

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: P273761

Luminaire Tested: **8RCG-4-78D-L840-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273761
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-L840-A
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

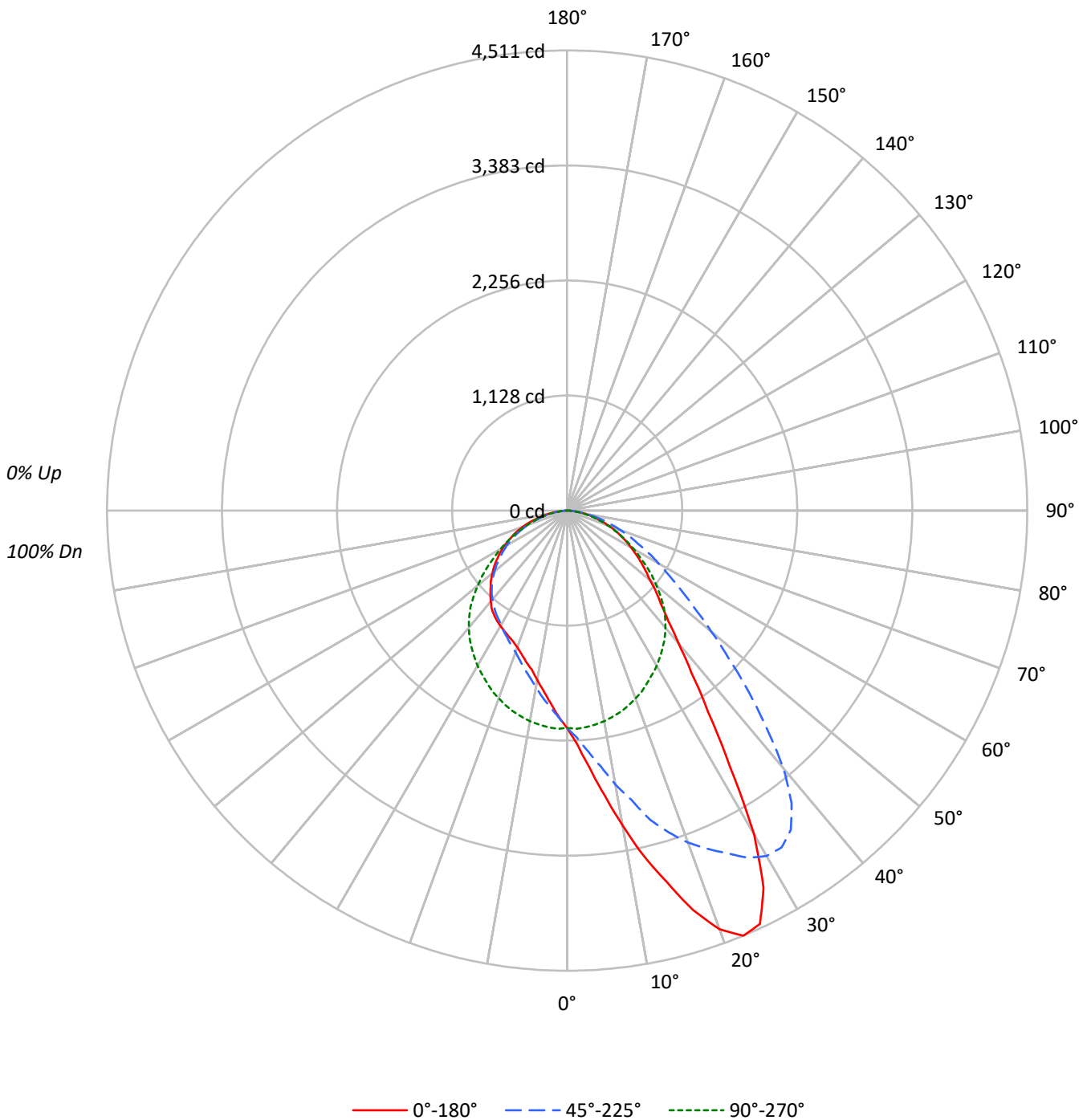
Lumens per Lamp: N/A
Luminaire Lumens: 6430.6 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5
Luminous Opening: Rectangular (W 7.88' x L: 0.23' x H: 0')
CIE Type: Direct

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°	12708	12708	12708
5°	15154	12762	11310
10°	18968	12697	10215
15°	23264	12595	9510
20°	27714	12435	9055
25°	29428	12241	8953
30°	25223	12099	9000
35°	17542	11897	9094
40°	13213	11662	9066
45°	10970	11310	8951
50°	9826	10593	8869
55°	9188	9823	8760
60°	8620	9013	8667
65°	8101	8217	8392
70°	7596	7307	7994
75°	6803	6397	7328
80°	5956	5248	6313
85°	4667	3819	4243



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.5	3.3
10°-20°	673.0	10.5
20°-30°	1132.4	17.6
30°-40°	1279.8	19.9
40°-50°	1146.3	17.8
50°-60°	925.3	14.4
60°-70°	644.7	10.0
70°-80°	338.4	5.3
80°-90°	81.1	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°	2014.9	31.3
0°-40°	3294.8	51.2
0°-60°	5366.4	83.5
0°-90°	6430.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6430.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2131	2131	2131	2131	2131	
5°	2531	2372	2132	1930	1889	260
15°	3768	3136	2040	1608	1540	1088
25°	4472	3706	1860	1382	1360	1977
35°	2409	3821	1634	1221	1249	1555
45°	1301	2519	1341	1045	1061	1026
55°	884	1368	945	807	842	793
65°	574	767	582	548	595	572
75°	295	363	278	276	318	315
85°	68	78	56	55	62	83
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°	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6
2.5°	2293.6	2291.6	2286.4	2290.6	2282.2	2271.0	2269.8	2259.6	2229.6	2227.6	2219.4
5°	2531.0	2522.8	2521.8	2520.8	2506.2	2486.6	2449.6	2446.4	2396.8	2372.0	2342.2
7.5°	2818.0	2815.0	2806.6	2797.4	2748.8	2725.2	2690.0	2644.6	2586.8	2531.0	2496.0
10°	3131.8	3165.8	3123.6	3094.6	3067.8	3017.2	2958.4	2885.2	2811.8	2726.2	2661.2
12.5°	3468.4	3480.8	3480.8	3453.8	3408.4	3324.8	3209.2	3126.6	3060.6	2903.6	2848.0
15°	3767.6	3830.6	3790.4	3697.4	3699.6	3626.2	3490.0	3340.4	3260.8	3136.0	2965.6
