

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CW06XXPC 20L 35K XW XX CL XX

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

Test Number

SP-01078_M-20L

Test Date

2/3/2020

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

Summary of Results

Power

Input Watts	12.9 W
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Lumen Output

Output Lumens	1376
Efficacy	106.65 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

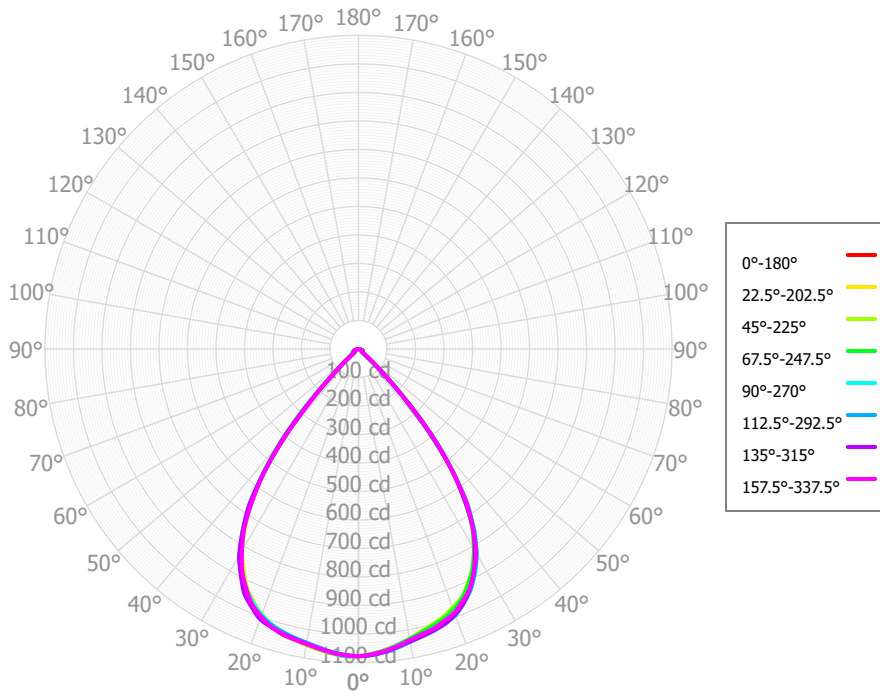
Full Beam Angle

0° - 180°	75°
90° - 270°	75°

IES File Header Contents

Keyword	Value
TEST	SP-01078_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	2/3/2020
ISSUEDATE	5/31/2022
LUMCAT	CW06XXPC 20L 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, scaled from 40L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	102.57	7.46%	90.00° - 100.00°	0.04	0.00%
10.00° - 20.00°	288.19	20.95%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	422.58	30.72%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	397.10	28.86%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	123.95	9.01%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	15.91	1.16%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	16.72	1.22%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	7.76	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.95	0.07%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1375.72	100.00%	0.00° - 180.00°	1375.76	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°	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87	1077.87
2.50°	1071.21	1070.90	1071.20	1071.33	1074.46	1073.96	1075.88	1075.13	1077.79	1076.95	1079.11	1076.07	1078.44	1074.74	1074.15	1072.11	1071.21
5.00°	1061.64	1061.58	1059.91	1061.78	1063.51	1066.99	1068.84	1069.50	1071.30	1072.09	1070.89	1070.12	1069.81	1067.33	1066.27	1063.22	1061.64
7.50°	1049.67	1048.67	1047.64	1047.37	1050.39	1056.20	1059.82	1059.62	1063.01	1063.77	1062.17	1061.12	1060.25	1056.51	1053.50	1051.22	1049.67
10.00°	1036.83	1035.28	1031.67	1033.14	1038.68	1046.59	1049.94	1050.91	1053.13	1054.68	1051.92	1051.57	1048.75	1043.69	1041.97	1037.03	1036.83
12.50°	1023.46	1020.90	1015.31	1019.33	1027.27	1038.09	1041.93	1043.11	1044.23	1043.90	1041.08	1042.38	1037.90	1033.13	1031.97	1025.59	1023.46
15.00°	1010.45	1007.45	1000.78	1005.72	1014.79	1027.67	1034.54	1032.98	1036.03	1032.87	1028.78	1033.24	1028.12	1023.63	1021.59	1015.69	1010.45
17.50°	997.63	995.50	986.31	992.48	1002.15	1015.78	1022.35	1021.33	1019.81	1014.25	1013.31	1017.40	1013.89	1009.73	1010.85	1000.96	997.63
20.00°	978.44	978.40	965.82	973.99	982.64	996.80	1008.91	999.46	998.78	994.92	991.71	1001.18	993.58	994.18	991.37	984.06	978.44
22.50°	956.78	954.32	944.49	947.54	962.49	973.43	979.67	972.23	968.03	960.44	964.33	968.64	965.69	964.84	964.62	956.60	956.78
25.00°	921.17	920.67	906.90	912.51	925.08	935.67	947.50	930.59	932.64	925.13	927.96	935.11	929.34	931.59	925.26	925.31	921.17
