

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: P273788

Luminaire Tested: **4RCG-4-100D-L930-A**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P273788  
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-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: 3335.8 lumens  
Efficiency: N/A  
Efficacy: 97.0 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

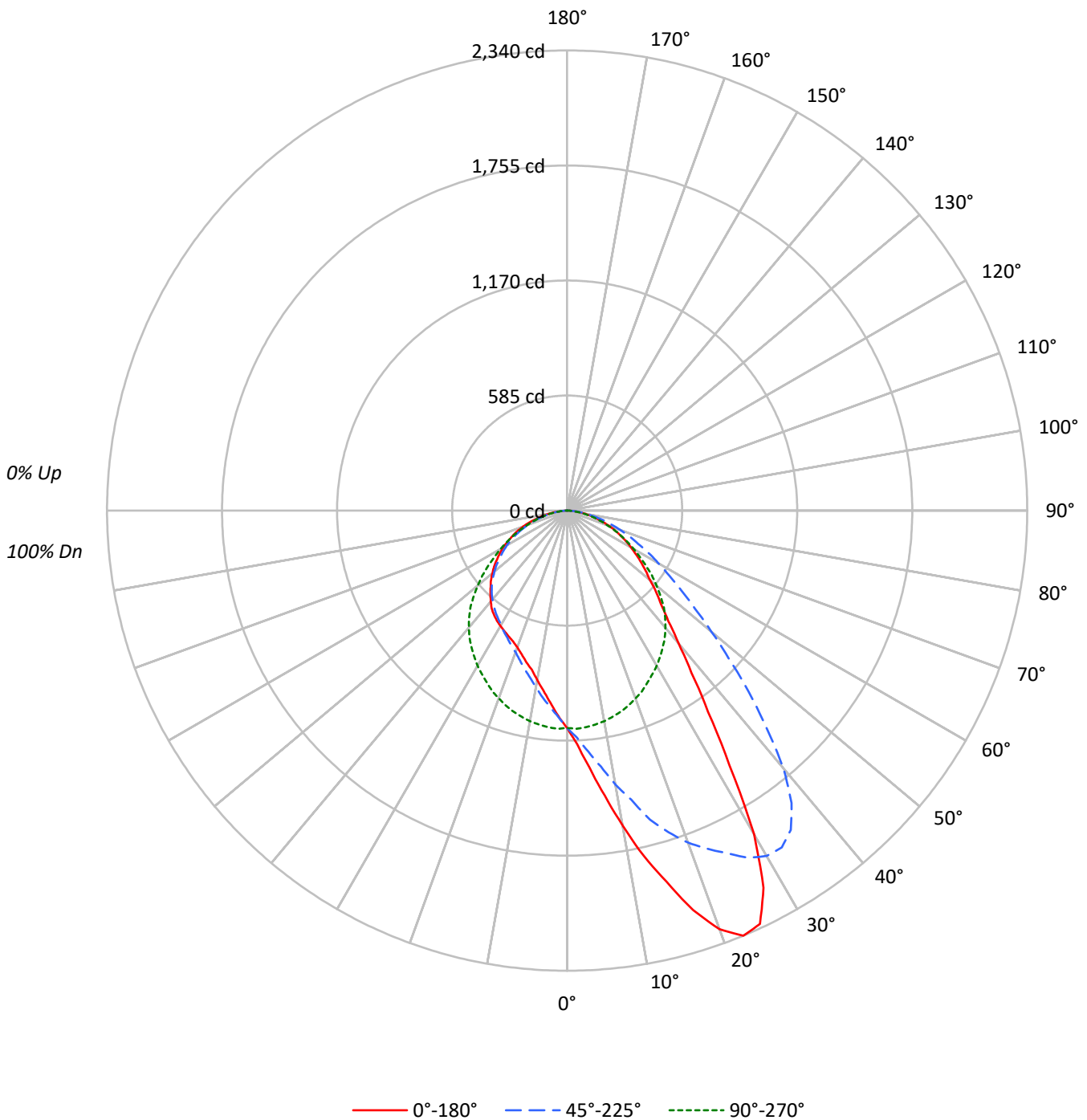
Input Watts (W): 34.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	13396	13396	13396
5°	15975	13454	11923
10°	19996	13385	10768
15°	24525	13278	10025
20°	29217	13109	9545
25°	31023	12905	9438
30°	26590	12756	9488
35°	18494	12542	9587
40°	13929	12295	9557
45°	11566	11924	9437
50°	10360	11167	9349
55°	9687	10353	9233
60°	9086	9503	9139
65°	8538	8662	8845
70°	8009	7705	8424
75°	7170	6744	7723
80°	6282	5528	6652
85°	4909	4019	4464



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.7	3.3
10°-20°	349.1	10.5
20°-30°	587.4	17.6
30°-40°	663.9	19.9
40°-50°	594.6	17.8
50°-60°	480.0	14.4
60°-70°	334.4	10.0
70°-80°	175.5	5.3
80°-90°	42.1	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°	1045.2	31.3
0°-40°	1709.1	51.2
0°-60°	2783.7	83.5
0°-90°	3335.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3335.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1105	1105	1105	1105	1105	
5°	1313	1230	1106	1001	980	135
15°	1954	1627	1058	834	799	564
25°	2320	1922	965	717	706	1025
35°	1250	1982	848	633	648	807
45°	675	1306	696	542	550	532
55°	458	710	490	419	437	411
65°	298	398	302	284	308	297
75°	153	188	144	143	165	164
85°	35	41	29	28	32	43
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°	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2
2.5°	1189.8	1188.7	1186.0	1188.2	1183.9	1178.0	1177.5	1172.1	1156.6	1155.5	1151.2
5°	1312.9	1308.7	1308.1	1307.6	1300.1	1289.9	1270.6	1269.0	1243.3	1230.5	1215.0
7.5°	1461.8	1460.2	1455.9	1451.1	1425.9	1413.6	1395.4	1371.8	1341.9	1312.9	1294.7
10°	1624.6	1642.3	1620.3	1605.3	1591.4	1565.1	1534.6	1496.6	1458.6	1414.1	1380.4
12.5°	1799.1	1805.6	1805.6	1791.6	1768.1	1724.7	1664.7	1621.9	1587.6	1506.2	1477.3
15°	1954.4	1987.1	1966.2	1918.0	1919.1	1881.1	1810.4	1732.7	1691.5	1626.7	1538.4
