

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

GL04IND8GL 05L 35K xx DW xx FS xx

4" Wide x 96" linear pendant or surface mount for semi-direct illumination

Test Number

SP-01619

Test Date

11/15/2023

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

Summary of Results

Power

Input Watts	30.4 W
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Lumen Output

Output Lumens	3096
Efficacy	101.84 lm/W

Luminous Dimensions

0° - 180° Size	0.33
90° - 270° Size	8
Height	0.19

Spacing Criterion

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

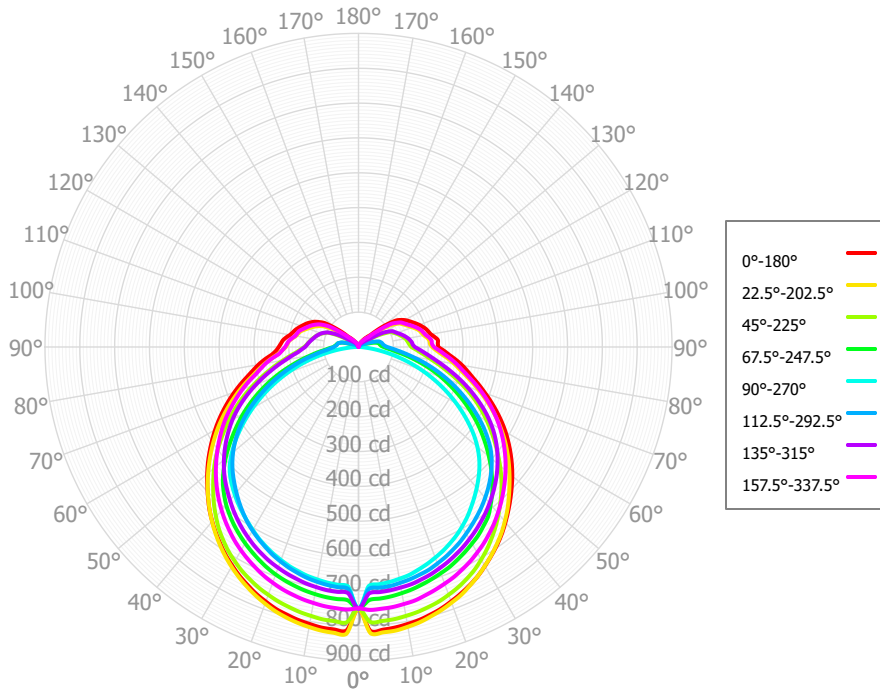
Full Beam Angle

0° - 180°	134°
90° - 270°	108°

IES File Header Contents

Keyword	Value
TEST	SP-01619
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/15/2023
ISSUEDATE	11/16/2023
LUMCAT	GL04IND8GL 05L 35K xx DW xx FS xx
LUMINAIRE	4" Wide x 96" 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, Scaled from the GL04IND4GL 20L 35K

