

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

EV320IND24OL 07L 35K EX DW XX MW
Evenlight 4.5" Wide x 24" linear surface or wall mount luminaire

Test Number

SP-00617_M-07L

Test Date

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

Summary of Results

Power

Input Watts	10.7 W
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Lumen Output

Output Lumens	1291
Efficacy	120.7 lm/W

Luminous Dimensions

0° - 180° Size	2.17
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

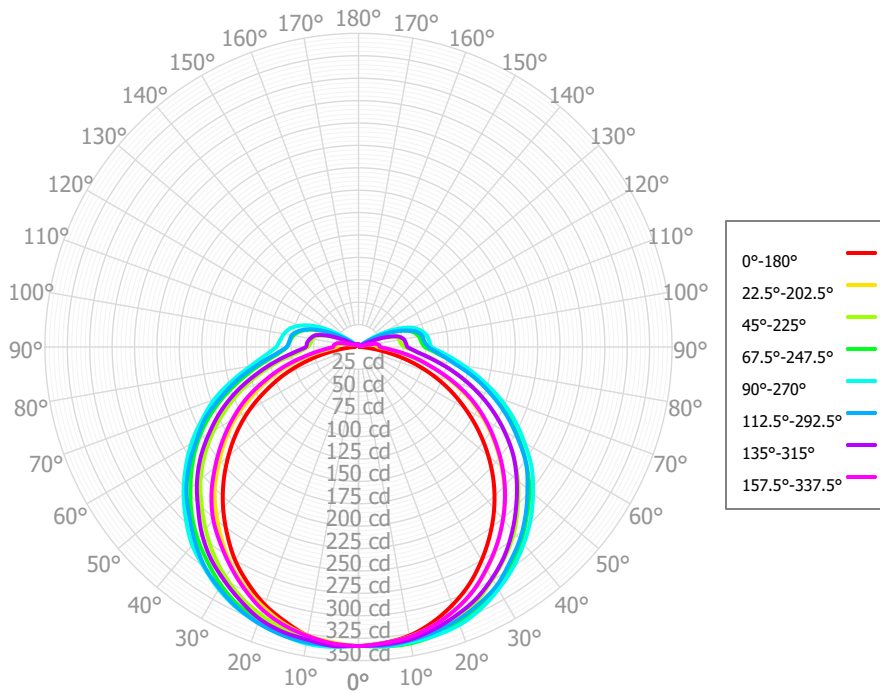
Full Beam Angle

0° - 180°	109°
90° - 270°	141°

IES File Header Contents

Keyword	Value
TEST	SP-00617_M-07L
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	9/22/2017
UPDATE	3/9/2020
LUMCAT	EV320IND24OL 07L 35K EX DW XX MW
LUMINAIRE	Evenlight 4.5" Wide x 24" linear surface or wall mount luminaire
OTHER	24" Linear LED, Diffuse White 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°	33.70	2.61%	90.00° - 100.00°	52.83	4.09%
10.00° - 20.00°	91.97	7.12%	100.00° - 110.00°	42.60	3.30%
20.00° - 30.00°	142.18	11.01%	100.00° - 120.00°	64.87	5.02%
30.00° - 40.00°	176.04	13.63%	120.00° - 130.00°	5.97	0.46%
40.00° - 50.00°	190.32	14.74%	130.00° - 140.00°	2.16	0.17%
50.00° - 60.00°	184.04	14.25%	140.00° - 150.00°	1.69	0.13%
60.00° - 70.00°	157.65	12.21%	150.00° - 160.00°	1.24	0.10%
70.00° - 80.00°	114.82	8.89%	160.00° - 170.00°	0.75	0.06%
80.00° - 90.00°	70.98	5.50%	170.00° - 180.00°	0.27	0.02%
0.00° - 90.00°	1,161.70	89.95%	0.00° - 180.00°	1,291.48	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°	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83	333.83
5.00°	331.56	332.06	334.46	335.60	335.39	334.21	334.98	332.11	332.15	330.94	334.39	333.56	336.14	334.56	333.29	331.76	331.56
10.00°	327.19	328.35	332.50	335.95	334.85	334.83	331.63	327.53	327.18	327.04	331.55	333.70	336.18	332.63	331.61	328.62	327.19
15.00°	318.38	322.08	327.97	332.98	333.27	332.56	328.89	321.54	317.16	320.10	326.05	330.52	332.24	329.39	326.10	322.09	318.38
20.00°	306.51	313.01	322.42	328.48	330.12	327.90	322.91	312.44	306.04	309.42	318.20	324.20	327.45	324.28	318.93	313.01	306.51
25.00°	292.38	301.44	312.55	320.72	322.69	320.75	312.19	299.26	291.44	297.23	308.95	317.76	321.33	317.00	310.35	301.25	292.38
30.00°	274.87	286.64	299.29	310.73	312.32	310.93	300.42	284.24	275.21	282.55	296.62	306.97	312.17	307.97	298.24	285.81	274.87
35.00°	255.95	269.81	285.65	298.27	300.71	299.41	287.83	268.36	255.48	265.14	282.23	293.37	300.41	294.04	284.32	269.33	255.95
40.00°	235.62	250.81	270.12	282.56	286.96	283.87	272.01	252.12	235.08	246.40	265.60	279.49	288.78	280.34	267.40	251.01	235.62
45.00°	213.44	230.79	251.44	265.85	271.86	267.06	253.32	232.12	213.08	227.15	247.86	263.44	272.43	263.94	249.12	231.38	213.44
