Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CF06XXPC 30L 35K XW XX CL XX

Nom 6" diam Gamma Cylinder (damp location), clear glass lens

Test Number

SP-01044_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

Lumen Output

Output Lumens	2180
Efficacy	109.54 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.17
Two luminaires, plane 90°	1.17
Four luminaires	1.11

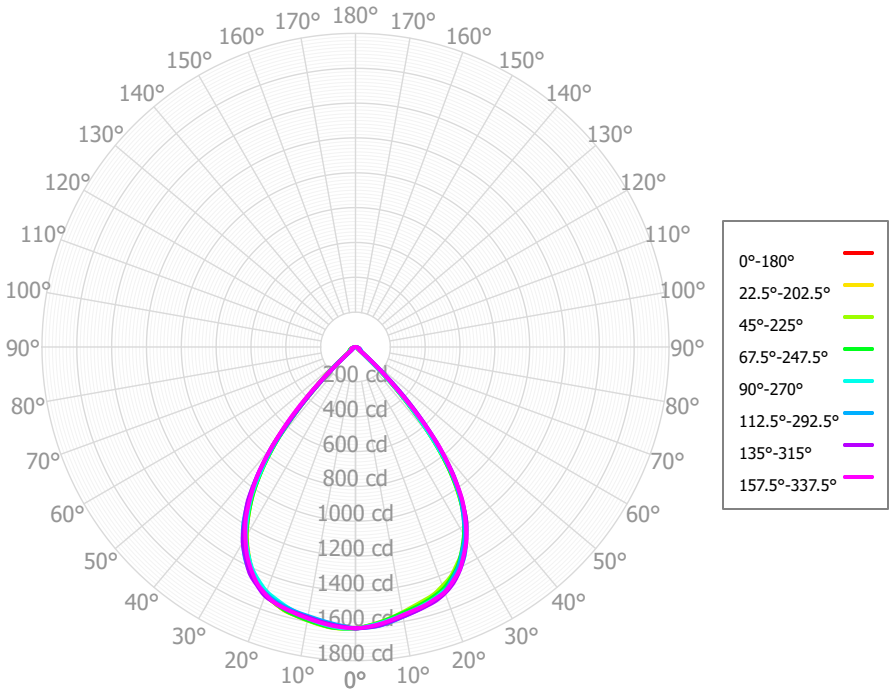
Full Beam Angle

0° - 180°	78°
90° - 270°	77°

IES File Header Contents

Keyword	Value
TEST	SP-01044_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/3/2020
ISSUEDATE	05/16/2022
LUMCAT	CF06XXPC 30L 35K XW XX CL XX
LUMINAIRE	Nom 6" diam Gamma Cylinder (damp location), clear glass lens
OTHER	Beam angle: 77.4 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°	154.14	7.07%	90.00° - 100.00°	0.06	0.00%
10.00° - 20.00°	434.97	19.95%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	642.55	29.48%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	635.95	29.17%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	247.79	11.37%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	26.36	1.21%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	24.25	1.11%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	12.19	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.66	0.08%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2179.84	100.00%	0.00° - 180.00°	2179.91	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°	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12	1615.12
2.50°	1606.28	1602.86	1602.25	1603.50	1604.99	1603.77	1608.15	1611.76	1616.07	1617.49	1619.14	1617.07	1616.71	1612.21	1611.41	1608.20	1606.28
5.00°	1593.28	1588.91	1586.06	1588.67	1592.23	1592.65	1599.61	1605.27	1609.52	1617.19	1614.38	1615.43	1608.78	1605.74	1604.25	1596.45	1593.28
7.50°	1576.38	1571.54	1567.80	1569.96	1577.52	1580.20	1588.18	1594.06	1599.31	1604.96	1606.48	1603.60	1596.72	1590.27	1587.55	1580.93	1576.38
10.00°	1558.73	1553.67	1547.55	1551.66	1562.70	1568.62	1575.80	1582.30	1587.34	1591.59	1593.65	1591.70	1581.03	1572.49	1572.01	1563.22	1558.73
12.50°	1540.27	1534.24	1526.68	1536.57	1547.81	1558.63	1565.82	1570.04	1576.22	1579.69	1580.08	1578.98	1562.40	1556.43	1558.22	1548.74	1540.27
15.00°	1522.45	1515.08	1508.15	1520.71	1531.10	1545.90	1556.43	1555.84	1565.44	1567.57	1565.56	1564.60	1541.68	1540.69	1543.91	1535.76	1522.45
17.50°	1505.19	1496.61	1490.16	1500.93	1513.49	1529.18	1539.26	1540.15	1542.09	1540.99	1541.85	1539.68	1518.15	1518.07	1528.94	1517.43	1505.19
20.00°	1478.53	1472.07	1459.69	1476.73	1489.21	1505.95	1520.79	1510.17	1515.01	1512.91	1508.78	1510.76	1492.97	1494.64	1503.51	1497.19	1478.53
22.50°	1445.14	1435.53	1427.18	1436.06	1462.27	1474.88	1479.69	1471.35	1465.88	1462.80	1463.84	1464.60	1451.82	1445.91	1467.52	1457.58	1445.14
25.00°	1397.16	1391.67	1377.64	1388.28	1412.13	1430.07	1436.14	1414.32	1412.03	1409.52	1408.82	1411.68	1403.29	1395.75	1415.86	1412.58	1397.16
