Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CW06XXPC 40L 35K XW XX CL XX

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

Test Number

SP-01078

Test Date

2/3/2020

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

Summary of Results

Power

Input Watts	27.4 W

Lumen Output

Output Lumens	2752
Efficacy	100.42 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.14
Two luminaires, plane 90°	1.14
Four luminaires	1.09

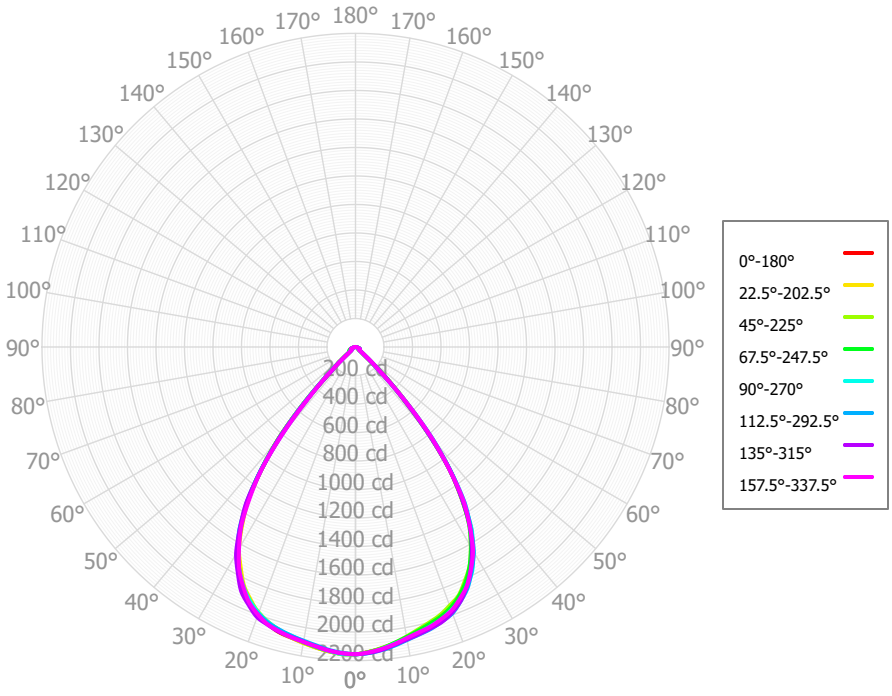
Full Beam Angle

0° - 180°	75°
90° - 270°	75°

IES File Header Contents

Keyword	Value
TEST	SP-01078
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/3/2020
ISSUEDATE	5/31/2022
LUMCAT	CW06XXPC 40L 35K XW XX CL XX
LUMINAIRE	Nom 6" diam Gamma Cylinder (wet location), clear glass lens
OTHER	Beam angle: 75.1 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
_CRI	80
_CCTMULT	27K x 0.97, 30K x 0.98, 40K x 1.04
_CCTMULTA	27HK x 0.78, 30HK x 0.82

