

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

EV04IND4GL 05L 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	15.2 W
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Lumen Output

Output Lumens	1724
Efficacy	113.42 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

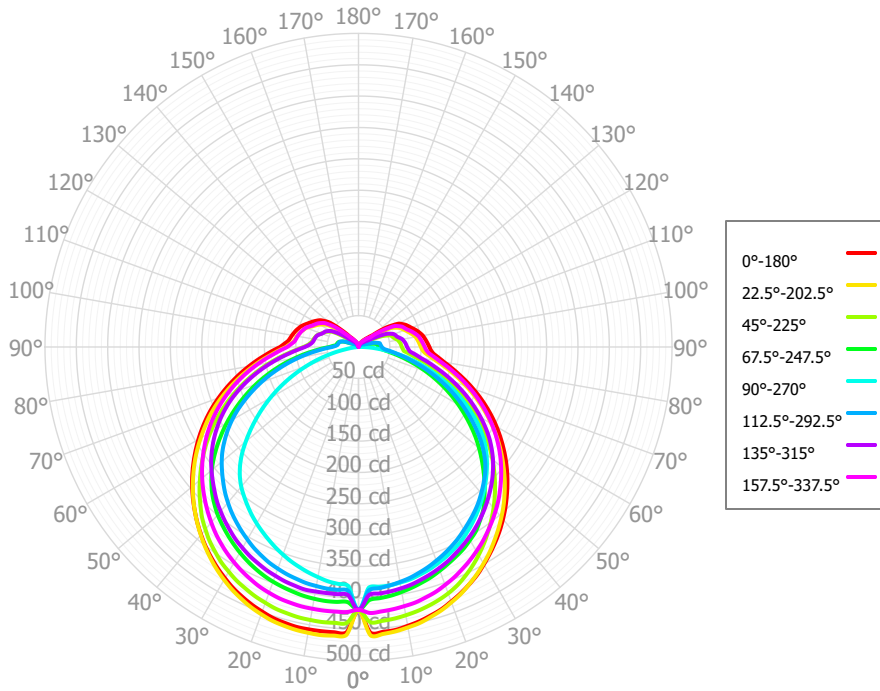
Full Beam Angle

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 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
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°	40.50	2.35%	90.00° - 100.00°	72.75	4.22%
10.00° - 20.00°	116.09	6.73%	100.00° - 110.00°	61.56	3.57%
20.00° - 30.00°	180.51	10.47%	100.00° - 120.00°	107.20	6.22%
30.00° - 40.00°	225.83	13.10%	120.00° - 130.00°	26.51	1.54%
40.00° - 50.00°	246.67	14.31%	130.00° - 140.00°	10.82	0.63%
50.00° - 60.00°	239.24	13.88%	140.00° - 150.00°	4.46	0.26%
60.00° - 70.00°	204.32	11.85%	150.00° - 160.00°	1.73	0.10%
70.00° - 80.00°	149.85	8.69%	160.00° - 170.00°	0.46	0.03%
80.00° - 90.00°	96.99	5.63%	170.00° - 180.00°	0.08	0.00%
0.00° - 90.00°	1500.01	87.01%	0.00° - 180.00°	1724.02	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°	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18	419.18
2.50°	456.70	461.02	439.49	403.88	383.96	388.81	395.66	423.08	456.12	460.33	440.77	407.10	381.18	388.15	395.59	424.63	456.70
5.00°	455.91	459.22	438.38	401.89	383.76	388.69	395.68	423.60	456.64	462.04	441.58	408.05	379.14	385.90	394.47	423.29	455.91
7.50°	455.04	457.27	436.90	399.83	383.41	388.56	395.72	424.04	457.13	463.42	442.45	408.46	376.75	383.54	393.09	421.87	455.04
10.00°	451.62	454.10	434.46	396.63	381.57	387.12	395.94	423.90	457.30	462.85	442.14	407.69	372.64	380.51	390.85	419.74	451.62
12.50°	448.11	450.87	431.60	393.17	379.66	385.63	396.19	423.57	457.21	462.04	441.59	406.36	368.36	377.24	388.16	417.51	448.11
15.00°	443.54	445.59	427.83	389.09	376.13	382.84	394.02	422.09	455.40	460.13	439.79	404.03	363.49	372.81	384.29	413.59	443.54
17.50°	438.71	440.20	423.49	384.89	372.56	379.97	391.66	420.28	453.18	457.71	437.82	401.41	358.32	368.16	380.18	409.50	438.71
20.00°	432.09	433.36	418.17	379.53	367.75	376.21	388.22	417.07	449.08	453.57	434.18	398.37	352.29	362.70	375.58	403.83	432.09
22.50°	425.32	426.32	411.54	374.04	362.87	372.25	384.73	413.40	444.68	448.92	430.42	394.57	346.00	357.04	370.44	398.00	425.32
25.00°	417.76	417.58	403.01	368.40	357.19	366.86	380.25	408.30	439.20	442.91	425.44	389.80	339.11	350.76	364.35	391.08	417.76
27.50°	409.78	408.68	393.63	362.76	351.28	361.26	375.71	402.89	433.23	436.39	420.41	384.41	332.09	344.15	358.09	383.99	409.78
30.00°	400.11	398.80	383.21	355.60	343.49	354.46	370.03	396.65	425.82	428.71	413.83	378.36	324.81	336.69	351.60	376.17	400.11
32.50°	390.33	388.67	372.06	348.34	335.59	347.54	364.23	389.99	418.08	420.51	407.18	371.78	317.09	329.23	344.55	368.10	390.33
35.00°	380.19	377.49	360.17	337.74	327.02	340.13	357.10	382.47	409.60	411.35	398.68	364.70	308.63	321.76	336.83	359.13	380.19
37.50°	369.72	366.19	347.85	326.91	318.24	332.45	349.88	374.39	400.63	401.71	390.03	357.18	299.92	313.64	328.62	350.00	369.72
40.00°	358.45	354.50	335.15	312.42	308.63	323.92	342.12	365.32	390.68	391.34	379.79	349.33	290.89	304.48	319.88	340.44	358.45
