248	1088	963	863	1011	906	820	939	852	779	872	800	768
	4	1190	994	849	739	1137	958	825	722	891	779	689	829	734	657	772	692	664
	5	1091	882	737	629	1042	852	717	616	794	678	589	741	641	564	691	606	582
	6	1005	791	647	544	960	764	630	533	714	598	511	668	567	490	624	537	516
	7	929	714	574	476	889	691	560	467	647	532	449	606	506	431	568	481	462
	8	863	649	514	421	826	629	502	413	590	478	398	555	456	383	521	434	418
	9	805	593	464	376	772	576	453	369	542	433	356	510	413	344	480	394	380
	10	753	546	421	338	723	530	412	333	500	394	322	472	377	311	445	361	348

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.4 fc	25.9 ft
6.5 ft	8.9 fc	30.6 ft
7.5 ft	6.7 fc	35.3 ft
8.0 ft	5.9 fc	37.7 ft
10.0 ft	3.8 fc	47.1 ft
12.0 ft	2.6 fc	56.5 ft
14.0 ft	1.9 fc	66.0 ft
16.0 ft	1.5 fc	75.4 ft
20.0 ft	0.9 fc	94.2 ft
24.0 ft	0.7 fc	113.1 ft
28.0 ft	0.5 fc	131.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3060	3060	3060
45.00°	2256	2323	2701
55.00°	2079	2085	2584
65.00°	1889	1852	2264
75.00°	1701	1560	1695
85.00°	1616	1383	583

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	15.1	16.5	15.6	17.1	17.7	12.4	13.8	12.9	14.4	15.0
	3H	17.6	18.9	18.2	19.5	20.2	13.8	15.1	14.3	15.7	16.3
	4H	18.9	20.1	19.5	20.7	21.4	14.2	15.4	14.8	16.0	16.7
	6H	20.2	21.3	20.8	21.9	22.6	14.4	15.6	15.1	16.2	16.9
	8H	20.9	22.0	21.5	22.6	23.3	14.5	15.6	15.1	16.2	16.9
	12H	21.6	22.7	22.3	23.3	24.0	14.5	15.6	15.1	16.2	16.9
4H	2H	15.5	16.7	16.1	17.3	18.0	13.3	14.6	13.9	15.2	15.9
	3H	18.2	19.3	18.8	19.9	20.6	15.0	16.0	15.6	16.7	17.4
	4H	19.6	20.6	20.3	21.2	22.0	15.5	16.5	16.2	17.2	17.9
	6H	21.1	22.0	21.8	22.7	23.4	15.9	16.8	16.5	17.4	18.2
	8H	21.9	22.7	22.6	23.4	24.2	16.0	16.8	16.6	17.5	18.2
	12H	22.8	23.5	23.5	24.2	25.0	16.0	16.8	16.7	17.4	18.2
8H	4H	19.8	20.6	20.5	21.3	22.0	16.3	17.1	16.9	17.8	18.5
	6H	21.5	22.2	22.2	22.9	23.6	16.8	17.5	17.5	18.2	19.0
	8H	22.4	23.0	23.1	23.7	24.5	17.0	17.6	17.7	18.3	19.1
	12H	23.5	24.0	24.1	24.7	25.5	17.1	17.7	17.8	18.4	19.2
12H	4H	19.8	20.6	20.5	21.2	22.0	16.5	17.2	17.2	17.9	18.7
	6H	21.5	22.1	22.2	22.8	23.6	17.2	17.8	17.9	18.5	19.3
	8H	22.5	23.1	23.2	23.8	24.6	17.4	18.0	18.1	18.7	19.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0