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	205.14	7.46%	90.00° - 100.00°	0.08	0.00%
10.00° - 20.00°	576.38	20.95%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	845.17	30.72%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	794.19	28.86%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	247.89	9.01%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	31.83	1.16%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	33.44	1.22%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	15.51	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.89	0.07%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2751.44	100.00%	0.00° - 180.00°	2751.52	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°	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74	2155.74
2.50°	2142.41	2141.79	2142.40	2142.66	2148.93	2147.92	2151.76	2150.26	2155.59	2153.91	2158.21	2152.14	2156.87	2149.48	2148.30	2144.21	2142.41
5.00°	2123.29	2123.16	2119.83	2123.56	2127.03	2133.97	2137.68	2139.00	2142.61	2144.18	2141.77	2140.24	2139.63	2134.66	2132.55	2126.43	2123.29
7.50°	2099.33	2097.34	2095.27	2094.74	2100.78	2112.40	2119.64	2119.25	2126.03	2127.54	2124.34	2122.25	2120.51	2113.01	2107.00	2102.44	2099.33
10.00°	2073.66	2070.55	2063.35	2066.29	2077.35	2093.19	2099.89	2101.82	2106.25	2109.36	2103.84	2103.14	2097.51	2087.39	2083.95	2074.06	2073.66
12.50°	2046.92	2041.80	2030.63	2038.66	2054.54	2076.17	2083.85	2086.22	2088.45	2087.80	2082.16	2084.77	2075.80	2066.25	2063.93	2051.17	2046.92
15.00°	2020.91	2014.90	2001.56	2011.44	2029.58	2055.34	2069.07	2065.96	2072.07	2065.74	2057.56	2066.48	2056.23	2047.25	2043.18	2031.38	2020.91
17.50°	1995.26	1991.00	1972.61	1984.96	2004.31	2031.57	2044.70	2042.65	2039.62	2028.51	2026.63	2034.79	2027.79	2019.46	2021.70	2001.92	1995.26
20.00°	1956.89	1956.80	1931.64	1947.98	1965.27	1993.61	2017.83	1998.92	1997.57	1989.84	1983.41	2002.36	1987.17	1988.36	1982.74	1968.12	1956.89
22.50°	1913.55	1908.64	1888.98	1895.08	1924.98	1946.86	1959.34	1944.47	1936.06	1920.89	1928.65	1937.29	1931.38	1929.68	1929.25	1913.19	1913.55
25.00°	1842.33	1841.34	1813.81	1825.02	1850.16	1871.34	1895.01	1861.18	1865.28	1850.26	1855.93	1870.22	1858.69	1863.18	1850.53	1850.62	1842.33
27.50°	1762.48	1752.96	1734.51	1733.90	1773.24	1781.57	1788.12	1765.95	1763.18	1744.93	1762.53	1765.14	1765.87	1765.49	1754.79	1755.17	1762.48
30.00°	1640.27	1638.37	1618.56	1621.11	1647.87	1656.00	1676.25	1635.24	1649.41	1636.49	1642.33	1654.86	1654.77	1661.12	1632.68	1650.73	1640.27
32.50°	1508.46	1500.28	1491.01	1486.37	1517.39	1516.03	1509.42	1492.78	1491.82	1479.98	1493.98	1494.97	1505.94	1503.12	1496.29	1493.59	1508.46
35.00°	1302.71	1311.56	1298.99	1306.03	1311.81	1313.49	1339.04	1294.57	1321.36	1315.21	1315.97	1324.45	1328.47	1337.45	1303.09	1326.17	1302.71
37.50°	1085.57	1084.87	1090.36	1087.55	1096.17	1091.68	1085.40	1082.65	1086.25	1084.94	1090.03	1088.10	1094.85	1093.31	1084.69	1083.73	1085.57
40.00°	800.28	811.29	813.88	817.06	803.12	804.66	828.91	792.44	837.35	841.92	822.96	838.75	826.80	842.92	806.17	831.84	800.28
42.50°	508.31	509.30	541.35	511.30	518.13	502.92	525.54	488.82	542.10	533.55	545.72	534.10	546.23	535.82	506.96	537.40	508.31
45.00°	287.18	287.35	280.82	284.55	273.47	284.51	239.12	275.50	240.25	263.89	261.29	272.38	259.53	231.52	288.93	239.88	287.18
47.50°	71.45	104.07	86.23	100.87	75.02	79.64	132.04	72.43	132.84	141.97	117.50	145.31	126.38	130.53	91.78	135.89	71.45
50.00°	47.90	41.42	45.94	36.83	46.02	46.38	39.23	47.75	42.37	50.65	54.95	54.66	54.31	36.74	47.26	38.44	47.90
52.50°	25.86	26.04	20.49	26.18	25.31	29.78	35.75	32.58	40.16	46.88	34.87	54.93	37.68	34.18	31.89	33.20	25.86
55.00°	28.45	24.70	23.37	24.95	27.96	31.62	33.30	35.64	40.57	43.72	34.30	54.66	37.91	32.20	31.52	28.54	28.45
57.50°	30.89	27.55	25.86	26.97	30.47	34.17	35.29	38.53	41.29	41.95	33.78	53.34	37.83	34.58	32.97	30.53	30.89
60.00°	32.10	29.88	27.74	29.38	32.67	35.60	36.82	37.93	41.92	40.60	33.29	51.34	37.68	36.47	34.04	32.27	32.10
62.50°	32.98	32.10	29.07	31.90	33.72	36.79	36.82	37.25	41.16	39.98	32.62	48.27	37.24	36.00	35.08	32.33	32.98
65.00°	32.12	31.04	29.69	32.10	32.77	34.30	36.46	35.68	40.12	38.42	31.89	44.21	36.77	34.96	33.47	32.25	32.12
67.50°	30.50	29.44	28.73	31.88	31.43	31.64	35.22	33.46	37.10	35.52	27.50	38.88	32.74	31.97	31.48	31.60	30.50
70.00°	26.76	25.24	26.45	28.37	29.64	28.26	31.43	28.64	32.92	30.81	22.42	31.79	28.08	27.33	25.99	28.43	26.76
72.50°	20.81	20.15	20.79	22.95	22.28	22.65	24.73	22.75	25.87	24.49	15.06	23.25	19.68	19.94	19.91	20.76	20.81
75.00°	12.95	13.31	14.08	13.68	13.53	14.28	15.49	15.54	18.34	17.37	8.64	16.44	12.32	12.90	12.68	13.35	12.95
77.50°	7.77	6.71	6.70	7.58	7.25	7.69	7.55	8.23	10.73	10.15	3.99	10.03	6.48	6.74	7.22	6.82	7.77
80.00°	3.98	2.85	3.49	3.32	3.48	3.63	3.42	3.55	4.70	3.15	2.49	3.68	3.16	3.36	3.37	2.82	3.98
82.50°	2.12	1.83	1.63	1.52	1.88	1.98	1.83	2.02	2.38	2.26	1.99	2.91	1.71	1.87	1.55	2.04	2.12
85.00°	1.70	1.67	1.53	1.76	1.36	1.55	1.21	1.75	1.67	1.52	1.60	2.24	1.37	1.74	1.20	1.43	1.70
87.50°	1.39	1.72	1.21	1.33	1.09	1.46	1.60	1.25	1.04	0.92	1.57	1.62	1.22	1.72	1.39	1.75	1.39
90.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	1.14	1.32	0.92	1.32	1.11	1.23	1.72	0.07	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	3276	3276	3276	3276	3199	3199	3199	3199	3057	3057	3057	2927	2927	2927	2808	2808	2808	2751
	1	3108	3025	2951	2884	3039	2965	2898	2838	2853	2799	2750	2750	2707	2668	2655	2622	2591	2569
	2	2936	2789	2668	2567	2873	2741	2631	2537	2651	2560	2481	2568	2493	2428	2491	2430	2377	2382
	3	2770	2576	2427	2308	2713	2537	2400	2289	2464	2347	2252	2395	2298	2216	2332	2251	2181	2207
	4	2612	2385	2218	2091	2560	2352	2198	2078	2291	2159	2053	2235	2121	2029	2182	2085	2005	2045
RCR	5	2463	2212	2036	1907	2416	2185	2021	1898	2134	1991	1881	2087	1962	1863	2043	1934	1847	1898
	6	2324	2056	1877	1748	2281	2034	1864	1741	1991	1841	1729	1951	1818	1717	1913	1796	1705	1764
	7	2194	1916	1735	1608	2155	1896	1725	1604	1860	1706	1595	1826	1688	1586	1793	1671	1577	1642
	8	2074	1788	1609	1486	2038	1772	1601	1482	1741	1586	1476	1711	1571	1469	1683	1557	1463	1531
	9	1962	1674	1497	1377	1930	1659	1490	1375	1632	1478	1370	1607	1466	1365	1583	1454	1360	1431
	10	1859	1570	1396	1281	1830	1557	1391	1279	1534	1381	1275	1511	1370	1271	1490	1361	1267	1340

