

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND48 20L 35K DW xx xx MW
Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

Test Number

SP-01549_2

Test Date

6/3/2022

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

Summary of Results

Power

Input Watts	62 W
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Lumen Output

Output Lumens	4814
Efficacy	77.65 lm/W

Luminous Dimensions

0° - 180° Size	0.15
90° - 270° Size	4
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.37

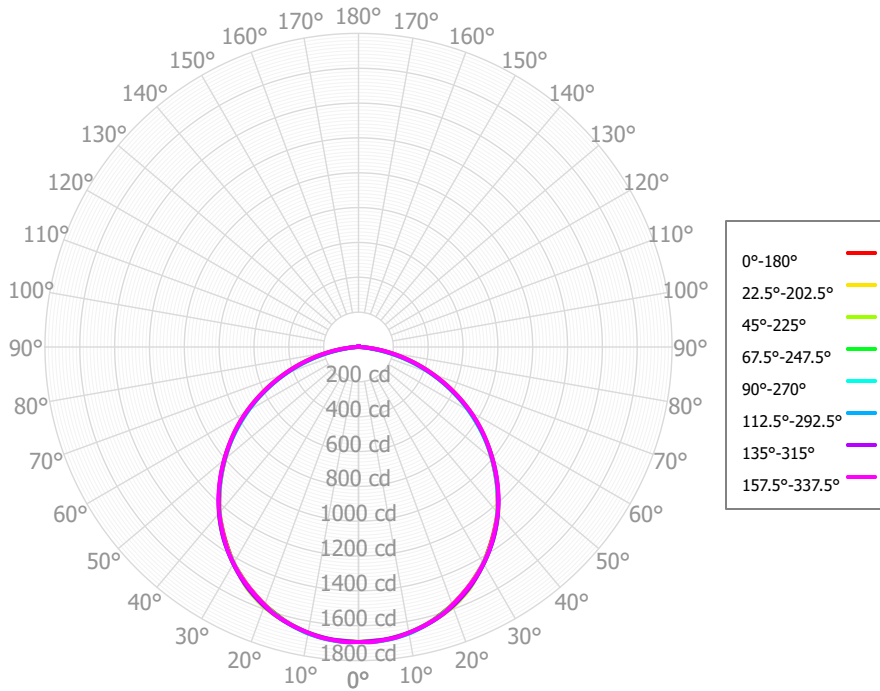
Full Beam Angle

0° - 180°	112°
90° - 270°	111°

IES File Header Contents

Keyword	Value
TEST	SP-01549_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 20L 35K DW xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Diffuse White Extruded Acrylic Lens, Symmetric Distribution
OTHER	Data for 4' IND fixture, Ceiling mount
OTHER	111 Degree Beam Angle
LAMP	N/A, Min. 80 CRI
LAMPCAT	N/A
OTHER	Reference project SL473
OTHER	20L designation for Spectrum linear product indicates 1204 Source Lm/Ft.
OTHER	CCT Output Multipliers: 40K x 1.02, 30K x 0.97
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°	162.89	3.38%	90.00° - 100.00°	4.38	0.09%
10.00° - 20.00°	459.74	9.55%	100.00° - 110.00°	3.72	0.08%
20.00° - 30.00°	696.84	14.47%	100.00° - 120.00°	7.44	0.15%
30.00° - 40.00°	840.64	17.46%	120.00° - 130.00°	3.47	0.07%
40.00° - 50.00°	868.93	18.05%	130.00° - 140.00°	2.92	0.06%
50.00° - 60.00°	780.08	16.20%	140.00° - 150.00°	2.44	0.05%
60.00° - 70.00°	587.00	12.19%	150.00° - 160.00°	1.80	0.04%
70.00° - 80.00°	322.00	6.69%	160.00° - 170.00°	1.12	0.02%
80.00° - 90.00°	72.39	1.50%	170.00° - 180.00°	0.39	0.01%
0.00° - 90.00°	4790.49	99.50%	0.00° - 180.00°	4814.46	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°	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77	1693.77
2.50°	1690.32	1691.70	1689.38	1692.27	1695.93	1694.97	1689.63	1696.17	1690.32	1691.70	1689.38	1692.27	1695.93	1694.97	1689.63	1696.17	1690.32
5.00°	1688.78	1687.90	1688.22	1688.75	1689.67	1690.85	1685.97	1688.86	1688.78	1687.90	1688.22	1688.75	1689.67	1690.85	1685.97	1688.86	1688.78
7.50°	1679.01	1678.58	1676.95	1679.17	1681.25	1682.92	1677.71	1681.27	1679.01	1678.58	1676.95	1679.17	1681.25	1682.92	1677.71	1681.27	1679.01
10.00°	1666.91	1665.91	1665.00	1669.38	1666.55	1669.83	1665.03	1665.74	1666.91	1665.91	1665.00	1669.38	1666.55	1669.83	1665.03	1665.74	1666.91
12.50°	1648.13	1649.26	1648.97	1649.97	1650.41	1652.68	1649.50	1650.02	1648.13	1649.26	1648.97	1649.97	1650.41	1652.68	1649.50	1650.02	1648.13
15.00°	1627.80	1630.51	1632.03	1630.28	1630.83	1631.41	1631.56	1629.81	1627.80	1630.51	1632.03	1630.28	1630.83	1631.41	1631.56	1629.81	1627.80
17.50°	1601.50	1604.61	1610.81	1604.13	1608.42	1607.28	1608.95	1608.70	1601.50	1604.61	1610.81	1604.13	1608.42	1607.28	1608.95	1608.70	1601.50
20.00°	1574.14	1575.53	1587.55	1577.57	1580.19	1579.06	1582.94	1576.17	1574.14	1575.53	1587.55	1577.57	1580.19	1579.06	1582.94	1576.17	1574.14
22.50°	1541.38	1543.21	1556.71	1546.35	1549.12	1548.44	1552.05	1543.50	1541.38	1543.21	1556.71	1546.35	1549.12	1548.44	1552.05	1543.50	1541.38
25.00°	1507.93	1509.71	1522.42	1514.38	1513.11	1513.36	1518.13	1509.65	1507.93	1509.71	1522.42	1514.38	1513.11	1513.36	1518.13	1509.65	1507.93
27.50°	1470.40	1472.38	1477.83	1476.68	1475.33	1476.06	1479.00	1474.89	1470.40	1472.38	1477.83	1476.68	1475.33	1476.06	1479.00	1474.89	1470.40
30.00°	1432.51	1433.92	1433.90	1437.83	1434.93	1435.48	1437.05	1434.97	1432.51	1433.92	1433.90	1437.83	1434.93	1435.48	1437.05	1434.97	1432.51
