

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P273758

Luminaire Tested: **8RCG-4-78D-L835-A**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P273758  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8RCG-4-78D-L835-A  
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS  
Light Source: (168) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

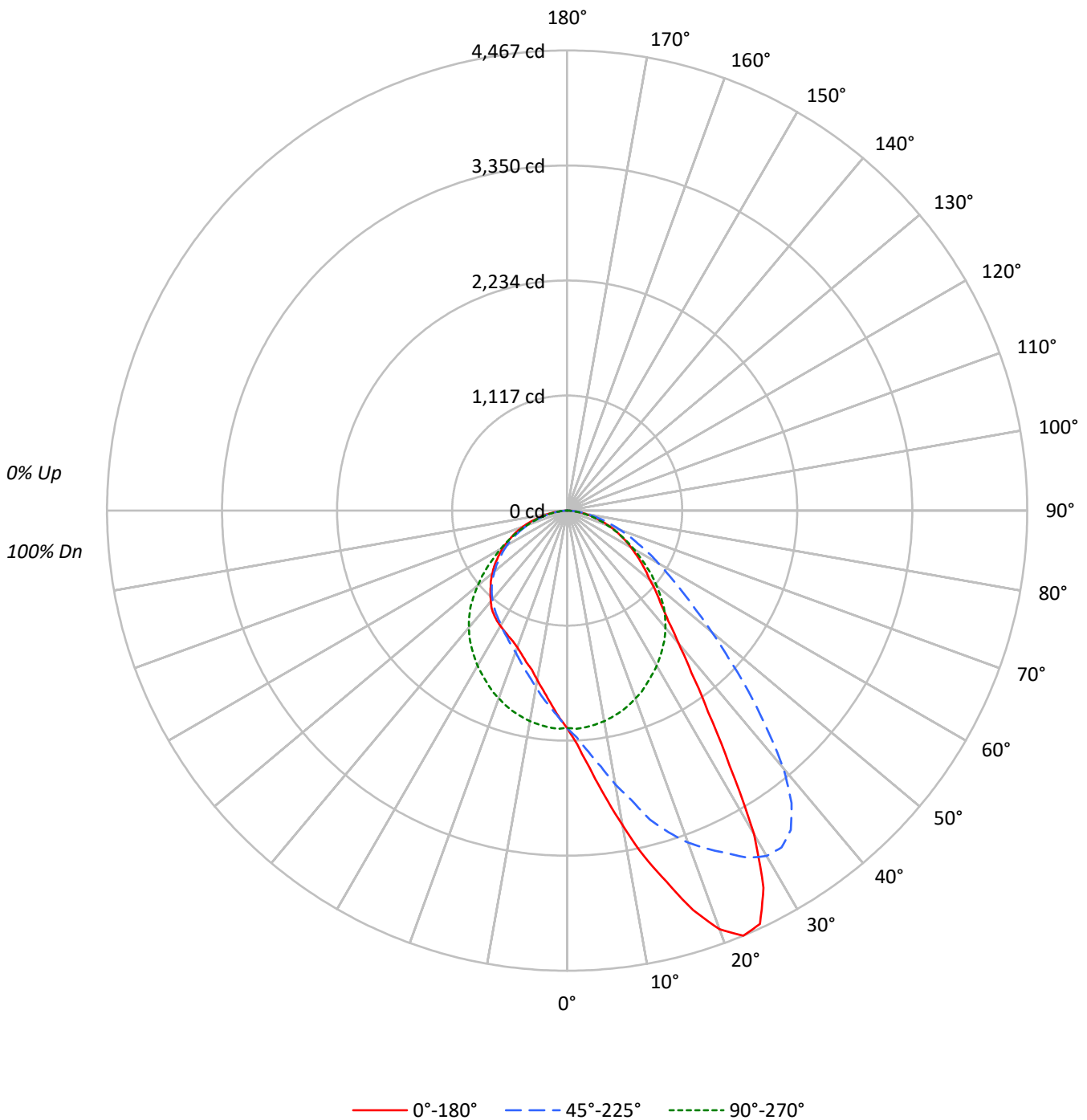
Lumens per Lamp: N/A  
Luminaire Lumens: 6367.8 lumens  
Efficiency: N/A  
Efficacy: 122.5 lumens/watt  
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5  
Luminous Opening: Rectangular (W 7.88' x L: 0.23' x H: 0')  
CIE Type: Direct

Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87					85				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74					72				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56					53				
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49					47				
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43					41				
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38					36				
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35					33				
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31					29				
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28					27				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	12584	12584	12584
5°	15006	12638	11200
10°	18782	12573	10115
15°	23037	12472	9417
20°	27444	12314	8966
25°	29141	12122	8866
30°	24977	11982	8912
35°	17371	11781	9005
40°	13084	11548	8977
45°	10864	11200	8863
50°	9732	10491	8783
55°	9099	9725	8672
60°	8536	8925	8584
65°	8022	8135	8310
70°	7523	7237	7914
75°	6738	6337	7254
80°	5901	5193	6251
85°	4612	3778	4202



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.5	3.3
10°-20°	666.4	10.5
20°-30°	1121.3	17.6
30°-40°	1267.3	19.9
40°-50°	1135.1	17.8
50°-60°	916.2	14.4
60°-70°	638.4	10.0
70°-80°	335.1	5.3
80°-90°	80.3	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1995.3	31.3
0°-40°	3262.6	51.2
0°-60°	5313.9	83.5
0°-90°	6367.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6367.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2110	2110	2110	2110	2110	
5°	2506	2349	2111	1911	1871	258
15°	3731	3105	2020	1593	1525	1077
25°	4428	3670	1842	1369	1347	1958
35°	2386	3784	1618	1209	1237	1540
45°	1288	2494	1328	1034	1051	1016
55°	875	1354	935	799	834	785
65°	568	759	576	543	589	566
75°	292	360	275	273	315	312
