

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: P332476-927

Luminaire Tested: **S123RDIW-S1165D755U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332476-927
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-S1165D755U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1165 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: 5863.5 lumens
Efficiency: N/A
Efficacy: 98.1 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

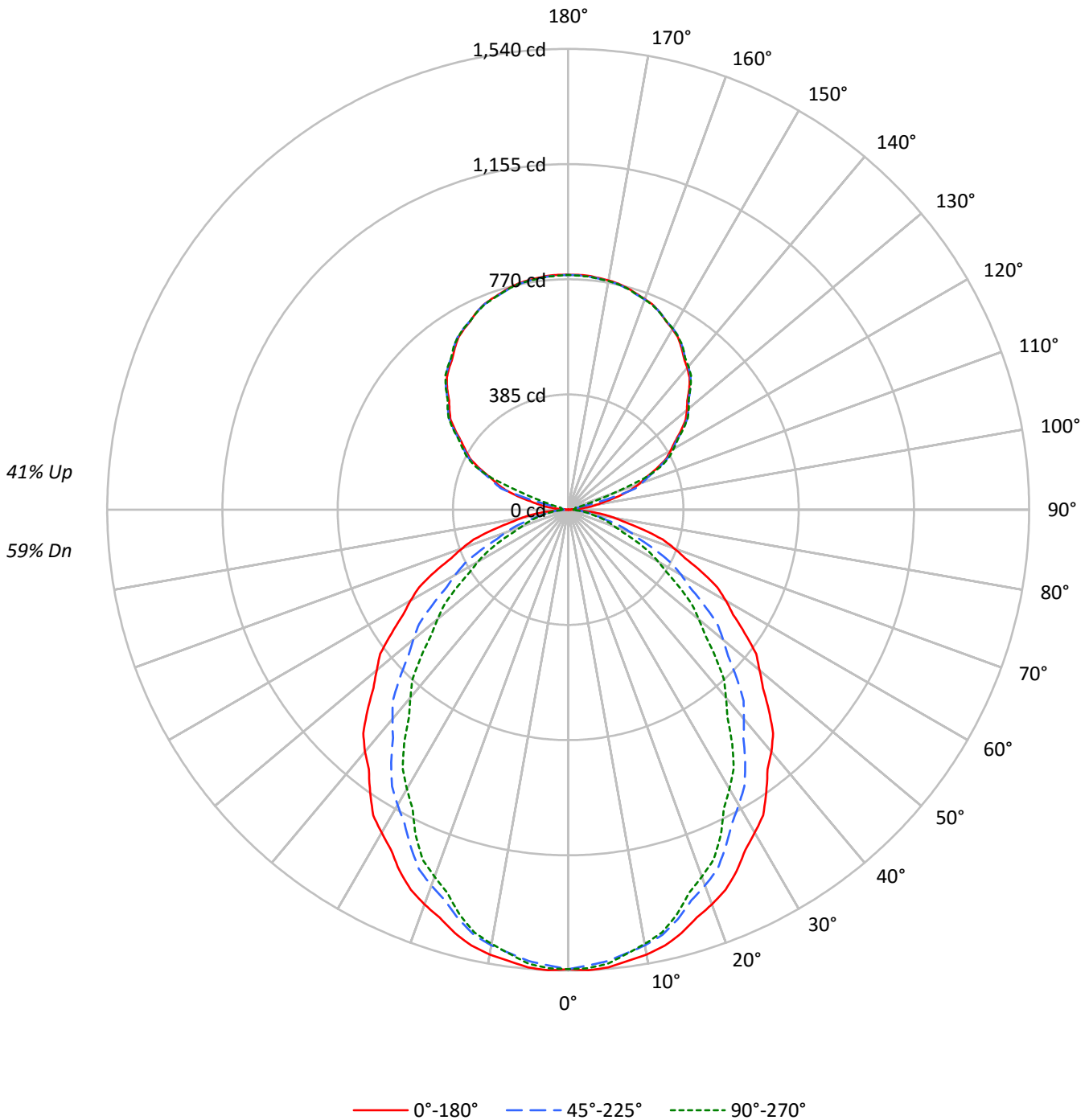
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	87	84	78	76	74	68	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16527	16527	16527
5°	16590	16361	16455
10°	16497	16156	16101
15°	16319	15778	15611
20°	16076	15306	14948
25°	15824	14775	14301
30°	15493	14162	13387
35°	15152	13548	12550
40°	14838	12826	11514
45°	14425	12113	10577
50°	13971	11302	9530
55°	13508	10376	8552
60°	13082	9384	7481
65°	12528	8308	6406
70°	11833	6977	5174
75°	10821	5490	4870
80°	9651	4860	4475
85°	8151	4310	4001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	2.5
10°-20°	401.2	6.8
20°-30°	577.6	9.9
30°-40°	650.7	11.1
40°-50°	622.5	10.6
50°-60°	509.7	8.7
60°-70°	343.9	5.9
70°-80°	173.0	3.0
80°-90°	48.0	0.8
90°-100°	28.5	0.5
100°-110°	136.0	2.3
110°-120°	326.6	5.6
120°-130°	415.9	7.1
130°-140°	444.3	7.6
140°-150°	415.5	7.1
150°-160°	335.2	5.7
160°-170°	216.3	3.7
170°-180°	74.5	1.3
0°-30°	1123.0	19.2
0°-40°	1773.6	30.2
0°-60°	2905.8	49.6
0°-90°	3470.8	59.2
90°-120°	491.1	8.4
90°-150°	1766.8	30.1
90°-180°	2393.0	40.8
0°-180°	5863.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1535	1529	1514	1525	1523	146
15°	1464	1450	1416	1410	1401	412
25°	1332	1300	1244	1219	1204	613
35°	1153	1106	1031	979	955	721
45°	948	889	796	727	695	731
55°	720	656	553	483	456	645
65°	492	422	326	268	252	487
75°	260	200	132	120	117	278
85°	66	40	35	32	32	74
90°	1	7	14	16	18	5
95°	36	13	18	22	22	44
105°	174	177	128	30	26	184
115°	326	329	335	340	343	322
125°	459	464	466	468	469	410
135°	572	575	578	579	578	440
145°	660	664	665	666	666	413
155°	727	726	726	729	726	335
165°	767	765	764	768	765	216
175°	785	782	782	786	782	75
180°	785	785	785	785	785	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1540.4	1539.4	1538.6	1537.7	1536.8	1535.0	1532.4	1529.7	1527.1	1524.4	1526.9
