

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

EV320IND48OL 07L 35K EX DW XX MW
Evenlight 4.5" Wide x 48" linear surface or wall mount luminaire

Test Number

SP-00617_1_M-07L

Test Date

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

Summary of Results

Power

Input Watts	21.4 W
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Lumen Output

Output Lumens	2582
Efficacy	120.66 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

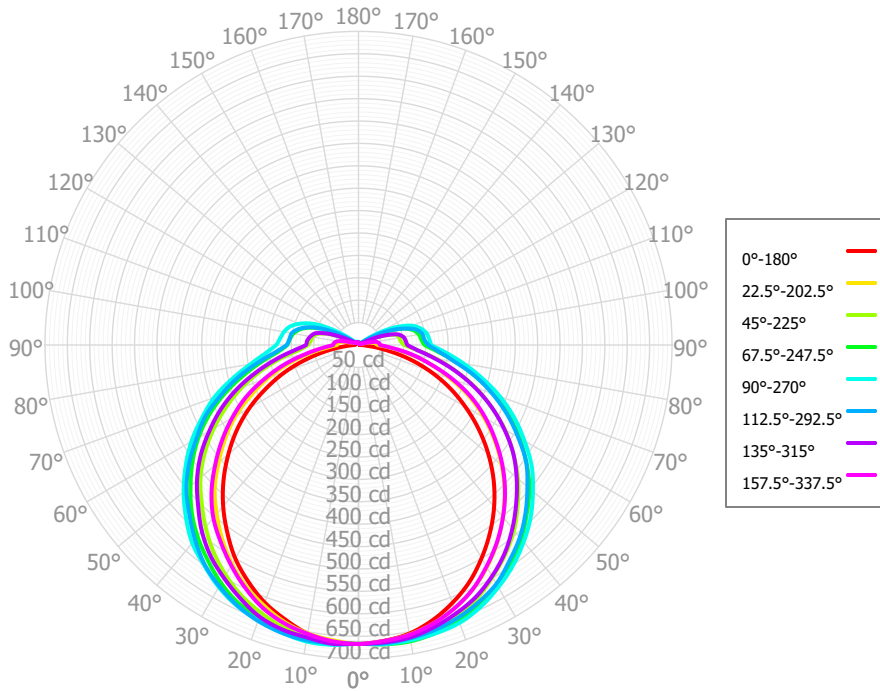
Full Beam Angle

0° - 180°	109°
90° - 270°	141°

IES File Header Contents

Keyword	Value
TEST	SP-00617_1_M-07L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	9/22/2017
UPDATE	3/9/2020
LUMCAT	EV320IND48OL 07L 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, 710 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 20L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	67.38	2.61%	90.00° - 100.00°	105.63	4.09%
10.00° - 20.00°	183.90	7.12%	100.00° - 110.00°	85.18	3.30%
20.00° - 30.00°	284.27	11.01%	100.00° - 120.00°	129.70	5.02%
30.00° - 40.00°	351.98	13.63%	120.00° - 130.00°	11.93	0.46%
40.00° - 50.00°	380.52	14.74%	130.00° - 140.00°	4.33	0.17%
50.00° - 60.00°	367.96	14.25%	140.00° - 150.00°	3.38	0.13%
60.00° - 70.00°	315.22	12.21%	150.00° - 160.00°	2.47	0.10%
70.00° - 80.00°	229.58	8.89%	160.00° - 170.00°	1.50	0.06%
80.00° - 90.00°	141.91	5.50%	170.00° - 180.00°	0.54	0.02%
0.00° - 90.00°	2,322.71	89.95%	0.00° - 180.00°	2,582.20	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°	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47	667.47
5.00°	662.93	663.93	668.72	671.00	670.57	668.22	669.75	664.03	664.10	661.69	668.59	666.92	672.08	668.92	666.39	663.33	662.93
10.00°	654.19	656.50	664.80	671.71	669.50	669.46	663.06	654.86	654.17	653.90	662.91	667.21	672.17	665.06	663.03	657.05	654.19
15.00°	636.57	643.97	655.75	665.76	666.34	664.92	657.60	642.90	634.13	640.01	651.90	660.84	664.28	658.58	652.00	643.98	636.57
20.00°	612.84	625.84	644.64	656.77	660.05	655.60	645.64	624.70	611.90	618.66	636.21	648.20	654.72	648.36	637.66	625.84	612.84
25.00°	584.60	602.70	624.91	641.26	645.19	641.31	624.21	598.35	582.71	594.28	617.72	635.33	642.47	633.82	620.52	602.32	584.60
30.00°	549.58	573.11	598.41	621.27	624.46	621.68	600.66	568.32	550.25	564.92	593.08	613.76	624.16	615.76	596.31	571.46	549.58
35.00°	511.75	539.46	571.13	596.36	601.24	598.65	575.48	536.55	510.82	530.13	564.29	586.56	600.65	587.91	568.47	538.51	511.75
40.00°	471.10	501.47	540.07	564.95	573.74	567.58	543.85	504.10	470.02	492.65	531.04	558.81	577.38	560.52	534.64	501.87	471.10
45.00°	426.76	461.44	502.73	531.54	543.57	533.97	506.48	464.11	426.04	454.16	495.57	526.73	544.70	527.72	498.09	462.63	426.76
50.00°	378.35	417.01	464.64	498.29	508.41	501.44	470.70	417.91	379.18	407.42	460.46	489.57	509.55	492.26	461.05	419.73	378.35