50.00°	189.23	208.56	232.39	249.22	254.28	250.79	235.42	209.02	189.65	203.77	230.30	244.86	254.85	246.20	230.59	209.93	189.23
55.00°	163.84	185.53	210.89	228.93	236.19	230.87	215.23	186.10	165.95	181.44	209.43	226.26	235.62	228.70	210.99	187.10	163.84
60.00°	137.60	161.71	188.85	207.32	213.97	208.92	192.34	162.87	140.53	158.32	186.61	206.26	215.43	205.78	187.98	164.07	137.60
65.00°	111.57	136.81	163.69	185.16	191.82	188.71	169.55	139.23	112.96	131.99	162.58	183.85	192.89	183.12	163.86	139.61	111.57
70.00°	84.34	108.84	139.08	160.74	167.95	163.16	144.65	112.46	86.38	107.22	138.57	159.20	171.47	159.05	138.05	112.02	84.34
75.00°	56.42	83.80	112.43	134.93	142.63	138.98	118.42	86.93	58.49	81.51	113.37	133.78	145.87	135.17	111.81	83.46	56.42
80.00°	28.86	58.26	87.84	111.47	119.05	114.03	94.11	61.29	33.31	56.77	89.42	110.47	122.01	109.55	86.31	59.98	28.86
85.00°	8.92	35.42	65.52	89.54	97.85	93.14	72.75	41.29	13.55	35.51	67.20	90.57	103.88	90.88	65.80	37.13	8.92
90.00°	2.08	21.48	51.39	74.00	81.54	80.28	58.76	28.41	4.12	24.08	56.52	79.70	91.90	77.95	54.74	24.11	2.08
95.00°	1.39	19.08	47.43	70.39	79.19	77.34	57.41	27.26	3.44	23.02	53.60	76.99	87.73	73.63	52.97	23.10	1.39
100.00°	1.83	16.46	46.50	68.34	76.93	75.70	54.59	24.03	3.83	20.19	52.23	73.77	84.40	72.17	51.08	20.20	1.83
105.00°	1.27	9.31	43.63	63.64	71.70	69.14	50.22	15.40	3.72	11.24	47.83	67.64	79.35	66.61	45.68	9.93	1.27
110.00°	1.55	4.33	30.82	54.03	63.17	57.86	37.45	7.24	3.52	7.44	36.14	56.85	69.62	53.66	31.48	4.30	1.55
115.00°	1.24	3.12	15.16	38.23	47.82	41.41	19.93	6.01	3.44	6.08	18.98	42.15	55.98	37.99	13.95	2.85	1.24
120.00°	1.24	2.35	4.05	22.51	29.46	23.16	7.62	5.29	3.47	4.55	6.58	24.59	36.43	20.01	2.67	1.96	1.24
125.00°	1.53	1.95	2.29	5.59	11.00	8.16	4.31	4.49	3.80	4.33	4.25	9.23	16.66	6.03	1.89	1.99	1.53
130.00°	1.51	1.78	1.86	1.86	2.16	3.95	3.89	3.44	3.30	3.81	4.18	4.55	4.85	1.64	1.98	1.41	1.51
135.00°	1.26	1.65	1.97	2.18	1.92	3.83	4.05	3.21	3.15	3.51	3.80	4.56	3.86	1.76	2.09	1.55	1.26
140.00°	1.45	1.91	2.22	1.96	1.88	4.12	4.16	3.52	3.41	3.40	3.22	3.84	3.87	1.74	1.73	1.60	1.45
145.00°	1.68	1.92	2.08	1.82	2.17	4.06	3.55	3.52	3.04	3.29	3.22	3.47	3.69	1.77	1.66	1.76	1.68
150.00°	1.66	1.70	2.50	1.80	2.44	3.57	3.20	3.09	3.00	3.38	2.98	3.40	4.02	2.00	2.09	1.81	1.66
155.00°	1.85	1.70	2.37	1.83	2.45	3.44	3.39	2.85	3.43	3.42	2.95	3.63	3.84	2.05	1.93	1.58	1.85
160.00°	1.92	1.93	2.27	2.27	2.45	3.46	3.22	2.65	2.85	3.11	3.35	3.70	3.76	2.25	1.72	2.00	1.92
165.00°	1.72	2.17	2.61	2.50	2.19	3.22	2.93	2.72	2.43	2.90	3.30	3.19	3.65	2.68	1.86	2.09	1.72
170.00°	2.11	2.12	2.31	2.95	3.19	2.89	2.54	2.40	2.42	2.66	2.68	3.16	3.59	2.62	2.50	2.15	2.11
175.00°	2.20	1.95	2.42	2.47	2.94	3.42	2.79	2.78	2.47	3.15	3.33	2.98	3.40	2.42	2.58	2.33	2.20
180.00°	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66