85°	67	78	55	54	61	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2271.2	2269.2	2264.0	2268.2	2260.0	2248.8	2247.8	2237.6	2207.8	2205.8	2197.6
5°	2506.4	2498.2	2497.2	2496.2	2481.8	2462.4	2425.6	2422.6	2373.4	2349.0	2319.2
7.5°	2790.4	2787.4	2779.2	2770.0	2722.0	2698.4	2663.8	2618.8	2561.6	2506.4	2471.6
10°	3101.2	3135.0	3093.0	3064.4	3037.8	2987.8	2929.6	2857.0	2784.4	2699.6	2635.2
12.5°	3434.4	3446.8	3446.8	3420.2	3375.2	3292.4	3177.8	3096.2	3030.6	2875.4	2820.2
15°	3730.8	3793.2	3753.4	3661.4	3663.4	3590.8	3456.0	3307.6	3229.0	3105.4	2936.6
17.5°	4066.2	4077.4	4065.2	3979.2	3937.4	3832.0	3710.4	3572.4	3424.2	3274.0	3099.2
20°	4323.8	4317.6	4281.8	4242.0	4154.0	4076.4	3940.4	3782.0	3577.6	3430.4	3235.2
22.5°	4466.8	4455.6	4443.4	4411.6	4342.2	4257.2	4138.8	3961.8	3769.8	3553.0	3320.0
25°	4428.0	4441.2	4443.4	4434.2	4408.6	4358.4	4262.4	4124.4	3930.2	3669.6	3434.4
27.5°	4127.4	4161.2	4204.2	4232.8	4278.8	4309.4	4278.8	4191.8	4032.4	3799.4	3510.0
30°	3626.6	3585.8	3687.0	3814.6	3901.6	4054.8	4140.8	4145.8	4065.2	3872.0	3591.8
32.5°	2931.6	2998.0	3028.6	3193.2	3408.8	3585.8	3777.8	3948.6	3988.4	3876.0	3640.0
35°	2385.8	2442.0	2523.8	2605.4	2810.0	2985.8	3286.2	3548.0	3756.4	3784.0	3633.8
37.5°	1983.0	2015.6	2065.8	2152.6	2292.6	2510.4	2748.6	3089.0	3376.2	3578.6	3558.2
40°	1680.4	1688.6	1746.8	1809.2	1917.6	2089.2	2298.8	2591.2	2953.0	3266.8	3397.6
42.5°	1453.6	1474.0	1490.4	1549.6	1630.4	1749.0	1940.0	2169.0	2493.0	2866.2	3153.4
45°	1288.0	1308.4	1323.6	1363.6	1424.8	1511.8	1647.8	1868.6	2121.0	2494.0	2838.6
47.5°	1173.4	1171.4	1184.6	1216.4	1260.4	1329.8	1430.0	1577.2	1819.4	2131.2	2492.0
50°	1048.8	1065.0	1069.2	1092.6	1125.4	1173.4	1253.2	1373.8	1564.0	1829.6	2154.8
52.5°	960.8	962.8	976.2	991.4	1019.0	1053.8	1120.2	1208.2	1347.2	1564.0	1856.2
55°	875.0	875.0	886.2	899.4	915.8	949.6	995.6	1065.0	1178.6	1354.4	1601.8
57.5°	795.2	799.4	809.6	812.6	827.0	850.4	890.2	945.4	1032.4	1174.4	1378.8
60°	715.6	724.8	723.6	731.8	744.2	761.6	794.2	837.2	912.8	1021.2	1186.8
62.5°	646.0	643.0	643.0	653.2	665.4	681.8	700.2	736.0	797.2	890.2	1025.2
65°	568.4	566.2	573.4	579.6	583.6	596.0	612.2	645.0	688.0	759.4	868.8
67.5°	500.8	494.8	499.8	501.8	509.0	519.2	535.6	556.0	590.8	651.2	739.0
70°	431.4	426.2	425.2	427.2	433.4	440.6	451.8	471.2	503.0	548.8	609.2
72.5°	359.8	356.8	356.8	361.8	363.8	368.0	375.2	392.6	416.0	447.8	503.0