55.00°	327.58	370.95	421.65	457.73	472.23	461.60	430.33	372.09	331.80	362.77	418.73	452.38	471.09	457.26	421.86	374.10	327.58
60.00°	275.12	323.32	377.59	414.52	427.82	417.72	384.58	325.65	280.98	316.55	373.11	412.41	430.73	411.44	375.85	328.04	275.12
65.00°	223.08	273.54	327.28	370.22	383.53	377.32	339.00	278.38	225.85	263.90	325.06	367.60	385.66	366.13	327.62	279.15	223.08
70.00°	168.64	217.61	278.08	321.38	335.80	326.21	289.21	224.85	172.70	214.38	277.06	318.31	342.84	318.02	276.02	223.97	168.64
75.00°	112.81	167.54	224.79	269.78	285.17	277.88	236.78	173.82	116.95	162.98	226.66	267.48	291.65	270.27	223.56	166.86	112.81
80.00°	57.71	116.49	175.62	222.88	238.03	228.00	188.15	122.55	66.59	113.51	178.79	220.87	243.95	219.03	172.57	119.93	57.71
85.00°	17.83	70.82	131.00	179.02	195.65	186.23	145.46	82.57	27.10	70.99	134.35	181.09	207.70	181.71	131.56	74.24	17.83
90.00°	4.16	42.96	102.75	147.95	163.04	160.51	117.48	56.79	8.23	48.15	113.02	159.36	183.74	155.86	109.44	48.20	4.16
95.00°	2.79	38.14	94.83	140.74	158.34	154.64	114.79	54.51	6.87	46.02	107.17	153.93	175.40	147.23	105.90	46.19	2.79
100.00°	3.66	32.92	92.97	136.64	153.82	151.37	109.15	48.04	7.66	40.37	104.44	147.49	168.75	144.29	102.13	40.38	3.66
105.00°	2.53	18.62	87.24	127.25	143.36	138.23	100.40	30.79	7.44	22.48	95.64	135.24	158.66	133.17	91.33	19.86	2.53
110.00°	3.10	8.66	61.62	108.03	126.29	115.69	74.89	14.48	7.04	14.87	72.26	113.67	139.20	107.28	62.93	8.60	3.10
115.00°	2.49	6.23	30.30	76.44	95.62	82.81	39.85	12.02	6.89	12.15	37.95	84.27	111.93	75.96	27.90	5.70	2.49
120.00°	2.49	4.70	8.10	45.00	58.90	46.31	15.23	10.58	6.93	9.09	13.16	49.17	72.85	40.00	5.35	3.91	2.49
125.00°	3.07	3.90	4.57	11.18	21.98	16.31	8.61	8.97	7.59	8.66	8.50	18.45	33.32	12.06	3.77	3.98	3.07
130.00°	3.02	3.55	3.72	3.72	4.31	7.90	7.79	6.87	6.61	7.62	8.35	9.11	9.69	3.27	3.95	2.82	3.02
135.00°	2.52	3.31	3.94	4.36	3.83	7.66	8.09	6.42	6.29	7.02	7.60	9.11	7.73	3.52	4.18	3.10	2.52
140.00°	2.90	3.83	4.43	3.91	3.76	8.23	8.33	7.03	6.82	6.80	6.43	7.67	7.73	3.48	3.46	3.21	2.90
145.00°	3.35	3.83	4.16	3.63	4.34	8.12	7.10	7.05	6.09	6.58	6.43	6.94	7.38	3.55	3.33	3.51	3.35
150.00°	3.32	3.39	4.99	3.60	4.89	7.13	6.41	6.17	6.00	6.77	5.95	6.80	8.04	3.99	4.18	3.61	3.32
155.00°	3.69	3.40	4.75	3.67	4.90	6.88	6.78	5.69	6.86	6.83	5.90	7.25	7.67	4.10	3.87	3.16	3.69
160.00°	3.83	3.87	4.53	4.54	4.90	6.91	6.44	5.30	5.71	6.22	6.71	7.40	7.52	4.51	3.44	4.00	3.83
165.00°	3.43	4.34	5.23	5.00	4.37	6.45	5.85	5.44	4.86	5.79	6.60	6.38	7.31	5.35	3.72	4.18	3.43
170.00°	4.22	4.23	4.63	5.90	6.38	5.78	5.08	4.79	4.83	5.32	5.35	6.32	7.18	5.24	4.99	4.29	4.22
175.00°	4.41	3.90	4.83	4.93	5.88	6.84	5.59	5.55	4.93	6.29	6.65	5.95	6.80	4.85	5.15	4.66	4.41
180.00°	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32