5°	1535.4	1534.0	1532.6	1531.2	1529.9	1527.5	1524.2	1520.8	1517.5	1514.2	1516.7
7.5°	1521.1	1519.7	1518.2	1516.7	1515.2	1512.3	1508.0	1503.6	1499.4	1495.0	1496.4
10°	1509.3	1507.3	1505.4	1503.4	1501.5	1498.0	1493.0	1488.0	1483.0	1478.1	1478.4
12.5°	1492.3	1490.2	1488.0	1485.8	1483.7	1479.6	1473.5	1467.4	1461.3	1455.2	1455.0
15°	1464.4	1461.3	1458.3	1455.2	1452.2	1446.8	1439.1	1431.3	1423.6	1415.9	1414.4
17.5°	1429.3	1425.8	1422.2	1418.6	1415.2	1408.4	1398.6	1388.7	1378.9	1369.0	1366.1
20°	1403.4	1399.0	1394.6	1390.1	1385.7	1378.2	1367.7	1357.2	1346.6	1336.2	1332.5
22.5°	1374.5	1369.4	1364.3	1359.2	1354.2	1346.0	1334.8	1323.7	1312.5	1301.2	1296.8
25°	1332.4	1325.5	1318.6	1311.6	1304.7	1294.9	1282.1	1269.5	1256.7	1244.0	1238.2
27.5°	1281.4	1273.7	1266.1	1258.5	1250.8	1239.9	1225.7	1211.6	1197.4	1183.2	1175.1
30°	1246.5	1238.2	1229.9	1221.5	1213.3	1201.3	1185.9	1170.4	1154.9	1139.4	1130.0
32.5°	1211.6	1202.2	1192.8	1183.4	1174.0	1161.1	1144.7	1128.3	1111.9	1095.6	1085.3
35°	1153.1	1143.1	1133.1	1123.2	1113.3	1099.7	1082.5	1065.4	1048.2	1031.0	1019.1
37.5°	1093.8	1082.8	1071.7	1060.6	1049.6	1034.8	1016.5	998.2	979.9	961.6	948.1
40°	1056.0	1043.8	1031.6	1019.5	1007.3	991.3	971.7	952.0	932.4	912.8	898.3
42.5°	1013.1	1000.9	988.8	976.6	964.4	948.2	927.9	907.5	887.2	867.0	851.2
45°	947.6	935.2	922.7	910.3	897.8	880.9	859.6	838.3	817.0	795.7	779.9
47.5°	882.1	868.5	854.8	841.1	827.4	809.9	788.6	767.3	746.0	724.8	707.6
50°	834.3	821.3	808.3	795.3	782.3	764.6	742.2	719.8	697.4	674.9	657.7
52.5°	791.5	777.4	763.3	749.2	735.0	716.8	694.7	672.5	650.3	628.1	610.3
55°	719.8	706.2	692.6	679.1	665.5	647.0	623.4	599.9	576.4	552.9	536.9
57.5°	653.5	638.7	623.9	609.2	594.4	575.2	551.6	527.9	504.3	480.7	465.5
60°	607.7	592.5	577.3	562.1	546.8	527.7	504.7	481.8	458.8	435.9	420.9
62.5°	561.8	546.6	531.4	516.2	501.0	481.9	458.9	435.9	413.0	390.0	376.0
65°	491.9	476.7	461.4	446.2	431.0	412.6	391.0	369.4	347.8	326.2	312.7
67.5°	421.9	406.5	391.1	375.7	360.4	342.3	321.6	300.9	280.2	259.5	249.4
70°	376.0	361.2	346.2	331.2	316.3	299.1	279.8	260.4	241.1	221.7	212.0
72.5°	330.3	315.5	300.8	286.1	271.3	255.2	237.6	220.0	202.4	184.8	176.9
75°	260.2	247.0	233.7	220.4	207.2	192.9	177.7	162.4	147.2	132.0	129.2
77.5°	196.5	184.5	172.5	160.5	148.5	137.5	127.8	118.0	108.1	98.4	96.9