75°	292.4	292.4	292.4	293.4	296.4	300.6	306.6	315.8	335.2	359.8	397.6
77.5°	231.0	232.0	230.0	229.0	234.0	236.2	237.2	247.4	258.6	277.0	306.6
80°	171.8	166.6	168.6	171.8	173.8	174.8	177.8	179.8	189.0	198.2	217.8
82.5°	116.6	112.4	112.4	117.6	117.6	118.6	121.6	124.8	126.8	135.0	143.2
85°	67.4	67.4	68.4	68.4	69.6	68.4	71.6	72.6	72.6	77.6	83.8
87.5°	30.6	28.6	29.6	30.6	29.6	30.6	31.6	32.8	33.8	34.8	35.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2191.6	2183.4	2175.2	2160.8	2148.6	2131.2	2126.0	2120.0	2101.6	2085.2	2073.0
5°	2308.0	2283.4	2247.8	2215.0	2188.4	2152.6	2132.2	2110.8	2080.0	2052.4	2030.0
7.5°	2419.4	2376.6	2326.4	2272.2	2220.2	2170.0	2130.2	2094.4	2054.6	2015.6	1986.0
10°	2557.4	2488.0	2410.2	2326.4	2254.8	2185.4	2127.2	2076.0	2020.8	1972.8	1932.8
12.5°	2714.8	2603.4	2489.0	2382.6	2294.8	2191.6	2118.0	2049.4	1985.0	1924.8	1878.8
15°	2832.4	2701.6	2574.8	2434.8	2306.0	2185.4	2101.6	2019.8	1947.2	1888.0	1830.6
17.5°	2949.0	2805.8	2644.4	2475.6	2324.4	2185.4	2070.8	1983.0	1894.0	1822.6	1767.4
20°	3045.0	2876.4	2687.2	2510.4	2338.6	2179.2	2050.4	1940.0	1842.0	1765.2	1700.8
22.5°	3127.8	2923.4	2726.0	2534.0	2337.6	2162.8	2012.6	1898.2	1789.8	1715.2	1645.6
25°	3180.0	2943.8	2747.6	2525.8	2312.2	2134.2	1970.8	1842.0	1735.6	1647.8	1577.2
27.5°	3229.0	2940.8	2719.0	2479.8	2281.4	2104.6	1928.8	1790.8	1679.4	1584.4	1511.8
30°	3278.0	2945.8	2668.8	2432.8	2232.4	2048.4	1878.8	1739.8	1621.2	1524.0	1456.6
32.5°	3308.8	2942.8	2622.8	2367.4	2154.8	1997.2	1824.6	1679.4	1556.8	1461.6	1397.2
35°	3316.8	2925.4	2568.6	2272.2	2069.8	1911.4	1767.4	1618.0	1490.4	1401.4	1327.8
37.5°	3299.6	2893.8	2509.4	2186.4	1967.6	1810.2	1684.6	1556.8	1434.0	1335.0	1270.6
40°	3243.4	2863.0	2437.8	2094.4	1861.4	1711.0	1607.8	1483.2	1362.6	1269.6	1210.2
42.5°	3136.0	2800.8	2359.2	1992.2	1751.0	1600.6	1507.6	1408.6	1296.0	1210.2	1151.0
45°	2948.0	2704.6	2280.4	1890.0	1642.6	1487.2	1403.4	1327.8	1224.6	1139.8	1088.6
47.5°	2707.6	2574.8	2167.0	1782.6	1529.2	1378.8	1291.0	1228.6	1147.8	1079.4	1029.4
50°	2455.2	2407.2	2051.4	1672.2	1415.6	1269.6	1185.8	1130.6	1076.4	1007.8	962.8
52.5°	2164.0	2213.0	1916.6	1557.8	1300.2	1157.0	1079.4	1038.6	990.4	937.4	899.4
55°	1894.0	2001.4	1757.0	1427.0	1185.8	1048.8	974.2	935.2	906.6	864.8	831.0
57.5°	1632.4	1769.4	1591.4	1295.0	1073.2	953.6	880.0	836.2	817.8	794.2	766.6
60°	1404.4	1539.4	1411.6	1162.2	959.8	847.4	784.0	748.2	729.8	714.4	692.0
