

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

GL04IND8GL 15L 35K xx DW xx FS xx

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

Test Number

SP-01619_2

Test Date

11/15/2023

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

Summary of Results

Power

Input Watts	91.4 W
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Lumen Output

Output Lumens	9288
Efficacy	101.61 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

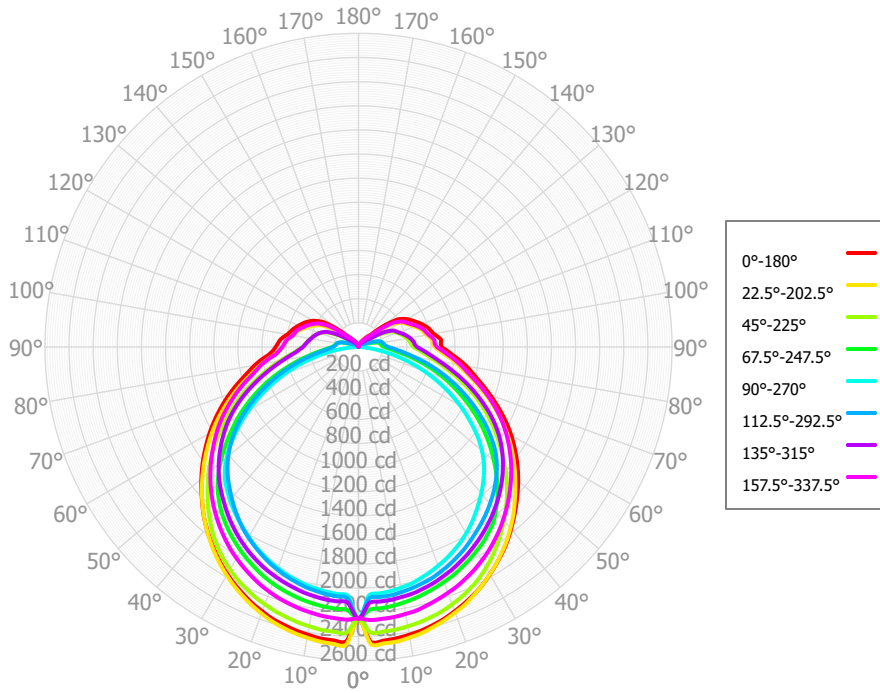
Full Beam Angle

0° - 180°	134°
90° - 270°	108°

IES File Header Contents

Keyword	Value
TEST	SP-01619_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/15/2023
ISSUEDATE	11/16/2023
LUMCAT	GL04IND8GL 15L 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°	217.07	2.34%	90.00° - 100.00°	429.96	4.63%
10.00° - 20.00°	619.04	6.67%	100.00° - 110.00°	357.73	3.85%
20.00° - 30.00°	958.79	10.32%	100.00° - 120.00°	618.48	6.66%
30.00° - 40.00°	1196.46	12.88%	120.00° - 130.00°	147.09	1.58%
40.00° - 50.00°	1305.30	14.05%	130.00° - 140.00°	54.46	0.59%
50.00° - 60.00°	1265.72	13.63%	140.00° - 150.00°	22.30	0.24%
60.00° - 70.00°	1083.90	11.67%	150.00° - 160.00°	8.47	0.09%
70.00° - 80.00°	808.34	8.70%	160.00° - 170.00°	2.14	0.02%
80.00° - 90.00°	549.71	5.92%	170.00° - 180.00°	0.37	0.00%
0.00° - 90.00°	8004.33	86.18%	0.00° - 180.00°	9287.60	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°	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35	2251.35
2.50°	2450.22	2470.47	2371.33	2180.74	2059.45	2083.70	2120.19	2262.79	2446.17	2475.28	2374.20	2182.64	2063.96	2083.87	2123.50	2266.56	2450.22
5.00°	2443.70	2466.72	2368.23	2174.11	2050.70	2075.62	2116.42	2257.56	2441.83	2470.41	2370.15	2178.48	2055.54	2080.39	2118.47	2262.99	2443.70
7.50°	2436.17	2462.86	2364.06	2165.65	2041.58	2066.72	2111.48	2251.05	2437.35	2463.33	2365.83	2171.82	2046.84	2076.68	2112.99	2258.88	2436.17
10.00°	2423.15	2446.71	2351.81	2152.17	2027.10	2053.10	2099.51	2238.58	2422.46	2448.78	2351.91	2160.82	2033.80	2062.93	2103.10	2248.03	2423.15
12.50°	2408.48	2429.02	2338.47	2137.08	2011.54	2037.91	2086.18	2224.81	2407.16	2432.29	2337.76	2147.01	2020.03	2048.88	2092.97	2236.80	2408.48
15.00°	2386.88	2402.60	2319.54	2117.29	1986.19	2016.08	2066.97	2206.41	2386.34	2410.58	2317.94	2129.05	1999.84	2030.76	2074.34	2215.18	2386.88
17.50°	2363.07	2375.54	2298.78	2096.33	1960.25	1992.91	2046.81	2186.09	2365.00	2385.24	2297.58	2108.59	1978.72	2012.13	2055.34	2193.32	2363.07
20.00°	2332.07	2343.42	2270.65	2073.44	1930.79	1965.19	2023.37	2160.21	2333.36	2352.00	2271.33	2085.03	1951.78	1984.87	2030.55	2169.27	2332.07
22.50°	2299.81	2311.05	2240.47	2050.17	1900.26	1935.41	1998.07	2131.76	2300.96	2316.27	2244.07	2056.95	1923.95	1957.19	2005.25	2144.78	2299.81
25.00°	2264.30	2268.08	2203.84	2019.77	1865.04	1900.13	1967.65	2097.30	2261.14	2275.93	2209.94	2024.02	1892.21	1925.68	1975.50	2113.66	2264.30
27.50°	2225.09	2224.81	2163.54	1988.40	1828.07	1863.85	1935.08	2061.50	2220.49	2232.91	2174.25	1988.93	1858.77	1893.31	1945.11	2081.88	2225.09
30.00°	2177.83	2176.47	2113.75	1954.93	1784.95	1825.41	1897.73	2023.13	2174.15	2185.79	2130.60	1951.91	1819.32	1855.42	1910.69	2044.59	2177.83
32.50°	2129.88	2127.74	2061.23	1921.28	1739.63	1783.87	1858.44	1981.58	2126.48	2135.37	2084.88	1911.86	1780.17	1817.38	1875.60	2006.30	2129.88
35.00°	2080.68	2074.99	2002.94	1878.75	1688.29	1736.62	1815.50	1934.85	2072.41	2080.71	2031.23	1869.53	1741.82	1778.72	1837.48	1962.31	2080.68
37.50°	2027.73	2021.14	1942.01	1835.75	1636.57	1687.65	1770.40	1886.08	2017.56	2023.04	1974.70	1822.81	1701.84	1739.14	1798.37	1917.24	2027.73