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	72.36	2.34%	90.00° - 100.00°	143.32	4.63%
10.00° - 20.00°	206.35	6.67%	100.00° - 110.00°	119.24	3.85%
20.00° - 30.00°	319.60	10.32%	100.00° - 120.00°	206.16	6.66%
30.00° - 40.00°	398.82	12.88%	120.00° - 130.00°	49.03	1.58%
40.00° - 50.00°	435.10	14.05%	130.00° - 140.00°	18.15	0.59%
50.00° - 60.00°	421.91	13.63%	140.00° - 150.00°	7.43	0.24%
60.00° - 70.00°	361.30	11.67%	150.00° - 160.00°	2.82	0.09%
70.00° - 80.00°	269.45	8.70%	160.00° - 170.00°	0.71	0.02%
80.00° - 90.00°	183.24	5.92%	170.00° - 180.00°	0.12	0.00%
0.00° - 90.00°	2668.11	86.18%	0.00° - 180.00°	3095.87	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°	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45	750.45
2.50°	816.74	823.49	790.44	726.91	686.48	694.57	706.73	754.26	815.39	825.09	791.40	727.55	687.99	694.62	707.83	755.52	816.74
5.00°	814.57	822.24	789.41	724.70	683.57	691.87	705.47	752.52	813.94	823.47	790.05	726.16	685.18	693.46	706.16	754.33	814.57
7.50°	812.06	820.95	788.02	721.88	680.53	688.91	703.83	750.35	812.45	821.11	788.61	723.94	682.28	692.23	704.33	752.96	812.06
10.00°	807.72	815.57	783.94	717.39	675.70	684.37	699.84	746.19	807.49	816.26	783.97	720.27	677.93	687.64	701.03	749.34	807.72
12.50°	802.83	809.67	779.49	712.36	670.51	679.30	695.39	741.60	802.39	810.76	779.25	715.67	673.34	682.96	697.66	745.60	802.83
15.00°	795.63	800.87	773.18	705.76	662.06	672.03	688.99	735.47	795.45	803.53	772.65	709.68	666.61	676.92	691.45	738.39	795.63
17.50°	787.69	791.85	766.26	698.78	653.42	664.30	682.27	728.70	788.33	795.08	765.86	702.86	659.57	670.71	685.11	731.11	787.69
20.00°	777.36	781.14	756.88	691.15	643.60	655.06	674.46	720.07	777.79	784.00	757.11	695.01	650.59	661.62	676.85	723.09	777.36
22.50°	766.60	770.35	746.82	683.39	633.42	645.14	666.02	710.59	766.99	772.09	748.02	685.65	641.32	652.40	668.42	714.93	766.60
25.00°	754.77	756.03	734.61	673.26	621.68	633.38	655.88	699.10	753.71	758.64	736.65	674.67	630.74	641.89	658.50	704.55	754.77
27.50°	741.70	741.60	721.18	662.80	609.36	621.28	645.03	687.17	740.16	744.30	724.75	662.98	619.59	631.10	648.37	693.96	741.70
30.00°	725.94	725.49	704.58	651.64	594.98	608.47	632.58	674.38	724.72	728.60	710.20	650.64	606.44	618.47	636.90	681.53	725.94
32.50°	709.96	709.25	687.08	640.43	579.88	594.62	619.48	660.53	708.83	711.79	694.96	637.29	593.39	605.79	625.20	668.77	709.96
35.00°	693.56	691.66	667.65	626.25	562.76	578.87	605.17	644.95	690.80	693.57	677.08	623.18	580.61	592.91	612.49	654.10	693.56
37.50°	675.91	673.71	647.34	611.92	545.52	562.55	590.13	628.69	672.52	674.35	658.23	607.60	567.28	579.71	599.46	639.08	675.91
40.00°	656.34	653.41	625.50	590.23	527.99	545.35	573.98	611.51	653.27	654.01	636.41	591.08	552.72	565.40	585.25	622.47	656.34
42.50°	636.58	632.71	603.28	568.37	509.90	528.00	557.75	593.54	633.25	632.64	613.87	571.64	537.57	550.66	570.66	605.57	636.58
45.00°	616.58	610.23	580.49	542.51	490.75	510.45	541.43	574.64	610.93	610.31	589.56	550.64	521.30	534.70	554.98	587.75	616.58
47.50°	596.45	587.82	556.27	516.48	469.62	491.17	523.66	554.86	588.76	587.22	565.28	525.38	501.18	517.81	538.70	569.69	596.45
50.00°	576.17	565.71	530.28	488.59	445.37	469.97	504.26	534.23	566.92	563.52	541.05	498.17	474.96	498.80	521.05	550.97	576.17
52.50°	555.00	543.44	504.20	460.61	418.51	446.69	483.88	513.06	544.66	539.45	515.53	469.29	446.61	477.44	502.67	531.82	555.00
55.00°	533.01	520.71	478.03	432.07	388.14	421.49	462.58	491.45	521.53	515.13	487.77	439.78	415.42	451.53	482.90	511.72	533.01
57.50°	510.41	497.50	452.09	403.23	356.90	393.98	440.47	469.89	498.36	490.67	460.29	410.56	383.43	424.16	461.71	491.23	510.41
60.00°	487.31	473.11	426.37	372.86	324.70	364.62	417.71	448.35	475.08	466.13	433.20	381.41	350.53	394.41	438.27	470.01	487.31
62.50°	462.85	448.18	400.06	342.45	291.93	334.22	392.86	425.29	451.43	440.59	405.85	350.81	317.34	364.10	413.21	447.91	462.85
65.00°	437.50	422.21	373.32	311.86	258.63	303.13	366.59	401.33	427.26	414.57	378.18	319.87	283.88	333.00	385.92	424.45	437.50
67.50°	412.12	396.11	345.61	281.58	225.29	272.22	339.35	377.68	403.08	388.89	350.11	288.76	250.22	302.16	358.46	400.40	412.12
70.00°	386.73	369.84	317.27	252.18	191.92	241.43	311.55	354.17	378.90	363.33	321.65	257.62	216.40	271.61	330.78	375.60	386.73
72.50°	362.99	344.24	289.45	222.65	159.09	211.47	284.97	330.32	354.89	338.16	294.35	226.34	182.78	241.52	303.37	350.98	362.99
75.00°	340.00	319.60	261.91	192.77	126.63	181.90	259.00	306.33	331.07	313.10	268.06	195.03	149.28	211.86	276.22	326.55	340.00
77.50°	320.38	297.80	237.41	164.04	95.61	154.83	235.05	287.33	310.01	292.21	243.31	167.41	117.40	182.99	251.12	305.23	320.38
80.00°	302.06	279.31	214.25	137.60	65.42	128.73	211.91	269.99	291.29	272.35	219.73	140.05	86.45	154.76	227.71	286.86	302.06
82.50°	282.20	259.98	195.53	114.11	40.94	108.33	192.81	250.03	270.98	252.01	198.95	118.72	59.28	131.26	207.84	267.99	282.20
85.00°	261.87	239.82	178.45	95.66	19.23	89.75	175.03	229.37	249.51	231.59	179.92	97.64	33.96	111.08	190.41	248.72	261.87
87.50°	245.43	223.87	164.78	81.06	8.63	79.11	163.46	218.98	236.63	219.61	166.41	84.48	17.57	95.45	175.48	231.97	245.43
90.00°	229.92	211.47	152.12	71.95	2.43	70.43	153.47	210.69	228.96	208.78	155.81	71.86	4.76	82.54	162.01	216.95	229.92
92.50°	228.06	205.69	146.98	65.74	0.85	66.19	147.91	205.45	222.98	204.04	149.13	68.22	1.41	75.73	156.00	211.12	228.06
95.00°	228.72	204.60	143.63	63.01	0.79	62.81	143.21	200.65	217.88	199.79	144.16	64.73	1.22	71.99	153.64	210.54	228.72
97.50°	220.35	199.17	140.38	60.98	0.81	61.23	138.31	192.59	209.49	191.15	139.45	62.64	1.16	69.64	149.37	204.73	220.35
100.00°	210.86	191.10	137.15	59.69	0.85	59.90	133.38	184.20	199.70	182.35	134.81	60.13	1.14	67.85	144.33	196.47	210.86
102.50°	205.39	185.56	131.56	55.12	1.02	55.20	128.88	180.24	193.29	177.48	129.86	54.89	1.14	64.74	138.19	190.88	205.39
105.00°	200.24	181.30	125.70	47.69	1.21	50.23	124.43	176.49	188.05	172.42	124.81	48.41	1.15	61.18	131.68	186.33	200.24