62.5°	1201.0	1338.0	1235.8	1027.2	848.4	746.2	693.0	658.2	645.0	638.8	620.4
65°	1018.0	1135.6	1064.0	886.2	743.2	651.2	601.0	576.4	563.2	560.2	547.8
67.5°	859.6	950.6	895.4	761.6	645.0	561.2	517.2	495.8	484.6	483.4	473.2
70°	704.2	788.0	748.2	629.6	532.6	470.2	433.4	415.0	408.8	407.8	402.8
72.5°	583.6	635.8	606.2	512.2	442.6	387.4	362.8	343.4	336.2	338.4	335.2
75°	449.8	493.8	475.4	406.8	346.6	309.8	287.2	275.0	268.8	271.8	267.8
77.5°	343.4	374.2	355.8	303.6	264.8	237.2	219.8	211.6	205.4	205.4	203.4
80°	244.2	260.6	251.4	222.8	192.2	169.6	156.4	151.2	148.2	147.2	146.2
82.5°	156.4	169.6	158.4	141.0	122.6	111.4	105.2	98.2	96.0	97.2	96.0
85°	88.0	93.0	89.0	76.6	68.4	62.4	58.2	55.2	53.2	54.2	52.2
87.5°	37.8	38.8	35.8	31.6	29.6	26.6	26.6	24.6	22.4	22.4	21.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2065.8	2058.6	2048.4	2033.0	2020.8	2001.4	2001.4	2004.4	2004.4	2003.4	2001.4
5°	2011.6	1996.2	1977.8	1956.4	1934.0	1911.4	1907.4	1899.2	1893.0	1889.0	1883.8
7.5°	1956.4	1930.8	1905.4	1875.6	1850.2	1828.6	1813.4	1800.0	1791.8	1782.6	1775.4
10°	1900.2	1866.4	1834.8	1803.0	1768.4	1740.8	1723.4	1711.0	1701.8	1693.8	1689.6
12.5°	1833.8	1793.8	1758.2	1728.4	1689.6	1661.0	1644.6	1640.6	1629.4	1609.8	1599.6
15°	1769.4	1733.6	1691.6	1645.6	1627.2	1592.6	1573.0	1564.0	1557.8	1544.4	1540.4
17.5°	1716.2	1668.2	1620.2	1586.4	1552.6	1525.0	1513.8	1501.6	1493.4	1481.2	1478.0
20°	1649.8	1607.8	1565.0	1528.2	1492.4	1461.6	1452.4	1444.4	1436.2	1431.0	1427.0
22.5°	1582.2	1540.4	1506.6	1473.0	1434.0	1416.8	1406.4	1397.2	1392.2	1389.2	1385.0
25°	1520.0	1483.2	1443.2	1412.6	1382.0	1368.6	1362.6	1357.4	1353.4	1348.2	1347.2
27.5°	1464.8	1423.8	1390.2	1360.4	1338.0	1326.8	1319.6	1316.6	1316.6	1318.6	1319.6
30°	1401.4	1364.6	1338.0	1313.4	1293.0	1282.8	1281.8	1281.8	1285.8	1286.8	1289.0
32.5°	1343.2	1314.4	1288.0	1264.4	1250.0	1244.0	1249.0	1249.0	1252.2	1255.2	1259.2
35°	1286.8	1260.4	1239.8	1219.4	1206.2	1209.2	1211.2	1213.4	1218.4	1224.6	1228.6
37.5°	1233.8	1209.2	1187.8	1171.4	1163.2	1169.4	1174.4	1178.6	1184.6	1189.8	1193.8
40°	1175.4	1158.2	1137.6	1123.4	1125.4	1128.4	1132.6	1137.6	1142.8	1145.8	1150.0
42.5°	1121.4	1103.0	1088.6	1077.4	1080.4	1084.6	1086.6	1088.6	1094.8	1100.8	1103.0
45°	1066.2	1051.8	1037.4	1030.4	1032.4	1034.4	1036.4	1039.6	1044.6	1048.8	1049.8
47.5°	1003.8	993.6	984.4	976.2	980.2	979.2	982.2	988.4	990.4	992.6	998.6
