

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: P332069-940

Luminaire Tested: **S123DIP-S1165D805U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332069-940
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: S123DIP-S1165D805U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7106.0 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

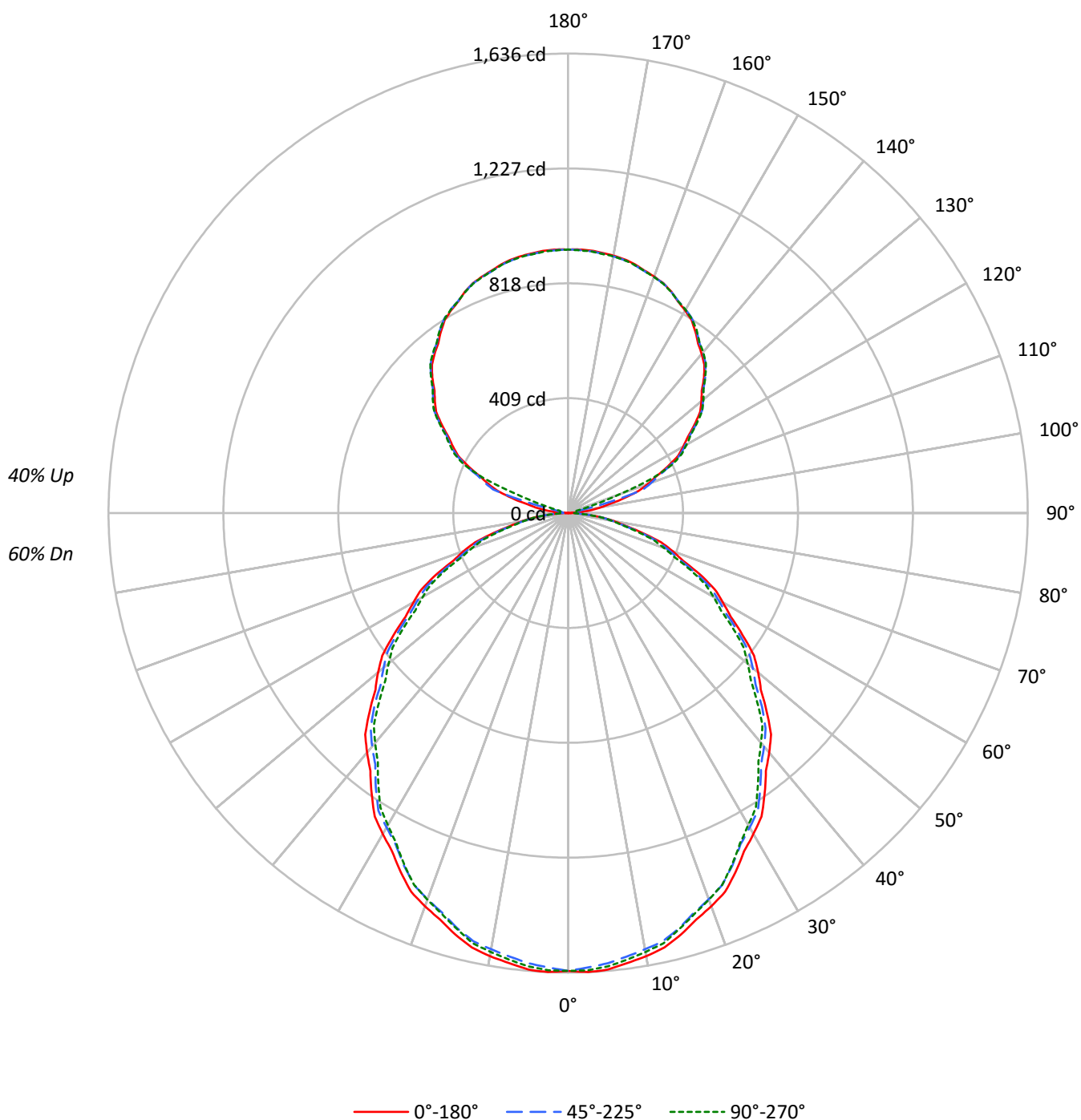
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
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	89	89	89	76	76	76	65	65	65	60		
1	100	95	91	88	93	89	86	83	78	75	73	67	65	64	57	56	55	50		
2	91	83	77	72	85	78	73	68	68	64	60	59	56	53	50	48	46	42		
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	39	35		
4	76	65	57	51	71	61	54	48	53	48	43	46	42	38	40	37	34	30		
5	70	58	50	43	65	54	47	41	48	42	37	42	37	33	36	32	29	26		
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	33	29	26	23		
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	21		
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	24	21	18		
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17		
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17546	17546	17546
5°	17629	17386	17507
10°	17511	17235	17343
15°	17307	17041	17072
20°	17068	16763	16778
25°	16747	16431	16397
30°	16394	16063	15940
35°	16025	15674	15471
40°	15638	15244	15008
45°	15213	14850	14487
50°	14788	14364	13966
55°	14230	13863	13440
60°	13670	13276	12854
65°	13173	12638	12246
70°	12441	11909	11383
75°	11366	10959	10493
80°	10253	9819	9732
85°	9003	8657	8312

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	2.2
10°-20°	433.6	6.1
20°-30°	640.5	9.0
30°-40°	748.2	10.5
40°-50°	752.2	10.6
50°-60°	660.7	9.3
60°-70°	492.2	6.9
70°-80°	280.4	3.9
80°-90°	83.1	1.2
90°-100°	34.1	0.5
100°-110°	162.6	2.3
110°-120°	390.6	5.5
120°-130°	497.3	7.0
130°-140°	531.4	7.5
140°-150°	496.9	7.0
150°-160°	400.8	5.6
160°-170°	258.7	3.6
170°-180°	89.2	1.3
0°-30°	1227.6	17.3
0°-40°	1975.8	27.8
0°-60°	3388.7	47.7
0°-90°	4244.5	59.7
90°-120°	587.3	8.3
90°-150°	2112.9	29.7
90°-180°	2862.0	40.3
0°-180°	7106.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1630	1630	1630	1630	1630	
5°	1632	1624	1609	1622	1620	155
15°	1553	1547	1529	1539	1532	438
25°	1410	1401	1384	1385	1381	649
35°	1220	1211	1193	1185	1177	763
45°	999	993	976	959	952	771
55°	758	756	739	724	716	679
65°	517	510	496	485	481	510
75°	273	268	264	257	252	292
