

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

EV320IND48OL 05L 35K EX DW XX MW
Evenlight 4.5" Wide x 48" linear surface or wall mount luminaire

Test Number

SP-00617_1_M-05L

Test Date

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

Summary of Results

Power

Input Watts	16 W
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Lumen Output

Output Lumens	1835
Efficacy	114.67 lm/W

Luminous Dimensions

0° - 180° Size	4.17
90° - 270° Size	0.42
Height	0.17

Spacing Criterion

Two luminaires, plane 0°	1.21
Two luminaires, plane 90°	1.39
Four luminaires	1.45

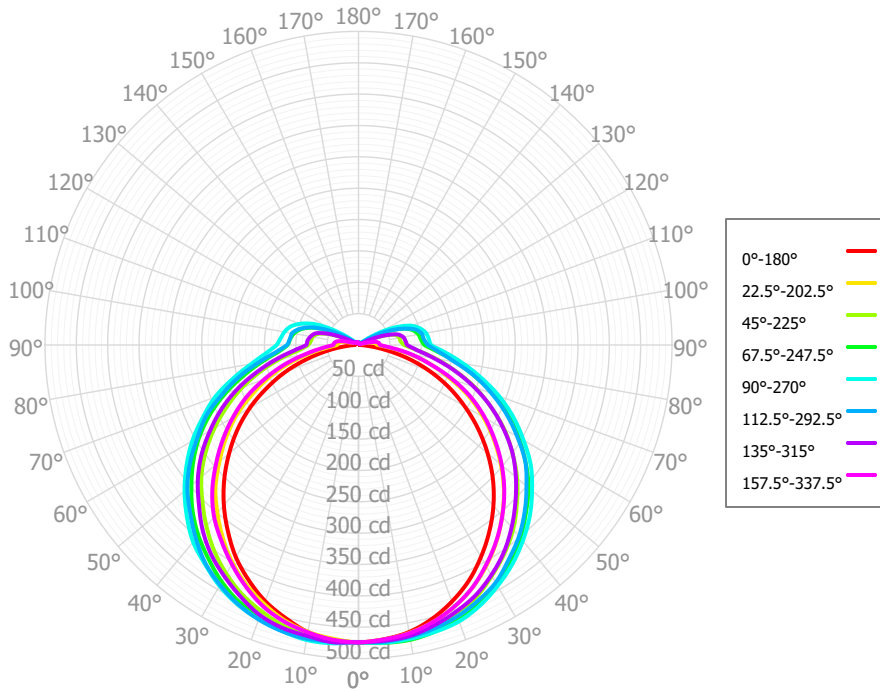
Full Beam Angle

0° - 180°	109°
90° - 270°	141°

IES File Header Contents

Keyword	Value
TEST	SP-00617_1_M-05L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	9/22/2017
UPDATE	3/9/2020
LUMCAT	EV320IND48OL 05L 35K EX DW XX MW
LUMINAIRE	Evenlight 4.5" Wide x 48" linear surface or wall mount luminaire
OTHER	48" Linear LED, Frosted Acrylic Lens
OTHER	Matte White interior finish
OTHER	112 Degree Beam Angle
LAMPCAT	N/A
LAMP	N/A, 512 Source Lms/Ft
OTHER	Total Luminaire Watts is approximate
OTHER	Tested CCT: 3500K
OTHER	CCT Output Multipliers: 30K x 0.972, 40K x 1.018, 50K x 1.087
OTHER	This report prepared by Spectrum Lighting, scaled from 10L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	47.88	2.61%	90.00° - 100.00°	75.05	4.09%
10.00° - 20.00°	130.66	7.12%	100.00° - 110.00°	60.52	3.30%
20.00° - 30.00°	201.98	11.01%	100.00° - 120.00°	92.16	5.02%
30.00° - 40.00°	250.09	13.63%	120.00° - 130.00°	8.48	0.46%
40.00° - 50.00°	270.37	14.74%	130.00° - 140.00°	3.08	0.17%
50.00° - 60.00°	261.45	14.25%	140.00° - 150.00°	2.40	0.13%
60.00° - 70.00°	223.97	12.21%	150.00° - 160.00°	1.75	0.10%
70.00° - 80.00°	163.12	8.89%	160.00° - 170.00°	1.07	0.06%
80.00° - 90.00°	100.83	5.50%	170.00° - 180.00°	0.39	0.02%
0.00° - 90.00°	1,650.35	89.95%	0.00° - 180.00°	1,834.72	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°	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25	474.25
5.00°	471.03	471.74	475.14	476.76	476.46	474.79	475.88	471.81	471.86	470.15	475.05	473.87	477.53	475.28	473.49	471.31	471.03
10.00°	464.82	466.46	472.36	477.27	475.69	475.67	471.12	465.30	464.81	464.61	471.01	474.07	477.59	472.54	471.10	466.85	464.82
15.00°	452.30	457.56	465.93	473.04	473.45	472.44	467.24	456.80	450.56	454.74	463.19	469.54	471.99	467.94	463.27	457.57	452.30
20.00°	435.44	444.68	458.04	466.65	468.99	465.82	458.74	443.86	434.77	439.57	452.04	460.56	465.19	460.68	453.08	444.67	435.44
25.00°	415.37	428.23	444.02	455.63	458.42	455.67	443.52	425.14	414.03	422.25	438.90	451.42	456.49	450.34	440.90	427.97	415.37
30.00°	390.49	407.21	425.18	441.43	443.70	441.72	426.78	403.80	390.97	401.39	421.40	436.09	443.48	437.51	423.70	406.04	390.49
35.00°	363.61	383.30	405.80	423.73	427.20	425.36	408.90	381.24	362.95	376.67	400.94	416.77	426.78	417.72	403.91	382.62	363.61
40.00°	334.73	356.31	383.74	401.41	407.66	403.28	386.42	358.18	333.96	350.04	377.32	397.05	410.25	398.26	379.87	356.59	334.73
45.00°	303.22	327.87	357.20	377.67	386.22	379.40	359.87	329.76	302.71	322.69	352.12	374.26	387.02	374.96	353.91	328.71	303.22
50.00°	268.83	296.29	330.14	354.05	361.24	356.28	334.44	296.94	269.42	289.48	327.17	347.85	362.05	349.77	327.59	298.23	268.83
55.00°	232.76	263.57	299.59	325.23	335.54	327.98	305.76	264.38	235.76	257.75	297.52	321.43	334.72	324.90	299.74	265.81	232.76