40.00°	1969.01	1960.23	1876.50	1770.68	1583.98	1636.05	1721.93	1834.54	1959.81	1962.03	1909.23	1773.23	1658.16	1696.20	1755.75	1867.40	1969.01
42.50°	1909.74	1898.14	1809.84	1705.10	1529.71	1584.00	1673.25	1780.62	1899.75	1897.92	1841.61	1714.93	1612.71	1651.98	1711.97	1816.72	1909.74
45.00°	1849.75	1830.68	1741.47	1627.52	1472.26	1531.35	1624.28	1723.91	1832.79	1830.93	1768.69	1651.93	1563.89	1604.10	1664.95	1763.25	1849.75
47.50°	1789.35	1763.46	1668.82	1549.44	1408.85	1473.51	1570.98	1664.59	1766.27	1761.65	1695.85	1576.15	1503.53	1553.44	1616.11	1709.07	1789.35
50.00°	1728.51	1697.13	1590.84	1465.77	1336.10	1409.90	1512.78	1602.68	1700.76	1690.55	1623.16	1494.51	1424.89	1496.39	1563.16	1652.91	1728.51
52.50°	1665.01	1630.32	1512.59	1381.84	1255.53	1340.08	1451.65	1539.18	1633.98	1618.34	1546.58	1407.86	1339.83	1432.32	1508.02	1595.47	1665.01
55.00°	1599.04	1562.14	1434.08	1296.22	1164.41	1264.46	1387.73	1474.36	1564.60	1545.38	1463.32	1319.35	1246.26	1354.59	1448.71	1535.17	1599.04
57.50°	1531.22	1492.49	1356.27	1209.70	1070.71	1181.93	1321.41	1409.67	1495.07	1472.00	1380.87	1231.67	1150.30	1272.47	1385.14	1473.68	1531.22
60.00°	1461.94	1419.32	1279.10	1118.59	974.09	1093.86	1253.13	1345.05	1425.25	1398.40	1299.60	1144.23	1051.59	1183.24	1314.82	1410.02	1461.94
62.50°	1388.56	1344.53	1200.19	1027.34	875.80	1002.67	1178.59	1275.88	1354.30	1321.77	1217.54	1052.43	952.03	1092.31	1239.62	1343.74	1388.56
65.00°	1312.50	1266.62	1119.96	935.59	775.89	909.38	1099.76	1204.00	1281.79	1243.71	1134.53	959.61	851.63	999.01	1157.77	1273.34	1312.50
67.50°	1236.37	1188.34	1036.83	844.73	675.88	816.67	1018.04	1133.03	1209.25	1166.66	1050.34	866.28	750.66	906.48	1075.37	1201.21	1236.37
70.00°	1160.20	1109.51	951.81	756.54	575.77	724.30	934.64	1062.50	1136.69	1090.00	964.95	772.87	649.21	814.84	992.33	1126.80	1160.20
72.50°	1088.97	1032.72	868.35	667.94	477.28	634.41	854.92	990.95	1064.67	1014.47	883.04	679.01	548.33	724.55	910.11	1052.93	1088.97
75.00°	1020.00	958.80	785.73	578.32	379.90	545.70	776.99	918.98	993.20	939.29	804.17	585.09	447.84	635.59	828.66	979.66	1020.00
77.50°	961.14	893.41	712.22	492.12	286.82	464.50	705.16	861.98	930.03	876.62	729.94	502.22	352.20	548.96	753.36	915.70	961.14
80.00°	906.19	837.94	642.76	412.81	196.26	386.20	635.74	809.96	873.87	817.06	659.20	420.15	259.35	464.29	683.14	860.58	906.19
82.50°	846.61	779.93	586.58	342.32	122.82	325.00	578.43	750.10	812.93	756.04	596.85	356.16	177.84	393.77	623.51	803.97	846.61
85.00°	785.60	719.46	535.35	286.99	57.69	269.26	525.09	688.10	748.53	694.77	539.75	292.91	101.89	333.25	571.23	746.17	785.60
87.50°	736.29	671.60	494.34	243.18	25.90	237.33	490.37	656.94	709.88	658.84	499.22	253.44	52.72	286.36	526.44	695.92	736.29
90.00°	689.76	634.40	456.35	215.86	7.29	211.29	460.40	632.08	686.88	626.34	467.43	215.57	14.27	247.62	486.04	650.85	689.76
92.50°	684.19	617.07	440.94	197.23	2.56	198.57	443.72	616.36	668.95	612.11	447.38	204.65	4.23	227.19	467.99	633.37	684.19
95.00°	686.15	613.81	430.89	189.02	2.38	188.42	429.64	601.95	653.65	599.36	432.49	194.19	3.65	215.97	460.92	631.62	686.15
97.50°	661.06	597.52	421.14	182.95	2.44	183.69	414.93	577.76	628.46	573.45	418.34	187.93	3.48	208.91	448.11	614.20	661.06
100.00°	632.57	573.31	411.45	179.07	2.56	179.69	400.14	552.61	599.09	547.05	404.44	180.38	3.42	203.55	433.00	589.42	632.57
102.50°	616.16	556.69	394.68	165.36	3.06	165.60	386.65	540.72	579.88	532.44	389.57	164.68	3.43	194.22	414.57	572.63	616.16
105.00°	600.73	543.90	377.09	143.07	3.63	150.68	373.28	529.48	564.15	517.27	374.42	145.23	3.46	183.55	395.04	558.99	600.73