85°	73	70	70	67	67	80
90°	1	8	17	19	21	6
95°	42	16	22	26	26	53
105°	208	212	153	36	31	220
115°	390	394	400	407	410	385
125°	549	555	558	559	560	490
135°	684	688	691	693	691	526
145°	789	794	795	797	797	494
155°	869	868	869	872	868	400
165°	917	915	914	919	915	259
175°	938	935	936	940	935	89
180°	938	938	938	938	938	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1
2.5°	1635.8	1634.8	1633.8	1632.8	1631.7	1629.9	1627.2	1624.4	1621.7	1618.9	1621.4
5°	1631.6	1630.0	1628.4	1626.9	1625.3	1622.8	1619.4	1616.0	1612.6	1609.1	1612.2
7.5°	1615.6	1614.0	1612.5	1610.9	1609.4	1606.8	1603.2	1599.7	1596.2	1592.6	1595.4
10°	1602.1	1600.5	1599.0	1597.4	1595.9	1593.1	1589.0	1585.0	1580.9	1576.9	1579.7
12.5°	1584.2	1582.9	1581.5	1580.3	1579.0	1576.4	1572.6	1568.8	1565.0	1561.2	1563.3
15°	1553.1	1551.8	1550.6	1549.3	1548.1	1545.4	1541.4	1537.3	1533.3	1529.2	1531.7
17.5°	1516.9	1515.3	1513.7	1512.1	1510.4	1507.6	1503.5	1499.5	1495.4	1491.4	1493.2
20°	1490.0	1488.1	1486.2	1484.3	1482.6	1479.5	1475.5	1471.5	1467.4	1463.4	1464.6
22.5°	1459.7	1457.9	1456.0	1454.1	1452.2	1449.3	1445.2	1441.2	1437.2	1433.1	1434.0
25°	1410.1	1408.2	1406.3	1404.4	1402.7	1399.6	1395.6	1391.6	1387.5	1383.5	1383.8
27.5°	1357.1	1355.3	1353.5	1351.7	1349.9	1346.8	1342.5	1338.1	1333.7	1329.4	1329.6
30°	1319.0	1317.4	1315.9	1314.3	1312.8	1309.8	1305.5	1301.1	1296.7	1292.4	1292.4
32.5°	1280.9	1278.8	1276.8	1274.7	1272.6	1269.9	1266.6	1263.2	1259.8	1256.5	1254.7
35°	1219.5	1217.6	1215.8	1213.9	1212.0	1209.1	1205.0	1201.0	1196.9	1192.8	1191.0
37.5°	1156.6	1154.3	1151.9	1149.6	1147.2	1144.0	1139.9	1135.8	1131.7	1127.5	1125.2
40°	1112.9	1111.1	1109.2	1107.3	1105.5	1102.3	1098.0	1093.6	1089.2	1084.9	1082.4
42.5°	1069.2	1067.1	1065.0	1062.8	1060.7	1057.5	1053.1	1048.7	1044.4	1040.1	1037.6
45°	999.4	998.2	996.9	995.7	994.4	991.8	987.7	983.6	979.6	975.5	971.9
47.5°	930.1	928.4	926.6	924.7	922.9	920.2	916.3	912.5	908.7	904.9	901.3
50°	883.1	881.5	879.9	878.4	876.8	874.1	870.0	865.9	861.8	857.8	854.4
52.5°	833.7	832.7	831.6	830.5	829.5	826.8	822.5	818.2	814.0	809.6	806.6
55°	758.3	758.0	757.7	757.4	757.1	754.9	750.8	746.8	742.7	738.7	735.3
57.5°	686.5	685.5	684.4	683.4	682.3	680.2	676.9	673.7	670.5	667.2	664.1
60°	635.0	634.6	634.4	634.0	633.7	631.7	627.9	624.2	620.5	616.7	613.9
62.5°	589.0	588.2	587.4	586.6	585.8	583.4	579.7	576.0	572.3	568.6	565.7
65°	517.2	515.7	514.1	512.6	511.0	508.6	505.5	502.4	499.3	496.2	493.7
