Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SL03IND8 20L 35HK LW xx xx MW

Specline Linear Pendant, 1.8" aperture x 8' Long, Matte White Refl

Test Number

SP-01374_2

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	120 W

Lumen Output

Output Lumens	9855
Efficacy	82.12 lm/W

Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	8
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.91
Two luminaires, plane 90°	1.21
Four luminaires	1.69

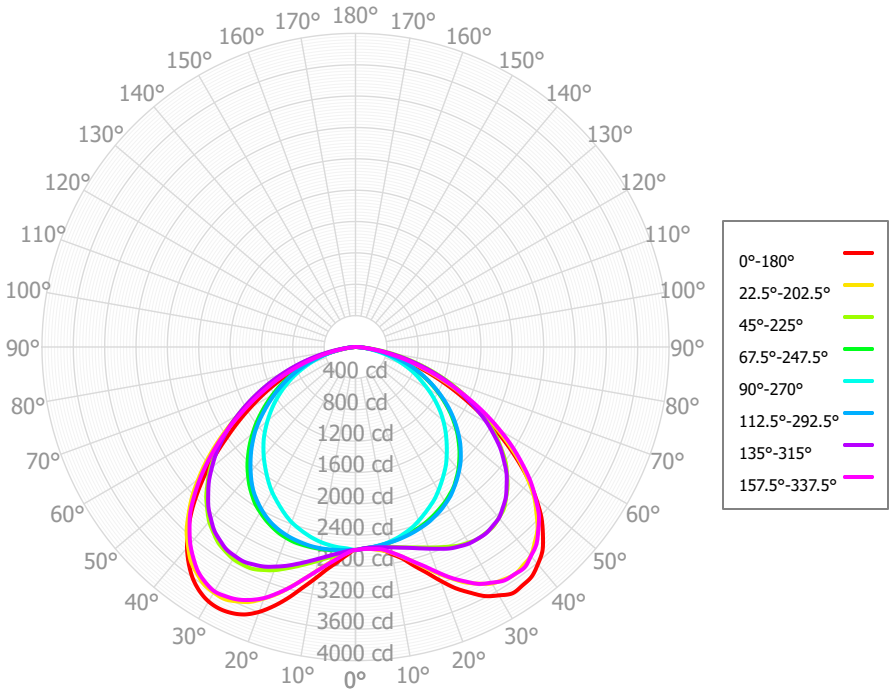
Full Beam Angle

0° - 180°	118°
90° - 270°	76°

IES File Header Contents

Keyword	Value
TEST	SP-01374_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	11/2/2022
LUMCAT	SL03IND8 20L 35HK LW xx xx MW
LUMINAIRE	Specline Linear Pendant, 1.8" aperture x 8' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 8' IND fixture, or 8' module for continuous ROW
OTHER	76 Degree x 118 Degree Beam Angle
LAMP	N/A, Min. 90 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	20L designation for Spectrum linear product indicates 1232 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
0.00° - 10.00°	255.66	2.59%
10.00° - 20.00°	789.56	8.01%
20.00° - 30.00°	1357.78	13.78%
30.00° - 40.00°	1801.41	18.28%
40.00° - 50.00°	1948.57	19.77%
50.00° - 60.00°	1733.53	17.59%
60.00° - 70.00°	1235.72	12.54%
70.00° - 80.00°	616.14	6.25%
80.00° - 90.00°	116.15	1.18%
0.00° - 90.00°	9854.52	100.00%