32.50°	1385.96	1389.56	1391.67	1392.55	1392.41	1393.54	1393.38	1393.32	1385.96	1389.56	1391.67	1392.55	1392.41	1393.54	1393.38	1393.32	1385.96
35.00°	1339.03	1343.75	1347.77	1346.11	1347.12	1346.40	1348.93	1343.91	1339.03	1343.75	1347.77	1346.11	1347.12	1346.40	1348.93	1343.91	1339.03
37.50°	1290.13	1292.75	1300.35	1294.77	1297.38	1297.41	1298.61	1294.19	1290.13	1292.75	1300.35	1294.77	1297.38	1297.41	1298.61	1294.19	1290.13
40.00°	1240.96	1240.76	1248.10	1242.20	1242.70	1243.39	1246.08	1243.38	1240.96	1240.76	1248.10	1242.20	1242.70	1243.39	1246.08	1243.38	1240.96
42.50°	1182.67	1185.28	1187.22	1185.34	1185.08	1187.92	1188.16	1190.42	1182.67	1185.28	1187.22	1185.34	1185.08	1187.92	1188.16	1190.42	1182.67
45.00°	1124.12	1129.33	1126.93	1127.22	1124.66	1128.80	1128.51	1131.32	1124.12	1129.33	1126.93	1127.22	1124.66	1128.80	1128.51	1131.32	1124.12
47.50°	1061.82	1068.64	1067.55	1065.54	1063.70	1068.86	1067.03	1070.77	1061.82	1068.64	1067.55	1065.54	1063.70	1068.86	1067.03	1070.77	1061.82
50.00°	999.49	1007.49	1005.66	1002.69	1002.29	1005.08	1005.07	1006.71	999.49	1007.49	1005.66	1002.69	1002.29	1005.08	1005.07	1006.71	999.49
52.50°	936.86	943.40	940.43	937.15	936.79	940.62	940.54	942.72	936.86	943.40	940.43	937.15	936.79	940.62	940.54	942.72	936.86
55.00°	873.59	879.16	874.63	870.26	868.35	872.21	875.51	878.90	873.59	879.16	874.63	870.26	868.35	872.21	875.51	878.90	873.59
57.50°	806.57	811.46	808.20	800.73	799.70	803.29	807.99	812.67	806.57	811.46	808.20	800.73	799.70	803.29	807.99	812.67	806.57
60.00°	738.68	743.66	739.20	731.10	730.92	732.96	740.12	742.31	738.68	743.66	739.20	731.10	730.92	732.96	740.12	742.31	738.68
62.50°	666.68	673.08	667.62	661.30	659.51	662.52	666.73	671.15	666.68	673.08	667.62	661.30	659.51	662.52	666.73	671.15	666.68
65.00°	594.80	602.40	595.75	590.56	586.68	589.53	592.77	598.81	594.80	602.40	595.75	590.56	586.68	589.53	592.77	598.81	594.80
67.50°	523.33	529.95	523.60	518.47	513.95	516.42	520.65	526.52	523.33	529.95	523.60	518.47	513.95	516.42	520.65	526.52	523.33
70.00°	452.23	457.53	450.86	444.95	441.25	442.86	448.64	454.27	452.23	457.53	450.86	444.95	441.25	442.86	448.64	454.27	452.23
72.50°	382.25	385.28	377.66	369.68	367.04	369.33	377.83	382.45	382.25	385.28	377.66	369.68	367.04	369.33	377.83	382.45	382.25
75.00°	312.66	313.51	305.78	296.28	292.27	296.79	307.07	311.10	312.66	313.51	305.78	296.28	292.27	296.79	307.07	311.10	312.66
77.50°	244.04	245.03	234.71	224.94	219.88	224.56	237.65	242.82	244.04	245.03	234.71	224.94	219.88	224.56	237.65	242.82	244.04
80.00°	178.15	177.80	167.18	155.99	148.24	156.77	168.73	177.42	178.15	177.80	167.18	155.99	148.24	156.77	168.73	177.42	178.15
82.50°	118.00	116.83	101.58	89.28	90.97	91.58	108.64	116.19	118.00	116.83	101.58	89.28	90.97	91.58	108.64	116.19	118.00
85.00°	66.67	62.04	55.65	44.42	37.28	49.09	51.77	58.39	66.67	62.04	55.65	44.42	37.28	49.09	51.77	58.39	66.67
87.50°	30.91	31.24	18.73	16.99	18.32	11.98	27.05	25.23	30.91	31.24	18.73	16.99	18.32	11.98	27.05	25.23	30.91
90.00°	7.94	7.36	6.53	5.07	6.00	7.35	5.23	9.48	7.94	7.36	6.53	5.07	6.00	7.35	5.23	9.48	7.94
92.50°	4.69	4.97	3.71	4.03	4.20	3.57	4.11	3.61	4.69	4.97	3.71	4.03	4.20	3.57	4.11	3.61	4.69
95.00°	2.84	3.30	3.04	3.51	3.86	3.83	3.18	3.69	2.84	3.30	3.04	3.51	3.86	3.83	3.18	3.69	2.84
97.50°	2.81	3.52	3.06	3.29	3.50	4.05	3.18	3.61	2.81	3.52	3.06	3.29	3.50	4.05	3.18	3.61	2.81
100.00°	2.93	3.63	3.47	3.38	3.14	4.18	3.16	3.45	2.93	3.63	3.47	3.38	3.14	4.18	3.16	3.45	2.93
102.50°	3.22	3.48	3.99	3.63	3.49	4.25	3.05	3.28	3.22	3.48	3.99	3.63	3.49	4.25	3.05	3.28	3.22
105.00°	3.44	3.44	3.56	3.54	3.88	4.10	3.05	3.10	3.44	3.44	3.56	3.54	3.88	4.10	3.05	3.10	3.44