17.5°	4106.2	4117.6	4105.2	4018.6	3976.2	3869.8	3747.0	3607.6	3458.0	3306.2	3129.8
20°	4366.4	4360.2	4324.0	4283.8	4195.0	4116.6	3979.2	3819.2	3612.8	3464.2	3267.0
22.5°	4510.8	4499.6	4487.2	4455.2	4385.0	4299.2	4179.6	4001.0	3807.0	3588.0	3352.8
25°	4471.6	4485.0	4487.2	4477.8	4452.0	4401.4	4304.4	4165.0	3969.0	3705.8	3468.4
27.5°	4168.2	4202.2	4245.6	4274.6	4321.0	4352.0	4321.0	4233.2	4072.2	3836.8	3544.8
30°	3662.4	3621.0	3723.2	3852.4	3940.0	4094.8	4181.6	4186.8	4105.2	3910.2	3627.2
32.5°	2960.4	3027.6	3058.6	3224.8	3442.6	3621.0	3815.2	3987.6	4027.8	3914.2	3675.8
35°	2409.2	2466.0	2548.6	2631.2	2837.6	3015.2	3318.6	3583.0	3793.4	3821.4	3669.6
37.5°	2002.6	2035.6	2086.2	2173.8	2315.4	2535.2	2775.6	3119.4	3409.4	3613.8	3593.2
40°	1697.0	1705.2	1764.0	1827.0	1936.4	2109.8	2321.6	2616.8	2982.2	3299.0	3431.2
42.5°	1467.8	1488.4	1505.0	1564.8	1646.4	1766.2	1959.2	2190.4	2517.6	2894.4	3184.4
45°	1300.6	1321.2	1336.8	1377.0	1439.0	1526.6	1664.0	1887.0	2141.8	2518.6	2866.6
47.5°	1185.0	1183.0	1196.4	1228.4	1272.8	1343.0	1444.2	1592.8	1837.4	2152.2	2516.6
50°	1059.0	1075.6	1079.8	1103.4	1136.4	1185.0	1265.6	1387.4	1579.4	1847.8	2176.0
52.5°	970.4	972.4	985.8	1001.2	1029.2	1064.2	1131.4	1220.2	1360.4	1579.4	1874.6
55°	883.6	883.6	895.0	908.4	924.8	959.0	1005.4	1075.6	1190.2	1367.8	1617.6
57.5°	803.0	807.2	817.6	820.6	835.0	858.8	899.0	954.8	1042.6	1186.0	1392.4
60°	722.6	731.8	730.8	739.0	751.4	769.0	802.0	845.4	921.8	1031.2	1198.4
62.5°	652.4	649.2	649.2	659.6	672.0	688.6	707.0	743.2	805.2	899.0	1035.4
65°	574.0	571.8	579.0	585.2	589.4	601.8	618.4	651.4	694.6	767.0	877.4
67.5°	505.8	499.6	504.8	506.8	514.0	524.4	540.8	561.6	596.6	657.6	746.4
70°	435.6	430.4	429.4	431.4	437.6	444.8	456.2	475.8	507.8	554.4	615.2
72.5°	363.4	360.2	360.2	365.4	367.4	371.6	378.8	396.4	420.2	452.2	507.8
75°	295.2	295.2	295.2	296.2	299.4	303.4	309.6	319.0	338.6	363.4	401.6
77.5°	233.2	234.4	232.2	231.2	236.4	238.4	239.4	249.8	261.2	279.8	309.6
80°	173.4	168.2	170.4	173.4	175.4	176.6	179.6	181.6	191.0	200.2	219.8
82.5°	117.6	113.6	113.6	118.8	118.8	119.8	122.8	126.0	128.0	136.2	144.6
85°	68.2	68.2	69.2	69.2	70.2	69.2	72.2	73.2	73.2	78.4	84.6
87.5°	31.0	29.0	30.0	31.0	30.0	31.0	32.0	33.0	34.0	35.0	36.2
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°	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6