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	1,507	1,507	1,507	1,507	1,456	1,456	1,456	1,456	1,363	1,363	1,363	1,277	1,277	1,277	1,199	1,199	1,162
	1	1,348	1,276	1,211	1,153	1,299	1,233	1,175	1,121	1,154	1,106	1,062	1,080	1,042	1,006	1,013	982	950
	2	1,215	1,097	999	917	1,168	1,061	972	896	993	919	855	930	869	816	872	823	794
	3	1,102	955	841	750	1,057	924	819	735	866	778	705	812	738	676	763	701	677
	4	1,004	840	720	628	964	814	702	616	764	669	594	718	637	571	675	607	586
	5	921	747	625	535	884	724	611	526	682	584	508	642	557	491	605	532	514
	6	848	670	549	463	815	650	538	456	613	515	442	579	493	427	547	472	456
	7	785	605	488	406	754	588	478	400	556	459	388	526	441	377	498	423	409
	8	730	550	437	360	702	536	429	355	508	413	345	482	397	335	457	382	370
	9	681	504	395	322	656	491	388	318	466	374	309	443	360	301	421	347	337
	10	638	464	360	290	615	452	353	287	431	341	280	410	329	272	391	318	309

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	11.0 fc	22.7 ft
6.5 ft	7.9 fc	26.8 ft
7.5 ft	5.9 fc	31.0 ft
8.0 ft	5.2 fc	33.0 ft
10.0 ft	3.3 fc	41.3 ft
12.0 ft	2.3 fc	49.5 ft
14.0 ft	1.7 fc	57.8 ft
16.0 ft	1.3 fc	66.0 ft
20.0 ft	0.8 fc	82.6 ft
24.0 ft	0.6 fc	99.1 ft
28.0 ft	0.4 fc	115.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3,943	3,943	3,943
45.00°	3,306	3,130	3,232
55.00°	3,034	2,918	3,082
65.00°	2,670	2,640	2,870
75.00°	1,992	2,255	2,592
85.00°	637	1,810	2,357

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	13.8	15.3	14.3	15.8	16.4	16.4	17.8	16.9	18.4	18.9
	3H	15.3	16.7	15.8	17.2	17.8	18.8	20.2	19.3	20.7	21.3
	4H	15.7	17.0	16.3	17.6	18.2	20.0	21.3	20.5	21.8	22.4
	6H	16.0	17.2	16.5	17.7	18.4	21.1	22.3	21.6	22.8	23.5
	8H	16.0	17.2	16.6	17.7	18.4	21.6	22.8	22.2	23.4	24.0
	12H	16.0	17.1	16.6	17.7	18.4	22.2	23.3	22.8	23.9	24.6
4H	2H	14.8	16.1	15.4	16.7	17.3	16.8	18.1	17.3	18.6	19.2
	3H	16.6	17.7	17.1	18.2	18.9	19.5	20.6	20.0	21.2	21.8
	4H	17.1	18.2	17.7	18.7	19.4	20.8	21.8	21.4	22.4	23.0
	6H	17.5	18.4	18.1	19.0	19.7	22.1	23.0	22.7	23.6	24.3
	8H	17.6	18.4	18.2	19.1	19.7	22.7	23.6	23.3	24.2	24.9
	12H	17.6	18.4	18.3	19.0	19.7	23.4	24.2	24.1	24.9	25.5
8H	4H	17.9	18.7	18.5	19.3	20.0	21.0	21.8	21.6	22.5	23.1
	6H	18.4	19.1	19.1	19.8	20.5	22.5	23.2	23.1	23.8	24.5
	8H	18.6	19.2	19.2	19.9	20.6	23.3	23.9	23.9	24.6	25.3
	12H	18.7	19.3	19.3	19.9	20.7	24.1	24.7	24.8	25.3	26.1
12H	4H	18.0	18.8	18.7	19.4	20.1	21.0	21.8	21.6	22.4	23.1
	6H	18.7	19.4	19.4	20.0	20.7	22.5	23.2	23.2	23.8	24.5
	8H	19.0	19.5	19.6	20.2	21.0	23.4	23.9	24.0	24.6	25.3

Corrected UGR values based on total output lumens

SHR = 1.0