

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332456-830

Luminaire Tested: **S123RDIW-S1000D755U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332456-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIW-S1000D755U830-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 755 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6422.8 lumens  
Efficiency: N/A  
Efficacy: 119.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

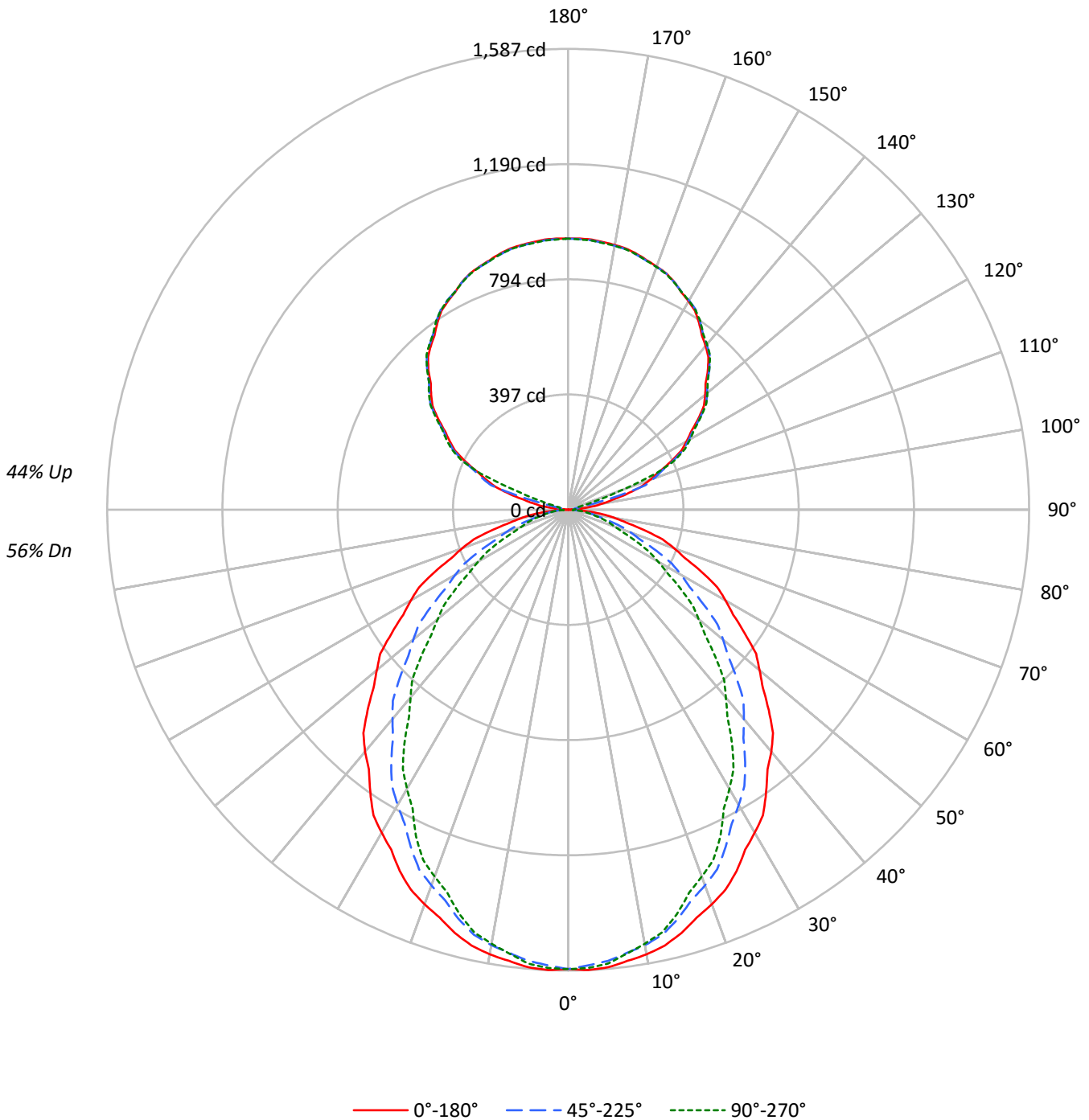
Input Watts (W): 53.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	56
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	54	53	48
2	91	84	78	72	84	78	73	68	67	63	60	58	55	52	49	47	45	40
3	83	74	67	61	77	69	63	57	60	55	51	51	48	45	43	41	38	35
4	76	66	58	52	71	61	54	49	53	48	44	46	42	38	39	36	33	30
5	70	59	51	45	65	55	48	42	48	42	38	41	37	34	35	32	29	26
6	65	53	45	39	60	49	42	37	43	38	33	38	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	29	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	31	27	24	27	24	21	19
9	52	40	32	27	48	37	31	26	33	28	24	29	24	21	25	22	19	17
10	49	37	29	25	45	34	28	23	31	25	21	27	22	19	23	20	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	17026	17026	17026
5°	17091	16855	16953
10°	16994	16644	16587
15°	16811	16254	16082
20°	16561	15767	15400
25°	16302	15221	14733
30°	15960	14589	13793
35°	15609	13958	12929
40°	15286	13212	11861
45°	14862	12478	10898
50°	14393	11643	9818
55°	13915	10689	8811
60°	13476	9666	7705
65°	12905	8560	6599
70°	12192	7188	5331
75°	11154	5656	5016
80°	9937	5009	4612
85°	8398	4434	4125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.5	2.3
10°-20°	413.3	6.4
20°-30°	595.1	9.3
30°-40°	670.3	10.4
40°-50°	641.3	10.0
50°-60°	525.1	8.2
60°-70°	354.3	5.5
70°-80°	178.2	2.8
80°-90°	49.8	0.8
90°-100°	33.9	0.5
100°-110°	161.8	2.5
110°-120°	388.6	6.0
120°-130°	494.8	7.7
130°-140°	528.7	8.2
140°-150°	494.4	7.7
150°-160°	398.8	6.2
160°-170°	257.4	4.0
170°-180°	88.7	1.4
0°-30°	1156.9	18.0
0°-40°	1827.2	28.4
0°-60°	2993.6	46.6
0°-90°	3575.9	55.7
90°-120°	584.3	9.1
90°-150°	2102.1	32.7
90°-180°	2847.0	44.3
0°-180°	6422.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1582	1582	1582	1582	1582	
5°	1582	1575	1560	1571	1569	150
15°	1509	1493	1459	1452	1443	425
25°	1373	1339	1282	1255	1240	631
35°	1188	1140	1062	1009	984	743
45°	976	916	820	749	716	753
55°	742	676	570	498	470	665
65°	507	435	336	276	259	501
75°	268	206	136	124	121	286