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	3584	3584	3584	3584	3451	3451	3451	3451	3202	3202	3202	2975	2975	2975	2766	2766	2668
	1	3200	3025	2867	2726	3068	2911	2769	2641	2699	2584	2479	2504	2412	2326	2324	2251	2165
	2	2882	2598	2363	2166	2757	2501	2288	2106	2320	2144	1992	2153	2009	1882	1998	1881	1807
	3	2612	2259	1987	1769	2495	2177	1927	1725	2021	1812	1640	1878	1704	1557	1744	1601	1536
	4	2381	1987	1699	1479	2274	1916	1651	1445	1783	1557	1379	1659	1468	1314	1544	1384	1328
	5	2182	1765	1474	1259	2084	1704	1434	1232	1589	1357	1179	1482	1283	1127	1382	1212	1164
	6	2009	1581	1294	1088	1920	1528	1261	1066	1429	1196	1023	1335	1134	980	1248	1074	1033
	7	1858	1427	1148	952	1778	1382	1120	934	1294	1065	898	1213	1012	862	1136	961	925
	8	1726	1297	1027	842	1653	1257	1003	827	1181	956	796	1109	911	766	1042	867	836
	9	1610	1186	927	752	1543	1151	906	739	1084	866	713	1020	826	687	960	788	760
	10	1507	1091	842	677	1446	1060	824	666	1000	789	643	944	755	621	890	721	697

