

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

LT03IND48 20L 35HK xx LW xx xx MW

Specline Linear, 1.8" aperture x 4' Long, Matte White Refl

Test Number

SP-01381_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	4927
Efficacy	79.47 lm/W

Luminous Dimensions

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

Spacing Criterion

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

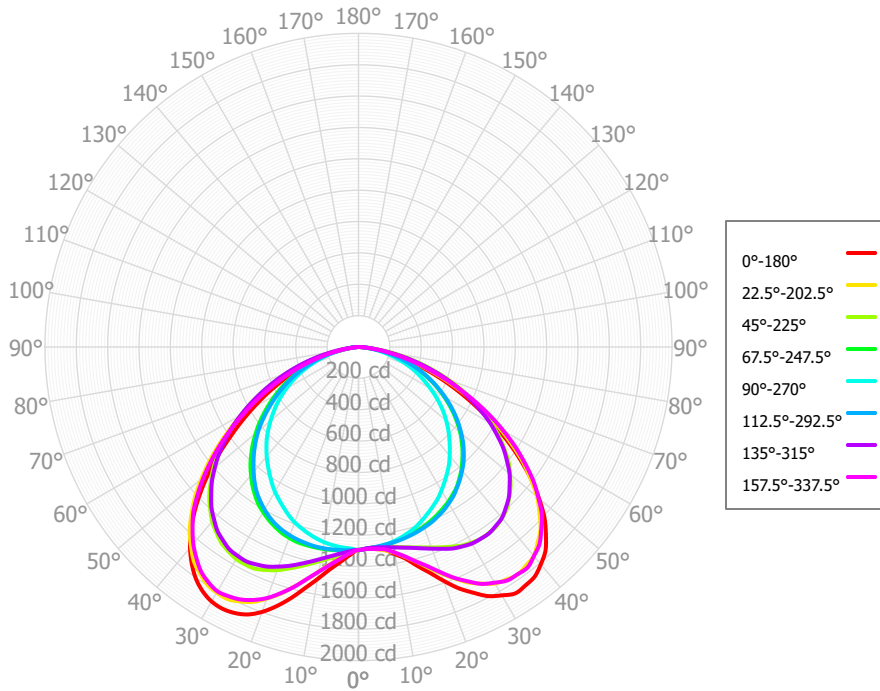
Full Beam Angle

0° - 180°	118°
90° - 270°	76°

IES File Header Contents

Keyword	Value
TEST	SP-01381_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	6/3/2022
ISSUEDATE	3/27/2023
LUMCAT	LT03IND48 20L 35HK xx LW xx xx MW
LUMINAIRE	SpecLine Linear, 1.8" aperture x 4' Long, Matte White Refl
OTHER	Wide Extruded Acrylic Lens, Batwing Distribution
OTHER	Data for 4' 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: 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°	127.83	2.59%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	394.78	8.01%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	678.89	13.78%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	900.71	18.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	974.29	19.77%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	866.76	17.59%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	617.86	12.54%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	308.07	6.25%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	58.08	1.18%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	4927.26	100.00%	0.00° - 180.00°	4927.26	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°	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83	1294.83
2.50°	1288.60	1288.60	1285.38	1286.75	1286.24	1297.34	1304.95	1318.58	1330.52	1317.13	1310.45	1297.27	1286.03	1286.83	1284.80	1290.02	1288.60
5.00°	1294.52	1293.21	1282.63	1281.68	1281.11	1300.03	1323.24	1357.19	1379.53	1351.37	1331.20	1301.89	1281.99	1280.14	1284.01	1293.30	1294.52
7.50°	1305.92	1309.12	1285.59	1274.45	1273.34	1302.10	1345.75	1402.08	1434.12	1398.06	1356.37	1305.77	1274.80	1273.17	1288.84	1302.60	1305.92
10.00°	1342.02	1332.79	1294.67	1265.85	1260.83	1302.87	1372.31	1454.84	1502.61	1453.64	1385.15	1307.70	1264.37	1265.92	1298.12	1331.45	1342.02
12.50°	1382.14	1370.88	1307.88	1254.50	1245.81	1301.37	1401.69	1515.13	1575.55	1516.38	1416.12	1307.90	1249.96	1258.61	1311.12	1368.54	1382.14
15.00°	1444.66	1417.19	1323.60	1241.73	1226.78	1295.97	1432.26	1583.33	1657.24	1582.14	1448.58	1306.55	1232.13	1248.54	1326.58	1416.00	1444.66
17.50°	1509.36	1474.41	1340.69	1229.81	1206.06	1288.78	1463.50	1646.17	1732.82	1649.89	1481.64	1304.10	1211.98	1238.08	1346.65	1466.81	1509.36
20.00°	1587.05	1536.57	1361.21	1218.23	1179.43	1279.07	1490.84	1704.42	1798.55	1707.51	1515.03	1295.20	1190.22	1225.19	1369.18	1528.90	1587.05
22.50°	1665.23	1597.28	1383.21	1201.48	1150.90	1265.87	1516.45	1746.48	1846.78	1759.85	1539.71	1282.59	1161.99	1212.09	1393.40	1593.71	1665.23
25.00°	1729.20	1657.47	1405.49	1183.10	1122.07	1248.70	1531.67	1777.32	1872.19	1790.55	1560.60	1263.83	1130.12	1193.78	1418.34	1649.60	1729.20
27.50°	1791.65	1701.84	1427.87	1162.88	1093.17	1225.95	1543.32	1792.91	1881.81	1812.17	1564.00	1242.16	1098.15	1175.22	1434.43	1703.93	1791.65