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	5726	5726	5726	5726	5590	5590	5590	5590	5336	5336	5336	5104	5104	5104	4891	4891	4790
	1	5237	5010	4806	4623	5104	4898	4713	4545	4689	4537	4397	4497	4373	4258	4320	4220	4129
	2	4762	4367	4040	3766	4633	4273	3973	3719	4098	3846	3628	3937	3726	3541	3788	3614	3459
	3	4340	3834	3442	3129	4218	3755	3392	3099	3608	3297	3041	3472	3207	2985	3346	3122	2930
	4	3973	3395	2973	2650	3860	3330	2935	2630	3205	2862	2590	3090	2793	2552	2983	2727	2515
	5	3652	3033	2600	2280	3549	2977	2570	2266	2872	2513	2239	2774	2459	2212	2682	2407	2186
	6	3372	2730	2298	1989	3278	2683	2275	1979	2593	2230	1959	2509	2186	1940	2431	2145	1921
	7	3127	2475	2052	1755	3041	2434	2033	1748	2358	1996	1733	2286	1961	1719	2219	1927	1705
	8	2910	2258	1847	1565	2833	2223	1832	1559	2157	1802	1548	2096	1773	1537	2037	1745	1526
	9	2719	2072	1675	1408	2649	2042	1663	1403	1985	1638	1394	1932	1614	1386	1881	1591	1377
	10	2549	1911	1530	1276	2486	1885	1519	1272	1836	1498	1265	1789	1478	1258	1745	1459	1252