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%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	10751	10751	10751	10751	10352	10352	10352	10352	9607	9607	9607	8925	8925	8925	8299	8299	8299	8004
	1	9600	9074	8602	8178	9205	8734	8308	7922	8096	7752	7436	7511	7235	6979	6971	6754	6550	6495
	2	8647	7794	7090	6498	8272	7504	6863	6319	6960	6431	5975	6458	6026	5647	5994	5644	5333	5420
	3	7835	6778	5960	5308	7486	6530	5780	5176	6064	5436	4920	5633	5111	4672	5232	4802	4433	4608
	4	7142	5961	5097	4437	6821	5749	4952	4335	5349	4672	4136	4977	4405	3942	4631	4151	3754	3984
	5	6545	5295	4421	3777	6252	5112	4302	3696	4767	4070	3537	4445	3849	3381	4145	3637	3229	3493
	6	6027	4743	3882	3263	5760	4585	3782	3197	4286	3588	3068	4006	3402	2940	3744	3223	2815	3098
	7	5575	4282	3443	2856	5333	4145	3359	2801	3883	3195	2693	3638	3036	2587	3409	2883	2482	2775
	8	5179	3892	3082	2526	4959	3772	3010	2480	3542	2869	2389	3327	2733	2299	3125	2602	2210	2507
	9	4830	3559	2781	2255	4629	3454	2719	2216	3251	2597	2138	3061	2479	2061	2881	2365	1986	2281
	10	4520	3274	2527	2031	4338	3180	2473	1997	3000	2367	1930	2831	2264	1863	2671	2164	1797	2090