17.5°	2130.1	2135.9	2129.5	2084.5	2062.6	2007.4	1943.7	1871.4	1793.8	1715.1	1623.5
20°	2265.0	2261.8	2243.0	2222.2	2176.1	2135.4	2064.2	1981.2	1874.1	1797.0	1694.7
22.5°	2340.0	2334.1	2327.6	2311.0	2274.6	2230.2	2168.1	2075.4	1974.8	1861.3	1739.2
25°	2319.6	2326.6	2327.6	2322.8	2309.4	2283.2	2232.9	2160.6	2058.8	1922.3	1799.1
27.5°	2162.2	2179.9	2202.3	2217.3	2241.4	2257.5	2241.4	2195.9	2112.4	1990.3	1838.8
30°	1899.8	1878.4	1931.4	1998.3	2043.9	2124.2	2169.1	2171.8	2129.5	2028.3	1881.6
32.5°	1535.7	1570.5	1586.6	1672.8	1785.8	1878.4	1979.1	2068.5	2089.4	2030.5	1906.8
35°	1249.8	1279.2	1322.1	1364.9	1472.0	1564.1	1721.5	1858.6	1967.8	1982.3	1903.6
37.5°	1038.8	1055.9	1082.2	1127.7	1201.0	1315.1	1439.9	1618.2	1768.6	1874.6	1863.9
40°	880.3	884.6	915.1	947.8	1004.5	1094.5	1204.2	1357.4	1546.9	1711.3	1779.9
42.5°	761.4	772.1	780.7	811.8	854.1	916.2	1016.3	1136.2	1306.0	1501.4	1651.9
45°	674.7	685.4	693.4	714.3	746.4	791.9	863.2	978.8	1111.1	1306.5	1487.0
47.5°	614.7	613.6	620.6	637.2	660.2	696.6	749.1	826.2	953.1	1116.4	1305.5
50°	549.4	557.9	560.1	572.4	589.5	614.7	656.5	719.7	819.3	958.5	1128.7
52.5°	503.3	504.4	511.4	519.4	533.9	552.1	586.9	632.9	705.7	819.3	972.4
55°	458.4	458.4	464.2	471.2	479.8	497.4	521.5	557.9	617.4	709.5	839.1
57.5°	416.6	418.7	424.1	425.7	433.2	445.5	466.4	495.3	540.8	615.2	722.3
60°	374.8	379.6	379.1	383.4	389.8	398.9	416.1	438.5	478.2	534.9	621.7
62.5°	338.4	336.8	336.8	342.2	348.6	357.2	366.8	385.5	417.7	466.4	537.1
65°	297.7	296.6	300.4	303.6	305.7	312.2	320.7	337.9	360.4	397.8	455.1
67.5°	262.4	259.2	261.8	262.9	266.7	272.0	280.6	291.3	309.5	341.1	387.1
70°	226.0	223.3	222.8	223.8	227.0	230.8	236.7	246.8	263.4	287.5	319.1
72.5°	188.5	186.9	186.9	189.6	190.6	192.8	196.5	205.6	217.9	234.5	263.4
75°	153.1	153.1	153.1	153.7	155.3	157.4	160.6	165.5	175.6	188.5	208.3
77.5°	121.0	121.5	120.5	119.9	122.6	123.7	124.2	129.6	135.5	145.1	160.6
80°	90.0	87.3	88.4	90.0	91.0	91.6	93.2	94.2	99.1	103.9	114.1
82.5°	61.0	58.9	58.9	61.6	61.6	62.1	63.7	65.3	66.4	70.7	75.0
85°	35.3	35.3	35.9	35.9	36.4	35.9	37.5	38.0	38.0	40.7	43.9
87.5°	16.1	15.0	15.5	16.1	15.5	16.1	16.6	17.1	17.7	18.2	18.7
