

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: P273767

Luminaire Tested: **8RCG-4-78D-L930-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273767
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-L930-A
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS
Light Source: (168) 3000K CCT, 90 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

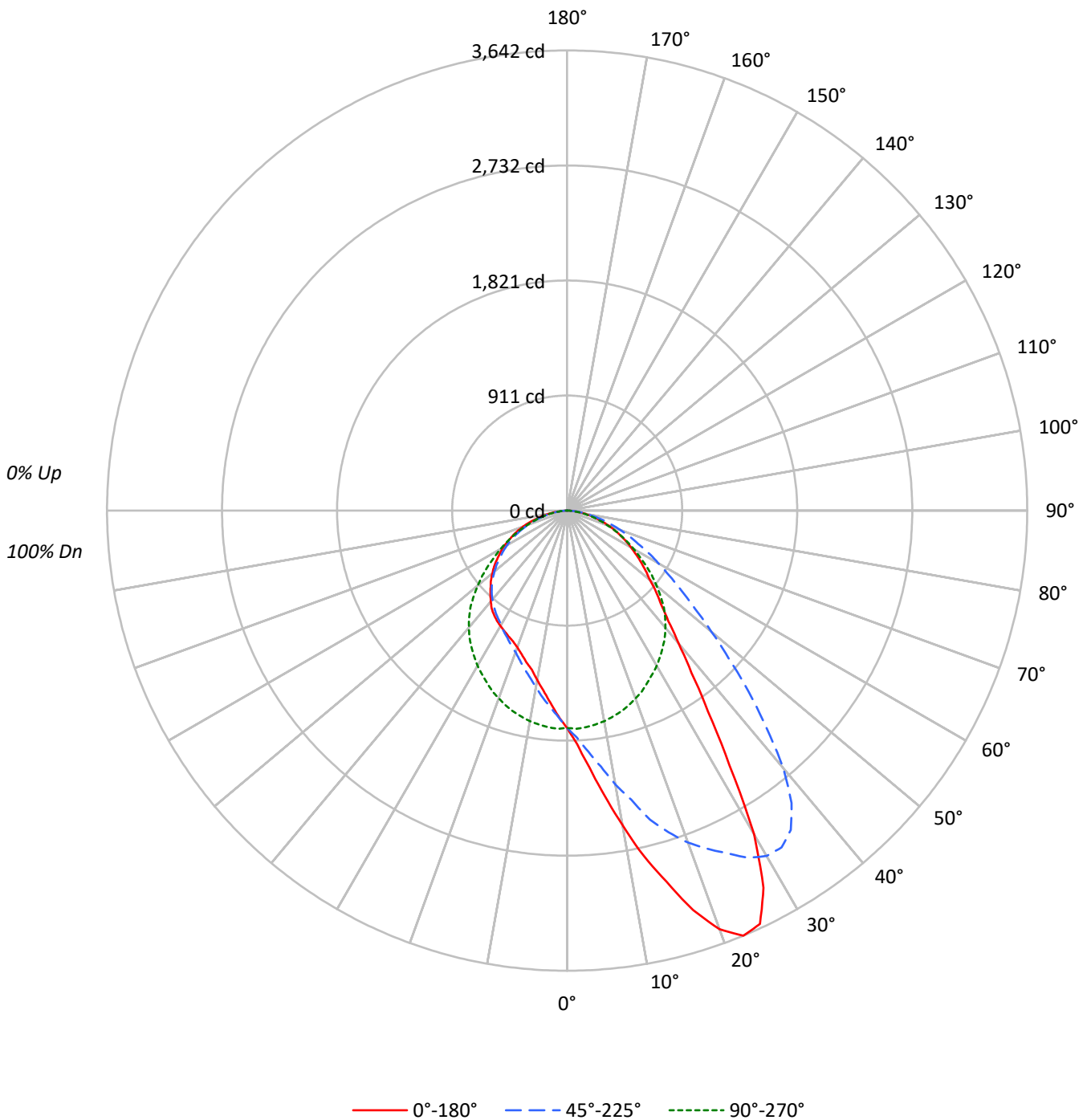
Lumens per Lamp: N/A
Luminaire Lumens: 5191.7 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5
Luminous Opening: Rectangular (W 7.88' x L: 0.23' x H: 0')
CIE Type: Direct

Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): 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



