

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

EV04IND4GL 11L 35K xx DW xx FS xx

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

Test Number

SP-01621_2

Test Date

11/15/2023

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

Summary of Results

Power

Input Watts	33.6 W
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Lumen Output

Output Lumens	3767
Efficacy	112.12 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.39
Two luminaires, plane 90°	1.23
Four luminaires	1.46

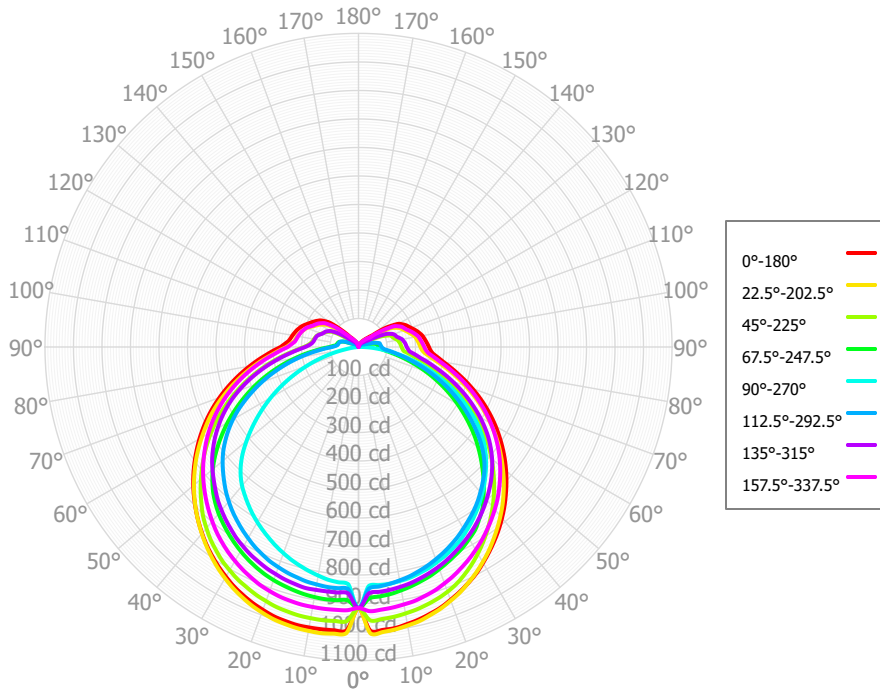
Full Beam Angle

0° - 180°	135°
90° - 270°	107°

IES File Header Contents

Keyword	Value
TEST	SP-01621_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/15/2023
ISSUEDATE	11/16/2023
LUMCAT	EV04IND4GL 11L 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
OTHER	Matte White interior finish
OTHER	Beam Angle 135 deg x 107 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°	88.51	2.35%	90.00° - 100.00°	158.97	4.22%
10.00° - 20.00°	253.69	6.73%	100.00° - 110.00°	134.52	3.57%
20.00° - 30.00°	394.45	10.47%	100.00° - 120.00°	234.26	6.22%
30.00° - 40.00°	493.49	13.10%	120.00° - 130.00°	57.93	1.54%
40.00° - 50.00°	539.01	14.31%	130.00° - 140.00°	23.65	0.63%
50.00° - 60.00°	522.79	13.88%	140.00° - 150.00°	9.75	0.26%
60.00° - 70.00°	446.49	11.85%	150.00° - 160.00°	3.78	0.10%
70.00° - 80.00°	327.45	8.69%	160.00° - 170.00°	1.00	0.03%
80.00° - 90.00°	211.93	5.63%	170.00° - 180.00°	0.17	0.00%
0.00° - 90.00°	3277.80	87.01%	0.00° - 180.00°	3767.31	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°	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00	916.00
2.50°	997.98	1007.41	960.37	882.54	839.02	849.62	864.59	924.50	996.70	1005.91	963.17	889.58	832.95	848.19	864.44	927.89	997.98
5.00°	996.26	1003.47	957.94	878.21	838.58	849.36	864.64	925.63	997.84	1009.63	964.94	891.65	828.49	843.26	862.00	924.97	996.26
7.50°	994.34	999.21	954.70	873.70	837.81	849.07	864.72	926.60	998.91	1012.66	966.84	892.56	823.26	838.11	858.97	921.86	994.34
10.00°	986.87	992.29	949.38	866.71	833.80	845.94	865.21	926.31	999.28	1011.42	966.15	890.88	814.28	831.48	854.09	917.21	986.87
12.50°	979.21	985.23	943.12	859.16	829.62	842.68	865.75	925.57	999.09	1009.64	964.96	887.98	804.94	824.34	848.20	912.34	979.21
15.00°	969.21	973.69	934.89	850.23	821.92	836.57	861.01	922.35	995.12	1005.46	961.02	882.87	794.29	814.65	839.75	903.76	969.21
17.50°	958.67	961.92	925.41	841.06	814.11	830.30	855.85	918.39	990.29	1000.19	956.71	877.16	783.00	804.50	830.77	894.83	958.67
20.00°	944.20	946.98	913.77	829.35	803.60	822.08	848.33	911.37	981.32	991.12	948.77	870.50	769.81	792.57	820.72	882.45	944.20
22.50°	929.41	931.59	899.29	817.34	792.93	813.43	840.72	903.36	971.72	980.97	940.55	862.21	756.07	780.19	809.48	869.70	929.41
25.00°	912.89	912.50	880.65	805.03	780.54	801.67	830.93	892.22	959.74	967.83	929.67	851.78	741.02	766.48	796.17	854.57	912.89
27.50°	895.44	893.04	860.15	792.69	767.60	789.41	821.00	880.38	946.68	953.58	918.67	840.01	725.69	752.02	782.50	839.09	895.44
30.00°	874.32	871.45	837.38	777.06	750.60	774.56	808.59	866.74	930.49	936.81	904.30	826.80	709.78	735.74	768.31	822.00	874.32
32.50°	852.95	849.32	813.02	761.18	733.32	759.43	795.91	852.21	913.59	918.90	889.75	812.41	692.90	719.44	752.91	804.36	852.95
35.00°	830.78	824.89	787.04	738.03	714.59	743.25	780.33	835.77	895.05	898.88	871.19	796.94	674.41	703.10	736.04	784.76	830.78
