

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: P273782

Luminaire Tested: **4RCG-4-100D-L840-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273782
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: 4RCG-4-100D-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: 4131.8 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.23' x H: 0')
CIE Type: Direct

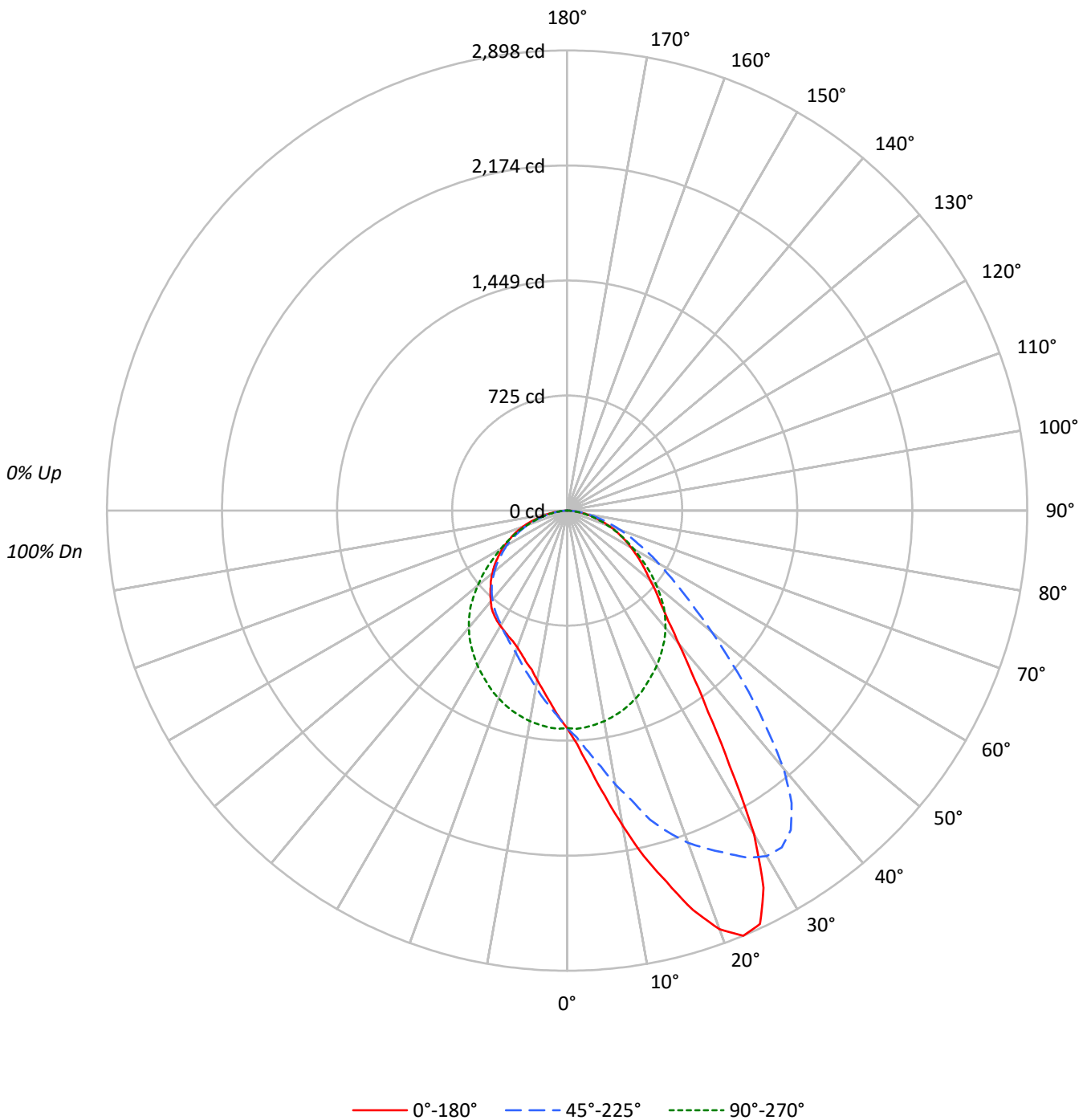
Input Watts (W): 34.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	16593	16593	16593
5°	19788	16665	14768
10°	24768	16579	13338
15°	30378	16446	12418
20°	36189	16237	11823
25°	38427	15985	11692
30°	32936	15799	11753
35°	22906	15536	11875
40°	17254	15228	11837
45°	14326	14770	11687
50°	12832	13832	11582
55°	11997	12825	11437
60°	11256	11770	11319
65°	10578	10730	10956
70°	9920	9544	10437
75°	8884	8355	9568
80°	7776	6855	8244
85°	6092	4979	5535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.6	3.3
10°-20°	432.4	10.5
20°-30°	727.6	17.6
30°-40°	822.3	19.9
40°-50°	736.6	17.8
50°-60°	594.5	14.4
60°-70°	414.3	10.0
70°-80°	217.4	5.3
80°-90°	52.1	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°	1294.7	31.3
0°-40°	2117.0	51.2
0°-60°	3448.0	83.5
0°-90°	4131.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4131.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1369	1369	1369	1369	1369	
5°	1626	1524	1370	1240	1214	167
15°	2421	2015	1311	1033	990	699
25°	2873	2381	1195	888	874	1270
35°	1548	2455	1050	785	802	999
45°	836	1618	862	671	682	659
55°	568	879	607	519	541	509
65°	369	493	374	352	382	367
75°	190	234	178	177	204	203
85°	44	50	36	35	40	53
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°	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9
2.5°	1473.7	1472.4	1469.1	1471.7	1466.4	1459.1	1458.5	1451.8	1432.6	1431.3	1426.0
5°	1626.3	1621.0	1620.3	1619.6	1610.4	1597.8	1573.9	1571.9	1540.1	1524.1	1504.9
7.5°	1810.7	1808.7	1803.4	1797.4	1766.2	1751.0	1728.4	1699.2	1662.1	1626.3	1603.7
10°	2012.3	2034.2	2007.0	1988.4	1971.2	1938.7	1900.9	1853.8	1806.7	1751.6	1709.8
12.5°	2228.5	2236.5	2236.5	2219.2	2190.0	2136.3	2062.0	2009.0	1966.5	1865.7	1829.9
15°	2420.8	2461.3	2435.4	2375.7	2377.1	2330.0	2242.4	2146.3	2095.2	2014.9	1905.5