85°	68	41	36	34	33	76
90°	1	8	17	19	21	5
95°	42	16	22	26	26	52
105°	207	210	152	36	30	219
115°	388	392	398	405	408	383
125°	547	552	555	556	558	488
135°	680	684	687	689	687	524
145°	785	790	791	793	793	491
155°	865	864	864	867	864	398
165°	912	910	909	914	910	258
175°	934	930	931	935	930	89
180°	934	934	934	934	934	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8
2.5°	1586.9	1585.9	1585.1	1584.1	1583.2	1581.4	1578.7	1575.9	1573.2	1570.5	1572.9
5°	1581.8	1580.3	1578.9	1577.4	1576.0	1573.6	1570.2	1566.8	1563.4	1559.9	1562.5
7.5°	1567.1	1565.6	1564.1	1562.5	1560.9	1557.9	1553.5	1549.1	1544.6	1540.2	1541.6
10°	1554.8	1552.8	1550.8	1548.8	1546.8	1543.2	1538.1	1533.0	1527.9	1522.8	1523.1
12.5°	1537.4	1535.1	1533.0	1530.7	1528.4	1524.2	1518.0	1511.6	1505.4	1499.1	1498.9
15°	1508.6	1505.5	1502.3	1499.2	1496.1	1490.5	1482.5	1474.5	1466.6	1458.6	1457.2
17.5°	1472.4	1468.8	1465.2	1461.5	1457.8	1451.0	1440.8	1430.7	1420.5	1410.3	1407.3
20°	1445.8	1441.2	1436.6	1432.1	1427.5	1419.8	1409.0	1398.2	1387.3	1376.5	1372.8
22.5°	1416.0	1410.8	1405.5	1400.2	1395.1	1386.7	1375.1	1363.6	1352.1	1340.6	1336.0
25°	1372.6	1365.6	1358.4	1351.2	1344.2	1334.0	1320.9	1307.8	1294.7	1281.6	1275.5
27.5°	1320.0	1312.2	1304.3	1296.5	1288.5	1277.3	1262.7	1248.1	1233.5	1219.0	1210.6
30°	1284.1	1275.5	1267.1	1258.5	1249.9	1237.7	1221.7	1205.7	1189.8	1173.8	1164.1
32.5°	1248.2	1238.5	1228.8	1219.1	1209.5	1196.2	1179.3	1162.4	1145.5	1128.6	1118.0
35°	1187.9	1177.6	1167.3	1157.2	1146.9	1132.8	1115.2	1097.5	1079.9	1062.2	1049.9
37.5°	1126.8	1115.4	1104.0	1092.6	1081.2	1066.1	1047.3	1028.3	1009.5	990.6	976.7
40°	1087.9	1075.3	1062.7	1050.2	1037.6	1021.2	1001.1	980.8	960.5	940.3	925.5
42.5°	1043.7	1031.1	1018.6	1006.1	993.5	976.9	955.9	935.0	914.1	893.2	876.9
45°	976.3	963.4	950.6	937.7	924.9	907.6	885.6	863.7	841.7	819.7	803.5
47.5°	908.8	894.7	880.6	866.5	852.4	834.4	812.5	790.5	768.5	746.6	729.0
50°	859.5	846.1	832.7	819.4	805.9	787.7	764.6	741.5	718.4	695.3	677.6
52.5°	815.4	800.9	786.3	771.8	757.2	738.5	715.7	692.8	670.0	647.1	628.7
55°	741.5	727.5	713.5	699.6	685.6	666.5	642.2	618.0	593.8	569.6	553.1
57.5°	673.3	658.0	642.8	627.5	612.4	592.6	568.2	543.8	519.5	495.2	479.6
60°	626.0	610.4	594.7	579.0	563.3	543.7	520.0	496.3	472.7	449.0	433.6
62.5°	578.8	563.2	547.4	531.8	516.1	496.4	472.8	449.1	425.5	401.8	387.3
65°	506.7	491.1	475.3	459.7	444.0	425.1	402.8	380.6	358.4	336.1	322.2