60.00°	195.48	229.72	268.29	294.53	303.98	296.80	273.25	231.38	199.64	224.92	265.10	293.03	306.04	292.34	267.05	233.08	195.48
65.00°	158.51	194.36	232.54	263.05	272.50	268.09	240.87	197.80	160.47	187.51	230.96	261.19	274.02	260.14	232.79	198.34	158.51
70.00°	119.82	154.62	197.58	228.35	238.60	231.78	205.49	159.77	122.71	152.33	196.86	226.17	243.60	225.96	196.12	159.14	119.82
75.00°	80.15	119.04	159.72	191.69	202.62	197.44	168.24	123.50	83.09	115.80	161.05	190.05	207.22	192.03	158.85	118.56	80.15
80.00°	41.01	82.77	124.78	158.36	169.13	162.00	133.69	87.07	47.31	80.65	127.03	156.94	173.33	155.63	122.62	85.22	41.01
85.00°	12.67	50.32	93.08	127.20	139.01	132.32	103.35	58.66	19.25	50.44	95.46	128.67	147.57	129.11	93.48	52.75	12.67
90.00°	2.95	30.52	73.00	105.12	115.85	114.05	83.47	40.35	5.85	34.21	80.30	113.23	130.55	110.74	77.76	34.25	2.95
95.00°	1.98	27.10	67.38	100.00	112.51	109.88	81.56	38.73	4.88	32.70	76.15	109.37	124.63	104.61	75.24	32.82	1.98
100.00°	2.60	23.39	66.06	97.09	109.29	107.55	77.55	34.13	5.44	28.69	74.20	104.80	119.90	102.53	72.56	28.69	2.60
105.00°	1.80	13.23	61.99	90.41	101.86	98.22	71.34	21.88	5.29	15.97	67.95	96.09	112.73	94.62	64.89	14.11	1.80
110.00°	2.20	6.15	43.78	76.76	89.73	82.20	53.21	10.29	5.00	10.57	51.34	80.76	98.91	76.23	44.71	6.11	2.20
115.00°	1.77	4.43	21.53	54.31	67.94	58.84	28.32	8.54	4.89	8.63	26.97	59.88	79.53	53.97	19.82	4.05	1.77
120.00°	1.77	3.34	5.76	31.97	41.85	32.90	10.82	7.52	4.93	6.46	9.35	34.94	51.76	28.42	3.80	2.78	1.77
125.00°	2.18	2.77	3.25	7.94	15.62	11.59	6.12	6.37	5.40	6.15	6.04	13.11	23.67	8.57	2.68	2.83	2.18
130.00°	2.15	2.52	2.64	2.64	3.06	5.61	5.53	4.88	4.70	5.42	5.93	6.47	6.88	2.33	2.81	2.00	2.15
135.00°	1.79	2.35	2.80	3.09	2.72	5.44	5.75	4.56	4.47	4.99	5.40	6.47	5.49	2.50	2.97	2.20	1.79
140.00°	2.06	2.72	3.15	2.78	2.67	5.85	5.92	4.99	4.85	4.83	4.57	5.45	5.49	2.47	2.46	2.28	2.06
145.00°	2.38	2.72	2.95	2.58	3.08	5.77	5.05	5.01	4.33	4.67	4.57	4.93	5.24	2.52	2.36	2.49	2.38
150.00°	2.36	2.41	3.55	2.56	3.47	5.07	4.55	4.38	4.26	4.81	4.23	4.83	5.72	2.84	2.97	2.56	2.36
155.00°	2.62	2.42	3.37	2.61	3.48	4.89	4.82	4.04	4.87	4.86	4.19	5.15	5.45	2.91	2.75	2.24	2.62
160.00°	2.72	2.75	3.22	3.23	3.48	4.91	4.58	3.77	4.06	4.42	4.76	5.26	5.34	3.20	2.44	2.84	2.72
165.00°	2.44	3.09	3.71	3.55	3.11	4.58	4.16	3.87	3.45	4.11	4.69	4.54	5.19	3.80	2.64	2.97	2.44
170.00°	3.00	3.01	3.29	4.19	4.53	4.11	3.61	3.41	3.43	3.78	3.80	4.49	5.10	3.72	3.55	3.05	3.00
175.00°	3.13	2.77	3.44	3.50	4.18	4.86	3.97	3.94	3.50	4.47	4.72	4.23	4.83	3.44	3.66	3.31	3.13
180.00°	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2,140	2,140	2,140	2,140	2,069	2,069	2,069	2,069	1,936	1,936	1,936	1,815	1,815	1,815	1,703	1,703	1,703
	1	1,915	1,813	1,720	1,637	1,845	1,752	1,669	1,593	1,639	1,571	1,509	1,535	1,480	1,429	1,439	1,396	1,355
	2	1,726	1,558	1,420	1,303	1,659	1,507	1,380	1,273	1,411	1,305	1,215	1,322	1,235	1,159	1,239	1,169	1,106
	3	1,565	1,356	1,195	1,066	1,502	1,312	1,164	1,044	1,230	1,105	1,002	1,154	1,049	961	1,083	996	921
	4	1,427	1,194	1,023	892	1,369	1,156	998	876	1,086	950	843	1,020	905	812	959	862	781
	5	1,308	1,061	888	760	1,255	1,029	868	748	968	829	722	912	792	697	859	756	673
	6	1,205	951	781	658	1,157	924	764	648	871	732	627	822	700	607	777	671	588
	7	1,116	859	693	577	1,072	836	679	568	790	652	552	748	626	535	708	601	519
	8	1,037	782	621	511	997	761	610	504	721	586	490	684	564	476	649	542	462
	9	967	716	562	457	931	697	551	451	663	531	439	630	512	428	599	493	416
	10	906	659	511	413	873	643	502	407	612	485	397	583	468	387	555	452	377