17.5°	2638.4	2645.7	2637.7	2582.0	2554.8	2486.5	2407.6	2318.0	2221.9	2124.4	2011.0
20°	2805.5	2801.5	2778.3	2752.5	2695.4	2645.0	2556.8	2454.0	2321.4	2225.8	2099.2
22.5°	2898.4	2891.1	2883.1	2862.6	2817.5	2762.4	2685.5	2570.7	2446.0	2305.4	2154.2
25°	2873.2	2881.8	2883.1	2877.2	2860.6	2828.1	2765.7	2676.2	2550.2	2381.0	2228.5
27.5°	2678.2	2700.1	2727.9	2746.5	2776.3	2796.2	2776.3	2720.0	2616.5	2465.3	2277.6
30°	2353.2	2326.7	2392.3	2475.2	2531.6	2631.1	2686.8	2690.1	2637.7	2512.4	2330.6
32.5°	1902.2	1945.3	1965.2	2072.0	2211.9	2326.7	2451.3	2562.1	2588.0	2515.0	2361.8
35°	1548.0	1584.5	1637.5	1690.6	1823.3	1937.3	2132.3	2302.1	2437.4	2455.3	2357.8
37.5°	1286.7	1307.9	1340.4	1396.8	1487.7	1628.9	1783.5	2004.3	2190.7	2322.0	2308.8
40°	1090.4	1095.7	1133.5	1173.9	1244.2	1355.7	1491.6	1681.3	1916.1	2119.7	2204.6
42.5°	943.1	956.4	967.0	1005.5	1057.9	1134.8	1258.8	1407.4	1617.7	1859.7	2046.1
45°	835.7	849.0	858.9	884.8	924.6	980.9	1069.1	1212.4	1376.2	1618.3	1841.8
47.5°	761.4	760.1	768.7	789.3	817.8	862.9	927.9	1023.4	1180.6	1382.9	1617.0
50°	680.5	691.1	693.8	709.0	730.2	761.4	813.1	891.4	1014.8	1187.2	1398.1
52.5°	623.4	624.8	633.4	643.3	661.3	683.8	726.9	784.0	874.2	1014.8	1204.5
55°	567.7	567.7	575.0	583.7	594.3	616.2	646.0	691.1	764.7	878.8	1039.3
57.5°	516.0	518.7	525.3	527.3	536.6	551.8	577.7	613.5	669.9	762.1	894.7
60°	464.3	470.2	469.6	474.9	482.8	494.1	515.3	543.2	592.3	662.6	770.0
62.5°	419.2	417.2	417.2	423.8	431.8	442.4	454.3	477.5	517.3	577.7	665.2
65°	368.8	367.4	372.1	376.1	378.7	386.7	397.3	418.5	446.4	492.8	563.8
67.5°	325.0	321.0	324.3	325.7	330.3	336.9	347.5	360.8	383.4	422.5	479.5
70°	279.9	276.6	275.9	277.2	281.2	285.9	293.2	305.8	326.3	356.2	395.3
72.5°	233.5	231.5	231.5	234.8	236.1	238.8	243.4	254.7	269.9	290.5	326.3
75°	189.7	189.7	189.7	190.4	192.3	195.0	199.0	204.9	217.5	233.5	258.0
77.5°	149.9	150.6	149.2	148.6	151.9	153.2	153.9	160.5	167.8	179.7	199.0
80°	111.4	108.1	109.4	111.4	112.8	113.4	115.4	116.7	122.7	128.7	141.3
82.5°	75.6	73.0	73.0	76.3	76.3	76.9	78.9	80.9	82.2	87.5	92.9
85°	43.8	43.8	44.4	44.4	45.1	44.4	46.4	47.1	47.1	50.4	54.4
87.5°	19.9	18.6	19.2	19.9	19.2	19.9	20.6	21.2	21.9	22.6	23.2