50°	944.4	935.2	924.0	922.0	922.0	922.0	923.0	931.2	931.2	935.2	939.4
52.5°	879.0	874.0	867.8	863.8	861.6	861.6	866.8	869.8	871.8	878.0	882.2
55°	814.6	808.6	802.4	799.4	797.2	799.4	807.6	809.6	814.6	817.8	820.8
57.5°	747.2	743.2	738.0	736.0	736.0	737.0	743.2	748.2	749.2	759.4	763.6
60°	680.8	673.6	669.6	669.6	667.4	676.6	674.6	684.8	686.8	693.0	700.2
62.5°	612.2	602.0	601.0	601.0	605.2	606.2	610.2	613.2	619.4	627.6	632.8
65°	537.6	532.6	539.6	538.6	536.6	542.8	542.8	547.8	554.0	561.2	572.4
67.5°	468.2	464.0	466.2	465.0	468.2	472.2	475.4	479.4	486.6	494.8	501.8
70°	397.6	400.6	395.6	399.6	402.8	403.8	405.8	412.0	420.2	425.2	433.4
72.5°	329.2	328.2	330.2	331.2	334.2	336.2	338.4	345.4	354.6	358.8	365.0
75°	263.8	262.6	265.8	265.8	270.8	273.0	275.0	278.0	286.2	292.4	297.4
77.5°	204.4	205.4	204.4	208.6	206.4	207.4	213.6	216.6	217.8	231.0	233.0
80°	145.2	147.2	148.2	149.2	150.2	148.2	155.4	158.4	158.4	165.6	170.8
82.5°	94.0	95.0	98.2	99.2	99.2	102.2	101.2	103.2	106.4	108.4	115.6
85°	52.2	55.2	56.2	55.2	56.2	54.2	57.2	58.2	59.2	59.2	59.2
87.5°	20.4	21.4	20.4	21.4	20.4	21.4	21.4	19.4	19.4	22.4	18.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P273758

CATALOG NUMBER: 8RCG-4-78D-L835-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2109.8	2109.8	2109.8	2109.8
2.5°	1994.2	1993.2	2000.4	1995.2
5°	1877.8	1880.8	1870.6	1870.6
7.5°	1772.4	1768.4	1769.4	1762.2
10°	1677.4	1671.2	1669.2	1670.2
12.5°	1598.6	1598.6	1582.2	1582.2
15°	1540.4	1521.0	1519.0	1525.0
17.5°	1476.0	1464.8	1465.8	1463.8
20°	1427.0	1420.8	1419.8	1412.6
22.5°	1382.0	1381.0	1382.0	1373.8
25°	1346.2	1351.2	1347.2	1347.2
27.5°	1321.6	1321.6	1318.6	1318.6
30°	1293.0	1292.0	1294.0	1294.0
32.5°	1264.4	1266.4	1266.4	1267.4
35°	1234.8	1235.8	1238.8	1236.8
37.5°	1196.0	1201.0	1200.0	1202.0
40°	1151.0	1154.0	1153.0	1153.0
42.5°	1105.0	1107.0	1104.0	1101.8
45°	1053.8	1051.8	1054.8	1050.8
47.5°	997.6	998.6	999.6	1003.8
50°	941.4	947.6	947.6	946.6
52.5°	886.2	888.2	893.4	893.4
55°	829.0	831.0	833.0	834.0
57.5°	770.8	769.6	773.8	774.8
60°	708.4	708.4	716.6	719.6
62.5°	642.0	646.0	654.2	648.0
65°	577.6	585.6	584.6	588.8
67.5°	510.0	515.2	523.4	523.4
70°	441.6	446.6	450.8	453.8
72.5°	375.2	377.2	388.4	382.2
75°	304.6	311.8	317.8	314.8
77.5°	237.2	246.4	248.4	245.4
80°	177.8	176.8	183.0	182.0
82.5°	118.6	117.6	119.6	120.6
85°	63.4	66.4	62.4	61.4
87.5°	18.4	18.4	17.4	16.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)