TEST NUMBER: P273767
CATALOG NUMBER: 8RCG-4-78D-L930-A

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					85			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53					53			
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47					47			
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41					41			
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	36					36			
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33					33			
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29					29			
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10259	10259	10259
5°	12234	10303	9130
10°	15313	10251	8248
15°	18783	10169	7678
20°	22375	10040	7311
25°	23759	9883	7229
30°	20364	9769	7266
35°	14162	9605	7342
40°	10667	9415	7319
45°	8857	9132	7225
50°	7934	8553	7160
55°	7418	7930	7071
60°	6959	7277	6997
65°	6540	6633	6774
70°	6131	5901	6452
75°	5494	5167	5913
80°	4809	4239	5097
85°	3764	3080	3422



TEST NUMBER: P273767

CATALOG NUMBER: 8RCG-4-78D-L930-A

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.2	3.3
10°-20°	543.4	10.5
20°-30°	914.2	17.6
30°-40°	1033.2	19.9
40°-50°	925.5	17.8
50°-60°	747.0	14.4
60°-70°	520.5	10.0
70°-80°	273.2	5.3
80°-90°	65.5	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°	1626.7	31.3
0°-40°	2660.0	51.2
0°-60°	4332.5	83.5
0°-90°	5191.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5191.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1720	1720	1720	1720	1720	
5°	2043	1915	1721	1558	1525	210
15°	3042	2532	1647	1298	1243	878
25°	3610	2992	1502	1116	1098	1596
35°	1945	3085	1319	986	1008	1255
45°	1050	2033	1083	843	857	828
55°	713	1104	763	652	680	640
65°	463	619	470	443	480	462
75°	238	293	224	223	257	255
85°	55	63	45	44	50	67
90°	0	0	0	0	0	



TEST NUMBER: P273767

CATALOG NUMBER: 8RCG-4-78D-L930-A

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0
2.5°	1851.8	1850.0	1846.0	1849.2	1842.6	1833.4	1832.6	1824.2	1800.0	1798.4	1791.8
5°	2043.4	2036.8	2036.0	2035.0	2023.4	2007.6	1977.6	1975.0	1935.0	1915.0	1891.0
7.5°	2275.0	2272.6	2266.0	2258.4	2219.2	2200.0	2171.8	2135.0	2088.4	2043.4	2015.0
10°	2528.4	2556.0	2521.8	2498.4	2476.8	2436.0	2388.4	2329.2	2270.0	2201.0	2148.4
12.5°	2800.2	2810.2	2810.2	2788.4	2751.8	2684.2	2591.0	2524.2	2471.0	2344.2	2299.2
15°	3041.8	3092.6	3060.2	2985.2	2986.8	2927.6	2817.6	2696.8	2632.6	2531.8	2394.2
17.5°	3315.2	3324.2	3314.2	3244.2	3210.2	3124.2	3025.2	2912.6	2791.8	2669.2	2526.8
20°	3525.2	3520.2	3491.0	3458.4	3386.8	3323.4	3212.6	3083.4	2916.8	2796.8	2637.6
22.5°	3641.8	3632.6	3622.6	3596.8	3540.2	3471.0	3374.2	3230.2	3073.4	2896.8	2706.8
25°	3610.2	3621.0	3622.6	3615.2	3594.2	3553.4	3475.2	3362.6	3204.2	2991.8	2800.2
27.5°	3365.2	3392.6	3427.6	3451.0	3488.4	3513.4	3488.4	3417.6	3287.6	3097.6	2861.8
30°	2956.8	2923.4	3006.0	3110.2	3181.0	3306.0	3376.0	3380.2	3314.2	3156.8	2928.4
32.5°	2390.0	2444.2	2469.2	2603.4	2779.2	2923.4	3080.2	3219.2	3251.8	3160.2	2967.6
35°	1945.0	1991.0	2057.6	2124.2	2291.0	2434.2	2679.2	2892.6	3062.6	3085.2	2962.6
37.5°	1616.8	1643.4	1684.2	1755.0	1869.2	2046.8	2241.0	2518.4	2752.6	2917.6	2901.0
40°	1370.0	1376.8	1424.2	1475.0	1563.4	1703.4	1874.2	2112.6	2407.6	2663.4	2770.2
42.5°	1185.0	1201.8	1215.0	1263.4	1329.2	1425.8	1581.8	1768.4	2032.6	2336.8	2571.0
45°	1050.0	1066.8	1079.2	1111.8	1161.8	1232.6	1343.4	1523.4	1729.2	2033.4	2314.2
47.5°	956.8	955.0	965.8	991.8	1027.6	1084.2	1165.8	1285.8	1483.4	1737.6	2031.8
50°	855.0	868.4	871.6	890.8	917.6	956.8	1021.8	1120.0	1275.0	1491.8	1756.8
52.5°	783.4	785.0	795.8	808.4	830.8	859.2	913.4	985.0	1098.4	1275.0	1513.4
55°	713.4	713.4	722.6	733.4	746.6	774.2	811.6	868.4	960.8	1104.2	1305.8
57.5°	648.4	651.6	660.0	662.6	674.2	693.4	725.8	770.8	841.6	957.6	1124.2
60°	583.4	590.8	590.0	596.6	606.6	620.8	647.6	682.6	744.2	832.6	967.6
62.5°	526.6	524.2	524.2	532.6	542.6	555.8	570.8	600.0	650.0	725.8	835.8
65°	463.4	461.6	467.6	472.6	475.8	485.8	499.2	525.8	560.8	619.2	708.4
67.5°	408.4	403.4	407.6	409.2	415.0	423.4	436.6	453.4	481.6	530.8	602.6
70°	351.6	347.6	346.6	348.4	353.4	359.2	368.4	384.2	410.0	447.6	496.6
72.5°	293.4	290.8	290.8	295.0	296.6	300.0	305.8	320.0	339.2	365.0	410.0
75°	238.4	238.4	238.4	239.2	241.6	245.0	250.0	257.6	273.4	293.4	324.2
77.5°	188.4	189.2	187.6	186.6	190.8	192.6	193.4	201.6	210.8	225.8	250.0
80°	140.0	135.8	137.6	140.0	141.6	142.6	145.0	146.6	154.2	161.6	177.6
82.5°	95.0	91.6	91.6	95.8	95.8	96.6	99.2	101.6	103.4	110.0	116.6
85°	55.0	55.0	55.8	55.8	56.6	55.8	58.4	59.2	59.2	63.4	68.4
87.5°	25.0	23.4	24.2	25.0	24.2	25.0	25.8	26.6	27.6	28.4	29.2
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: P273767