Zone	Lumens	% Fixture
90.00° - 100.00°	0.00	0.00%
100.00° - 110.00°	0.00	0.00%
100.00° - 120.00°	0.00	0.00%
120.00° - 130.00°	0.00	0.00%
130.00° - 140.00°	0.00	0.00%
140.00° - 150.00°	0.00	0.00%
150.00° - 160.00°	0.00	0.00%
160.00° - 170.00°	0.00	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 180.00°	9854.52	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°	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66	2589.66
2.50°	2577.21	2577.20	2570.75	2573.50	2572.48	2594.67	2609.90	2637.15	2661.05	2634.26	2620.90	2594.53	2572.06	2573.66	2569.60	2580.03	2577.21
5.00°	2589.05	2586.42	2565.25	2563.37	2562.22	2600.06	2646.48	2714.39	2759.06	2702.74	2662.41	2603.78	2563.99	2560.29	2568.03	2586.60	2589.05
7.50°	2611.83	2618.23	2571.17	2548.90	2546.69	2604.21	2691.51	2804.16	2868.25	2796.12	2712.75	2611.55	2549.60	2546.34	2577.68	2605.20	2611.83
10.00°	2684.03	2665.57	2589.33	2531.69	2521.67	2605.73	2744.63	2909.69	3005.21	2907.28	2770.30	2615.39	2528.73	2531.84	2596.25	2662.91	2684.03
12.50°	2764.27	2741.76	2615.75	2509.00	2491.62	2602.74	2803.38	3030.26	3151.11	3032.76	2832.24	2615.80	2499.92	2517.21	2622.24	2737.09	2764.27
15.00°	2889.32	2834.38	2647.20	2483.47	2453.55	2591.95	2864.52	3166.66	3314.48	3164.29	2897.16	2613.10	2464.26	2497.08	2653.16	2831.99	2889.32
17.50°	3018.73	2948.82	2681.38	2459.62	2412.12	2577.56	2927.00	3292.34	3465.64	3299.77	2963.28	2608.21	2423.96	2476.17	2693.30	2933.62	3018.73
20.00°	3174.09	3073.14	2722.43	2436.46	2358.86	2558.15	2981.68	3408.84	3597.09	3415.02	3030.06	2590.40	2380.44	2450.37	2738.36	3057.81	3174.09
22.50°	3330.46	3194.55	2766.42	2402.96	2301.80	2531.74	3032.90	3492.97	3693.56	3519.71	3079.42	2565.18	2323.97	2424.19	2786.80	3187.42	3330.46
25.00°	3458.40	3314.94	2810.99	2366.20	2244.14	2497.41	3063.34	3554.64	3744.38	3581.09	3121.20	2527.65	2260.24	2387.55	2836.68	3299.20	3458.40
27.50°	3583.30	3403.68	2855.75	2325.77	2186.34	2451.89	3086.63	3585.81	3763.62	3624.34	3128.01	2484.32	2196.29	2350.44	2868.86	3407.85	3583.30
30.00°	3659.21	3483.70	2881.96	2284.44	2115.44	2395.78	3078.81	3599.43	3749.35	3617.42	3122.60	2432.28	2132.26	2302.96	2895.09	3472.14	3659.21
32.50°	3726.09	3517.20	2903.39	2234.47	2042.28	2332.09	3062.62	3561.33	3697.98	3594.00	3089.91	2377.03	2057.34	2254.29	2901.35	3531.62	3726.09
35.00°	3713.99	3541.52	2897.40	2183.04	1968.91	2262.56	3012.78	3499.55	3614.08	3526.60	3050.09	2302.94	1978.52	2190.92	2902.60	3539.46	3713.99
37.50°	3692.48	3513.63	2886.44	2113.80	1895.51	2176.82	2956.49	3397.01	3492.78	3448.49	2980.34	2223.62	1900.00	2126.76	2877.27	3544.77	3692.48
40.00°	3619.22	3479.06	2845.46	2042.76	1809.98	2081.00	2868.57	3279.94	3344.49	3323.11	2905.06	2133.14	1821.57	2057.02	2847.28	3481.95	3619.22
42.50°	3530.44	3384.05	2800.80	1959.96	1723.78	1982.54	2776.76	3133.93	3159.98	3189.51	2800.74	2040.32	1738.59	1984.59	2782.00	3416.27	3530.44
45.00°	3381.59	3284.56	2717.32	1876.54	1637.89	1882.72	2657.60	2979.83	2954.38	3010.96	2692.76	1934.51	1654.70	1899.00	2712.58	3298.21	3381.59
47.50°	3217.26	3131.34	2631.46	1785.08	1551.74	1777.24	2536.54	2782.56	2727.11	2827.40	2557.64	1826.89	1560.65	1810.32	2615.28	3174.26	3217.26
50.00°	3006.40	2975.48	2523.58	1692.91	1460.73	1669.48	2391.86	2576.62	2489.80	2614.68	2420.78	1711.18	1465.24	1710.74	2516.42	2997.42	3006.40
52.50°	2783.22	2771.62	2414.30	1588.74	1368.80	1548.23	2246.10	2357.58	2244.50	2400.42	2258.92	1594.86	1368.10	1609.08	2387.78	2814.62	2783.22
55.00°	2531.40	2565.09	2273.02	1483.71	1268.14	1422.80	2081.29	2136.82	1996.22	2170.52	2095.98	1470.77	1270.84	1501.88	2257.82	2596.58	2531.40
57.50°	2275.17	2326.82	2129.12	1370.93	1166.56	1300.61	1914.80	1908.37	1770.27	1940.76	1912.07	1346.46	1169.17	1391.28	2099.32	2373.94	2275.17
60.00°	2010.83	2087.49	1958.36	1257.92	1059.70	1179.19	1729.58	1679.33	1550.64	1713.82	1727.73	1221.67	1067.32	1273.32	1938.86	2132.50	2010.83
62.50°	1751.73	1840.91	1786.00	1143.67	955.10	1059.40	1543.97	1467.79	1347.86	1488.84	1538.84	1096.40	961.78	1155.32	1759.37	1888.52	1751.73
65.00°	1500.57	1594.95	1603.86	1027.00	859.73	939.87	1355.82	1257.19	1148.50	1281.97	1349.81	965.38	855.76	1037.27	1578.22	1636.82	1500.57
67.50°	1261.77	1351.81	1418.43	900.78	761.44	816.02	1168.51	1064.26	967.67	1078.35	1159.89	834.63	744.28	916.34	1387.20	1389.12	1261.77
70.00°	1038.19	1114.74	1219.14	774.98	654.39	691.74	984.89	872.46	789.48	893.28	970.54	705.94	633.52	791.44	1193.76	1150.94	1038.19
72.50°	832.11	898.58	1019.76	650.41	548.03	569.24	803.44	694.59	626.52	711.34	783.64	578.59	527.45	664.82	989.89	924.14	832.11
75.00°	643.58	691.94	820.07	526.40	443.36	446.87	629.27	519.96	464.77	542.47	600.86	457.74	421.92	536.22	788.24	719.11	643.58
77.50°	475.85	510.25	624.94	403.70	341.03	332.37	460.51	367.68	326.36	379.79	431.62	339.04	318.92	412.18	593.58	527.66	475.85
80.00°	325.60	343.52	441.11	287.55	243.13	219.43	305.64	224.21	189.59	236.18	274.12	227.86	219.95	292.42	407.20	357.06	325.60
82.50°	200.35	207.48	273.27	183.63	154.51	132.14	170.70	121.39	102.72	116.95	146.06	129.25	134.59	189.23	240.87	214.56	200.35
85.00°	92.13	100.62	136.64	98.54	80.03	51.22	75.92	37.82	21.62	55.62	51.32	64.42	64.24	98.71	109.95	107.03	92.13
87.50°	38.03	43.08	43.39	41.65	30.94	26.71	14.60	20.20	13.95	13.67	22.36	18.10	32.62	45.77	48.92	40.49	38.03
90.00°	13.53	8.91	19.98	8.94	14.14	5.86	8.79	7.21	7.25	9.26	4.68	11.22	10.58	16.78	10.74	16.64	13.53

