

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CF06XXPC 30L 35K XW XX NL XX
Nom 6" diam Gamma Cylinder (damp location), no lens

Test Number

SP-01045_M-30L

Test Date

2/3/2020

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

Summary of Results

Power

Input Watts	19.9 W
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Lumen Output

Output Lumens	2275
Efficacy	114.3 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.21
Two luminaires, plane 90°	1.23
Four luminaires	1.12

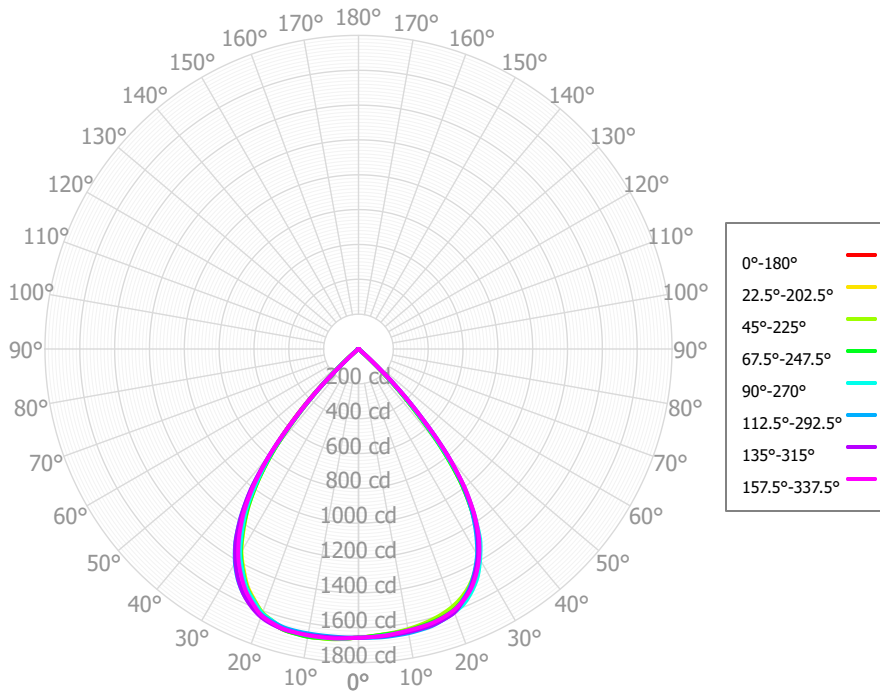
Full Beam Angle

0° - 180°	78°
90° - 270°	78°

IES File Header Contents

Keyword	Value
TEST	SP-01045_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/3/2020
ISSUEDATE	05/16/2022
LUMCAT	CFO6XXPC 30L 35K XW XX NL XX
LUMINAIRE	Nom 6" diam Gamma Cylinder (damp location), no lens
OTHER	Beam angle: 76.4 deg
OTHER	XTRA Wide optic
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.04, 27HK x 0.78, 30HK x 0.82
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 40L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	160.72	7.07%	90.00° - 100.00°	0.08	0.00%
10.00° - 20.00°	464.11	20.40%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	694.92	30.55%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	691.33	30.39%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	247.93	10.90%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.61	0.33%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	3.47	0.15%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.98	0.13%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.39	0.06%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2274.47	100.00%	0.00° - 180.00°	2274.54	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°	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85	1657.85
2.50°	1653.54	1651.09	1651.19	1651.31	1655.78	1658.02	1659.79	1662.90	1663.45	1663.60	1665.31	1662.94	1663.47	1659.46	1655.68	1655.64	1653.54
5.00°	1649.03	1646.57	1644.76	1646.07	1652.54	1657.56	1662.99	1667.84	1668.01	1670.75	1672.64	1668.87	1667.01	1660.32	1655.41	1652.89	1649.03
7.50°	1643.46	1644.36	1639.97	1643.66	1650.76	1658.07	1664.96	1668.85	1669.30	1674.12	1674.70	1673.48	1667.92	1658.67	1652.90	1646.98	1643.46
10.00°	1637.81	1639.02	1633.80	1640.19	1648.14	1658.42	1666.70	1669.61	1670.64	1676.38	1676.36	1677.67	1668.11	1656.78	1650.27	1641.25	1637.81
12.50°	1631.76	1629.30	1623.65	1632.74	1644.28	1658.16	1667.69	1667.65	1672.12	1672.10	1669.83	1673.95	1663.52	1651.40	1646.14	1636.34	1631.76
15.00°	1625.13	1618.98	1611.71	1624.34	1637.63	1654.73	1665.46	1663.84	1667.28	1666.58	1662.22	1668.21	1658.03	1644.62	1641.31	1629.41	1625.13
17.50°	1610.33	1608.00	1596.06	1613.39	1627.87	1642.34	1655.97	1649.04	1648.83	1640.73	1638.04	1646.54	1637.63	1627.66	1627.79	1616.02	1610.33
20.00°	1593.06	1586.70	1574.73	1594.96	1609.20	1624.97	1637.41	1627.93	1619.68	1612.79	1610.98	1620.18	1615.71	1605.61	1610.05	1597.21	1593.06
22.50°	1559.52	1556.68	1544.54	1561.76	1582.96	1597.03	1603.67	1583.22	1572.78	1560.18	1563.45	1571.18	1567.39	1561.40	1566.42	1565.97	1559.52
25.00°	1520.53	1512.19	1502.28	1516.06	1537.38	1556.86	1557.20	1531.51	1515.72	1505.91	1510.70	1515.89	1517.36	1511.04	1517.83	1523.66	1520.53
27.50°	1459.48	1458.37	1445.29	1451.79	1478.89	1497.30	1494.06	1461.55	1445.84	1427.81	1434.58	1440.36	1440.71	1442.54	1449.33	1461.89	1459.48
30.00°	1387.21	1378.45	1368.24	1371.70	1395.99	1418.33	1412.71	1379.94	1358.74	1345.95	1348.10	1353.14	1360.26	1362.25	1372.33	1384.92	1387.21