80°	155.7	144.3	132.9	121.6	110.3	101.7	95.9	90.1	84.3	78.4	77.6
82.5°	116.8	107.0	97.2	87.4	77.6	71.4	68.7	65.9	63.2	60.5	59.7
85°	66.0	59.9	53.8	47.8	41.7	38.2	37.4	36.5	35.7	34.9	34.3
87.5°	24.0	21.9	19.6	17.5	15.3	14.4	14.7	15.1	15.4	15.8	15.6
90°	0.6	1.9	3.2	4.4	5.8	7.3	9.0	10.6	12.3	14.0	14.5
92.5°	10.9	10.5	10.1	9.7	9.4	9.8	11.1	12.4	13.6	14.9	15.8
95°	35.6	30.3	25.0	19.6	14.3	12.4	13.8	15.2	16.6	18.1	19.0
97.5°	71.5	69.1	66.7	64.3	61.9	56.1	46.7	37.4	28.1	18.8	19.8
100°	98.5	101.1	103.7	106.3	108.8	100.1	79.9	59.7	39.5	19.3	20.3
102.5°	129.3	131.2	133.0	134.9	136.7	126.7	104.6	82.5	60.4	38.3	35.2
105°	173.7	175.2	176.6	178.0	179.4	174.3	162.6	151.0	139.3	127.7	104.7
107.5°	220.5	221.7	222.8	224.0	225.1	226.6	228.5	230.3	232.2	234.0	217.1
110°	251.8	252.9	253.9	254.9	256.0	257.2	258.6	260.1	261.5	262.9	258.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.7	282.6	283.5	284.5	285.4	286.6	288.0	289.5	290.9	292.3	292.4
115°	325.8	326.6	327.4	328.2	329.0	329.9	331.1	332.2	333.4	334.6	335.9
117.5°	368.7	369.6	370.6	371.5	372.5	373.3	373.8	374.5	375.0	375.7	376.7
120°	395.2	396.4	397.6	398.7	399.9	400.7	401.1	401.5	401.9	402.2	403.3
122.5°	422.3	423.3	424.2	425.2	426.1	426.8	427.3	427.9	428.3	428.8	429.5
125°	459.4	460.4	461.4	462.5	463.5	464.3	464.8	465.3	465.8	466.4	466.6
127.5°	495.3	496.3	497.3	498.4	499.4	500.3	500.9	501.5	502.1	502.7	503.1
130°	517.6	518.7	519.8	520.8	521.8	522.6	523.1	523.6	524.1	524.7	525.1
132.5°	539.1	540.1	541.1	542.2	543.3	544.0	544.4	544.8	545.2	545.7	546.1
135°	571.9	572.7	573.4	574.2	575.0	575.6	576.2	576.6	577.2	577.7	578.1
137.5°	599.8	600.8	601.8	602.8	603.8	604.4	604.7	605.0	605.3	605.5	606.2
140°	618.5	619.2	620.0	620.8	621.6	622.2	622.6	623.0	623.4	623.8	624.2
142.5°	635.7	636.5	637.3	638.1	638.9	639.4	639.8	640.2	640.6	641.0	641.4
145°	659.9	660.8	661.7	662.6	663.5	664.1	664.3	664.6	664.9	665.1	665.4
147.5°	682.6	683.2	683.8	684.4	685.0	685.4	685.7	686.0	686.2	686.4	686.7
150°	696.6	697.0	697.4	697.8	698.2	698.5	698.8	699.0	699.3	699.5	699.8
152.5°	709.2	709.4	709.6	709.7	710.0	710.1	710.3	710.4	710.6	710.7	711.1
155°	726.9	726.7	726.4	726.1	725.9	725.8	726.0	726.1	726.2	726.4	727.0
157.5°	740.7	740.7	740.6	740.6	740.6	740.5	740.4	740.2	740.1	740.0	740.8