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	11732	11732	11732	11732	11459	11459	11459	11459	10949	10949	10949	10484	10484	10484	10056	10056	10056	9855
	1	10733	10268	9852	9477	10465	10045	9666	9322	9626	9313	9027	9241	8986	8751	8886	8682	8491	8497
	2	9742	8927	8254	7688	9482	8740	8121	7596	8389	7868	7417	8066	7630	7247	7766	7406	7085	7243
	3	8858	7808	6996	6348	8611	7651	6897	6290	7355	6709	6177	7082	6531	6068	6828	6362	5963	6220
	4	8084	6885	6006	5335	7855	6752	5932	5297	6503	5788	5222	6271	5652	5150	6056	5521	5079	5399
RCR	5	7410	6120	5219	4554	7200	6008	5161	4528	5797	5049	4476	5600	4942	4426	5416	4840	4377	4734
	6	6821	5483	4584	3939	6630	5388	4538	3920	5208	4450	3884	5040	4364	3848	4882	4283	3813	4191
	7	6306	4946	4065	3447	6132	4865	4028	3434	4712	3957	3407	4568	3888	3381	4432	3822	3355	3743
	8	5853	4492	3636	3048	5696	4423	3606	3038	4291	3548	3018	4166	3491	2998	4050	3437	2979	3369
	9	5453	4104	3277	2719	5311	4044	3253	2711	3930	3205	2696	3823	3158	2681	3721	3113	2666	3054
	10	5099	3770	2975	2445	4970	3718	2954	2439	3619	2914	2427	3525	2875	2415	3437	2837	2403	2785