2.5°	2213.2	2204.8	2196.6	2182.2	2169.8	2152.2	2147.0	2140.8	2122.2	2105.8	2093.4
5°	2330.8	2306.0	2269.8	2236.8	2210.0	2173.8	2153.2	2131.6	2100.6	2072.8	2050.0
7.5°	2443.4	2400.0	2349.4	2294.6	2242.0	2191.4	2151.2	2115.0	2074.8	2035.6	2005.6
10°	2582.6	2512.4	2434.0	2349.4	2277.2	2207.0	2148.0	2096.4	2040.8	1992.2	1952.0
12.5°	2741.6	2629.2	2513.6	2406.2	2317.4	2213.2	2138.8	2069.6	2004.6	1943.8	1897.2
15°	2860.4	2728.2	2600.2	2458.8	2328.8	2207.0	2122.2	2039.8	1966.4	1906.6	1848.8
17.5°	2978.0	2833.6	2670.4	2500.0	2347.4	2207.0	2091.4	2002.6	1912.8	1840.4	1784.8
20°	3075.0	2904.8	2713.8	2535.2	2361.8	2200.8	2070.6	1959.2	1860.0	1782.6	1717.6
22.5°	3158.6	2952.2	2753.0	2559.0	2360.8	2184.2	2032.4	1916.8	1807.4	1732.0	1662.0
25°	3211.4	2972.8	2774.6	2550.6	2335.0	2155.4	1990.2	1860.0	1752.8	1664.0	1592.8
27.5°	3260.8	2969.8	2745.8	2504.2	2304.0	2125.4	1947.8	1808.4	1696.0	1600.0	1526.6
30°	3310.4	2975.0	2695.2	2456.8	2254.4	2068.6	1897.2	1756.8	1637.2	1539.0	1471.0
32.5°	3341.4	2971.8	2648.8	2390.6	2176.0	2017.0	1842.6	1696.0	1572.2	1476.2	1411.0
35°	3349.6	2954.2	2594.0	2294.6	2090.2	1930.2	1784.8	1634.0	1505.0	1415.2	1340.8
37.5°	3332.0	2922.2	2534.2	2208.0	1987.0	1828.0	1701.2	1572.2	1448.2	1348.2	1283.0
40°	3275.2	2891.4	2461.8	2115.0	1879.8	1728.0	1623.8	1497.8	1376.0	1282.0	1222.2
42.5°	3167.0	2828.4	2382.4	2011.8	1768.2	1616.4	1522.6	1422.4	1308.8	1222.2	1162.4
45°	2977.0	2731.4	2303.0	1908.6	1658.8	1502.0	1417.2	1340.8	1236.6	1151.0	1099.4
47.5°	2734.4	2600.2	2188.4	1800.2	1544.2	1392.4	1303.8	1240.8	1159.2	1090.0	1039.4
50°	2479.4	2431.0	2071.8	1688.8	1429.6	1282.0	1197.4	1141.6	1087.0	1017.8	972.4
52.5°	2185.2	2234.8	1935.4	1573.2	1313.0	1168.4	1090.0	1048.8	1000.2	946.6	908.4
55°	1912.8	2021.2	1774.4	1441.0	1197.4	1059.0	983.8	944.6	915.6	873.2	839.2
57.5°	1648.4	1786.8	1607.2	1307.8	1083.8	963.0	888.8	844.4	825.8	802.0	774.2
60°	1418.2	1554.6	1425.6	1173.6	969.2	855.8	791.8	755.6	737.0	721.6	698.8
62.5°	1212.8	1351.2	1248.0	1037.4	856.8	753.6	699.8	664.8	651.4	645.2	626.6
65°	1028.2	1146.8	1074.6	895.0	750.4	657.6	607.0	582.2	568.8	565.6	553.2
67.5°	868.2	960.0	904.2	769.0	651.4	566.8	522.4	500.6	489.2	488.2	478.0
70°	711.2	795.8	755.6	635.8	537.8	474.8	437.6	419.0	412.8	411.8	406.8