160°	749.1	748.9	748.8	748.7	748.5	748.5	748.3	748.1	748.1	747.9	748.7
162.5°	757.0	756.7	756.3	756.0	755.7	755.4	755.3	755.2	755.0	754.9	755.8
165°	766.6	766.2	765.8	765.4	765.0	764.8	764.6	764.5	764.4	764.2	765.2
167.5°	774.0	773.5	773.0	772.5	772.0	771.7	771.7	771.7	771.7	771.7	772.7
170°	778.2	777.7	777.2	776.7	776.2	775.9	775.9	775.9	775.9	775.9	776.9
172.5°	781.0	780.4	779.7	779.2	778.6	778.2	778.4	778.5	778.6	778.7	779.7
175°	784.7	783.9	783.3	782.7	782.0	781.8	781.9	782.0	782.2	782.3	783.2
177.5°	785.5	785.1	784.5	784.0	783.5	783.3	783.4	783.5	783.6	783.7	784.5
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1529.3	1531.8	1534.1	1535.2	1534.7	1534.3	1533.8	1533.3
5°	1519.2	1521.7	1524.2	1525.1	1524.6	1524.0	1523.4	1522.9
7.5°	1497.8	1499.2	1500.6	1500.8	1499.8	1498.9	1497.9	1497.0
10°	1478.7	1478.9	1479.2	1478.7	1477.3	1475.9	1474.5	1473.1
12.5°	1454.8	1454.7	1454.5	1453.7	1452.1	1450.4	1448.8	1447.2
15°	1413.1	1411.7	1410.3	1408.7	1406.7	1404.8	1402.8	1400.9
17.5°	1363.2	1360.2	1357.2	1354.4	1351.5	1348.6	1345.8	1342.8
20°	1329.0	1325.3	1321.8	1318.3	1314.9	1311.6	1308.4	1305.0
22.5°	1292.3	1287.9	1283.3	1279.5	1276.4	1273.4	1270.3	1267.2
25°	1232.4	1226.5	1220.8	1216.3	1213.3	1210.2	1207.2	1204.1
27.5°	1167.0	1159.0	1150.9	1144.5	1139.9	1135.3	1130.6	1125.9
30°	1120.5	1111.2	1101.8	1094.9	1090.4	1086.0	1081.6	1077.1
32.5°	1075.0	1064.7	1054.4	1046.9	1042.3	1037.6	1033.0	1028.3
35°	1007.3	995.4	983.5	975.0	970.0	965.0	960.0	955.1
37.5°	934.5	921.1	907.5	897.7	891.6	885.4	879.3	873.1
40°	884.0	869.6	855.2	844.9	838.4	832.1	825.8	819.4
42.5°	835.5	819.8	804.1	793.4	787.7	782.0	776.3	770.6
45°	764.1	748.4	732.6	721.4	714.8	708.1	701.5	694.8
47.5°	690.4	673.3	656.1	644.6	638.7	632.7	626.8	620.9
50°	640.6	623.4	606.3	594.5	588.2	581.8	575.4	569.1
52.5°	592.5	574.6	556.8	545.0	539.3	533.7	528.0	522.3
55°	520.8	504.7	488.7	477.9	472.4	466.8	461.3	455.7
57.5°	450.4	435.1	420.0	410.0	405.4	400.7	395.9	391.3
60°	405.9	391.0	376.0	366.2	361.6	356.8	352.1	347.5
62.5°	361.9	347.8	333.7	324.3	319.3	314.4	309.5	304.6
65°	299.1	285.6	272.0	263.7	260.7	257.6	254.6	251.5
67.5°	239.2	229.1	219.0	212.3	209.1	205.7	202.5	199.2
70°	202.2	192.6	182.9	176.6	173.5	170.5	167.4	164.4
72.5°	169.0	161.1	153.1	148.5	147.3	146.0	144.7	143.5
75°	126.4	123.7	120.9	119.3	118.7	118.2	117.6	117.1