CATALOG NUMBER: 8RCG-4-78D-L930-A

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0
2.5°	1786.8	1780.0	1773.4	1761.8	1751.8	1737.6	1733.4	1728.4	1713.4	1700.0	1690.0
5°	1881.8	1861.8	1832.6	1805.8	1784.2	1755.0	1738.4	1720.8	1695.8	1673.4	1655.0
7.5°	1972.6	1937.6	1896.8	1852.6	1810.0	1769.2	1736.8	1707.6	1675.0	1643.4	1619.2
10°	2085.0	2028.4	1965.0	1896.8	1838.4	1781.8	1734.2	1692.6	1647.6	1608.4	1575.8
12.5°	2213.4	2122.6	2029.2	1942.6	1871.0	1786.8	1726.8	1670.8	1618.4	1569.2	1531.8
15°	2309.2	2202.6	2099.2	1985.0	1880.0	1781.8	1713.4	1646.8	1587.6	1539.2	1492.6
17.5°	2404.2	2287.6	2156.0	2018.4	1895.0	1781.8	1688.4	1616.8	1544.2	1485.8	1440.8
20°	2482.6	2345.0	2191.0	2046.8	1906.8	1776.8	1671.8	1581.8	1501.8	1439.2	1386.8
22.5°	2550.0	2383.4	2222.6	2066.0	1906.0	1763.4	1640.8	1547.6	1459.2	1398.4	1341.8
25°	2592.6	2400.0	2240.0	2059.2	1885.0	1740.0	1606.8	1501.8	1415.0	1343.4	1285.8
27.5°	2632.6	2397.6	2216.8	2021.8	1860.0	1715.8	1572.6	1460.0	1369.2	1291.8	1232.6
30°	2672.6	2401.8	2176.0	1983.4	1820.0	1670.0	1531.8	1418.4	1321.8	1242.6	1187.6
32.5°	2697.6	2399.2	2138.4	1930.0	1756.8	1628.4	1487.6	1369.2	1269.2	1191.8	1139.2
35°	2704.2	2385.0	2094.2	1852.6	1687.6	1558.4	1440.8	1319.2	1215.0	1142.6	1082.6
37.5°	2690.0	2359.2	2046.0	1782.6	1604.2	1475.8	1373.4	1269.2	1169.2	1088.4	1035.8
40°	2644.2	2334.2	1987.6	1707.6	1517.6	1395.0	1310.8	1209.2	1110.8	1035.0	986.8
42.5°	2556.8	2283.4	1923.4	1624.2	1427.6	1305.0	1229.2	1148.4	1056.8	986.8	938.4
45°	2403.4	2205.0	1859.2	1540.8	1339.2	1212.6	1144.2	1082.6	998.4	929.2	887.6
47.5°	2207.6	2099.2	1766.8	1453.4	1246.8	1124.2	1052.6	1001.8	935.8	880.0	839.2
50°	2001.8	1962.6	1672.6	1363.4	1154.2	1035.0	966.8	921.8	877.6	821.6	785.0
52.5°	1764.2	1804.2	1562.6	1270.0	1060.0	943.4	880.0	846.6	807.6	764.2	733.4
55°	1544.2	1631.8	1432.6	1163.4	966.8	855.0	794.2	762.6	739.2	705.0	677.6
57.5°	1330.8	1442.6	1297.6	1055.8	875.0	777.6	717.6	681.6	666.6	647.6	625.0
60°	1145.0	1255.0	1150.8	947.6	782.6	690.8	639.2	610.0	595.0	582.6	564.2
62.5°	979.2	1090.8	1007.6	837.6	691.6	608.4	565.0	536.6	525.8	520.8	505.8
65°	830.0	925.8	867.6	722.6	605.8	530.8	490.0	470.0	459.2	456.6	446.6
67.5°	700.8	775.0	730.0	620.8	525.8	457.6	421.6	404.2	395.0	394.2	385.8
70°	574.2	642.6	610.0	513.4	434.2	383.4	353.4	338.4	333.4	332.6	328.4
72.5°	475.8	518.4	494.2	417.6	360.8	315.8	295.8	280.0	274.2	275.8	273.4
75°	366.6	402.6	387.6	331.6	282.6	252.6	234.2	224.2	219.2	221.6	218.4
77.5°	280.0	305.0	290.0	247.6	215.8	193.4	179.2	172.6	167.6	167.6	165.8
80°	199.2	212.6	205.0	181.6	156.6	138.4	127.6	123.4	120.8	120.0	119.2
82.5°	127.6	138.4	129.2	115.0	100.0	90.8	85.8	80.0	78.4	79.2	78.4
85°	71.6	75.8	72.6	62.6	55.8	50.8	47.6	45.0	43.4	44.2	42.6
87.5°	30.8	31.6	29.2	25.8	24.2	21.6	21.6	20.0	18.4	18.4	17.6
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: P273767

