

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: P273770

Luminaire Tested: **8RCG-4-78D-L935-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273770
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-L935-A
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

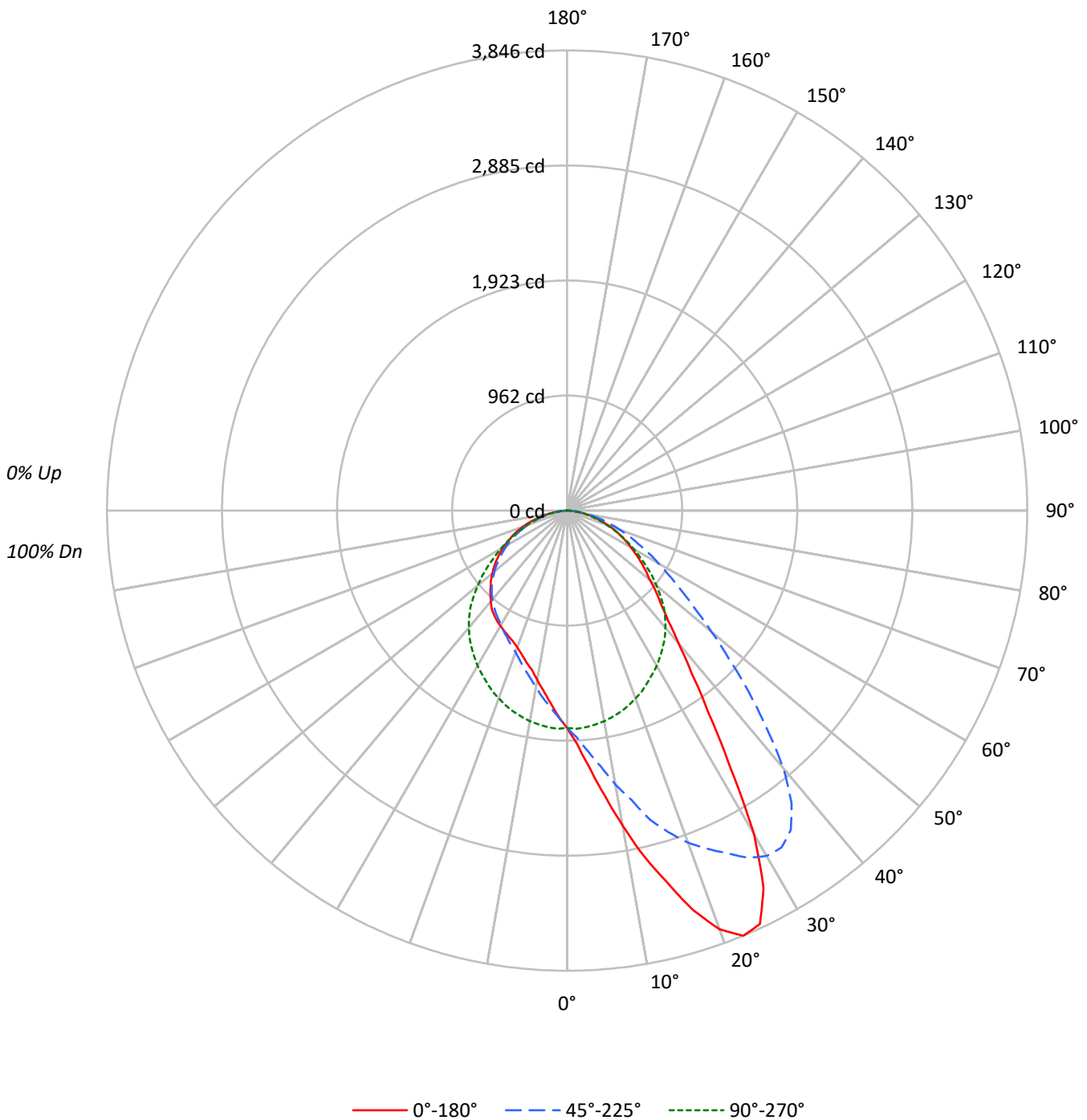
Lumens per Lamp: N/A
Luminaire Lumens: 5482.6 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5
Luminous Opening: Rectangular (W 7.88' x L: 0.23' x H: 0')
CIE Type: Direct

Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	10834	10834	10834
5°	12920	10881	9643
10°	16172	10825	8709
15°	19835	10738	8108
20°	23629	10602	7719
25°	25089	10436	7634
30°	21506	10316	7674
35°	14956	10144	7753
40°	11265	9943	7730
45°	9353	9643	7632
50°	8379	9032	7562
55°	7834	8373	7468
60°	7348	7685	7391
65°	6907	7006	7155
70°	6477	6233	6815
75°	5803	5457	6245
80°	5077	4472	5379
85°	3969	3257	3613



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.6	3.3
10°-20°	573.8	10.5
20°-30°	965.5	17.6
30°-40°	1091.2	19.9
40°-50°	977.4	17.8
50°-60°	788.9	14.4
60°-70°	549.7	10.0
70°-80°	288.5	5.3
80°-90°	69.1	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°	1717.9	31.3
0°-40°	2809.1	51.2
0°-60°	4575.3	83.5
0°-90°	5482.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5482.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1816	1816	1816	1816	1816	
5°	2158	2022	1817	1646	1611	222
15°	3212	2674	1739	1371	1313	927
25°	3812	3159	1586	1178	1160	1685
35°	2054	3258	1393	1041	1065	1326
45°	1109	2147	1143	891	905	875
55°	753	1166	805	688	718	676
65°	489	654	496	467	507	487
75°	252	310	237	235	271	269
85°	58	67	48	47	53	70
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°	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4
2.5°	1955.6	1953.8	1949.4	1952.8	1945.8	1936.2	1935.2	1926.4	1901.0	1899.2	1892.2
5°	2158.0	2151.0	2150.0	2149.2	2136.8	2120.2	2088.4	2085.8	2043.6	2022.4	1996.8
7.5°	2402.6	2400.0	2393.0	2385.0	2343.6	2323.4	2293.4	2254.8	2205.4	2158.0	2128.0
10°	2670.2	2699.2	2663.2	2638.4	2615.6	2572.4	2522.4	2459.8	2397.4	2324.2	2268.8
12.5°	2957.0	2967.6	2967.6	2944.8	2906.0	2834.8	2736.2	2665.8	2609.4	2475.6	2428.2
15°	3212.2	3266.0	3231.6	3152.4	3154.2	3091.8	2975.6	2848.0	2780.2	2673.6	2528.4