67.5°	434.6	418.8	402.9	387.1	371.3	352.6	331.3	310.0	288.7	267.3	256.9
70°	387.4	372.0	356.7	341.2	325.8	308.2	288.2	268.2	248.3	228.4	218.4
72.5°	340.2	325.1	309.9	294.7	279.6	262.9	244.8	226.7	208.5	190.4	182.2
75°	268.2	254.4	240.7	227.1	213.4	198.7	183.0	167.3	151.7	136.0	133.1
77.5°	202.5	190.0	177.7	165.3	153.0	141.7	131.6	121.5	111.4	101.3	99.8
80°	160.3	148.6	137.0	125.3	113.6	104.8	98.8	92.7	86.8	80.8	79.9
82.5°	120.4	110.3	100.2	90.0	79.9	73.5	70.7	68.0	65.1	62.3	61.5
85°	68.0	61.7	55.4	49.2	42.9	39.3	38.5	37.6	36.8	35.9	35.3
87.5°	24.8	22.5	20.4	18.2	15.9	15.1	15.5	15.8	16.3	16.7	16.6
90°	0.7	2.3	3.8	5.3	6.9	8.7	10.7	12.6	14.6	16.7	17.2
92.5°	12.9	12.4	12.1	11.6	11.2	11.7	13.2	14.7	16.2	17.7	18.8
95°	42.3	36.0	29.7	23.4	17.1	14.7	16.4	18.1	19.8	21.5	22.6
97.5°	85.0	82.2	79.4	76.5	73.7	66.7	55.6	44.5	33.5	22.3	23.6
100°	117.3	120.3	123.4	126.5	129.5	119.0	95.0	71.0	46.9	22.9	24.1
102.5°	153.8	156.1	158.3	160.5	162.7	150.7	124.4	98.1	71.9	45.6	41.8
105°	206.7	208.4	210.1	211.8	213.5	207.4	193.5	179.6	165.8	151.9	124.6
107.5°	262.4	263.8	265.1	266.6	267.9	269.7	271.8	274.0	276.3	278.4	258.4
110°	299.6	300.9	302.1	303.3	304.5	306.0	307.7	309.4	311.1	312.8	307.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	335.2	336.2	337.3	338.5	339.6	341.0	342.7	344.4	346.1	347.8	347.9
115°	387.7	388.6	389.6	390.5	391.4	392.6	394.0	395.3	396.7	398.1	399.6
117.5°	438.7	439.8	440.9	442.1	443.2	444.1	444.8	445.5	446.2	447.0	448.2
120°	470.2	471.6	473.1	474.4	475.8	476.7	477.2	477.7	478.2	478.5	479.8
122.5°	502.5	503.6	504.7	505.9	507.0	507.8	508.4	509.1	509.6	510.2	511.0
125°	546.6	547.8	549.0	550.3	551.5	552.4	553.0	553.6	554.2	554.9	555.2
127.5°	589.3	590.5	591.7	593.0	594.2	595.2	596.0	596.6	597.4	598.1	598.6
130°	615.9	617.2	618.4	619.6	620.9	621.8	622.4	623.0	623.6	624.2	624.8
132.5°	641.4	642.6	643.9	645.1	646.4	647.2	647.7	648.2	648.7	649.2	649.8
135°	680.4	681.4	682.2	683.2	684.1	684.9	685.5	686.1	686.7	687.3	687.8
137.5°	713.7	714.8	716.0	717.2	718.4	719.2	719.4	719.8	720.2	720.5	721.2
140°	735.8	736.8	737.7	738.7	739.6	740.3	740.7	741.2	741.7	742.2	742.7
142.5°	756.4	757.3	758.3	759.2	760.2	760.8	761.3	761.8	762.2	762.7	763.2
145°	785.1	786.2	787.3	788.3	789.5	790.1	790.4	790.8	791.1	791.4	791.6
147.5°	812.2	812.8	813.6	814.3	815.0	815.5	815.9	816.1	816.4	816.7	817.1
150°	828.9	829.2	829.7	830.2	830.7	831.0	831.4	831.7	832.0	832.3	832.6