27.50°	881.24	876.48	867.26	866.95	886.62	890.79	894.06	882.97	881.59	872.46	881.26	882.57	882.93	882.75	877.40	877.58	881.24
30.00°	820.14	819.18	809.28	810.56	823.93	828.00	838.12	817.62	824.71	818.25	821.16	827.43	827.38	830.56	816.34	825.37	820.14
32.50°	754.23	750.14	745.50	743.18	758.69	758.01	754.71	746.39	745.91	739.99	746.99	747.49	752.97	751.56	748.14	746.80	754.23
35.00°	651.36	655.78	649.50	653.02	655.91	656.75	669.52	647.29	660.68	657.60	657.99	662.22	664.23	668.73	651.54	663.09	651.36
37.50°	542.78	542.44	545.18	543.78	548.08	545.84	542.70	541.32	543.12	542.47	545.02	544.05	547.43	546.66	542.35	541.86	542.78
40.00°	400.14	405.64	406.94	408.53	401.56	402.33	414.46	396.22	418.68	420.96	411.48	419.37	413.40	421.46	403.08	415.92	400.14
42.50°	254.16	254.65	270.68	255.65	259.06	251.46	262.77	244.41	271.05	266.77	272.86	267.05	273.12	267.91	253.48	268.70	254.16
45.00°	143.59	143.67	140.41	142.27	136.73	142.25	119.56	137.75	120.12	131.94	130.65	136.19	129.77	115.76	144.47	119.94	143.59
47.50°	35.73	52.03	43.11	50.43	37.51	39.82	66.02	36.21	66.42	70.99	58.75	72.66	63.19	65.27	45.89	67.94	35.73
50.00°	23.95	20.71	22.97	18.42	23.01	23.19	19.61	23.87	21.19	25.33	27.48	27.33	27.16	18.37	23.63	19.22	23.95
52.50°	12.93	13.02	10.24	13.09	12.66	14.89	17.87	16.29	20.08	23.44	17.44	27.46	18.84	17.09	15.95	16.60	12.93
55.00°	14.22	12.35	11.69	12.47	13.98	15.81	16.65	17.82	20.29	21.86	17.15	27.33	18.96	16.10	15.76	14.27	14.22
57.50°	15.44	13.77	12.93	13.48	15.23	17.09	17.65	19.26	20.65	20.98	16.89	26.67	18.92	17.29	16.49	15.27	15.44
60.00°	16.05	14.94	13.87	14.69	16.33	17.80	18.41	18.97	20.96	20.30	16.65	25.67	18.84	18.23	17.02	16.13	16.05
62.50°	16.49	16.05	14.53	15.95	16.86	18.40	18.41	18.62	20.58	19.99	16.31	24.13	18.62	18.00	17.54	16.16	16.49
65.00°	16.06	15.52	14.85	16.05	16.39	17.15	18.23	17.84	20.06	19.21	15.94	22.10	18.38	17.48	16.73	16.12	16.06
67.50°	15.25	14.72	14.37	15.94	15.71	15.82	17.61	16.73	18.55	17.76	13.75	19.44	16.37	15.98	15.74	15.80	15.25
70.00°	13.38	12.62	13.23	14.19	14.82	14.13	15.71	14.32	16.46	15.40	11.21	15.90	14.04	13.67	12.99	14.22	13.38
72.50°	10.41	10.07	10.39	11.47	11.14	11.33	12.37	11.37	12.94	12.25	7.53	11.63	9.84	9.97	9.95	10.38	10.41
75.00°	6.48	6.65	7.04	6.84	6.77	7.14	7.74	7.77	9.17	8.69	4.32	8.22	6.16	6.45	6.34	6.67	6.48
77.50°	3.88	3.36	3.35	3.79	3.62	3.85	3.78	4.12	5.36	5.08	1.99	5.01	3.24	3.37	3.61	3.41	3.88
80.00°	1.99	1.43	1.74	1.66	1.74	1.82	1.71	1.78	2.35	1.58	1.25	1.84	1.58	1.68	1.68	1.41	1.99
82.50°	1.06	0.92	0.82	0.76	0.94	0.99	0.91	1.01	1.19	1.13	0.99	1.45	0.86	0.93	0.78	1.02	1.06
85.00°	0.85	0.83	0.76	0.88	0.68	0.78	0.60	0.88	0.83	0.76	0.80	1.12	0.69	0.87	0.60	0.72	0.85
87.50°	0.70	0.86	0.60	0.67	0.55	0.73	0.80	0.63	0.52	0.46	0.78	0.81	0.61	0.86	0.69	0.88	0.70
90.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.57	0.66	0.46	0.66	0.55	0.62	0.86	0.04	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.