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	74.4 fc	25.9 ft
6.5 ft	53.3 fc	30.6 ft
7.5 ft	40.0 fc	35.3 ft
8.0 ft	35.2 fc	37.7 ft
10.0 ft	22.5 fc	47.1 ft
12.0 ft	15.6 fc	56.5 ft
14.0 ft	11.5 fc	66.0 ft
16.0 ft	8.8 fc	75.4 ft
20.0 ft	5.6 fc	94.2 ft
24.0 ft	3.9 fc	113.1 ft
28.0 ft	2.9 fc	131.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	18359	18359	18359
45.00°	13537	13940	16208
55.00°	12475	12513	15503
65.00°	11332	11110	13587
75.00°	10206	9360	10167
85.00°	9696	8296	3498

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	21.3	22.7	21.9	23.3	23.9	18.6	20.0	19.1	20.6	21.2
	3H	23.9	25.2	24.4	25.7	26.4	20.0	21.3	20.6	21.9	22.6
	4H	25.1	26.3	25.7	26.9	27.6	20.4	21.7	21.0	22.3	23.0
	6H	26.4	27.6	27.0	28.2	28.9	20.7	21.8	21.3	22.4	23.1
	8H	27.1	28.2	27.7	28.8	29.5	20.7	21.8	21.3	22.4	23.2
	12H	27.9	28.9	28.5	29.5	30.3	20.7	21.8	21.3	22.4	23.1
4H	2H	21.7	22.9	22.3	23.5	24.2	19.6	20.8	20.2	21.4	22.1
	3H	24.5	25.5	25.1	26.2	26.9	21.2	22.3	21.8	22.9	23.6
	4H	25.9	26.8	26.5	27.5	28.2	21.8	22.7	22.4	23.4	24.1
	6H	27.4	28.2	28.0	28.9	29.6	22.1	23.0	22.8	23.7	24.4
	8H	28.2	29.0	28.8	29.6	30.4	22.2	23.0	22.9	23.7	24.4
	12H	29.0	29.8	29.7	30.4	31.2	22.2	23.0	22.9	23.7	24.4
8H	4H	26.0	26.8	26.7	27.5	28.3	22.5	23.3	23.2	24.0	24.7
	6H	27.7	28.4	28.4	29.1	29.9	23.1	23.7	23.7	24.4	25.2
	8H	28.6	29.3	29.3	30.0	30.7	23.2	23.9	23.9	24.6	25.3
	12H	29.7	30.2	30.4	30.9	31.8	23.3	23.9	24.0	24.6	25.4
12H	4H	26.0	26.8	26.7	27.5	28.2	22.7	23.5	23.4	24.1	24.9
	6H	27.7	28.4	28.4	29.0	29.9	23.4	24.0	24.1	24.7	25.5
	8H	28.7	29.3	29.4	30.0	30.8	23.7	24.2	24.3	24.9	25.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0