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°	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2
2.5°	1148.0	1143.7	1139.5	1132.0	1125.5	1116.4	1113.8	1110.5	1100.9	1092.3	1085.9
5°	1209.1	1196.2	1177.5	1160.3	1146.4	1127.7	1117.0	1105.7	1089.7	1075.2	1063.4
7.5°	1267.4	1244.9	1218.7	1190.3	1163.0	1136.8	1115.9	1097.2	1076.3	1055.9	1040.4
10°	1339.7	1303.3	1262.6	1218.7	1181.2	1144.8	1114.3	1087.5	1058.6	1033.4	1012.6
12.5°	1422.2	1363.8	1303.8	1248.2	1202.1	1148.0	1109.5	1073.6	1039.9	1008.3	984.2
15°	1483.8	1415.2	1348.8	1275.5	1208.0	1144.8	1100.9	1058.1	1020.1	989.0	959.0
17.5°	1544.8	1469.8	1385.2	1296.9	1217.6	1144.8	1084.8	1038.8	992.2	954.7	925.8
20°	1595.1	1506.8	1407.7	1315.1	1225.1	1141.6	1074.1	1016.3	964.9	924.7	891.0
22.5°	1638.5	1531.4	1428.1	1327.4	1224.6	1133.0	1054.3	994.3	937.6	898.5	862.1
25°	1665.8	1542.1	1439.3	1323.1	1211.2	1118.0	1032.4	964.9	909.2	863.2	826.2
27.5°	1691.5	1540.5	1424.3	1299.0	1195.1	1102.5	1010.4	938.1	879.8	830.0	791.9
30°	1717.2	1543.2	1398.1	1274.4	1169.4	1073.1	984.2	911.4	849.2	798.4	763.0
32.5°	1733.3	1541.6	1374.0	1240.1	1128.7	1046.3	955.8	879.8	815.5	765.7	732.0
35°	1737.6	1532.5	1345.6	1190.3	1084.3	1001.3	925.8	847.6	780.7	734.1	695.6
37.5°	1728.5	1515.9	1314.6	1145.3	1030.8	948.3	882.4	815.5	751.3	699.3	665.6
40°	1699.0	1499.8	1277.1	1097.2	975.1	896.4	842.3	777.0	713.8	665.0	634.0
42.5°	1642.8	1467.2	1235.8	1043.6	917.2	838.5	789.8	737.9	679.0	634.0	602.9
45°	1544.3	1416.8	1194.6	990.1	860.5	779.1	735.2	695.6	641.5	597.0	570.3
47.5°	1418.4	1348.8	1135.2	933.8	801.0	722.3	676.3	643.6	601.3	565.4	539.2
50°	1286.2	1261.0	1074.7	876.0	741.6	665.0	621.1	592.2	563.8	528.0	504.4
52.5°	1133.6	1159.3	1004.0	816.0	681.1	606.1	565.4	544.0	518.9	491.0	471.2
55°	992.2	1048.4	920.5	747.5	621.1	549.4	510.3	489.9	475.0	453.0	435.3
57.5°	855.1	926.9	833.7	678.4	562.2	499.6	461.0	438.0	428.4	416.1	401.6
60°	735.7	806.4	739.5	608.8	502.8	443.9	410.7	392.0	382.3	374.3	362.5
62.5°	629.2	700.9	647.4	538.1	444.4	390.9	363.0	344.8	337.9	334.7	325.0
65°	533.3	594.9	557.4	464.2	389.3	341.1	314.9	302.0	295.0	293.4	287.0
67.5°	450.3	498.0	469.1	398.9	337.9	294.0	270.9	259.7	253.8	253.3	247.9