17.5°	3501.0	3510.6	3500.0	3426.2	3390.0	3299.4	3194.6	3075.8	2948.2	2818.8	2668.4
20°	3722.8	3717.4	3686.6	3652.4	3576.6	3509.8	3392.6	3256.2	3080.2	2953.6	2785.4
22.5°	3846.0	3836.2	3825.6	3798.4	3738.6	3665.6	3563.4	3411.2	3245.8	3059.2	2858.4
25°	3812.4	3824.0	3825.6	3817.8	3795.8	3752.6	3670.0	3551.2	3383.8	3159.4	2957.0
27.5°	3553.8	3582.8	3619.8	3644.4	3684.0	3710.4	3684.0	3609.2	3472.0	3271.2	3022.2
30°	3122.6	3087.4	3174.4	3284.4	3359.2	3491.2	3565.2	3569.6	3500.0	3333.8	3092.6
32.5°	2524.0	2581.2	2607.6	2749.4	2935.0	3087.4	3252.8	3399.8	3434.0	3337.2	3134.0
35°	2054.0	2102.6	2173.0	2243.4	2419.4	2570.8	2829.4	3054.8	3234.2	3258.0	3128.6
37.5°	1707.4	1735.6	1778.6	1853.4	1974.0	2161.4	2366.6	2659.6	2906.8	3081.2	3063.6
40°	1446.8	1453.8	1504.0	1557.8	1651.0	1798.8	1979.2	2231.0	2542.6	2812.8	2925.4
42.5°	1251.4	1269.0	1283.2	1334.2	1403.8	1505.8	1670.4	1867.6	2146.6	2467.8	2715.0
45°	1108.8	1126.4	1139.6	1174.0	1226.8	1301.6	1418.6	1608.8	1826.2	2147.4	2444.0
47.5°	1010.4	1008.6	1020.0	1047.2	1085.2	1145.0	1231.2	1358.0	1566.6	1835.0	2145.6
50°	903.0	917.0	920.6	940.8	969.0	1010.4	1079.0	1182.8	1346.6	1575.4	1855.2
52.5°	827.2	829.0	840.4	853.6	877.4	907.4	964.6	1040.2	1160.0	1346.6	1598.2
55°	753.4	753.4	763.0	774.4	788.6	817.6	857.2	917.0	1014.8	1166.2	1379.0
57.5°	684.6	688.2	697.0	699.6	712.0	732.2	766.6	814.0	888.8	1011.2	1187.2
60°	616.0	624.0	623.0	630.2	640.6	655.6	683.8	720.8	786.0	879.2	1021.8
62.5°	556.2	553.6	553.6	562.4	573.0	587.0	602.8	633.6	686.4	766.6	882.8
65°	489.4	487.6	493.8	499.0	502.6	513.0	527.2	555.4	592.2	653.8	748.0
67.5°	431.2	426.0	430.4	432.2	438.2	447.0	461.2	478.8	508.6	560.6	636.2
70°	371.4	367.0	366.2	367.8	373.2	379.4	389.0	405.8	433.0	472.6	524.6
72.5°	309.8	307.2	307.2	311.6	313.4	316.8	323.0	338.0	358.2	385.4	433.0
75°	251.8	251.8	251.8	252.6	255.2	258.8	264.0	272.0	288.6	309.8	342.4
77.5°	198.8	199.8	198.0	197.2	201.6	203.2	204.2	213.0	222.6	238.6	264.0
80°	147.8	143.4	145.2	147.8	149.6	150.4	153.2	154.8	162.8	170.8	187.4
82.5°	100.4	96.8	96.8	101.2	101.2	102.0	104.8	107.4	109.2	116.2	123.2
85°	58.0	58.0	59.0	59.0	59.8	59.0	61.6	62.4	62.4	66.8	72.2
87.5°	26.4	24.6	25.6	26.4	25.6	26.4	27.2	28.2	29.0	30.0	30.8