152.5°	843.8	844.0	844.2	844.4	844.7	844.9	845.1	845.3	845.5	845.6	846.1
155°	864.9	864.6	864.3	863.9	863.7	863.6	863.7	863.9	864.0	864.2	865.0
157.5°	881.3	881.3	881.2	881.2	881.2	881.1	880.9	880.7	880.6	880.4	881.4
160°	891.3	891.1	891.0	890.8	890.6	890.5	890.3	890.1	890.0	889.9	890.8
162.5°	900.7	900.3	899.8	899.5	899.1	898.8	898.6	898.5	898.3	898.1	899.3
165°	912.1	911.6	911.2	910.7	910.2	909.9	909.7	909.6	909.5	909.3	910.5
167.5°	921.0	920.3	919.7	919.1	918.5	918.1	918.1	918.1	918.1	918.1	919.4
170°	926.0	925.3	924.7	924.1	923.5	923.1	923.1	923.1	923.1	923.1	924.4
172.5°	929.3	928.5	927.7	927.1	926.3	926.0	926.1	926.2	926.3	926.5	927.7
175°	933.6	932.7	932.0	931.2	930.5	930.2	930.3	930.5	930.7	930.8	931.9
177.5°	934.6	934.1	933.4	932.8	932.2	932.0	932.1	932.2	932.4	932.5	933.4
180°	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8
2.5°	1575.5	1578.0	1580.5	1581.5	1581.0	1580.6	1580.2	1579.7
5°	1565.1	1567.6	1570.2	1571.2	1570.7	1570.1	1569.5	1569.0
7.5°	1543.0	1544.5	1545.9	1546.1	1545.1	1544.2	1543.2	1542.2
10°	1523.3	1523.6	1523.9	1523.3	1521.8	1520.4	1519.0	1517.6
12.5°	1498.7	1498.6	1498.5	1497.5	1495.9	1494.2	1492.6	1490.9
15°	1455.8	1454.3	1452.9	1451.1	1449.2	1447.2	1445.2	1443.2
17.5°	1404.3	1401.3	1398.3	1395.2	1392.3	1389.3	1386.4	1383.4
20°	1369.0	1365.4	1361.7	1358.1	1354.7	1351.2	1347.8	1344.4
22.5°	1331.3	1326.7	1322.1	1318.1	1315.0	1311.8	1308.6	1305.4
25°	1269.6	1263.6	1257.6	1253.0	1249.9	1246.8	1243.7	1240.5
27.5°	1202.3	1194.0	1185.6	1179.1	1174.3	1169.5	1164.7	1160.0
30°	1154.4	1144.7	1135.0	1127.9	1123.3	1118.8	1114.2	1109.7
32.5°	1107.4	1096.8	1086.2	1078.6	1073.7	1068.9	1064.1	1059.3
35°	1037.6	1025.4	1013.1	1004.5	999.4	994.2	989.1	983.9
37.5°	962.8	948.9	935.0	924.8	918.5	912.2	905.9	899.6
40°	910.7	895.9	881.0	870.3	863.7	857.2	850.6	844.1
42.5°	860.7	844.5	828.3	817.3	811.4	805.6	799.7	793.8
45°	787.2	771.0	754.7	743.2	736.3	729.5	722.6	715.9
47.5°	711.2	693.6	675.9	664.0	657.9	651.9	645.7	639.6
50°	660.0	642.2	624.6	612.5	606.0	599.4	592.9	586.3
52.5°	610.4	592.0	573.6	561.5	555.6	549.8	543.9	538.0
55°	536.5	520.0	503.4	492.3	486.6	480.9	475.2	469.5
57.5°	463.9	448.3	432.7	422.4	417.6	412.7	407.9	403.0
60°	418.2	402.8	387.4	377.3	372.5	367.6	362.8	357.9
62.5°	372.8	358.4	343.8	334.0	329.0	324.0	318.9	313.8
65°	308.2	294.2	280.2	271.6	268.5	265.4	262.3	259.1
67.5°	246.5	236.0	225.6	218.7	215.4	212.0	208.6	205.3