CATALOG NUMBER: 8RCG-4-78D-L930-A

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0	1720.0
2.5°	1684.2	1678.4	1670.0	1657.6	1647.6	1631.8	1631.8	1634.2	1634.2	1633.4	1631.8
5°	1640.0	1627.6	1612.6	1595.0	1576.8	1558.4	1555.0	1548.4	1543.4	1540.0	1535.8
7.5°	1595.0	1574.2	1553.4	1529.2	1508.4	1490.8	1478.4	1467.6	1460.8	1453.4	1447.6
10°	1549.2	1521.8	1495.8	1470.0	1441.8	1419.2	1405.0	1395.0	1387.6	1380.8	1377.6
12.5°	1495.0	1462.6	1433.4	1409.2	1377.6	1354.2	1340.8	1337.6	1328.4	1312.6	1304.2
15°	1442.6	1413.4	1379.2	1341.8	1326.8	1298.4	1282.6	1275.0	1270.0	1259.2	1255.8
17.5°	1399.2	1360.0	1320.8	1293.4	1265.8	1243.4	1234.2	1224.2	1217.6	1207.6	1205.0
20°	1345.0	1310.8	1275.8	1245.8	1216.8	1191.8	1184.2	1177.6	1170.8	1166.8	1163.4
22.5°	1290.0	1255.8	1228.4	1200.8	1169.2	1155.0	1146.8	1139.2	1135.0	1132.6	1129.2
25°	1239.2	1209.2	1176.8	1151.8	1126.8	1115.8	1110.8	1106.8	1103.4	1099.2	1098.4
27.5°	1194.2	1160.8	1133.4	1109.2	1090.8	1081.8	1075.8	1073.4	1073.4	1075.0	1075.8
30°	1142.6	1112.6	1090.8	1070.8	1054.2	1045.8	1045.0	1045.0	1048.4	1049.2	1050.8
32.5°	1095.0	1071.8	1050.0	1030.8	1019.2	1014.2	1018.4	1018.4	1020.8	1023.4	1026.8
35°	1049.2	1027.6	1010.8	994.2	983.4	985.8	987.6	989.2	993.4	998.4	1001.8
37.5°	1005.8	985.8	968.4	955.0	948.4	953.4	957.6	960.8	965.8	970.0	973.4
40°	958.4	944.2	927.6	915.8	917.6	920.0	923.4	927.6	931.8	934.2	937.6
42.5°	914.2	899.2	887.6	878.4	880.8	884.2	885.8	887.6	892.6	897.6	899.2
45°	869.2	857.6	845.8	840.0	841.6	843.4	845.0	847.6	851.6	855.0	855.8
47.5°	818.4	810.0	802.6	795.8	799.2	798.4	800.8	805.8	807.6	809.2	814.2
50°	770.0	762.6	753.4	751.6	751.6	751.6	752.6	759.2	759.2	762.6	765.8
52.5°	716.6	712.6	707.6	704.2	702.6	702.6	706.6	709.2	710.8	715.8	719.2
55°	664.2	659.2	654.2	651.6	650.0	651.6	658.4	660.0	664.2	666.6	669.2
57.5°	609.2	605.8	601.6	600.0	600.0	600.8	605.8	610.0	610.8	619.2	622.6
60°	555.0	549.2	545.8	545.8	544.2	551.6	550.0	558.4	560.0	565.0	570.8
62.5°	499.2	490.8	490.0	490.0	493.4	494.2	497.6	500.0	505.0	511.6	515.8