70°	368.9	412.8	392.0	329.8	279.0	246.3	227.0	217.4	214.2	213.6	211.0
72.5°	305.7	333.1	317.5	268.3	231.9	202.9	190.1	179.9	176.2	177.2	175.6
75°	235.6	258.6	249.0	213.1	181.5	162.2	150.5	144.0	140.8	142.4	140.3
77.5°	179.9	196.0	186.3	159.0	138.7	124.2	115.1	110.8	107.6	107.6	106.6
80°	128.0	136.5	131.7	116.7	100.7	88.9	81.9	79.2	77.6	77.1	76.6
82.5°	81.9	88.9	83.0	73.9	64.3	58.4	55.2	51.4	50.3	50.9	50.3
85°	46.0	48.7	46.6	40.2	35.9	32.7	30.5	28.9	27.8	28.4	27.3
87.5°	19.8	20.3	18.7	16.6	15.5	13.9	13.9	12.9	11.8	11.8	11.2
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2	1105.2
2.5°	1082.2	1078.4	1073.1	1065.0	1058.6	1048.4	1048.4	1050.0	1050.0	1049.5	1048.4
5°	1053.8	1045.8	1036.1	1024.9	1013.1	1001.3	999.2	994.9	991.7	989.5	986.9
7.5°	1024.9	1011.5	998.1	982.6	969.2	957.9	949.9	942.9	938.7	933.8	930.1
10°	995.4	977.7	961.2	944.6	926.3	911.9	902.8	896.4	891.5	887.3	885.1
12.5°	960.6	939.7	921.0	905.5	885.1	870.1	861.6	859.4	853.5	843.3	838.0
15°	926.9	908.1	886.2	862.1	852.5	834.2	824.1	819.3	816.0	809.1	806.9
17.5°	899.0	873.9	848.7	831.0	813.4	798.9	793.0	786.6	782.3	775.9	774.3
20°	864.2	842.3	819.8	800.5	781.8	765.7	760.9	756.6	752.3	749.6	747.5
22.5°	828.9	806.9	789.3	771.6	751.3	742.1	736.8	732.0	729.3	727.7	725.5
25°	796.2	777.0	756.1	740.0	723.9	717.0	713.8	711.1	708.9	706.3	705.7
27.5°	767.3	745.9	728.2	712.7	700.9	695.0	691.3	689.7	689.7	690.7	691.3
30°	734.1	714.8	700.9	688.1	677.4	672.0	671.5	671.5	673.6	674.1	675.2
32.5°	703.6	688.6	674.7	662.4	654.9	651.7	654.3	654.3	655.9	657.5	659.7
35°	674.1	660.2	649.5	638.8	631.8	633.4	634.5	635.6	638.3	641.5	643.6
37.5°	646.3	633.4	622.2	613.6	609.4	612.6	615.2	617.4	620.6	623.3	625.4
40°	615.8	606.7	596.0	588.5	589.5	591.1	593.3	596.0	598.6	600.3	602.4
42.5°	587.4	577.8	570.3	564.4	566.0	568.1	569.2	570.3	573.5	576.7	577.8
45°	558.5	551.0	543.5	539.7	540.8	541.9	543.0	544.6	547.2	549.4	549.9
47.5°	525.8	520.5	515.6	511.4	513.5	513.0	514.6	517.8	518.9	519.9	523.1
50°	494.8	489.9	484.1	483.0	483.0	483.0	483.5	487.8	487.8	489.9	492.1
52.5°	460.5	457.8	454.6	452.5	451.4	451.4	454.1	455.7	456.7	460.0	462.1
