Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SL03IND2 05L 35HK LW xx xx MW

Specline Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl

Test Number

SP-01321

Test Date

8/5/2022

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

Summary of Results

Power

Input Watts	9.5 W

Lumen Output

Output Lumens	672
Efficacy	70.71 lm/W

Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	2
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.88
Two luminaires, plane 90°	1.21
Four luminaires	1.69

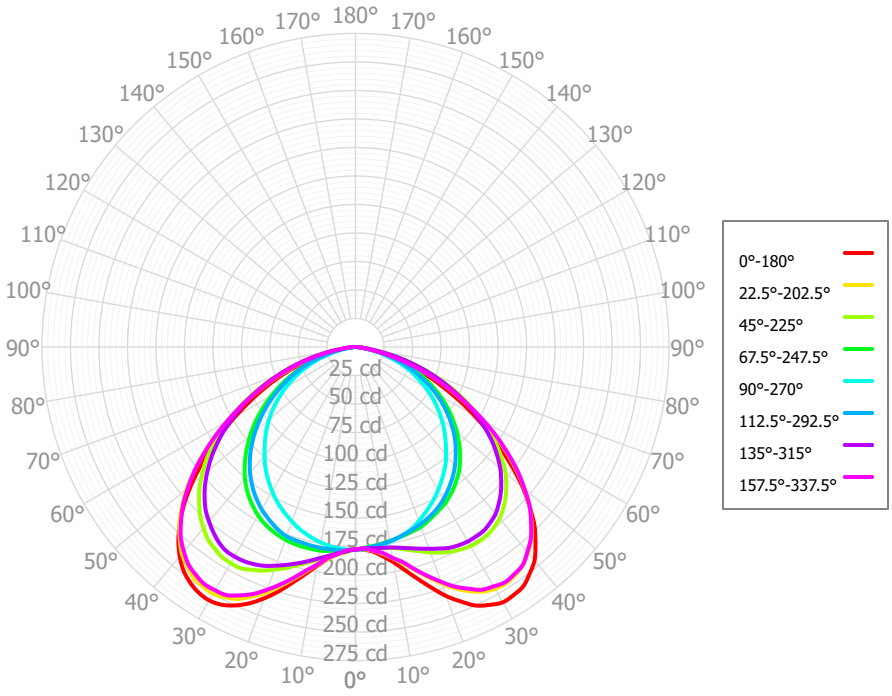
Full Beam Angle

0° - 180°	118°
90° - 270°	76°

IES File Header Contents

Keyword	Value
TEST	SP-01321
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	8/5/2022
ISSUEDATE	11/2/2022
LUMCAT	SL03IND2 05L 35HK LW xx xx MW
LUMINAIRE	Specline Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 2' IND fixture, or 2' module for continuous ROW
OTHER	76 Deg x 118 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	05L designation for Spectrum linear product indicates 340 Source Lm/Ft.
OTHER	CCT Output Multipliers: 40HK x 1.01, 30HK x 0.98, 27HK x 0.95
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°	17.53	2.61%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	54.30	8.08%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	93.84	13.97%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	124.59	18.55%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	134.55	20.03%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	118.69	17.67%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	82.95	12.35%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	38.66	5.76%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	6.58	0.98%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	671.70	100.00%	0.00° - 180.00°	671.70	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°	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64	177.64
2.50°	178.10	177.67	176.65	176.40	177.62	178.54	179.42	178.55	178.70	179.31	180.09	178.28	177.84	176.80	176.96	176.81	178.10
5.00°	180.31	179.43	176.70	175.25	176.60	178.78	181.82	182.54	181.86	182.65	182.72	179.18	177.09	175.65	177.14	179.43	180.31
7.50°	185.30	183.08	177.39	174.03	175.42	178.85	184.91	186.81	187.73	187.69	185.64	180.38	176.09	174.50	177.72	182.23	185.30
10.00°	191.65	188.20	179.03	172.79	173.55	178.81	188.46	193.75	194.97	193.91	189.42	181.28	174.12	173.10	178.61	187.82	191.65
12.50°	200.50	194.88	181.30	171.61	171.57	178.48	192.46	200.90	204.23	201.80	193.62	181.38	172.00	171.41	180.37	193.48	200.50
15.00°	210.45	202.74	184.43	170.45	169.04	178.00	196.42	209.59	214.12	210.72	198.33	181.29	169.39	169.59	182.74	202.01	210.45
17.50°	221.28	211.75	187.89	169.20	166.44	177.42	200.37	218.24	224.86	219.93	203.26	180.72	166.53	167.65	185.45	210.55	221.28
20.00°	232.44	220.60	191.76	167.95	162.43	176.79	204.14	226.58	234.67	229.29	207.84	179.86	162.93	165.60	188.36	219.07	232.44
22.50°	241.68	229.29	195.16	165.48	158.28	174.53	207.78	234.50	243.37	237.00	212.28	178.36	159.23	163.46	191.37	227.49	241.68