65°	438.4	434.2	440.0	439.2	437.6	442.6	442.6	446.6	451.6	457.6	466.6
67.5°	381.6	378.4	380.0	379.2	381.6	385.0	387.6	390.8	396.6	403.4	409.2
70°	324.2	326.6	322.6	325.8	328.4	329.2	330.8	335.8	342.6	346.6	353.4
72.5°	268.4	267.6	269.2	270.0	272.6	274.2	275.8	281.6	289.2	292.6	297.6
75°	215.0	214.2	216.6	216.6	220.8	222.6	224.2	226.6	233.4	238.4	242.6
77.5°	166.6	167.6	166.6	170.0	168.4	169.2	174.2	176.6	177.6	188.4	190.0
80°	118.4	120.0	120.8	121.6	122.6	120.8	126.6	129.2	129.2	135.0	139.2
82.5°	76.6	77.6	80.0	80.8	80.8	83.4	82.6	84.2	86.6	88.4	94.2
85°	42.6	45.0	45.8	45.0	45.8	44.2	46.6	47.6	48.4	48.4	48.4
87.5°	16.6	17.6	16.6	17.6	16.6	17.6	17.6	15.8	15.8	18.4	15.0
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: P273767

CATALOG NUMBER: 8RCG-4-78D-L930-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1720.0	1720.0	1720.0	1720.0
2.5°	1625.8	1625.0	1630.8	1626.8
5°	1530.8	1533.4	1525.0	1525.0
7.5°	1445.0	1441.8	1442.6	1436.8
10°	1367.6	1362.6	1360.8	1361.8
12.5°	1303.4	1303.4	1290.0	1290.0
15°	1255.8	1240.0	1238.4	1243.4
17.5°	1203.4	1194.2	1195.0	1193.4
20°	1163.4	1158.4	1157.6	1151.8
22.5°	1126.8	1125.8	1126.8	1120.0
25°	1097.6	1101.8	1098.4	1098.4
27.5°	1077.6	1077.6	1075.0	1075.0
30°	1054.2	1053.4	1055.0	1055.0
32.5°	1030.8	1032.6	1032.6	1033.4
35°	1006.8	1007.6	1010.0	1008.4
37.5°	975.0	979.2	978.4	980.0
40°	938.4	940.8	940.0	940.0
42.5°	900.8	902.6	900.0	898.4
45°	859.2	857.6	860.0	856.6
47.5°	813.4	814.2	815.0	818.4
50°	767.6	772.6	772.6	771.6
52.5°	722.6	724.2	728.4	728.4
55°	675.8	677.6	679.2	680.0
57.5°	628.4	627.6	630.8	631.6
60°	577.6	577.6	584.2	586.6
62.5°	523.4	526.6	533.4	528.4
65°	470.8	477.6	476.6	480.0
67.5°	415.8	420.0	426.6	426.6
70°	360.0	364.2	367.6	370.0
72.5°	305.8	307.6	316.6	311.6
75°	248.4	254.2	259.2	256.6
77.5°	193.4	200.8	202.6	200.0
80°	145.0	144.2	149.2	148.4
82.5°	96.6	95.8	97.6	98.4
85°	51.6	54.2	50.8	50.0
87.5°	15.0	15.0	14.2	13.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)