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	85.6 fc	18.3 ft
6.5 ft	61.3 fc	21.6 ft
7.5 ft	46.0 fc	24.9 ft
8.0 ft	40.5 fc	26.6 ft
10.0 ft	25.9 fc	33.2 ft
12.0 ft	18.0 fc	39.8 ft
14.0 ft	13.2 fc	46.5 ft
16.0 ft	10.1 fc	53.1 ft
20.0 ft	6.5 fc	66.4 ft
24.0 ft	4.5 fc	79.7 ft
28.0 ft	3.3 fc	93.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	23229	23229	23229
45.00°	42897	34470	20777
55.00°	39588	35547	19832
65.00°	31849	34041	18247
75.00°	22304	28421	15366
85.00°	9482	14062	8237

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	26.1	27.8	26.5	28.1	28.4	22.0	23.7	22.4	24.0	24.3
	3H	27.5	29.0	27.8	29.3	29.7	23.6	25.1	24.0	25.4	25.8
	4H	27.9	29.3	28.3	29.6	30.0	24.1	25.6	24.5	25.9	26.3
	6H	28.1	29.4	28.5	29.8	30.2	24.5	25.8	24.9	26.1	26.5
	8H	28.2	29.4	28.6	29.8	30.2	24.6	25.8	25.0	26.2	26.6
	12H	28.2	29.4	28.6	29.7	30.2	24.6	25.8	25.0	26.2	26.6
4H	2H	26.6	28.1	27.0	28.4	28.8	23.3	24.7	23.7	25.1	25.5
	3H	28.2	29.4	28.7	29.8	30.2	25.0	26.2	25.4	26.6	27.0
	4H	28.8	29.8	29.2	30.2	30.7	25.6	26.6	26.0	27.0	27.5
	6H	29.1	30.0	29.5	30.5	30.9	25.9	26.9	26.4	27.3	27.8
	8H	29.2	30.0	29.6	30.5	30.9	26.0	26.9	26.5	27.3	27.8
	12H	29.2	30.0	29.7	30.4	30.9	26.1	26.8	26.5	27.3	27.8
8H	4H	29.0	29.9	29.5	30.3	30.8	26.0	26.8	26.4	27.3	27.7
	6H	29.4	30.1	29.9	30.6	31.1	26.4	27.1	26.9	27.6	28.1
	8H	29.5	30.2	30.0	30.7	31.1	26.5	27.1	27.0	27.7	28.1
	12H	29.6	30.1	30.1	30.6	31.2	26.6	27.1	27.1	27.6	28.2
12H	4H	29.0	29.8	29.5	30.3	30.7	26.0	26.8	26.5	27.2	27.7
	6H	29.4	30.1	30.0	30.5	31.1	26.4	27.1	27.0	27.5	28.1
	8H	29.6	30.1	30.1	30.6	31.2	26.6	27.1	27.1	27.6	28.2

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0