42.50°	346.85	342.48	321.76	297.81	298.85	315.00	334.08	355.95	380.34	380.56	369.23	340.13	280.06	295.12	310.74	330.47	346.85
45.00°	334.57	329.55	307.85	282.26	288.52	305.09	324.73	346.16	369.35	369.25	356.58	330.04	267.11	285.50	301.24	319.55	334.57
47.50°	322.11	316.36	293.49	266.69	277.88	295.05	315.38	336.02	358.04	357.36	343.78	318.23	251.97	274.19	290.92	308.41	322.11
50.00°	309.30	302.56	278.85	250.99	266.43	284.76	306.03	325.45	346.30	344.85	330.19	305.46	234.65	260.89	280.00	296.86	309.30
52.50°	296.11	288.64	263.69	235.06	254.11	273.56	296.23	314.38	334.05	331.98	316.48	290.80	216.96	245.96	267.84	284.88	296.11
55.00°	282.35	274.51	248.26	218.03	239.96	260.82	285.10	302.78	321.21	318.75	302.28	275.27	198.95	229.39	254.92	272.20	282.35
57.50°	268.40	259.94	232.53	200.99	224.57	247.35	273.58	290.86	308.13	304.94	287.85	259.14	180.78	212.50	240.48	259.12	268.40
60.00°	254.21	244.70	216.66	183.88	207.04	232.84	261.15	278.65	294.80	290.67	272.75	242.78	162.49	195.34	225.25	245.49	254.21
62.50°	239.64	229.41	200.58	166.71	189.41	217.13	248.29	265.75	281.08	276.45	257.33	225.76	143.87	178.02	209.37	231.46	239.64
65.00°	224.69	214.06	184.42	149.36	171.62	200.00	234.58	252.33	267.02	262.26	241.11	208.54	125.05	160.59	193.20	216.99	224.69
67.50°	209.61	198.62	167.72	132.02	153.31	182.78	220.08	238.37	252.44	247.08	224.80	191.25	106.41	142.90	176.79	202.34	209.61
70.00°	194.41	183.08	150.88	114.71	134.38	165.49	204.31	224.08	237.49	231.33	208.27	173.94	87.85	125.05	160.30	187.51	194.41
72.50°	179.50	167.89	135.02	97.80	115.87	147.96	188.28	209.45	222.38	215.50	191.74	156.16	69.88	107.82	144.31	172.84	179.50
75.00°	164.81	153.03	119.38	81.64	97.80	130.22	171.91	194.64	207.16	199.63	175.19	138.29	52.15	90.88	128.46	158.31	164.81
77.50°	151.33	139.02	105.29	66.60	79.86	112.92	155.60	179.83	192.23	184.11	158.80	120.77	36.27	76.01	114.53	144.81	151.33
80.00°	138.60	125.69	91.45	53.31	62.03	95.97	139.36	165.02	177.45	168.73	142.61	103.30	21.02	62.01	101.01	132.02	138.60
82.50°	128.54	115.08	81.94	42.82	45.53	80.17	123.89	150.77	163.27	154.01	126.93	87.09	11.26	51.50	91.43	121.64	128.54
85.00°	119.88	106.28	72.88	35.95	30.01	65.11	109.18	136.71	149.34	139.50	111.84	70.98	2.96	42.16	82.46	112.67	119.88
87.50°	115.56	101.76	70.80	32.07	17.59	52.98	96.48	124.88	136.99	127.34	98.76	58.50	1.21	38.89	79.67	108.11	115.56
90.00°	113.11	99.57	69.12	31.47	7.08	42.36	85.47	113.72	125.17	115.74	87.70	46.19	0.75	37.22	77.56	105.68	113.11
92.50°	110.82	97.76	68.09	31.13	2.39	37.09	78.61	107.53	118.22	109.28	80.51	40.57	0.59	36.29	76.21	103.53	110.82
95.00°	108.59	96.11	67.05	31.02	0.77	34.13	74.66	102.48	112.54	103.78	76.53	35.24	0.46	35.51	74.90	101.48	108.59
97.50°	106.38	94.35	65.40	29.99	0.30	33.03	72.55	100.31	109.75	101.51	74.05	34.79	0.48	34.93	72.98	99.44	106.38
100.00°	104.17	92.55	63.66	28.23	0.33	32.58	71.54	98.62	107.56	99.65	72.64	34.28	0.52	34.37	71.01	97.39	104.17
102.50°	100.95	89.27	60.59	23.98	0.34	31.87	70.25	96.64	105.20	97.22	71.03	33.28	0.54	30.47	67.34	93.97	100.95
105.00°	97.52	85.55	57.70	18.06	0.35	31.09	68.83	94.63	102.81	94.76	69.32	32.00	0.56	26.25	63.80	90.21	97.52