27.50°	1340.57	1336.29	1326.45	1320.67	1355.02	1371.87	1366.16	1348.35	1338.84	1332.28	1336.22	1337.56	1335.80	1326.02	1351.41	1345.61	1340.57
30.00°	1265.63	1263.04	1248.65	1245.67	1271.11	1292.88	1294.66	1263.94	1262.75	1249.95	1251.56	1253.73	1261.53	1254.88	1272.07	1274.31	1265.63
32.50°	1182.10	1166.50	1169.25	1154.71	1181.39	1197.49	1187.60	1172.22	1155.16	1142.62	1144.73	1145.80	1154.96	1153.94	1182.94	1172.28	1182.10
35.00°	1054.17	1040.29	1030.61	1038.75	1045.53	1068.43	1077.63	1050.19	1044.92	1026.48	1025.76	1023.74	1039.59	1048.25	1061.00	1066.38	1054.17
37.50°	910.15	882.84	887.98	878.80	902.61	918.00	915.98	919.05	893.09	878.16	874.27	874.25	884.12	898.63	921.31	910.23	910.15
40.00°	713.27	692.38	686.39	689.62	691.09	719.79	746.30	740.07	738.90	712.91	708.29	701.56	720.72	740.73	744.00	750.71	713.27
42.50°	501.46	473.77	483.45	459.24	473.61	496.67	509.02	550.70	523.74	501.40	502.02	492.95	509.54	535.96	550.69	525.35	501.46
45.00°	300.60	282.95	270.24	264.96	270.85	295.60	287.11	336.44	314.33	309.87	281.90	306.58	292.30	340.19	351.00	302.48	300.60
47.50°	101.93	111.83	85.12	111.75	71.67	103.55	146.68	118.38	177.36	160.68	159.76	148.72	167.94	181.36	149.25	163.83	101.93
50.00°	52.01	38.13	45.65	31.65	41.40	41.85	33.54	64.23	56.11	62.24	62.59	59.92	49.49	58.34	75.69	37.06	52.01
52.50°	21.39	19.68	14.30	18.90	13.35	20.69	26.62	24.37	43.76	49.02	42.92	42.77	39.33	43.58	34.20	28.25	21.39
55.00°	19.32	14.05	12.71	13.53	14.16	16.91	21.56	25.21	33.47	40.35	37.73	36.80	31.10	33.62	27.91	20.78	19.32
57.50°	19.37	14.14	12.03	13.81	14.98	17.24	21.85	27.16	33.19	38.01	34.99	40.23	32.19	34.76	27.71	21.82	19.37
60.00°	20.54	15.64	13.83	15.11	15.94	18.79	22.49	27.69	33.01	36.00	32.53	39.99	33.05	34.93	27.46	22.82	20.54
62.50°	21.70	17.63	15.76	17.04	16.95	20.55	23.90	28.13	33.17	34.35	29.61	37.19	31.66	33.25	27.20	23.63	21.70
65.00°	21.95	19.18	17.97	18.95	18.25	20.76	24.25	27.30	32.68	32.36	26.65	32.88	29.81	30.30	26.60	23.80	21.95
67.50°	21.84	20.63	18.76	20.85	19.12	20.80	22.81	26.08	30.57	30.05	22.07	27.73	25.33	25.52	25.76	22.07	21.84
70.00°	19.64	17.83	17.56	19.01	18.86	19.95	20.74	23.03	27.39	25.88	17.37	22.96	20.31	20.42	20.90	19.51	19.64
72.50°	16.07	14.24	14.85	15.95	16.39	17.73	18.14	18.69	22.82	20.67	12.05	18.32	14.09	15.06	15.90	15.77	16.07
75.00°	10.58	9.09	11.17	10.45	12.06	12.43	12.03	12.60	16.38	15.83	7.54	13.44	9.22	9.61	10.57	10.09	10.58
77.50°	5.81	5.24	5.50	5.72	7.10	6.62	6.46	7.02	9.74	10.41	3.88	8.42	5.40	5.30	5.64	5.00	5.81
80.00°	2.58	2.60	2.70	2.36	3.25	2.58	2.80	3.29	4.14	4.16	2.81	3.70	3.23	3.06	2.33	3.01	2.58
82.50°	1.27	1.35	1.41	1.15	1.30	1.60	2.17	1.87	2.68	2.72	2.39	2.57	1.84	2.00	1.72	1.64	1.27
85.00°	1.05	1.02	0.81	1.10	1.03	1.34	1.28	1.50	1.95	2.10	1.84	1.46	1.74	1.50	1.41	1.12	1.05
87.50°	0.90	0.92	0.67	1.05	0.78	0.95	1.04	1.02	1.09	1.54	1.27	1.34	1.06	1.60	1.39	1.20	0.90
90.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.84	0.88	0.86	1.02	1.03	0.69	1.04	0.00	0.00
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.