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	56.0 fc	16.3 ft
6.5 ft	40.1 fc	19.2 ft
7.5 ft	30.1 fc	22.2 ft
8.0 ft	26.5 fc	23.7 ft
10.0 ft	16.9 fc	29.6 ft
12.0 ft	11.8 fc	35.5 ft
14.0 ft	8.6 fc	41.4 ft
16.0 ft	6.6 fc	47.4 ft
20.0 ft	4.2 fc	59.2 ft
24.0 ft	2.9 fc	71.0 ft
28.0 ft	2.2 fc	82.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	30386	30386	30386
45.00°	28520	28591	28533
55.00°	27323	27356	27159
65.00°	25249	25289	24904
75.00°	21672	21195	20258
85.00°	13722	11455	7674

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	23.7	25.3	24.1	25.6	26.0	23.6	25.2	24.0	25.5	25.9
	3H	25.5	26.9	25.8	27.3	27.6	25.3	26.8	25.7	27.1	27.5
	4H	26.1	27.5	26.5	27.8	28.2	25.9	27.3	26.3	27.7	28.1
	6H	26.5	27.8	27.0	28.2	28.6	26.3	27.6	26.7	27.9	28.3
	8H	26.7	27.9	27.1	28.3	28.7	26.4	27.6	26.8	28.0	28.4
	12H	26.7	27.9	27.2	28.3	28.7	26.4	27.6	26.8	27.9	28.4
4H	2H	24.3	25.7	24.7	26.0	26.4	24.2	25.6	24.6	26.0	26.4
	3H	26.3	27.4	26.7	27.9	28.3	26.2	27.3	26.6	27.7	28.2
	4H	27.1	28.1	27.5	28.5	29.0	26.9	27.9	27.3	28.4	28.8
	6H	27.6	28.5	28.1	29.0	29.4	27.4	28.3	27.8	28.7	29.2
	8H	27.8	28.6	28.2	29.1	29.6	27.5	28.3	27.9	28.8	29.2
	12H	27.9	28.6	28.4	29.1	29.6	27.5	28.3	28.0	28.7	29.2
8H	4H	27.3	28.2	27.8	28.6	29.1	27.2	28.0	27.7	28.5	29.0
	6H	28.0	28.7	28.5	29.2	29.7	27.7	28.4	28.2	28.9	29.4
	8H	28.2	28.8	28.7	29.4	29.9	27.9	28.5	28.4	29.0	29.5
	12H	28.4	28.9	28.9	29.4	30.0	28.0	28.5	28.5	29.0	29.6
12H	4H	27.3	28.1	27.8	28.6	29.1	27.2	28.0	27.7	28.5	28.9
	6H	28.0	28.7	28.6	29.1	29.7	27.8	28.4	28.3	28.9	29.4
	8H	28.3	28.8	28.8	29.3	29.9	28.0	28.5	28.5	29.0	29.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0