32.50°	1282.47	1285.49	1272.41	1273.12	1300.85	1315.88	1313.09	1275.28	1254.97	1229.31	1230.29	1239.11	1245.12	1256.84	1271.81	1287.72	1282.47
35.00°	1154.41	1141.53	1134.13	1136.03	1157.68	1178.88	1177.34	1149.28	1124.26	1105.38	1098.83	1107.04	1121.42	1133.90	1151.33	1159.75	1154.41
37.50°	977.49	979.00	965.41	964.39	996.92	1008.90	1013.83	991.53	972.98	942.19	937.63	943.27	954.37	982.14	990.62	1000.39	977.49
40.00°	766.77	748.15	739.19	738.75	763.29	786.97	794.03	791.04	778.47	761.89	749.37	752.03	771.77	789.74	794.32	790.90	766.77
42.50°	502.97	500.11	480.83	476.09	510.39	527.07	540.39	541.96	558.91	521.90	515.74	524.17	537.47	546.48	542.51	541.04	502.97
45.00°	280.25	278.80	266.51	263.35	284.55	302.67	313.29	317.25	337.85	303.99	309.51	319.10	319.86	323.13	316.30	315.87	280.25
47.50°	108.14	61.90	70.42	77.23	63.23	97.89	98.08	114.42	116.14	140.43	138.18	137.28	143.11	118.88	120.55	105.84	108.14
50.00°	18.46	24.72	16.38	16.42	25.34	24.95	29.33	23.66	40.75	29.16	42.00	43.38	25.79	23.70	20.79	26.88	18.46
52.50°	6.71	2.27	3.94	4.74	2.75	7.75	7.70	9.78	12.03	15.89	19.27	20.29	15.89	11.03	8.70	7.89	6.71
55.00°	1.76	1.66	1.42	1.96	2.12	3.58	3.79	4.86	7.11	8.24	8.14	11.19	10.07	6.42	3.46	2.59	1.76
57.50°	1.74	1.29	0.90	1.63	1.91	3.32	3.78	4.58	7.25	8.56	5.94	10.66	9.84	6.44	3.15	1.97	1.74
60.00°	1.66	1.33	1.17	1.60	2.16	2.87	3.41	4.25	7.00	8.15	4.77	9.75	8.55	5.75	2.87	1.72	1.66
62.50°	1.54	1.38	1.52	1.63	2.34	2.38	3.00	3.91	6.71	6.94	4.19	8.67	6.12	4.76	2.61	1.55	1.54
65.00°	1.55	1.44	1.27	1.60	2.09	2.17	2.69	4.09	6.66	6.56	4.05	7.86	4.58	3.84	2.51	1.50	1.55
67.50°	1.61	1.47	1.02	1.57	1.84	2.00	2.42	4.42	6.69	6.87	4.10	7.13	3.78	2.95	2.48	1.47	1.61
70.00°	1.43	1.40	1.03	1.62	1.62	1.79	2.52	4.82	7.44	7.78	3.47	6.60	3.40	2.78	1.97	1.47	1.43
72.50°	1.23	1.19	1.04	1.54	1.53	1.63	2.75	4.96	8.10	8.99	2.72	6.25	3.23	2.67	1.48	1.45	1.23
75.00°	1.18	0.83	1.03	1.21	1.57	1.60	3.20	4.01	8.58	8.06	2.24	7.05	3.61	2.48	1.93	1.34	1.18
77.50°	1.28	0.70	1.06	0.87	1.61	1.57	2.53	2.84	5.14	5.93	2.12	6.16	3.15	2.05	2.03	1.30	1.28
80.00°	1.40	0.82	0.98	0.82	1.42	1.42	1.78	1.84	2.48	2.59	2.18	4.06	1.85	1.67	1.81	1.42	1.40
82.50°	1.24	0.93	0.84	0.92	1.04	1.05	1.30	1.49	2.26	2.11	1.78	2.49	2.04	1.66	1.31	1.60	1.24
85.00°	0.92	0.91	0.81	0.85	0.89	0.72	1.17	1.23	1.57	1.94	2.04	2.06	1.25	1.42	1.17	1.16	0.92
87.50°	0.91	1.01	0.77	1.19	1.16	0.91	1.19	0.89	1.19	1.41	1.34	1.99	1.45	1.20	1.10	1.08	0.91
90.00°	0.62	0.00	0.00	0.00	0.00	0.93	0.00	0.62	1.02	0.81	0.88	0.89	0.94	0.69	0.79	0.88	0.62
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	2708	2708	2708	2708	2645	2645	2645	2645	2527	2527	2527	2420	2420	2420	2321	2321	2321	2274
	1	2572	2505	2445	2391	2515	2456	2402	2353	2363	2320	2280	2278	2244	2212	2200	2173	2148	2129
	2	2432	2313	2215	2133	2381	2274	2184	2109	2200	2126	2062	2131	2071	2017	2068	2019	1975	1978
	3	2296	2138	2017	1920	2249	2106	1994	1904	2046	1951	1873	1989	1910	1843	1937	1871	1814	1835
	4	2165	1979	1843	1739	2123	1953	1826	1729	1903	1794	1708	1856	1763	1688	1813	1733	1668	1700
	5	2041	1835	1691	1585	2002	1813	1678	1577	1771	1653	1563	1732	1629	1549	1695	1606	1535	1577
	6	1925	1704	1556	1450	1889	1686	1546	1445	1650	1527	1435	1617	1508	1425	1586	1490	1415	1463
	7	1816	1586	1437	1332	1783	1570	1429	1329	1540	1413	1321	1512	1398	1314	1485	1384	1306	1360
	8	1714	1479	1330	1229	1685	1465	1324	1226	1439	1311	1220	1415	1299	1215	1392	1287	1209	1266
	9	1620	1382	1235	1136	1594	1370	1230	1134	1347	1220	1130	1326	1210	1126	1306	1200	1122	1181
	10	1534	1294	1150	1055	1509	1284	1146	1053	1264	1137	1050	1246	1129	1046	1228	1121	1043	1104