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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	3,012	3,012	3,012	3,012	2,912	2,912	2,912	2,912	2,725	2,725	2,725	2,554	2,554	2,554	2,397	2,397	2,323
	1	2,696	2,551	2,421	2,304	2,596	2,466	2,349	2,242	2,307	2,211	2,123	2,160	2,083	2,012	2,025	1,964	1,899
	2	2,430	2,193	1,998	1,834	2,334	2,121	1,943	1,792	1,985	1,837	1,710	1,860	1,738	1,632	1,744	1,645	1,588
	3	2,202	1,909	1,681	1,500	2,114	1,847	1,638	1,469	1,731	1,555	1,410	1,624	1,476	1,352	1,525	1,402	1,297
	4	2,008	1,680	1,439	1,255	1,927	1,627	1,404	1,232	1,528	1,338	1,187	1,436	1,274	1,143	1,350	1,213	1,100
	5	1,841	1,493	1,250	1,070	1,767	1,448	1,221	1,052	1,363	1,167	1,016	1,283	1,114	981	1,209	1,064	947
	6	1,696	1,339	1,099	926	1,629	1,300	1,075	912	1,226	1,030	883	1,158	986	855	1,093	944	827
	7	1,570	1,210	976	812	1,508	1,176	956	800	1,112	918	776	1,052	881	753	996	845	730
	8	1,459	1,100	875	720	1,403	1,071	858	710	1,015	825	690	963	794	670	913	763	651
	9	1,362	1,007	790	644	1,311	982	776	635	932	748	618	886	721	602	843	694	585
	10	1,275	927	719	581	1,229	905	707	573	861	682	559	820	659	545	781	636	530

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	22.1 fc	22.7 ft
6.5 ft	15.8 fc	26.8 ft
7.5 ft	11.9 fc	31.0 ft
8.0 ft	10.4 fc	33.0 ft
10.0 ft	6.7 fc	41.3 ft
12.0 ft	4.6 fc	49.5 ft
14.0 ft	3.4 fc	57.8 ft
16.0 ft	2.6 fc	66.0 ft
20.0 ft	1.7 fc	82.6 ft
24.0 ft	1.2 fc	99.1 ft
28.0 ft	0.9 fc	115.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	4,102	4,102	4,102
45.00°	3,564	3,323	3,363
55.00°	3,317	3,116	3,206
65.00°	2,983	2,840	2,986
75.00°	2,325	2,453	2,697
85.00°	857	2,008	2,452

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	14.0	15.5	14.5	16.0	16.5	16.6	18.1	17.2	18.6	19.2
	3H	15.5	16.8	16.0	17.3	17.9	19.2	20.5	19.7	21.0	21.6
	4H	15.9	17.2	16.5	17.7	18.4	20.3	21.6	20.9	22.2	22.8
	6H	16.2	17.4	16.7	17.9	18.5	21.5	22.7	22.1	23.3	23.9
	8H	16.2	17.3	16.8	17.9	18.5	22.1	23.3	22.7	23.9	24.5
	12H	16.2	17.3	16.8	17.9	18.5	22.8	23.9	23.4	24.4	25.1
4H	2H	15.0	16.3	15.6	16.9	17.5	17.1	18.4	17.6	18.9	19.5
	3H	16.8	17.9	17.3	18.4	19.1	19.8	20.9	20.4	21.5	22.1
	4H	17.3	18.4	17.9	18.9	19.6	21.2	22.2	21.7	22.8	23.4
	6H	17.7	18.6	18.3	19.2	19.9	22.5	23.4	23.1	24.0	24.7
	8H	17.8	18.6	18.4	19.2	19.9	23.2	24.1	23.8	24.7	25.3
	12H	17.8	18.6	18.4	19.2	19.9	24.0	24.7	24.6	25.4	26.1
8H	4H	18.1	18.9	18.7	19.5	20.2	21.4	22.2	22.0	22.8	23.5
	6H	18.6	19.4	19.3	20.0	20.7	22.9	23.6	23.5	24.2	24.9
	8H	18.8	19.5	19.5	20.1	20.8	23.7	24.4	24.4	25.0	25.7
	12H	18.9	19.5	19.6	20.1	20.9	24.6	25.2	25.3	25.9	26.6
12H	4H	18.3	19.0	18.9	19.7	20.4	21.4	22.1	22.0	22.8	23.5
	6H	18.9	19.6	19.6	20.2	21.0	22.9	23.6	23.6	24.2	24.9
	8H	19.2	19.8	19.8	20.4	21.2	23.8	24.4	24.5	25.0	25.8

Corrected UGR values based on total output lumens

SHR = 1.0