37.50°	807.92	800.19	760.12	714.36	695.40	726.46	764.56	818.12	875.44	877.82	852.28	780.51	655.39	685.36	718.09	764.81	807.92
40.00°	783.28	774.65	732.37	682.69	674.41	707.83	747.59	798.29	853.71	855.15	829.90	763.34	635.65	665.34	699.00	743.92	783.28
42.50°	757.93	748.38	703.10	650.78	653.04	688.33	730.04	777.83	831.11	831.60	806.83	743.25	611.98	644.89	679.02	722.13	757.93
45.00°	731.11	720.14	672.71	616.79	630.47	666.68	709.60	756.42	807.09	806.87	779.20	721.19	583.69	623.87	658.26	698.27	731.11
47.50°	703.86	691.29	641.33	582.76	607.21	644.75	689.17	734.26	782.39	780.90	751.22	695.39	550.60	599.15	635.71	673.93	703.86
50.00°	675.88	661.14	609.33	548.47	582.20	622.24	668.74	711.16	756.73	753.57	721.54	667.50	512.76	570.08	611.84	648.70	675.88
52.50°	647.05	630.73	576.21	513.64	555.28	597.79	647.31	686.98	729.96	725.43	691.57	635.46	474.10	537.47	585.29	622.51	647.05
55.00°	617.00	599.86	542.50	476.44	524.35	569.94	622.99	661.64	701.90	696.54	660.54	601.52	434.75	501.26	557.04	594.82	617.00
57.50°	586.51	568.02	508.12	439.19	490.72	540.51	597.83	635.59	673.31	666.36	629.01	566.27	395.03	464.36	525.49	566.23	586.51
60.00°	555.49	534.71	473.45	401.82	452.43	508.80	570.66	608.91	644.20	635.16	596.02	530.52	355.07	426.86	492.22	536.44	555.49
62.50°	523.66	501.30	438.30	364.30	413.90	474.48	542.55	580.72	614.21	604.08	562.31	493.33	314.38	389.01	457.51	505.78	523.66
65.00°	490.99	467.77	402.98	326.38	375.02	437.03	512.59	551.38	583.48	573.08	526.88	455.70	273.26	350.91	422.17	474.16	490.99
67.50°	458.03	434.03	366.50	288.49	335.02	399.42	480.92	520.89	551.62	539.91	491.22	417.91	232.52	312.26	386.32	442.14	458.03
70.00°	424.83	400.06	329.69	250.66	293.65	361.63	446.45	489.66	518.97	505.50	455.11	380.08	191.97	273.27	350.29	409.75	424.83
72.50°	392.25	366.88	295.04	213.72	253.20	323.32	411.43	457.69	485.93	470.91	418.99	341.23	152.70	235.60	315.35	377.70	392.25
75.00°	360.14	334.40	260.87	178.39	213.71	284.55	375.66	425.32	452.67	436.23	382.83	302.19	113.96	198.60	280.71	345.93	360.14
77.50°	330.68	303.79	230.08	145.53	174.50	246.76	340.02	392.96	420.06	402.32	347.00	263.91	79.26	166.10	250.26	316.43	330.68
80.00°	302.87	274.65	199.82	116.49	135.54	209.70	304.52	360.60	387.76	368.70	311.63	225.72	45.92	135.51	220.73	288.48	302.87
82.50°	280.88	251.48	179.06	93.57	99.48	175.20	270.71	329.45	356.78	336.54	277.36	190.30	24.61	112.53	199.79	265.80	280.88
85.00°	261.97	232.24	159.26	78.56	65.58	142.27	238.58	298.74	326.34	304.84	244.38	155.10	6.46	92.12	180.19	246.19	261.97
87.50°	252.51	222.36	154.71	70.08	38.43	115.77	210.83	272.89	299.35	278.26	215.82	127.82	2.65	84.99	174.10	236.25	252.51
90.00°	247.16	217.58	151.04	68.77	15.47	92.57	186.76	248.51	273.51	252.91	191.64	100.92	1.64	81.34	169.49	230.93	247.16
92.50°	242.17	213.61	148.79	68.01	5.22	81.04	171.78	234.98	258.33	238.80	175.92	88.66	1.28	79.31	166.53	226.23	242.17
95.00°	237.30	210.02	146.52	67.78	1.67	74.57	163.14	223.93	245.92	226.78	167.24	77.01	1.01	77.60	163.66	221.76	237.30
97.50°	232.46	206.18	142.92	65.52	0.65	72.17	158.53	219.20	239.83	221.81	161.81	76.02	1.05	76.32	159.48	217.29	232.46
100.00°	227.63	202.23	139.11	61.68	0.71	71.19	156.32	215.50	235.03	217.74	158.72	74.91	1.13	75.10	155.17	212.81	227.63
102.50°	220.60	195.08	132.39	52.40	0.75	69.64	153.51	211.18	229.87	212.45	155.22	72.73	1.17	66.59	147.15	205.34	220.60
105.00°	213.10	186.94	126.07	39.47	0.77	67.94	150.42	206.78	224.66	207.07	151.48	69.92	1.22	57.36	139.41	197.12	213.10