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°	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9
2.5°	1422.0	1416.7	1411.4	1402.1	1394.1	1382.9	1379.5	1375.6	1363.6	1353.0	1345.1
5°	1497.6	1481.7	1458.5	1437.2	1420.0	1396.8	1383.5	1369.6	1349.7	1331.8	1317.2
7.5°	1569.9	1542.0	1509.5	1474.4	1440.6	1408.1	1382.2	1359.0	1333.1	1307.9	1288.7
10°	1659.4	1614.3	1563.9	1509.5	1463.1	1418.0	1380.2	1347.0	1311.2	1280.1	1254.2
12.5°	1761.6	1689.3	1615.0	1546.0	1489.0	1422.0	1374.2	1329.8	1288.0	1248.9	1219.0
15°	1837.8	1753.0	1670.7	1579.8	1496.3	1418.0	1363.6	1310.6	1263.5	1225.0	1187.9
17.5°	1913.5	1820.6	1715.8	1606.4	1508.2	1418.0	1343.7	1286.7	1229.0	1182.6	1146.7
20°	1975.8	1866.4	1743.7	1628.9	1517.5	1414.0	1330.5	1258.8	1195.2	1145.4	1103.6
22.5°	2029.5	1896.9	1768.9	1644.2	1516.8	1403.4	1305.9	1231.6	1161.3	1112.9	1067.8
25°	2063.4	1910.1	1782.8	1638.9	1500.3	1384.9	1278.7	1195.2	1126.2	1069.1	1023.4
27.5°	2095.2	1908.2	1764.2	1609.0	1480.4	1365.6	1251.5	1162.0	1089.7	1028.0	980.9
30°	2127.0	1911.5	1731.7	1578.5	1448.5	1329.1	1219.0	1128.8	1051.9	988.9	945.1
32.5°	2146.9	1909.5	1701.9	1536.1	1398.1	1296.0	1183.9	1089.7	1010.1	948.4	906.7
35°	2152.2	1898.2	1666.7	1474.4	1343.1	1240.3	1146.7	1049.9	967.0	909.3	861.6
37.5°	2141.0	1877.6	1628.3	1418.7	1276.7	1174.6	1093.0	1010.1	930.5	866.2	824.4
40°	2104.5	1857.7	1581.8	1359.0	1207.8	1110.3	1043.3	962.4	884.1	823.7	785.3
42.5°	2034.8	1817.3	1530.8	1292.7	1136.1	1038.6	978.3	913.9	841.0	785.3	746.8
45°	1912.8	1754.9	1479.7	1226.3	1065.8	965.0	910.6	861.6	794.6	739.5	706.4
47.5°	1756.9	1670.7	1406.1	1156.7	992.2	894.7	837.7	797.2	744.8	700.4	667.9
50°	1593.1	1561.9	1331.1	1085.1	918.6	823.7	769.4	733.5	698.4	654.0	624.8
52.5°	1404.1	1435.9	1243.6	1010.8	843.6	750.8	700.4	673.9	642.7	608.2	583.7
55°	1229.0	1298.6	1140.1	925.9	769.4	680.5	632.1	606.9	588.3	561.1	539.2
57.5°	1059.2	1148.1	1032.7	840.3	696.4	618.8	571.1	542.5	530.6	515.3	497.4
60°	911.3	998.8	915.9	754.1	622.8	549.8	508.7	485.5	473.6	463.6	449.0
62.5°	779.3	868.2	801.9	666.6	550.5	484.2	449.7	427.1	418.5	414.5	402.6
65°	660.6	736.9	690.4	575.0	482.2	422.5	390.0	374.1	365.4	363.5	355.5
67.5°	557.8	616.8	581.0	494.1	418.5	364.1	335.6	321.7	314.4	313.7	307.1
