

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND24 20L 35HK xx LW xx xx MW

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

Test Number

SP-01378_2

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	32 W
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Lumen Output

Output Lumens	2464
Efficacy	76.99 lm/W

Luminous Dimensions

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

Spacing Criterion

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

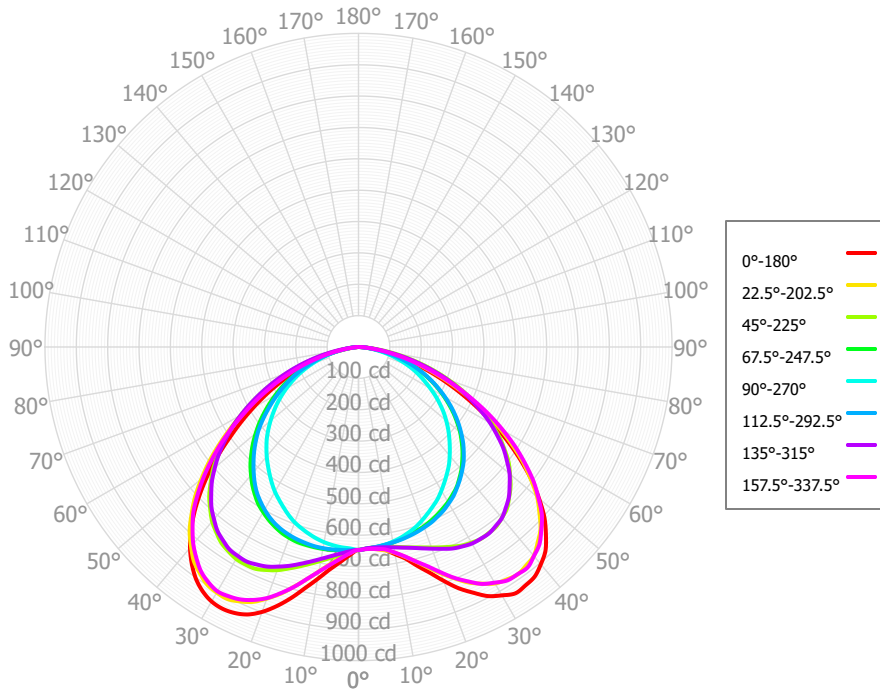
Full Beam Angle

0° - 180°	118°
90° - 270°	76°

IES File Header Contents

Keyword	Value
TEST	SP-01378_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND24 20L 35HK xx LW xx xx MW
LUMINAIRE	Specline Linear, 1.8" aperture x 2' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 2' IND fixture, Ceiling mount
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: 40DK x 1.0, 30DK x 1.0, 27DK x 1.0
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°	63.92	2.59%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	197.39	8.01%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	339.44	13.78%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	450.35	18.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	487.14	19.77%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	433.38	17.59%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	308.93	12.54%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	154.04	6.25%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	29.04	1.18%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2463.63	100.00%	0.00° - 180.00°	2463.63	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°	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41	647.41
2.50°	644.30	644.30	642.69	643.38	643.12	648.67	652.48	659.29	665.26	658.57	655.22	648.63	643.02	643.41	642.40	645.01	644.30
5.00°	647.26	646.60	641.31	640.84	640.55	650.02	661.62	678.60	689.77	675.68	665.60	650.95	641.00	640.07	642.01	646.65	647.26
7.50°	652.96	654.56	642.79	637.22	636.67	651.05	672.88	701.04	717.06	699.03	678.19	652.89	637.40	636.59	644.42	651.30	652.96
10.00°	671.01	666.39	647.33	632.92	630.42	651.43	686.16	727.42	751.30	726.82	692.58	653.85	632.18	632.96	649.06	665.73	671.01
12.50°	691.07	685.44	653.94	627.25	622.91	650.68	700.85	757.57	787.78	758.19	708.06	653.95	624.98	629.30	655.56	684.27	691.07
15.00°	722.33	708.59	661.80	620.87	613.39	647.99	716.13	791.67	828.62	791.07	724.29	653.28	616.06	624.27	663.29	708.00	722.33
17.50°	754.68	737.20	670.35	614.90	603.03	644.39	731.75	823.08	866.41	824.94	740.82	652.05	605.99	619.04	673.33	733.40	754.68
20.00°	793.52	768.28	680.61	609.12	589.72	639.54	745.42	852.21	899.27	853.76	757.52	647.60	595.11	612.59	684.59	764.45	793.52
22.50°	832.61	798.64	691.61	600.74	575.45	632.93	758.22	873.24	923.39	879.93	769.85	641.30	580.99	606.05	696.70	796.85	832.61
25.00°	864.60	828.74	702.75	591.55	561.03	624.35	765.84	888.66	936.09	895.27	780.30	631.91	565.06	596.89	709.17	824.80	864.60
27.50°	895.83	850.92	713.94	581.44	546.59	612.97	771.66	896.45	940.90	906.09	782.00	621.08	549.07	587.61	717.22	851.96	895.83
30.00°	914.80	870.93	720.49	571.11	528.86	598.95	769.70	899.86	937.34	904.36	780.65	608.07	533.06	575.74	723.77	868.04	914.80
32.50°	931.52	879.30	725.85	558.62	510.57	583.02	765.66	890.33	924.49	898.50	772.48	594.26	514.34	563.57	725.34	882.90	931.52
35.00°	928.50	885.38	724.35	545.76	492.23	565.64	753.19	874.89	903.52	881.65	762.52	575.74	494.63	547.73	725.65	884.86	928.50
37.50°	923.12	878.41	721.61	528.45	473.88	544.21	739.12	849.25	873.20	862.12	745.09	555.90	475.00	531.69	719.32	886.19	923.12
40.00°	904.81	869.77	711.37	510.69	452.50	520.25	717.14	819.98	836.12	830.78	726.27	533.28	455.39	514.26	711.82	870.49	904.81