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	1999	1999	1999	1999	1927	1927	1927	1927	1791	1791	1791	1667	1667	1667	1553	1553	1500
	1	1787	1690	1603	1525	1715	1628	1550	1479	1513	1449	1391	1407	1356	1308	1309	1268	1221
	2	1610	1452	1322	1212	1542	1400	1281	1180	1301	1203	1118	1210	1130	1059	1126	1061	1020
	3	1459	1263	1111	990	1395	1218	1079	967	1133	1017	921	1055	958	877	983	902	867
	4	1330	1111	950	828	1271	1072	924	810	1000	874	774	932	826	740	870	780	750
	5	1218	986	824	704	1165	953	803	690	891	761	662	832	721	634	778	683	657
	6	1122	884	724	609	1073	855	706	597	801	671	574	750	637	551	703	605	583
	7	1038	798	642	533	994	773	627	523	725	597	504	681	569	485	640	541	522
	8	964	725	574	471	924	703	561	463	662	536	447	623	512	431	586	488	471
	9	899	663	518	421	862	644	507	414	607	485	400	573	464	386	540	444	429
	10	841	610	471	379	808	593	461	373	560	442	361	530	424	349	501	406	393

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.9 fc	27.1 ft
6.5 ft	9.9 fc	32.1 ft
7.5 ft	7.5 fc	37.0 ft
8.0 ft	6.5 fc	39.5 ft
10.0 ft	4.2 fc	49.3 ft
12.0 ft	2.9 fc	59.2 ft
14.0 ft	2.1 fc	69.0 ft
16.0 ft	1.6 fc	78.9 ft
20.0 ft	1.0 fc	98.6 ft
24.0 ft	0.7 fc	118.4 ft
28.0 ft	0.5 fc	138.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3418	3418	3418
45.00°	2449	2464	3176
55.00°	2203	2166	3195
65.00°	1940	1829	3005
75.00°	1649	1422	2617
85.00°	1480	1129	1820

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	13.5	14.9	14.0	15.5	16.1
	3H	17.5	18.8	18.0	19.4	20.0	14.9	16.2	15.4	16.8	17.4
	4H	18.6	19.8	19.2	20.4	21.1	15.3	16.6	15.9	17.1	17.8
	6H	19.7	20.9	20.3	21.5	22.2	15.6	16.7	16.2	17.3	18.0
	8H	20.3	21.4	20.9	22.1	22.8	15.6	16.7	16.2	17.3	18.0
	12H	21.0	22.1	21.6	22.7	23.4	15.6	16.7	16.2	17.3	18.0
4H	2H	15.4	16.7	16.0	17.2	17.9	14.5	15.8	15.1	16.3	17.0
	3H	18.0	19.1	18.6	19.7	20.4	16.2	17.3	16.8	17.9	18.6
	4H	19.3	20.3	19.9	20.9	21.6	16.9	17.8	17.5	18.5	19.2
	6H	20.6	21.5	21.3	22.1	22.9	17.3	18.1	17.9	18.8	19.5
	8H	21.3	22.1	22.0	22.8	23.5	17.4	18.2	18.0	18.8	19.6
	12H	22.1	22.8	22.8	23.5	24.3	17.4	18.2	18.1	18.8	19.6
8H	4H	19.4	20.3	20.1	20.9	21.6	17.7	18.5	18.3	19.1	19.9
	6H	20.9	21.6	21.6	22.3	23.0	18.3	19.0	19.0	19.7	20.4
	8H	21.7	22.4	22.4	23.1	23.8	18.5	19.1	19.2	19.8	20.6
	12H	22.7	23.3	23.4	23.9	24.8	18.6	19.2	19.3	19.9	20.7
12H	4H	19.4	20.2	20.1	20.8	21.6	17.9	18.6	18.5	19.3	20.0
	6H	20.9	21.6	21.6	22.2	23.0	18.6	19.2	19.3	19.9	20.7
	8H	21.8	22.4	22.5	23.1	23.9	18.9	19.5	19.6	20.2	21.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0