70°	457.0	511.4	485.5	408.6	345.6	305.1	281.2	269.3	265.3	264.6	261.3
72.5°	378.7	412.5	393.3	332.3	287.2	251.4	235.5	222.8	218.2	219.5	217.5
75°	291.8	320.3	308.4	264.0	224.8	201.0	186.4	178.4	174.4	176.4	173.8
77.5°	222.8	242.7	230.8	197.0	171.8	153.9	142.6	137.3	133.3	133.3	132.0
80°	158.5	169.1	163.2	144.6	124.7	110.1	101.5	98.2	96.2	95.5	94.8
82.5°	101.5	110.1	102.8	91.5	79.6	72.3	68.3	63.7	62.3	63.0	62.3
85°	57.0	60.4	57.7	49.7	44.4	40.5	37.8	35.8	34.5	35.2	33.8
87.5°	24.5	25.2	23.2	20.6	19.2	17.2	17.2	15.9	14.6	14.6	13.9
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°	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9	1368.9
2.5°	1340.4	1335.8	1329.1	1319.2	1311.2	1298.6	1298.6	1300.6	1300.6	1300.0	1298.6
5°	1305.3	1295.3	1283.4	1269.4	1254.9	1240.3	1237.6	1232.3	1228.3	1225.7	1222.4
7.5°	1269.4	1252.9	1236.3	1217.1	1200.5	1186.5	1176.6	1168.0	1162.7	1156.7	1152.1
10°	1233.0	1211.1	1190.5	1170.0	1147.4	1129.5	1118.2	1110.3	1104.3	1099.0	1096.3
12.5°	1189.9	1164.0	1140.8	1121.5	1096.3	1077.8	1067.2	1064.5	1057.2	1044.6	1038.0
15°	1148.1	1124.9	1097.7	1067.8	1055.9	1033.3	1020.7	1014.8	1010.8	1002.2	999.5
17.5°	1113.6	1082.4	1051.2	1029.4	1007.5	989.6	982.3	974.3	969.0	961.0	959.1
20°	1070.5	1043.3	1015.4	991.5	968.3	948.4	942.5	937.2	931.9	928.5	925.9
22.5°	1026.7	999.5	977.6	955.7	930.5	919.3	912.6	906.7	903.3	901.3	898.7
25°	986.2	962.4	936.5	916.6	896.7	888.1	884.1	880.8	878.1	874.8	874.2
27.5°	950.4	923.9	902.0	882.8	868.2	860.9	856.2	854.3	854.3	855.6	856.2
30°	909.3	885.4	868.2	852.3	839.0	832.4	831.7	831.7	834.4	835.0	836.4
32.5°	871.5	852.9	835.7	820.4	811.1	807.2	810.5	810.5	812.5	814.5	817.1
35°	835.0	817.8	804.5	791.2	782.6	784.6	785.9	787.3	790.6	794.6	797.2
37.5°	800.5	784.6	770.7	760.1	754.8	758.8	762.1	764.7	768.7	772.0	774.7
40°	762.7	751.5	738.2	728.9	730.2	732.2	734.9	738.2	741.5	743.5	746.1
42.5°	727.6	715.6	706.4	699.1	701.0	703.7	705.0	706.4	710.3	714.3	715.6
45°	691.8	682.5	673.2	668.5	669.9	671.2	672.5	674.5	677.8	680.5	681.2
47.5°	651.3	644.7	638.7	633.4	636.1	635.4	637.4	641.4	642.7	644.0	648.0
50°	612.8	606.9	599.6	598.2	598.2	598.2	598.9	604.2	604.2	606.9	609.5
52.5°	570.4	567.1	563.1	560.4	559.1	559.1	562.4	564.4	565.7	569.7	572.4