42.50°	882.61	846.01	700.20	489.99	430.95	495.63	694.19	783.48	789.99	797.38	700.19	510.08	434.65	496.15	695.50	854.07	882.61
45.00°	845.40	821.14	679.33	469.14	409.47	470.68	664.40	744.96	738.60	752.74	673.19	483.63	413.68	474.75	678.15	824.55	845.40
47.50°	804.31	782.83	657.87	446.27	387.93	444.31	634.14	695.64	681.78	706.85	639.41	456.72	390.16	452.58	653.82	793.56	804.31
50.00°	751.60	743.87	630.90	423.23	365.18	417.37	597.97	644.15	622.45	653.67	605.20	427.80	366.31	427.68	629.10	749.35	751.60
52.50°	695.81	692.91	603.57	397.19	342.20	387.06	561.53	589.39	561.13	600.10	564.73	398.71	342.03	402.27	596.94	703.66	695.81
55.00°	632.85	641.27	568.26	370.93	317.03	355.70	520.32	534.21	499.06	542.63	523.99	367.69	317.71	375.47	564.45	649.14	632.85
57.50°	568.79	581.71	532.28	342.73	291.64	325.15	478.70	477.09	442.57	485.19	478.02	336.62	292.29	347.82	524.83	593.49	568.79
60.00°	502.71	521.87	489.59	314.48	264.93	294.80	432.40	419.83	387.66	428.46	431.93	305.42	266.83	318.33	484.72	533.13	502.71
62.50°	437.93	460.23	446.50	285.92	238.78	264.85	385.99	366.95	336.96	372.21	384.71	274.10	240.45	288.83	439.84	472.13	437.93
65.00°	375.14	398.74	400.97	256.75	214.93	234.97	338.96	314.30	287.13	320.49	337.45	241.34	213.94	259.32	394.55	409.21	375.14
67.50°	315.44	337.95	354.61	225.20	190.36	204.00	292.13	266.07	241.92	269.59	289.97	208.66	186.07	229.09	346.80	347.28	315.44
70.00°	259.55	278.68	304.79	193.75	163.60	172.94	246.22	218.12	197.37	223.32	242.64	176.49	158.38	197.86	298.44	287.74	259.55
72.50°	208.03	224.65	254.94	162.60	137.01	142.31	200.86	173.65	156.63	177.84	195.91	144.65	131.86	166.21	247.47	231.03	208.03
75.00°	160.89	172.99	205.02	131.60	110.84	111.72	157.32	129.99	116.19	135.62	150.21	114.43	105.48	134.06	197.06	179.78	160.89
77.50°	118.96	127.56	156.24	100.93	85.26	83.09	115.13	91.92	81.59	94.95	107.91	84.76	79.73	103.05	148.40	131.92	118.96
80.00°	81.40	85.88	110.28	71.89	60.78	54.86	76.41	56.05	47.40	59.04	68.53	56.96	54.99	73.11	101.80	89.27	81.40
82.50°	50.09	51.87	68.32	45.91	38.63	33.03	42.68	30.35	25.68	29.24	36.51	32.31	33.65	47.31	60.22	53.64	50.09
85.00°	23.03	25.16	34.16	24.63	20.01	12.80	18.98	9.46	5.41	13.90	12.83	16.11	16.06	24.68	27.49	26.76	23.03
87.50°	9.51	10.77	10.85	10.41	7.74	6.68	3.65	5.05	3.49	3.42	5.59	4.52	8.15	11.44	12.23	10.12	9.51
90.00°	3.38	2.23	5.00	2.24	3.53	1.47	2.20	1.80	1.81	2.32	1.17	2.81	2.65	4.19	2.69	4.16	3.38

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	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	2933	2933	2933	2933	2865	2865	2865	2865	2737	2737	2737	2621	2621	2621	2514	2514	2464
	1	2683	2567	2463	2369	2616	2511	2416	2331	2406	2328	2257	2310	2247	2188	2221	2170	2124
	2	2435	2232	2063	1922	2370	2185	2030	1899	2097	1967	1854	2016	1907	1812	1942	1851	1811
	3	2214	1952	1749	1587	2153	1913	1724	1573	1839	1677	1544	1771	1633	1517	1707	1591	1555
	4	2021	1721	1502	1334	1964	1688	1483	1324	1626	1447	1306	1568	1413	1287	1514	1380	1350
	5	1853	1530	1305	1138	1800	1502	1290	1132	1449	1262	1119	1400	1236	1107	1354	1210	1184
	6	1705	1371	1146	985	1657	1347	1135	980	1302	1112	971	1260	1091	962	1221	1071	1048
	7	1576	1237	1016	862	1533	1216	1007	858	1178	989	852	1142	972	845	1108	955	936
	8	1463	1123	909	762	1424	1106	902	759	1073	887	754	1042	873	750	1012	859	842
	9	1363	1026	819	680	1328	1011	813	678	983	801	674	956	789	670	930	778	763
	10	1275	943	744	611	1243	930	738	610	905	728	607	881	719	604	859	709	696

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	21.4 fc	18.3 ft
6.5 ft	15.3 fc	21.6 ft
7.5 ft	11.5 fc	24.9 ft
8.0 ft	10.1 fc	26.6 ft
10.0 ft	6.5 fc	33.2 ft
12.0 ft	4.5 fc	39.8 ft
14.0 ft	3.3 fc	46.5 ft
16.0 ft	2.5 fc	53.1 ft
20.0 ft	1.6 fc	66.4 ft
24.0 ft	1.1 fc	79.7 ft
28.0 ft	0.8 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