77.5°	95.4	93.9	92.4	91.3	90.8	90.2	89.7	89.1
80°	76.8	76.0	75.1	74.5	73.9	73.4	72.8	72.2
82.5°	58.9	58.1	57.2	56.7	56.6	56.5	56.4	56.3
85°	33.7	33.2	32.6	32.4	32.4	32.4	32.4	32.4
87.5°	15.5	15.4	15.3	15.1	15.0	14.8	14.7	14.4
90°	15.1	15.5	16.1	16.5	16.7	17.0	17.2	17.5
92.5°	16.6	17.4	18.2	18.7	18.9	19.0	19.2	19.3
95°	19.9	20.8	21.7	22.2	22.2	22.2	22.2	22.2
97.5°	20.8	21.9	22.9	23.5	23.6	23.8	23.9	24.0
100°	21.3	22.3	23.4	24.0	24.1	24.2	24.3	24.5
102.5°	31.9	28.8	25.5	24.0	24.2	24.5	24.7	25.0
105°	81.8	58.9	36.0	24.6	24.9	25.1	25.4	25.7
107.5°	200.3	183.5	166.8	149.7	132.4	115.1	97.8	80.6
110°	254.4	250.1	245.8	234.4	215.9	197.3	178.8	160.3



TEST NUMBER: P332476-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.5	292.6	292.6	290.7	286.8	282.9	278.9	275.0
115°	337.2	338.5	339.8	340.7	341.2	341.7	342.2	342.8
117.5°	377.7	378.7	379.8	380.3	380.5	380.6	380.6	380.8
120°	404.3	405.4	406.4	406.9	406.9	406.9	406.9	406.9
122.5°	430.2	430.9	431.7	432.1	432.2	432.3	432.5	432.5
125°	466.8	467.1	467.4	467.6	467.9	468.2	468.4	468.7
127.5°	503.6	504.0	504.4	504.5	504.2	503.9	503.7	503.4
130°	525.7	526.2	526.7	526.9	526.6	526.3	526.1	525.8
132.5°	546.7	547.2	547.7	547.8	547.4	547.1	546.7	546.3
135°	578.5	578.8	579.2	579.2	578.8	578.5	578.1	577.7
137.5°	606.8	607.4	608.1	608.2	608.0	607.7	607.4	607.2
140°	624.8	625.3	625.8	626.0	625.7	625.4	625.2	624.9
142.5°	641.8	642.2	642.6	642.7	642.3	642.0	641.6	641.2
145°	665.7	665.9	666.1	666.3	666.3	666.3	666.3	666.3
147.5°	687.0	687.2	687.5	687.3	686.7	686.1	685.6	684.9
150°	700.1	700.3	700.5	700.5	700.1	699.7	699.3	698.9
152.5°	711.6	712.1	712.6	712.5	711.9	711.3	710.7	710.1
155°	727.6	728.3	729.0	728.9	728.1	727.3	726.5	725.7
157.5°	741.6	742.3	743.1	743.0	742.0	740.9	740.0	738.9
160°	749.5	750.3	751.0	751.0	750.0	749.2	748.2	747.3
162.5°	756.7	757.6	758.4	758.4	757.6	756.9	756.1	755.3
165°	766.3	767.3	768.3	768.4	767.5	766.6	765.7	764.8
167.5°	773.7	774.8	775.9	775.9	774.8	773.7	772.7	771.7
170°	777.9	779.0	780.1	780.1	779.0	777.9	776.9	775.9
172.5°	780.8	781.8	782.8	782.8	781.6	780.5	779.3	778.2
175°	784.1	785.1	785.9	785.8	784.8	783.8	782.8	781.7
177.5°	785.4	786.2	787.0	786.9	785.8	784.8	783.8	782.8
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7

(END OF REPORT)