55°	426.8	423.5	420.3	418.7	417.7	418.7	423.0	424.1	426.8	428.4	430.0
57.5°	391.4	389.3	386.6	385.5	385.5	386.1	389.3	392.0	392.5	397.8	400.0
60°	356.6	352.9	350.7	350.7	349.7	354.5	353.4	358.8	359.8	363.0	366.8
62.5°	320.7	315.4	314.9	314.9	317.0	317.5	319.7	321.3	324.5	328.8	331.4
65°	281.7	279.0	282.7	282.2	281.1	284.3	284.3	287.0	290.2	294.0	299.9
67.5°	245.2	243.1	244.2	243.6	245.2	247.4	249.0	251.1	254.9	259.2	262.9
70°	208.3	209.9	207.2	209.4	211.0	211.5	212.6	215.8	220.1	222.8	227.0
72.5°	172.4	171.9	173.0	173.5	175.1	176.2	177.2	181.0	185.8	187.9	191.2
75°	138.1	137.6	139.2	139.2	141.9	143.0	144.0	145.6	149.9	153.1	155.8
77.5°	107.1	107.6	107.1	109.2	108.2	108.7	111.9	113.5	114.1	121.0	122.1
80°	76.0	77.1	77.6	78.2	78.7	77.6	81.4	83.0	83.0	86.7	89.4
82.5°	49.3	49.8	51.4	51.9	51.9	53.5	53.0	54.1	55.7	56.8	60.5
85°	27.3	28.9	29.5	28.9	29.5	28.4	30.0	30.5	31.1	31.1	31.1
87.5°	10.7	11.2	10.7	11.2	10.7	11.2	11.2	10.2	10.2	11.8	9.6
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: P273788

CATALOG NUMBER: 4RCG-4-100D-L930-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1105.2	1105.2	1105.2	1105.2
2.5°	1044.7	1044.1	1047.9	1045.2
5°	983.6	985.2	979.9	979.9
7.5°	928.5	926.3	926.9	923.1
10°	878.7	875.5	874.4	874.9
12.5°	837.5	837.5	828.9	828.9
15°	806.9	796.8	795.7	798.9
17.5°	773.2	767.3	767.8	766.8
20°	747.5	744.3	743.8	740.0
22.5°	723.9	723.4	723.9	719.7
25°	705.2	707.9	705.7	705.7
27.5°	692.3	692.3	690.7	690.7
30°	677.4	676.8	677.9	677.9
32.5°	662.4	663.4	663.4	664.0
35°	646.8	647.4	649.0	647.9
37.5°	626.5	629.2	628.6	629.7
40°	602.9	604.5	604.0	604.0
42.5°	578.8	579.9	578.3	577.2
45°	552.1	551.0	552.6	550.5
47.5°	522.6	523.1	523.7	525.8
50°	493.2	496.4	496.4	495.8
52.5°	464.2	465.3	468.0	468.0
55°	434.3	435.3	436.4	436.9
57.5°	403.7	403.2	405.3	405.9
60°	371.1	371.1	375.4	377.0
62.5°	336.3	338.4	342.7	339.5
65°	302.5	306.8	306.3	308.4
67.5°	267.2	269.9	274.2	274.2
70°	231.3	234.0	236.1	237.7
72.5°	196.5	197.6	203.5	200.3
75°	159.6	163.3	166.5	164.9
77.5°	124.2	129.0	130.1	128.5
80°	93.2	92.6	95.8	95.3
82.5°	62.1	61.6	62.6	63.2
85°	33.2	34.8	32.7	32.1
87.5°	9.6	9.6	9.1	8.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)