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	71.3 fc	8.5 ft
6.5 ft	51.0 fc	10.0 ft
7.5 ft	38.3 fc	11.5 ft
8.0 ft	33.7 fc	12.3 ft
10.0 ft	21.6 fc	15.4 ft
12.0 ft	15.0 fc	18.5 ft
14.0 ft	11.0 fc	21.5 ft
16.0 ft	8.4 fc	24.6 ft
20.0 ft	5.4 fc	30.8 ft
24.0 ft	3.7 fc	36.9 ft
28.0 ft	2.7 fc	43.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	118178	118178	118178
45.00°	22264	21771	21201
55.00°	2719	2234	2672
65.00°	4167	3852	4251
75.00°	2743	2982	2867
85.00°	1072	961	858

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	6.5	7.5	6.8	7.8	8.1	9.0	10.1	9.4	10.4	10.7
	3H	9.9	10.8	10.3	11.2	11.5	11.4	12.3	11.8	12.6	13.0
	4H	10.5	11.3	10.9	11.7	12.1	11.8	12.6	12.2	13.0	13.4
	6H	10.6	11.3	11.0	11.7	12.1	11.8	12.6	12.2	13.0	13.4
	8H	10.5	11.3	11.0	11.7	12.1	11.8	12.5	12.2	12.9	13.3
	12H	10.5	11.2	10.9	11.6	12.0	11.7	12.4	12.2	12.8	13.2
4H	2H	7.7	8.5	8.1	8.9	9.3	9.7	10.5	10.1	10.9	11.3
	3H	10.9	11.6	11.3	12.0	12.4	12.1	12.8	12.5	13.2	13.6
	4H	11.5	12.1	11.9	12.5	13.0	12.6	13.2	13.0	13.6	14.1
	6H	11.6	12.1	12.1	12.6	13.0	12.7	13.2	13.1	13.6	14.1
	8H	11.6	12.0	12.0	12.5	13.0	12.6	13.1	13.1	13.5	14.0
	12H	11.5	11.9	12.0	12.4	12.9	12.6	13.0	13.1	13.5	14.0
8H	4H	11.6	12.1	12.1	12.6	13.0	12.7	13.1	13.1	13.6	14.1
	6H	11.7	12.1	12.2	12.6	13.1	12.7	13.1	13.2	13.6	14.1
	8H	11.7	12.0	12.2	12.6	13.0	12.7	13.0	13.2	13.5	14.0
	12H	11.7	12.0	12.2	12.5	13.1	12.7	13.0	13.2	13.5	14.0
12H	4H	11.6	12.0	12.1	12.5	13.0	12.6	13.0	13.1	13.5	14.0
	6H	11.7	12.0	12.2	12.5	13.0	12.7	13.0	13.2	13.5	14.0
	8H	11.6	11.9	12.2	12.4	13.0	12.6	12.9	13.2	13.4	14.0

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0