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	54.8 fc	9.0 ft
6.5 ft	39.2 fc	10.6 ft
7.5 ft	29.5 fc	12.2 ft
8.0 ft	25.9 fc	13.0 ft
10.0 ft	16.6 fc	16.3 ft
12.0 ft	11.5 fc	19.6 ft
14.0 ft	8.5 fc	22.8 ft
16.0 ft	6.5 fc	26.1 ft
20.0 ft	4.1 fc	32.6 ft
24.0 ft	2.9 fc	39.1 ft
28.0 ft	2.1 fc	45.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	90884	90884	90884
45.00°	21727	20662	22060
55.00°	168	136	202
65.00°	201	164	271
75.00°	249	218	332
85.00°	577	512	562

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	-12.9	-11.8	-12.5	-11.5	-11.2	-2.2	-1.2	-1.9	-0.9	-0.6
	3H	-9.8	-8.9	-9.4	-8.6	-8.2	-1.0	-0.1	-0.6	0.3	0.6
	4H	-8.6	-7.8	-8.2	-7.4	-7.0	-0.1	0.7	0.3	1.0	1.4
	6H	-6.8	-6.1	-6.4	-5.7	-5.3	0.6	1.3	1.0	1.7	2.1
	8H	-5.8	-5.1	-5.4	-4.7	-4.3	0.8	1.5	1.2	1.9	2.3
	12H	-4.9	-4.3	-4.5	-3.9	-3.4	1.0	1.6	1.4	2.0	2.5
4H	2H	-11.3	-10.5	-10.9	-10.1	-9.7	-2.2	-1.4	-1.8	-1.0	-0.6
	3H	-8.5	-7.8	-8.0	-7.4	-7.0	-0.4	0.2	0.0	0.6	1.0
	4H	-7.3	-6.7	-6.8	-6.2	-5.8	1.1	1.7	1.5	2.1	2.6
	6H	-5.4	-4.9	-4.9	-4.5	-4.0	2.1	2.6	2.6	3.1	3.5
	8H	-4.3	-3.8	-3.8	-3.3	-2.9	2.4	2.8	2.8	3.3	3.8
	12H	-3.3	-2.9	-2.8	-2.4	-1.9	2.6	3.0	3.1	3.5	4.0
8H	4H	-6.3	-5.8	-5.8	-5.4	-4.9	1.4	1.9	1.9	2.4	2.8
	6H	-4.3	-3.9	-3.8	-3.4	-2.9	2.7	3.0	3.2	3.5	4.0
	8H	-3.0	-2.7	-2.5	-2.1	-1.6	3.0	3.4	3.6	3.9	4.4
	12H	-1.9	-1.6	-1.3	-1.1	-0.5	3.4	3.7	3.9	4.2	4.8
12H	4H	-6.1	-5.7	-5.6	-5.2	-4.7	1.5	1.9	2.0	2.4	2.9
	6H	-4.0	-3.7	-3.5	-3.2	-2.6	2.7	3.1	3.3	3.5	4.1
	8H	-2.6	-2.3	-2.1	-1.8	-1.2	3.2	3.5	3.7	4.0	4.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0