70°	208.4	198.4	188.4	181.9	178.7	175.6	172.5	169.4
72.5°	174.1	165.9	157.8	153.1	151.7	150.4	149.1	147.8
75°	130.3	127.4	124.6	122.9	122.3	121.7	121.1	120.6
77.5°	98.3	96.7	95.2	94.2	93.6	93.0	92.5	91.9
80°	79.1	78.2	77.4	76.7	76.2	75.6	74.9	74.4
82.5°	60.6	59.8	58.9	58.4	58.3	58.2	58.1	58.0
85°	34.8	34.2	33.6	33.4	33.4	33.4	33.4	33.4
87.5°	16.5	16.4	16.2	16.1	15.9	15.7	15.6	15.5
90°	17.9	18.5	19.1	19.6	19.9	20.2	20.5	20.8
92.5°	19.7	20.7	21.7	22.2	22.4	22.6	22.8	23.0
95°	23.7	24.7	25.8	26.4	26.4	26.4	26.4	26.4
97.5°	24.8	26.0	27.2	28.0	28.1	28.3	28.5	28.6
100°	25.4	26.6	27.8	28.6	28.7	28.8	28.9	29.1
102.5°	38.0	34.2	30.3	28.6	28.8	29.1	29.4	29.7
105°	97.4	70.0	42.8	29.3	29.6	29.9	30.3	30.5
107.5°	238.4	218.4	198.4	178.1	157.5	137.0	116.4	95.9
110°	302.7	297.6	292.5	278.9	256.8	234.8	212.7	190.8





TEST NUMBER: P332456-830

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	348.0	348.1	348.2	345.8	341.2	336.6	331.9	327.3
115°	401.2	402.7	404.3	405.4	406.0	406.6	407.2	407.8
117.5°	449.4	450.6	451.9	452.5	452.7	452.8	452.9	453.1
120°	481.1	482.3	483.5	484.1	484.1	484.1	484.1	484.1
122.5°	511.9	512.7	513.7	514.2	514.3	514.3	514.5	514.6
125°	555.4	555.8	556.1	556.4	556.8	557.0	557.3	557.6
127.5°	599.2	599.6	600.1	600.2	599.9	599.6	599.3	599.0
130°	625.5	626.0	626.7	626.9	626.5	626.2	625.9	625.6
132.5°	650.4	651.0	651.7	651.8	651.3	650.9	650.4	650.0
135°	688.2	688.7	689.2	689.2	688.7	688.2	687.8	687.3
137.5°	722.0	722.7	723.5	723.7	723.4	723.0	722.7	722.5
140°	743.4	743.9	744.6	744.8	744.4	744.1	743.9	743.5
142.5°	763.6	764.1	764.6	764.7	764.2	763.8	763.4	762.9
145°	792.0	792.3	792.6	792.8	792.8	792.8	792.8	792.8
147.5°	817.4	817.7	818.0	817.7	817.1	816.3	815.7	814.9
150°	832.9	833.2	833.5	833.5	833.0	832.5	832.1	831.6
152.5°	846.7	847.3	847.8	847.7	847.1	846.3	845.6	844.9
155°	865.7	866.5	867.3	867.2	866.3	865.3	864.4	863.5
157.5°	882.3	883.2	884.1	884.0	882.8	881.6	880.4	879.2
160°	891.7	892.7	893.5	893.5	892.4	891.4	890.2	889.2
162.5°	900.3	901.4	902.4	902.4	901.4	900.5	899.6	898.6
165°	911.7	912.9	914.2	914.3	913.2	912.1	911.1	909.9
167.5°	920.6	921.9	923.1	923.1	921.9	920.6	919.4	918.1
170°	925.6	926.9	928.1	928.1	926.9	925.6	924.4	923.1
172.5°	929.0	930.2	931.4	931.3	930.0	928.7	927.3	926.0
175°	932.9	934.1	935.1	935.0	933.8	932.6	931.3	930.1
177.5°	934.4	935.4	936.4	936.2	935.0	933.8	932.6	931.3
180°	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6

(END OF REPORT)