25.00°	250.28	236.30	198.06	162.85	154.04	171.51	210.24	240.39	250.14	243.87	215.66	176.48	155.26	160.87	194.43	233.90	250.28
27.50°	255.00	241.96	200.21	160.38	149.79	168.09	211.83	245.33	254.82	247.56	218.68	173.90	151.02	157.89	196.06	240.02	255.00
30.00°	258.57	244.90	201.63	157.93	144.88	164.51	212.22	246.39	256.66	249.84	218.90	170.75	146.14	154.23	197.00	242.45	258.57
32.50°	258.01	245.86	202.00	154.28	139.95	160.09	211.80	246.64	255.69	249.12	218.26	166.61	141.15	150.04	196.95	244.50	258.01
35.00°	256.40	244.32	201.44	150.53	134.85	155.36	209.02	244.07	252.60	247.21	215.72	162.03	135.94	145.61	196.48	243.07	256.40
37.50°	250.82	241.14	199.49	146.05	129.74	149.79	204.82	240.57	247.59	242.51	212.66	156.79	130.34	141.00	194.17	241.02	250.82
40.00°	244.38	235.47	196.45	141.54	123.56	143.94	199.85	234.23	239.87	236.83	207.33	150.83	124.05	135.75	191.15	234.59	244.38
42.50°	233.66	228.32	191.90	135.65	117.38	137.23	194.46	226.81	229.97	228.14	201.49	143.88	117.84	130.11	186.09	227.65	233.66
45.00°	222.17	218.45	186.27	129.73	111.23	130.28	187.18	216.44	217.71	218.55	193.88	136.52	111.78	124.20	180.33	217.82	222.17
47.50°	207.13	207.13	179.42	122.98	105.06	122.52	179.00	205.18	203.75	206.16	185.93	128.63	105.51	118.14	173.30	207.31	207.13
50.00°	191.57	193.32	171.78	116.20	98.55	114.57	169.53	191.77	188.09	193.04	176.03	120.48	98.95	111.41	165.87	193.56	191.57
52.50°	173.74	178.34	162.22	108.87	92.00	106.28	159.51	177.62	171.30	177.92	165.84	112.04	92.13	104.35	156.75	179.40	173.74
55.00°	155.65	162.35	151.53	101.51	85.12	97.93	148.43	161.92	154.43	162.35	153.92	103.23	84.97	96.91	147.19	163.54	155.65
57.50°	137.99	145.93	139.84	93.60	78.19	89.29	136.93	146.07	137.51	145.80	141.79	94.05	77.69	89.31	136.19	147.40	137.99
60.00°	120.38	129.22	127.62	85.64	70.87	80.61	124.58	129.94	121.40	129.06	128.50	84.77	70.29	81.18	124.87	130.32	120.38
62.50°	103.73	112.39	114.80	77.22	63.55	71.89	111.94	114.18	105.73	113.48	115.10	75.38	62.71	72.83	112.04	113.28	103.73
65.00°	87.13	95.92	101.71	68.75	56.23	63.17	98.89	99.03	91.25	98.08	101.19	65.89	54.95	64.26	98.93	96.38	87.13
67.50°	72.21	79.56	88.07	59.88	48.86	54.58	85.72	84.37	77.35	83.36	87.24	56.31	47.16	55.60	85.62	79.80	72.21
70.00°	57.34	64.08	74.21	50.95	41.30	46.01	72.42	70.43	64.08	68.74	73.58	46.81	39.36	47.12	72.28	64.07	57.34
72.50°	44.19	48.84	59.98	41.64	33.70	37.13	59.09	56.87	51.09	55.43	59.93	37.37	31.54	38.69	58.62	48.89	44.19
75.00°	31.11	35.67	45.61	32.41	25.97	28.23	46.54	43.83	38.85	42.23	46.67	28.27	23.69	29.69	44.92	35.03	31.11
77.50°	21.10	23.00	32.38	23.62	18.65	20.27	34.16	31.56	26.91	29.96	33.45	19.40	16.83	20.55	31.73	22.68	21.10
80.00°	11.33	14.22	19.54	15.38	12.90	12.35	23.20	20.25	17.45	17.74	21.99	12.49	10.75	13.65	18.58	13.48	11.33
82.50°	6.77	6.24	11.31	9.64	7.78	7.86	12.50	11.59	8.80	10.83	10.82	6.78	6.49	7.26	11.01	6.46	6.77
85.00°	2.48	3.55	4.39	4.68	4.74	3.45	7.20	5.93	4.84	4.11	6.27	3.65	3.53	4.20	3.78	3.49	2.48
87.50°	1.88	1.76	2.34	2.81	2.34	2.29	2.66	2.66	2.24	2.69	1.99	1.96	2.01	1.79	2.49	1.58	1.88
90.00°	1.33	1.46	1.47	1.33	1.76	1.17	1.84	1.83	1.55	1.35	1.60	1.31	1.42	1.30	1.39	1.43	1.33