	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	2595	2595	2595	2595	2535	2535	2535	2535	2422	2422	2422	2319	2319	2319	2224	2224	2224	2180
	1	2460	2393	2334	2280	2405	2346	2292	2244	2257	2214	2175	2176	2141	2110	2100	2073	2048	2032
	2	2321	2203	2106	2024	2271	2165	2077	2001	2094	2020	1957	2028	1968	1915	1967	1918	1874	1879
	3	2187	2031	1911	1815	2142	2000	1889	1800	1942	1848	1771	1888	1809	1743	1837	1772	1715	1737
	4	2059	1876	1743	1640	2018	1851	1726	1630	1802	1695	1610	1757	1665	1591	1715	1637	1572	1606
RCR	5	1939	1737	1596	1491	1902	1716	1583	1484	1675	1559	1471	1637	1536	1457	1602	1514	1444	1486
	6	1827	1611	1467	1363	1793	1593	1457	1358	1559	1438	1348	1527	1420	1338	1497	1403	1329	1378
	7	1723	1498	1353	1251	1691	1483	1345	1247	1454	1330	1240	1426	1316	1233	1401	1302	1226	1279
	8	1626	1396	1252	1153	1597	1383	1246	1150	1358	1233	1145	1334	1222	1139	1312	1210	1134	1190
	9	1536	1304	1162	1066	1510	1293	1157	1064	1271	1147	1060	1251	1137	1056	1231	1128	1052	1110
	10	1454	1221	1082	989	1430	1211	1077	987	1192	1069	984	1174	1061	981	1158	1053	978	1037

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	53.4 fc	8.8 ft
6.5 ft	38.2 fc	10.5 ft
7.5 ft	28.7 fc	12.1 ft
8.0 ft	25.2 fc	12.9 ft
10.0 ft	16.2 fc	16.1 ft
12.0 ft	11.2 fc	19.3 ft
14.0 ft	8.2 fc	22.5 ft
16.0 ft	6.3 fc	25.7 ft
20.0 ft	4.0 fc	32.2 ft
24.0 ft	2.8 fc	38.6 ft
28.0 ft	2.1 fc	45.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	88541	88541	88541
45.00°	23305	20951	20998
55.00°	1846	1215	1353
65.00°	2847	2331	2367
75.00°	2241	2366	2555
85.00°	661	511	651

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	4.0	5.1	4.4	5.4	5.7	7.3	8.4	7.7	8.7	9.0
	3H	8.0	9.0	8.4	9.3	9.7	9.6	10.6	10.0	10.9	11.3
	4H	8.8	9.7	9.2	10.0	10.4	10.2	11.1	10.6	11.4	11.8
	6H	8.9	9.7	9.3	10.1	10.5	10.3	11.1	10.7	11.5	11.9
	8H	8.9	9.6	9.3	10.0	10.4	10.3	11.0	10.7	11.4	11.8
	12H	8.8	9.5	9.3	9.9	10.4	10.2	11.0	10.7	11.3	11.8
4H	2H	5.6	6.5	6.0	6.8	7.2	8.1	8.9	8.5	9.3	9.7
	3H	9.2	9.9	9.6	10.3	10.7	10.5	11.2	10.9	11.6	12.0
	4H	9.9	10.5	10.3	10.9	11.4	11.2	11.8	11.6	12.2	12.7
	6H	10.0	10.5	10.5	11.0	11.5	11.3	11.8	11.8	12.3	12.8
	8H	10.0	10.5	10.4	10.9	11.4	11.3	11.8	11.7	12.2	12.7
	12H	9.9	10.4	10.4	10.8	11.3	11.2	11.7	11.7	12.2	12.6
8H	4H	10.0	10.6	10.5	11.0	11.5	11.3	11.8	11.8	12.2	12.7
	6H	10.2	10.6	10.7	11.1	11.6	11.4	11.8	11.9	12.3	12.8
	8H	10.1	10.5	10.7	11.0	11.5	11.4	11.8	11.9	12.3	12.8
	12H	10.1	10.4	10.7	10.9	11.5	11.4	11.7	11.9	12.2	12.8
12H	4H	10.0	10.4	10.5	10.9	11.4	11.2	11.7	11.7	12.2	12.6
	6H	10.1	10.5	10.7	11.0	11.5	11.4	11.7	11.9	12.2	12.8
	8H	10.1	10.4	10.6	10.9	11.5	11.4	11.7	11.9	12.2	12.8

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0