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	4368	4368	4368	4368	4210	4210	4210	4210	3914	3914	3914	3643	3643	3643	3395	3395	3278
	1	3905	3693	3504	3333	3749	3559	3387	3232	3306	3167	3040	3074	2962	2859	2860	2772	2669
	2	3518	3173	2889	2649	3369	3058	2799	2579	2843	2629	2444	2644	2469	2315	2460	2318	2229
	3	3188	2760	2428	2164	3049	2662	2358	2113	2477	2222	2012	2306	2094	1915	2147	1972	1895
	4	2906	2427	2076	1809	2778	2343	2019	1769	2184	1909	1691	2037	1804	1616	1900	1705	1638
	5	2662	2155	1801	1539	2546	2083	1754	1508	1946	1663	1446	1819	1576	1386	1700	1493	1436
	6	2452	1931	1581	1330	2345	1868	1542	1305	1750	1466	1254	1639	1393	1205	1536	1323	1273
	7	2268	1743	1402	1164	2171	1688	1369	1143	1585	1305	1101	1489	1243	1060	1398	1183	1140
	8	2106	1584	1255	1029	2019	1536	1227	1012	1446	1172	976	1361	1119	942	1281	1067	1030
	9	1964	1449	1133	919	1885	1407	1108	904	1327	1061	874	1252	1015	844	1181	970	937
	10	1838	1332	1029	827	1766	1295	1008	814	1224	966	788	1158	926	763	1095	887	858