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	800	800	800	800	781	781	781	781	746	746	746	715	715	715	685	685	685	672
	1	733	702	674	649	715	686	661	638	658	637	618	632	615	599	608	594	581	581
	2	666	611	566	527	648	598	557	521	574	539	509	552	523	497	532	508	486	497
	3	606	535	480	436	589	524	473	432	504	460	425	486	448	417	468	437	410	427
	4	553	472	412	367	537	463	407	364	446	398	359	430	388	354	416	379	349	371
RCR	5	507	420	359	313	493	412	355	312	398	347	308	384	340	305	372	333	301	325
	6	467	376	315	271	454	369	312	270	357	306	267	346	300	265	335	294	263	288
	7	431	339	279	237	420	334	277	236	323	272	235	313	267	233	304	263	231	257
	8	400	308	250	210	390	303	248	209	294	244	208	286	240	207	278	236	205	232
	9	373	281	225	187	363	277	224	187	270	220	186	262	217	185	255	214	184	210
	10	349	258	204	168	340	255	203	168	248	200	167	242	198	166	236	195	166	191

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	5.9 fc	18.1 ft
6.5 ft	4.2 fc	21.4 ft
7.5 ft	3.2 fc	24.7 ft
8.0 ft	2.8 fc	26.4 ft
10.0 ft	1.8 fc	33.0 ft
12.0 ft	1.2 fc	39.6 ft
14.0 ft	0.9 fc	46.2 ft
16.0 ft	0.7 fc	52.7 ft
20.0 ft	0.4 fc	65.9 ft
24.0 ft	0.3 fc	79.1 ft
28.0 ft	0.2 fc	92.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	6374	6374	6374
45.00°	11273	9451	5644
55.00°	9736	9479	5325
65.00°	7397	8635	4774
75.00°	4313	6322	3600
85.00°	1019	1809	1953

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	21.0	22.6	21.3	22.9	23.2	17.6	19.2	18.0	19.6	19.9
	3H	22.1	23.6	22.5	23.9	24.3	19.0	20.5	19.4	20.8	21.2
	4H	22.4	23.8	22.8	24.1	24.5	19.5	20.9	19.9	21.2	21.6
	6H	22.5	23.8	22.9	24.1	24.5	19.7	21.0	20.1	21.3	21.7
	8H	22.5	23.7	22.9	24.1	24.5	19.7	20.9	20.1	21.3	21.7
	12H	22.5	23.7	22.9	24.0	24.5	19.7	20.9	20.1	21.3	21.7
4H	2H	21.5	22.9	21.9	23.3	23.6	19.1	20.5	19.5	20.8	21.2
	3H	22.9	24.1	23.3	24.5	24.9	20.6	21.8	21.0	22.2	22.6
	4H	23.2	24.3	23.7	24.7	25.1	21.0	22.1	21.5	22.5	22.9
	6H	23.4	24.3	23.8	24.7	25.2	21.3	22.2	21.7	22.6	23.1
	8H	23.4	24.2	23.8	24.7	25.2	21.3	22.2	21.8	22.6	23.1
	12H	23.4	24.1	23.9	24.6	25.1	21.3	22.1	21.8	22.6	23.0
8H	4H	23.4	24.3	23.9	24.7	25.2	21.5	22.4	22.0	22.8	23.3
	6H	23.6	24.3	24.1	24.8	25.3	21.8	22.5	22.3	23.0	23.5
	8H	23.6	24.3	24.1	24.8	25.3	21.9	22.5	22.4	23.0	23.5
	12H	23.6	24.2	24.1	24.7	25.2	21.9	22.5	22.4	23.0	23.5
12H	4H	23.4	24.2	23.9	24.7	25.1	21.6	22.3	22.1	22.8	23.3
	6H	23.6	24.3	24.1	24.7	25.3	21.9	22.5	22.4	23.0	23.5
	8H	23.7	24.2	24.2	24.7	25.3	22.0	22.5	22.5	23.0	23.6

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0