30.00°	1829.61	1741.85	1440.98	1142.22	1057.72	1197.89	1539.40	1799.71	1874.68	1808.71	1561.30	1216.14	1066.13	1151.48	1447.55	1736.07	1829.61
32.50°	1863.04	1758.60	1451.70	1117.23	1021.14	1166.05	1531.31	1780.67	1848.99	1797.00	1544.96	1188.52	1028.67	1127.14	1450.68	1765.81	1863.04
35.00°	1857.00	1770.76	1448.70	1091.52	984.45	1131.28	1506.39	1749.78	1807.04	1763.30	1525.04	1151.47	989.26	1095.46	1451.30	1769.73	1857.00
37.50°	1846.24	1756.82	1443.22	1056.90	947.76	1088.41	1478.25	1698.50	1746.39	1724.24	1490.17	1111.81	950.00	1063.38	1438.64	1772.38	1846.24
40.00°	1809.61	1739.53	1422.73	1021.38	904.99	1040.50	1434.28	1639.97	1672.25	1661.56	1452.53	1066.57	910.79	1028.51	1423.64	1740.97	1809.61
42.50°	1765.22	1692.03	1400.40	979.98	861.89	991.27	1388.38	1566.96	1579.99	1594.76	1400.37	1020.16	869.29	992.30	1391.00	1708.13	1765.22
45.00°	1690.80	1642.28	1358.66	938.27	818.94	941.36	1328.80	1489.92	1477.19	1505.48	1346.38	967.25	827.35	949.50	1356.29	1649.10	1690.80
47.50°	1608.63	1565.67	1315.73	892.54	775.87	888.62	1268.27	1391.28	1363.56	1413.70	1278.82	913.45	780.33	905.16	1307.64	1587.13	1608.63
50.00°	1503.20	1487.74	1261.79	846.46	730.36	834.74	1195.93	1288.31	1244.90	1307.34	1210.39	855.59	732.62	855.37	1258.21	1498.71	1503.20
52.50°	1391.61	1385.81	1207.15	794.37	684.40	774.11	1123.05	1178.79	1122.25	1200.21	1129.46	797.43	684.05	804.54	1193.89	1407.31	1391.61
55.00°	1265.70	1282.55	1136.51	741.86	634.07	711.40	1040.65	1068.41	998.11	1085.26	1047.99	735.39	635.42	750.94	1128.91	1298.29	1265.70
57.50°	1137.59	1163.41	1064.56	685.46	583.28	650.30	957.40	954.19	885.14	970.38	956.03	673.23	584.58	695.64	1049.66	1186.97	1137.59
60.00°	1005.42	1043.74	979.18	628.96	529.85	589.59	864.79	839.66	775.32	856.91	863.86	610.83	533.66	636.66	969.43	1066.25	1005.42
62.50°	875.86	920.45	893.00	571.84	477.55	529.70	771.99	733.90	673.93	744.42	769.42	548.20	480.89	577.66	879.69	944.26	875.86
65.00°	750.29	797.47	801.93	513.50	429.86	469.93	677.91	628.59	574.25	640.98	674.90	482.69	427.88	518.63	789.11	818.41	750.29
67.50°	630.89	675.90	709.21	450.39	380.72	408.01	584.25	532.13	483.83	539.17	579.95	417.32	372.14	458.17	693.60	694.56	630.89
70.00°	519.09	557.37	609.57	387.49	327.19	345.87	492.45	436.23	394.74	446.64	485.27	352.97	316.76	395.72	596.88	575.47	519.09
72.50°	416.05	449.29	509.88	325.20	274.02	284.62	401.72	347.29	313.26	355.67	391.82	289.30	263.73	332.41	494.94	462.07	416.05
75.00°	321.79	345.97	410.04	263.20	221.68	223.44	314.63	259.98	232.39	271.23	300.43	228.87	210.96	268.11	394.12	359.56	321.79
77.50°	237.92	255.13	312.47	201.85	170.52	166.19	230.25	183.84	163.18	189.89	215.81	169.52	159.46	206.09	296.79	263.83	237.92
80.00°	162.80	171.76	220.55	143.78	121.57	109.72	152.82	112.11	94.80	118.09	137.06	113.93	109.98	146.21	203.60	178.53	162.80
82.50°	100.18	103.74	136.64	91.82	77.25	66.07	85.35	60.69	51.36	58.47	73.03	64.63	67.30	94.62	120.44	107.28	100.18
85.00°	46.07	50.31	68.32	49.27	40.02	25.61	37.96	18.91	10.81	27.81	25.66	32.21	32.12	49.35	54.97	53.51	46.07
87.50°	19.01	21.54	21.69	20.83	15.47	13.36	7.30	10.10	6.98	6.83	11.18	9.05	16.31	22.88	24.46	20.25	19.01
90.00°	6.76	4.45	9.99	4.47	7.07	2.93	4.40	3.61	3.63	4.63	2.34	5.61	5.29	8.39	5.37	8.32	6.76