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°	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4
2.5°	1886.8	1879.8	1872.8	1860.4	1850.0	1835.0	1830.6	1825.2	1809.4	1795.4	1784.8
5°	1987.2	1966.0	1935.2	1907.2	1884.2	1853.4	1835.8	1817.4	1791.0	1767.2	1747.8
7.5°	2083.2	2046.2	2003.0	1956.4	1911.6	1868.4	1834.0	1803.2	1769.0	1735.6	1710.0
10°	2202.0	2142.2	2075.2	2003.0	1941.4	1881.6	1831.4	1787.4	1740.0	1698.6	1664.2
12.5°	2337.4	2241.6	2143.0	2051.4	1975.8	1886.8	1823.6	1764.6	1709.2	1657.2	1617.6
15°	2438.6	2326.0	2217.0	2096.4	1985.4	1881.6	1809.4	1739.0	1676.6	1625.6	1576.2
17.5°	2539.0	2415.8	2276.8	2131.6	2001.2	1881.6	1783.0	1707.4	1630.8	1569.2	1521.6
20°	2621.8	2476.6	2313.8	2161.4	2013.6	1876.4	1765.4	1670.4	1585.8	1519.8	1464.4
22.5°	2693.0	2517.0	2347.2	2181.8	2012.8	1862.2	1732.8	1634.4	1541.0	1476.8	1417.0
25°	2738.0	2534.6	2365.6	2174.6	1990.8	1837.6	1696.8	1585.8	1494.4	1418.6	1358.0
27.5°	2780.2	2532.0	2341.0	2135.0	1964.4	1812.0	1660.8	1541.8	1446.0	1364.2	1301.6
30°	2822.4	2536.4	2297.8	2094.6	1922.0	1763.6	1617.6	1497.8	1395.8	1312.2	1254.2
32.5°	2848.8	2533.8	2258.2	2038.2	1855.2	1719.6	1571.0	1446.0	1340.4	1258.6	1203.0
35°	2855.8	2518.8	2211.6	1956.4	1782.2	1645.8	1521.6	1393.2	1283.2	1206.6	1143.2
37.5°	2840.8	2491.4	2160.6	1882.4	1694.2	1558.6	1450.4	1340.4	1234.8	1149.4	1094.0
40°	2792.4	2465.0	2099.0	1803.2	1602.6	1473.2	1384.4	1277.0	1173.2	1093.0	1042.0
42.5°	2700.0	2411.4	2031.2	1715.2	1507.6	1378.2	1298.2	1212.8	1116.0	1042.0	991.0
45°	2538.2	2328.6	1963.4	1627.2	1414.2	1280.6	1208.4	1143.2	1054.4	981.2	937.2
47.5°	2331.4	2217.0	1865.8	1534.8	1316.6	1187.2	1111.6	1057.8	988.4	929.4	886.2
50°	2114.0	2072.6	1766.4	1439.8	1219.0	1093.0	1020.8	973.4	926.8	867.8	829.0
52.5°	1863.2	1905.4	1650.2	1341.2	1119.4	996.2	929.4	894.2	852.8	807.0	774.4
55°	1630.8	1723.2	1512.8	1228.6	1020.8	903.0	838.8	805.2	780.6	744.6	715.6
57.5°	1405.4	1523.4	1370.2	1115.0	924.0	821.2	757.8	720.0	704.0	683.8	660.0
60°	1209.2	1325.4	1215.4	1000.6	826.4	729.6	675.0	644.2	628.4	615.2	595.8
62.5°	1034.0	1152.0	1064.0	884.4	730.4	642.4	596.6	566.8	555.4	550.0	534.2
65°	876.6	977.8	916.2	763.0	639.8	560.6	517.4	496.4	485.0	482.2	471.8
67.5°	740.2	818.4	771.0	655.6	555.4	483.2	445.4	426.8	417.2	416.2	407.4