55°	528.6	524.6	520.6	518.7	517.3	518.7	524.0	525.3	528.6	530.6	532.6
57.5°	484.8	482.2	478.9	477.5	477.5	478.2	482.2	485.5	486.2	492.8	495.4
60°	441.7	437.1	434.4	434.4	433.1	439.1	437.7	444.4	445.7	449.7	454.3
62.5°	397.3	390.7	390.0	390.0	392.6	393.3	396.0	397.9	401.9	407.2	410.5
65°	348.9	345.6	350.2	349.5	348.2	352.2	352.2	355.5	359.5	364.1	371.4
67.5°	303.8	301.1	302.4	301.8	303.8	306.4	308.4	311.1	315.7	321.0	325.7
70°	258.0	260.0	256.7	259.3	261.3	262.0	263.3	267.3	272.6	275.9	281.2
72.5°	213.6	212.9	214.2	214.9	216.9	218.2	219.5	224.2	230.1	232.8	236.8
75°	171.1	170.5	172.4	172.4	175.8	177.1	178.4	180.4	185.7	189.7	193.0
77.5°	132.6	133.3	132.6	135.3	134.0	134.6	138.6	140.6	141.3	149.9	151.2
80°	94.2	95.5	96.2	96.8	97.5	96.2	100.8	102.8	102.8	107.4	110.8
82.5°	61.0	61.7	63.7	64.3	64.3	66.3	65.7	67.0	69.0	70.3	74.9
85°	33.8	35.8	36.5	35.8	36.5	35.2	37.1	37.8	38.5	38.5	38.5
87.5°	13.3	13.9	13.3	13.9	13.3	13.9	13.9	12.6	12.6	14.6	11.9
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: P273782

CATALOG NUMBER: 4RCG-4-100D-L840-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1368.9	1368.9	1368.9	1368.9
2.5°	1294.0	1293.3	1298.0	1294.7
5°	1218.4	1220.4	1213.7	1213.7
7.5°	1150.1	1147.4	1148.1	1143.4
10°	1088.4	1084.4	1083.1	1083.7
12.5°	1037.3	1037.3	1026.7	1026.7
15°	999.5	986.9	985.6	989.6
17.5°	957.7	950.4	951.1	949.8
20°	925.9	921.9	921.2	916.6
22.5°	896.7	896.0	896.7	891.4
25°	873.5	876.8	874.2	874.2
27.5°	857.6	857.6	855.6	855.6
30°	839.0	838.3	839.7	839.7
32.5°	820.4	821.8	821.8	822.4
35°	801.2	801.9	803.9	802.5
37.5°	776.0	779.3	778.6	780.0
40°	746.8	748.8	748.1	748.1
42.5°	717.0	718.3	716.3	715.0
45°	683.8	682.5	684.5	681.8
47.5°	647.3	648.0	648.7	651.3
50°	610.8	614.8	614.8	614.2
52.5°	575.0	576.4	579.7	579.7
55°	537.9	539.2	540.5	541.2
57.5°	500.1	499.4	502.1	502.7
60°	459.6	459.6	464.9	466.9
62.5°	416.5	419.2	424.5	420.5
65°	374.7	380.0	379.4	382.0
67.5°	331.0	334.3	339.6	339.6
70°	286.5	289.8	292.5	294.5
72.5°	243.4	244.7	252.0	248.1
75°	197.6	202.3	206.3	204.3
77.5°	153.9	159.8	161.2	159.2
80°	115.4	114.7	118.7	118.1
82.5°	76.9	76.3	77.6	78.3
85°	41.1	43.1	40.5	39.8
87.5°	11.9	11.9	11.3	10.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)