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	5866	5866	5866	5866	5729	5729	5729	5729	5475	5475	5475	5242	5242	5242	5028	5028	4927
	1	5367	5134	4926	4738	5232	5022	4833	4661	4813	4657	4514	4620	4493	4375	4443	4341	4245
	2	4871	4464	4127	3844	4741	4370	4060	3798	4195	3934	3709	4033	3815	3624	3883	3703	3542
	3	4429	3904	3498	3174	4306	3825	3449	3145	3678	3355	3089	3541	3266	3034	3414	3181	2982
	4	4042	3442	3003	2668	3928	3376	2966	2649	3251	2894	2611	3136	2826	2575	3028	2761	2540
	5	3705	3060	2609	2277	3600	3004	2581	2264	2898	2525	2238	2800	2471	2213	2708	2420	2189
	6	3411	2741	2292	1969	3315	2694	2269	1960	2604	2225	1942	2520	2182	1924	2441	2141	1907
	7	3153	2473	2032	1724	3066	2433	2014	1717	2356	1978	1704	2284	1944	1690	2216	1911	1678
	8	2926	2246	1818	1524	2848	2211	1803	1519	2145	1774	1509	2083	1746	1499	2025	1719	1489
	9	2727	2052	1639	1359	2655	2022	1626	1356	1965	1602	1348	1911	1579	1340	1861	1556	1333
	10	2550	1885	1487	1222	2485	1859	1477	1219	1810	1457	1213	1763	1437	1208	1718	1418	1202

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	42.8 fc	18.3 ft
6.5 ft	30.6 fc	21.6 ft
7.5 ft	23.0 fc	24.9 ft
8.0 ft	20.2 fc	26.6 ft
10.0 ft	12.9 fc	33.2 ft
12.0 ft	9.0 fc	39.8 ft
14.0 ft	6.6 fc	46.5 ft
16.0 ft	5.1 fc	53.1 ft
20.0 ft	3.2 fc	66.4 ft
24.0 ft	2.2 fc	79.7 ft
28.0 ft	1.7 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