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	15.7 fc	22.7 ft
6.5 ft	11.2 fc	26.8 ft
7.5 ft	8.4 fc	31.0 ft
8.0 ft	7.4 fc	33.0 ft
10.0 ft	4.7 fc	41.3 ft
12.0 ft	3.3 fc	49.5 ft
14.0 ft	2.4 fc	57.8 ft
16.0 ft	1.9 fc	66.0 ft
20.0 ft	1.2 fc	82.6 ft
24.0 ft	0.8 fc	99.1 ft
28.0 ft	0.6 fc	115.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2,915	2,915	2,915
45.00°	2,532	2,361	2,390
55.00°	2,357	2,214	2,278
65.00°	2,120	2,018	2,121
75.00°	1,652	1,743	1,916
85.00°	609	1,427	1,742

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	12.8	14.3	13.3	14.8	15.4	15.5	16.9	16.0	17.5	18.0
	3H	14.3	15.6	14.8	16.2	16.8	18.0	19.3	18.5	19.9	20.5
	4H	14.7	16.0	15.3	16.6	17.2	19.2	20.4	19.7	21.0	21.6
	6H	15.0	16.2	15.5	16.7	17.3	20.3	21.5	20.9	22.1	22.7
	8H	15.0	16.2	15.6	16.7	17.4	20.9	22.1	21.5	22.7	23.3
	12H	15.0	16.1	15.6	16.7	17.3	21.6	22.7	22.2	23.3	23.9
4H	2H	13.8	15.1	14.4	15.7	16.3	15.9	17.2	16.4	17.7	18.3
	3H	15.6	16.7	16.1	17.2	17.9	18.6	19.7	19.2	20.3	20.9
	4H	16.2	17.2	16.7	17.8	18.4	20.0	21.0	20.5	21.6	22.2
	6H	16.5	17.4	17.1	18.0	18.7	21.3	22.2	21.9	22.8	23.5
	8H	16.6	17.5	17.2	18.1	18.7	22.0	22.9	22.6	23.5	24.2
	12H	16.6	17.4	17.3	18.0	18.7	22.8	23.6	23.4	24.2	24.9
8H	4H	16.9	17.7	17.5	18.3	19.0	20.2	21.0	20.8	21.6	22.3
	6H	17.5	18.2	18.1	18.8	19.5	21.7	22.4	22.3	23.1	23.7
	8H	17.6	18.3	18.3	18.9	19.6	22.5	23.2	23.2	23.8	24.5
	12H	17.7	18.3	18.4	19.0	19.7	23.5	24.0	24.1	24.7	25.4
12H	4H	17.1	17.9	17.7	18.5	19.2	20.2	20.9	20.8	21.6	22.3
	6H	17.8	18.4	18.4	19.0	19.8	21.7	22.4	22.4	23.0	23.8
	8H	18.0	18.6	18.7	19.2	20.0	22.6	23.2	23.3	23.8	24.6

Corrected UGR values based on total output lumens

SHR = 1.0