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.8 fc	25.9 ft
6.5 ft	17.8 fc	30.6 ft
7.5 ft	13.3 fc	35.3 ft
8.0 ft	11.7 fc	37.7 ft
10.0 ft	7.5 fc	47.1 ft
12.0 ft	5.2 fc	56.5 ft
14.0 ft	3.8 fc	66.0 ft
16.0 ft	2.9 fc	75.4 ft
20.0 ft	1.9 fc	94.2 ft
24.0 ft	1.3 fc	113.1 ft
28.0 ft	1.0 fc	131.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3060	3060	3060
45.00°	2256	2351	2764
55.00°	2079	2117	2669
65.00°	1889	1887	2374
75.00°	1701	1598	1832
85.00°	1616	1428	708

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	15.2	16.6	15.7	17.2	17.8	12.4	13.8	12.9	14.4	15.0
	3H	17.8	19.1	18.3	19.6	20.3	13.8	15.1	14.4	15.7	16.3
	4H	19.0	20.3	19.6	20.8	21.5	14.2	15.5	14.8	16.1	16.7
	6H	20.4	21.5	21.0	22.1	22.8	14.5	15.6	15.1	16.2	16.9
	8H	21.1	22.2	21.7	22.8	23.5	14.5	15.6	15.1	16.2	16.9
	12H	21.9	23.0	22.5	23.6	24.3	14.5	15.6	15.1	16.2	16.9
4H	2H	15.6	16.8	16.2	17.4	18.1	13.4	14.6	14.0	15.2	15.9
	3H	18.4	19.4	19.0	20.0	20.7	15.0	16.1	15.6	16.7	17.4
	4H	19.8	20.7	20.4	21.4	22.1	15.6	16.6	16.2	17.2	17.9
	6H	21.3	22.2	22.0	22.8	23.6	15.9	16.8	16.6	17.5	18.2
	8H	22.1	23.0	22.8	23.6	24.4	16.0	16.8	16.7	17.5	18.3
	12H	23.1	23.8	23.7	24.5	25.3	16.1	16.8	16.7	17.5	18.2
8H	4H	20.0	20.8	20.6	21.4	22.2	16.3	17.1	17.0	17.8	18.6
	6H	21.7	22.3	22.3	23.0	23.8	16.9	17.6	17.6	18.3	19.0
	8H	22.6	23.2	23.3	23.9	24.7	17.1	17.7	17.7	18.4	19.2
	12H	23.7	24.3	24.4	25.0	25.8	17.2	17.7	17.9	18.4	19.3
12H	4H	20.0	20.7	20.6	21.4	22.1	16.5	17.3	17.2	18.0	18.7
	6H	21.7	22.3	22.4	23.0	23.8	17.2	17.8	17.9	18.5	19.3
	8H	22.7	23.3	23.4	24.0	24.8	17.5	18.0	18.2	18.7	19.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0