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	30.3 fc	27.1 ft
6.5 ft	21.7 fc	32.1 ft
7.5 ft	16.3 fc	37.0 ft
8.0 ft	14.3 fc	39.5 ft
10.0 ft	9.2 fc	49.3 ft
12.0 ft	6.4 fc	59.2 ft
14.0 ft	4.7 fc	69.0 ft
16.0 ft	3.6 fc	78.9 ft
20.0 ft	2.3 fc	98.6 ft
24.0 ft	1.6 fc	118.4 ft
28.0 ft	1.2 fc	138.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	7469	7469	7469
45.00°	5351	5385	6941
55.00°	4814	4733	6981
65.00°	4239	3998	6567
75.00°	3604	3108	5719
85.00°	3233	2468	3977

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	19.2	18.3	19.8	20.4	16.2	17.6	16.7	18.2	18.8
	3H	20.2	21.5	20.7	22.1	22.7	17.6	18.9	18.2	19.5	20.1
	4H	21.3	22.6	21.9	23.1	23.8	18.0	19.3	18.6	19.9	20.5
	6H	22.5	23.6	23.1	24.2	24.9	18.3	19.4	18.9	20.0	20.7
	8H	23.0	24.2	23.7	24.8	25.5	18.3	19.4	18.9	20.1	20.7
	12H	23.7	24.8	24.3	25.4	26.1	18.3	19.4	19.0	20.0	20.7
4H	2H	18.1	19.4	18.7	20.0	20.6	17.2	18.5	17.8	19.1	19.7
	3H	20.7	21.8	21.3	22.4	23.1	19.0	20.0	19.6	20.6	21.3
	4H	22.0	23.0	22.6	23.6	24.3	19.6	20.6	20.2	21.2	21.9
	6H	23.3	24.2	24.0	24.9	25.6	20.0	20.9	20.6	21.5	22.2
	8H	24.0	24.8	24.7	25.5	26.2	20.1	20.9	20.7	21.5	22.3
	12H	24.8	25.6	25.5	26.2	27.0	20.1	20.9	20.8	21.5	22.3
8H	4H	22.2	23.0	22.8	23.6	24.4	20.4	21.2	21.0	21.8	22.6
	6H	23.6	24.3	24.3	25.0	25.8	21.0	21.7	21.7	22.4	23.1
	8H	24.5	25.1	25.1	25.8	26.5	21.2	21.8	21.9	22.5	23.3
	12H	25.4	26.0	26.1	26.7	27.5	21.3	21.9	22.0	22.6	23.4
12H	4H	22.1	22.9	22.8	23.6	24.3	20.6	21.3	21.2	22.0	22.7
	6H	23.6	24.3	24.3	24.9	25.7	21.3	21.9	22.0	22.6	23.4
	8H	24.5	25.1	25.2	25.8	26.6	21.6	22.2	22.3	22.9	23.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0