72.5°	589.4	642.0	612.2	517.2	447.0	391.2	366.4	346.8	339.6	341.6	338.6
75°	454.2	498.6	480.0	410.8	350.0	312.8	290.0	277.6	271.4	274.6	270.4
77.5°	346.8	377.8	359.2	306.6	267.4	239.4	222.0	213.6	207.4	207.4	205.4
80°	246.8	263.2	254.0	225.0	194.0	171.4	158.0	152.8	149.6	148.6	147.6
82.5°	158.0	171.4	160.0	142.4	123.8	112.6	106.4	99.0	97.0	98.0	97.0
85°	88.8	94.0	89.8	77.4	69.2	63.0	58.8	55.8	53.6	54.8	52.6
87.5°	38.2	39.2	36.2	32.0	30.0	26.8	26.8	24.8	22.8	22.8	21.6
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°	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6	2130.6
2.5°	2086.2	2079.0	2068.6	2053.2	2040.8	2021.2	2021.2	2024.2	2024.2	2023.2	2021.2
5°	2031.4	2016.0	1997.4	1975.8	1953.0	1930.2	1926.2	1918.0	1911.8	1907.6	1902.4
7.5°	1975.8	1950.0	1924.0	1894.2	1868.4	1846.6	1831.2	1817.8	1809.6	1800.2	1793.0
10°	1919.0	1884.8	1852.8	1820.8	1785.8	1758.0	1740.4	1728.0	1718.6	1710.4	1706.2
12.5°	1851.8	1811.6	1775.4	1745.6	1706.2	1677.4	1660.8	1656.8	1645.4	1625.8	1615.4
15°	1786.8	1750.6	1708.4	1662.0	1643.4	1608.2	1588.6	1579.4	1573.2	1559.8	1555.6
17.5°	1733.2	1684.6	1636.2	1602.0	1568.0	1540.2	1528.8	1516.4	1508.2	1495.8	1492.6
20°	1666.0	1623.8	1580.4	1543.2	1507.0	1476.2	1466.8	1458.6	1450.2	1445.2	1441.0
22.5°	1598.0	1555.6	1521.6	1487.4	1448.2	1430.6	1420.4	1411.0	1406.0	1402.8	1398.6
25°	1535.0	1497.8	1457.6	1426.6	1395.6	1382.2	1376.0	1370.8	1366.6	1361.6	1360.4
27.5°	1479.2	1438.0	1403.8	1374.0	1351.2	1339.8	1332.6	1329.6	1329.6	1331.6	1332.6
30°	1415.2	1378.0	1351.2	1326.4	1305.8	1295.4	1294.4	1294.4	1298.6	1299.6	1301.6
32.5°	1356.4	1327.4	1300.6	1276.8	1262.4	1256.2	1261.4	1261.4	1264.4	1267.6	1271.8
35°	1299.6	1272.8	1252.2	1231.4	1218.0	1221.2	1223.2	1225.2	1230.4	1236.6	1240.8
37.5°	1246.0	1221.2	1199.4	1183.0	1174.6	1180.8	1186.0	1190.2	1196.4	1201.6	1205.6
40°	1187.0	1169.6	1148.8	1134.4	1136.4	1139.6	1143.8	1148.8	1154.0	1157.2	1161.2
42.5°	1132.4	1113.8	1099.4	1088.0	1091.0	1095.2	1097.2	1099.4	1105.6	1111.8	1113.8
45°	1076.6	1062.2	1047.8	1040.4	1042.6	1044.6	1046.6	1049.8	1055.0	1059.0	1060.2
47.5°	1013.6	1003.4	994.0	985.8	990.0	988.8	992.0	998.2	1000.2	1002.4	1008.4
50°	953.8	944.6	933.2	931.0	931.0	931.0	932.2	940.4	940.4	944.6	948.6
52.5°	887.8	882.6	876.4	872.2	870.2	870.2	875.4	878.4	880.6	886.6	890.8