RCR	pfc	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	1638	1638	1638	1638	1600	1600	1600	1600	1529	1529	1529	1464	1464	1464	1404	1404	1376
	1	1554	1512	1475	1442	1519	1482	1449	1419	1426	1400	1375	1375	1354	1334	1328	1311	1295
	2	1468	1395	1334	1283	1437	1371	1315	1269	1326	1280	1241	1284	1247	1214	1245	1215	1188
	3	1385	1288	1213	1154	1356	1269	1200	1144	1232	1174	1126	1198	1149	1108	1166	1125	1091
	4	1306	1192	1109	1046	1280	1176	1099	1039	1146	1079	1027	1117	1061	1014	1091	1043	1002
	5	1231	1106	1018	953	1208	1093	1010	949	1067	995	940	1043	981	932	1021	967	923
	6	1162	1028	938	874	1140	1017	932	871	995	920	864	975	909	858	957	898	852
	7	1097	958	867	804	1078	948	863	802	930	853	797	913	844	793	897	835	789
	8	1037	894	805	743	1019	886	801	741	870	793	738	856	786	735	842	779	731
	9	981	837	748	689	965	830	745	687	816	739	685	803	733	682	791	727	680
	10	930	785	698	640	915	779	695	639	767	690	637	756	685	636	745	680	634

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	35.6 fc	8.5 ft
6.5 ft	25.5 fc	10.0 ft
7.5 ft	19.2 fc	11.5 ft
8.0 ft	16.8 fc	12.3 ft
10.0 ft	10.8 fc	15.4 ft
12.0 ft	7.5 fc	18.5 ft
14.0 ft	5.5 fc	21.5 ft
16.0 ft	4.2 fc	24.6 ft
20.0 ft	2.7 fc	30.8 ft
24.0 ft	1.9 fc	36.9 ft
28.0 ft	1.4 fc	43.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	59089	59089	59089
45.00°	11132	10886	10601
55.00°	1359	1117	1336
65.00°	2083	1926	2126
75.00°	1372	1491	1433
85.00°	536	480	429

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	4.1	5.1	4.4	5.4	5.7	6.6	7.7	7.0	8.0	8.3
	3H	7.5	8.4	7.9	8.7	9.1	9.0	9.9	9.3	10.2	10.6
	4H	8.1	8.9	8.5	9.3	9.7	9.4	10.2	9.8	10.6	11.0
	6H	8.2	8.9	8.6	9.3	9.7	9.4	10.2	9.8	10.5	10.9
	8H	8.1	8.9	8.6	9.3	9.7	9.4	10.1	9.8	10.5	10.9
	12H	8.1	8.8	8.5	9.2	9.6	9.3	10.0	9.7	10.4	10.8
4H	2H	5.3	6.1	5.7	6.5	6.9	7.3	8.1	7.7	8.5	8.9
	3H	8.5	9.2	8.9	9.6	10.0	9.7	10.4	10.1	10.8	11.2
	4H	9.1	9.7	9.5	10.1	10.6	10.2	10.8	10.6	11.2	11.7
	6H	9.2	9.7	9.7	10.2	10.6	10.2	10.8	10.7	11.2	11.7
	8H	9.1	9.6	9.6	10.1	10.6	10.2	10.7	10.7	11.1	11.6
	12H	9.1	9.5	9.6	10.0	10.5	10.2	10.6	10.6	11.1	11.5
8H	4H	9.2	9.7	9.7	10.2	10.6	10.2	10.7	10.7	11.2	11.7
	6H	9.3	9.7	9.8	10.2	10.7	10.3	10.7	10.8	11.2	11.7
	8H	9.3	9.6	9.8	10.1	10.6	10.3	10.6	10.8	11.1	11.6
	12H	9.3	9.6	9.8	10.1	10.6	10.2	10.6	10.8	11.0	11.6
12H	4H	9.2	9.6	9.7	10.1	10.6	10.2	10.6	10.7	11.1	11.6
	6H	9.2	9.6	9.8	10.1	10.6	10.2	10.6	10.8	11.1	11.6
	8H	9.2	9.5	9.8	10.0	10.6	10.2	10.5	10.8	11.0	11.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0