70°	606.4	678.6	644.2	542.2	458.6	404.8	373.2	357.4	352.0	351.2	346.8
72.5°	502.6	547.4	521.8	441.0	381.0	333.6	312.4	295.8	289.6	291.4	288.6
75°	387.2	425.0	409.2	350.2	298.4	266.6	247.4	236.8	231.4	234.2	230.6
77.5°	295.8	322.2	306.2	261.4	228.0	204.2	189.2	182.2	176.8	176.8	175.2
80°	210.4	224.4	216.4	191.8	165.4	146.0	134.6	130.2	127.6	126.8	125.8
82.5°	134.6	146.0	136.4	121.4	105.6	96.0	90.6	84.4	82.8	83.6	82.8
85°	75.6	80.0	76.6	66.0	59.0	53.6	50.2	47.6	45.8	46.6	44.8
87.5°	32.6	33.4	30.8	27.2	25.6	22.8	22.8	21.2	19.4	19.4	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4	1816.4
2.5°	1778.6	1772.4	1763.6	1750.4	1740.0	1723.2	1723.2	1725.8	1725.8	1725.0	1723.2
5°	1732.0	1718.8	1703.0	1684.4	1665.2	1645.8	1642.2	1635.2	1630.0	1626.4	1622.0
7.5°	1684.4	1662.4	1640.4	1615.0	1593.0	1574.4	1561.2	1549.8	1542.8	1534.8	1528.6
10°	1636.0	1607.0	1579.8	1552.4	1522.6	1498.8	1483.8	1473.2	1465.4	1458.2	1454.8
12.5°	1578.8	1544.6	1513.8	1488.2	1454.8	1430.2	1416.0	1412.6	1402.8	1386.2	1377.4
15°	1523.4	1492.6	1456.6	1417.0	1401.0	1371.2	1354.4	1346.6	1341.2	1329.8	1326.2
17.5°	1477.6	1436.2	1395.0	1365.8	1336.8	1313.0	1303.4	1292.8	1285.8	1275.2	1272.6
20°	1420.4	1384.4	1347.4	1315.8	1285.0	1258.6	1250.6	1243.6	1236.6	1232.2	1228.6
22.5°	1362.4	1326.2	1297.2	1268.2	1234.8	1219.8	1211.0	1203.0	1198.6	1196.0	1192.6
25°	1308.6	1277.0	1242.6	1216.2	1189.8	1178.4	1173.2	1168.8	1165.2	1160.8	1160.0
27.5°	1261.2	1226.0	1197.0	1171.4	1152.0	1142.4	1136.2	1133.6	1133.6	1135.2	1136.2
30°	1206.6	1175.0	1152.0	1130.8	1113.2	1104.4	1103.6	1103.6	1107.2	1108.0	1109.8
32.5°	1156.4	1131.8	1108.8	1088.6	1076.4	1071.0	1075.4	1075.4	1078.0	1080.8	1084.2
35°	1108.0	1085.2	1067.6	1050.0	1038.4	1041.2	1042.8	1044.6	1049.0	1054.4	1057.8
37.5°	1062.2	1041.2	1022.6	1008.6	1001.6	1006.8	1011.2	1014.8	1020.0	1024.4	1028.0
40°	1012.0	997.2	979.6	967.2	969.0	971.6	975.2	979.6	984.0	986.6	990.0
42.5°	965.4	949.6	937.2	927.6	930.2	933.8	935.6	937.2	942.6	947.8	949.6
45°	918.0	905.6	893.2	887.2	888.8	890.6	892.4	895.0	899.4	903.0	903.8
47.5°	864.2	855.4	847.6	840.4	844.0	843.2	845.8	851.0	852.8	854.6	859.8
50°	813.2	805.2	795.6	793.8	793.8	793.8	794.8	801.8	801.8	805.2	808.8
52.5°	756.8	752.4	747.2	743.6	742.0	742.0	746.4	749.0	750.8	756.0	759.6