55°	822.6	816.6	810.4	807.2	805.2	807.2	815.4	817.6	822.6	825.8	828.8
57.5°	754.6	750.4	745.2	743.2	743.2	744.2	750.4	755.6	756.6	767.0	771.0
60°	687.4	680.2	676.2	676.2	674.0	683.4	681.2	691.6	693.6	699.8	707.0
62.5°	618.4	608.0	607.0	607.0	611.0	612.2	616.2	619.4	625.6	633.8	639.0
65°	543.0	537.8	545.0	544.0	542.0	548.2	548.2	553.2	559.4	566.8	578.0
67.5°	472.8	468.6	470.8	469.6	472.8	476.8	480.0	484.2	491.4	499.6	506.8
70°	401.6	404.6	399.4	403.6	406.8	407.8	409.8	416.0	424.2	429.4	437.6
72.5°	332.4	331.4	333.4	334.4	337.6	339.6	341.6	348.8	358.2	362.4	368.6
75°	266.4	265.2	268.4	268.4	273.6	275.6	277.6	280.8	289.0	295.2	300.4
77.5°	206.4	207.4	206.4	210.6	208.6	209.6	215.8	218.8	219.8	233.2	235.4
80°	146.6	148.6	149.6	150.8	151.8	149.6	157.0	160.0	160.0	167.2	172.4
82.5°	95.0	96.0	99.0	100.2	100.2	103.2	102.2	104.2	107.4	109.4	116.6
85°	52.6	55.8	56.8	55.8	56.8	54.8	57.8	58.8	59.8	59.8	59.8
87.5°	20.6	21.6	20.6	21.6	20.6	21.6	21.6	19.6	19.6	22.8	18.6
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: P273761

CATALOG NUMBER: 8RCG-4-78D-L840-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2130.6	2130.6	2130.6	2130.6
2.5°	2014.0	2012.8	2020.0	2015.0
5°	1896.2	1899.4	1889.0	1889.0
7.5°	1790.0	1785.8	1786.8	1779.6
10°	1694.0	1687.8	1685.6	1686.6
12.5°	1614.4	1614.4	1598.0	1598.0
15°	1555.6	1536.0	1534.0	1540.2
17.5°	1490.6	1479.2	1480.2	1478.2
20°	1441.0	1434.8	1433.8	1426.6
22.5°	1395.6	1394.6	1395.6	1387.4
25°	1359.4	1364.6	1360.4	1360.4
27.5°	1334.6	1334.6	1331.6	1331.6
30°	1305.8	1304.8	1306.8	1306.8
32.5°	1276.8	1279.0	1279.0	1280.0
35°	1247.0	1248.0	1251.0	1249.0
37.5°	1207.8	1212.8	1211.8	1214.0
40°	1162.4	1165.4	1164.4	1164.4
42.5°	1115.8	1118.0	1114.8	1112.8
45°	1064.2	1062.2	1065.2	1061.2
47.5°	1007.4	1008.4	1009.6	1013.6
50°	950.6	956.8	956.8	955.8
52.5°	895.0	897.0	902.2	902.2
55°	837.2	839.2	841.2	842.4
57.5°	778.4	777.2	781.4	782.4
60°	715.4	715.4	723.6	726.6
62.5°	648.2	652.4	660.6	654.4
65°	583.2	591.4	590.4	594.6
67.5°	515.0	520.2	528.6	528.6
70°	446.0	451.0	455.2	458.4
72.5°	378.8	380.8	392.2	386.0
75°	307.6	314.8	321.0	318.0
77.5°	239.4	248.8	250.8	247.8
80°	179.6	178.6	184.8	183.8
82.5°	119.8	118.8	120.8	121.8
85°	64.0	67.0	63.0	62.0
87.5°	18.6	18.6	17.6	16.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)