55°	701.4	696.2	690.8	688.2	686.4	688.2	695.2	697.0	701.4	704.0	706.8
57.5°	643.4	639.8	635.4	633.6	633.6	634.6	639.8	644.2	645.0	653.8	657.4
60°	586.2	580.0	576.4	576.4	574.6	582.6	580.8	589.6	591.4	596.6	602.8
62.5°	527.2	518.4	517.4	517.4	521.0	521.8	525.4	528.0	533.4	540.4	544.8
65°	463.0	458.6	464.6	463.8	462.0	467.4	467.4	471.8	477.0	483.2	492.8
67.5°	403.0	399.6	401.4	400.4	403.0	406.6	409.2	412.8	419.0	426.0	432.2
70°	342.4	345.0	340.6	344.2	346.8	347.6	349.4	354.6	361.8	366.2	373.2
72.5°	283.4	282.6	284.2	285.2	287.8	289.6	291.4	297.4	305.4	309.0	314.2
75°	227.0	226.2	228.8	228.8	233.2	235.0	236.8	239.4	246.4	251.8	256.2
77.5°	176.0	176.8	176.0	179.6	177.8	178.6	184.0	186.6	187.4	198.8	200.6
80°	125.0	126.8	127.6	128.4	129.4	127.6	133.8	136.4	136.4	142.6	147.0
82.5°	81.0	81.8	84.4	85.4	85.4	88.0	87.2	88.8	91.6	93.2	99.4
85°	44.8	47.6	48.4	47.6	48.4	46.6	49.2	50.2	51.0	51.0	51.0
87.5°	17.6	18.4	17.6	18.4	17.6	18.4	18.4	16.8	16.8	19.4	15.8
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: P273770

CATALOG NUMBER: 8RCG-4-78D-L935-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1816.4	1816.4	1816.4	1816.4
2.5°	1717.0	1716.2	1722.4	1718.0
5°	1616.8	1619.4	1610.6	1610.6
7.5°	1526.0	1522.6	1523.4	1517.2
10°	1444.2	1439.0	1437.2	1438.0
12.5°	1376.4	1376.4	1362.4	1362.4
15°	1326.2	1309.6	1307.8	1313.0
17.5°	1270.8	1261.2	1262.0	1260.2
20°	1228.6	1223.4	1222.4	1216.2
22.5°	1189.8	1189.0	1189.8	1182.8
25°	1159.0	1163.4	1160.0	1160.0
27.5°	1138.0	1138.0	1135.2	1135.2
30°	1113.2	1112.4	1114.2	1114.2
32.5°	1088.6	1090.4	1090.4	1091.2
35°	1063.2	1064.0	1066.6	1064.8
37.5°	1029.6	1034.0	1033.2	1035.0
40°	991.0	993.6	992.8	992.8
42.5°	951.4	953.2	950.4	948.8
45°	907.4	905.6	908.2	904.8
47.5°	859.0	859.8	860.8	864.2
50°	810.6	815.8	815.8	815.0
52.5°	763.0	764.8	769.2	769.2
55°	713.8	715.6	717.2	718.2
57.5°	663.6	662.6	666.2	667.0
60°	609.8	609.8	617.0	619.6
62.5°	552.6	556.2	563.2	558.0
65°	497.2	504.2	503.4	507.0
67.5°	439.2	443.6	450.6	450.6
70°	380.2	384.6	388.2	390.8
72.5°	323.0	324.8	334.4	329.2
75°	262.2	268.4	273.8	271.0
77.5°	204.2	212.0	213.8	211.2
80°	153.2	152.2	157.6	156.6
82.5°	102.0	101.2	103.0	103.8
85°	54.6	57.2	53.6	52.8
87.5°	15.8	15.8	15.0	14.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)