67.5°	441.2	439.9	438.5	437.1	435.8	433.9	431.5	429.2	426.8	424.5	422.2
70°	395.3	393.4	391.6	389.7	387.8	385.9	384.1	382.2	380.3	378.4	376.3
72.5°	347.1	345.7	344.3	343.0	341.6	339.8	337.7	335.6	333.5	331.4	329.4
75°	273.3	272.1	270.8	269.6	268.3	267.2	266.4	265.4	264.5	263.5	262.0
77.5°	208.0	207.3	206.6	206.0	205.3	204.4	203.2	202.2	201.0	199.9	198.9
80°	165.4	164.4	163.5	162.6	161.7	160.9	160.2	159.6	159.0	158.4	158.1
82.5°	123.9	123.7	123.5	123.3	123.1	123.0	122.9	122.8	122.6	122.5	122.0
85°	72.9	72.2	71.6	71.0	70.4	70.1	70.1	70.1	70.1	70.1	69.5
87.5°	29.3	28.9	28.4	28.0	27.6	27.4	27.6	27.7	27.8	28.0	27.9
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	12.9	12.6	12.1	11.7	11.2	11.8	13.3	14.8	16.3	17.8	18.8
95°	42.5	36.2	29.8	23.5	17.1	14.8	16.5	18.2	19.9	21.6	22.7
97.5°	85.4	82.7	79.8	77.0	74.1	67.1	55.9	44.8	33.6	22.5	23.7
100°	117.8	120.9	124.0	127.1	130.2	119.7	95.5	71.3	47.2	23.0	24.3
102.5°	154.6	156.9	159.1	161.3	163.5	151.5	125.1	98.6	72.2	45.8	42.0
105°	207.8	209.5	211.2	212.9	214.5	208.5	194.5	180.6	166.6	152.7	125.3
107.5°	263.8	265.2	266.5	267.9	269.2	271.0	273.2	275.4	277.6	279.8	259.8
110°	301.1	302.4	303.6	304.9	306.1	307.6	309.3	311.0	312.7	314.4	309.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	338.0	339.1	340.2	341.3	342.7	344.5	346.2	347.9	349.6	349.6
115°	389.7	390.7	391.6	392.5	393.4	394.6	396.0	397.3	398.8	400.2	401.7
117.5°	440.9	442.0	443.2	444.3	445.4	446.4	447.1	447.8	448.5	449.2	450.5
120°	472.7	474.0	475.5	476.8	478.2	479.2	479.7	480.1	480.5	481.0	482.2
122.5°	505.0	506.1	507.3	508.5	509.6	510.4	511.0	511.7	512.2	512.8	513.7
125°	549.4	550.5	551.8	553.0	554.3	555.3	555.9	556.4	557.1	557.7	558.0
127.5°	592.3	593.5	594.8	596.0	597.3	598.2	599.0	599.8	600.5	601.2	601.7
130°	619.0	620.3	621.5	622.8	624.0	624.9	625.5	626.2	626.8	627.4	628.0
132.5°	644.7	646.0	647.2	648.5	649.7	650.5	651.0	651.5	652.0	652.6	653.2
135°	683.9	684.8	685.7	686.7	687.6	688.4	689.0	689.6	690.3	690.9	691.3
137.5°	717.4	718.5	719.7	720.9	722.0	722.8	723.2	723.5	723.8	724.2	725.0
140°	739.7	740.6	741.5	742.4	743.4	744.0	744.6	745.0	745.5	745.9	746.5
142.5°	760.3	761.3	762.1	763.1	764.0	764.7	765.2	765.6	766.1	766.6	767.0
145°	789.2	790.2	791.3	792.4	793.5	794.2	794.5	794.8	795.1	795.4	795.8
147.5°	816.4	817.1	817.8	818.5	819.2	819.7	820.0	820.3	820.6	820.9	821.3
150°	833.0	833.6	834.0	834.5	834.9	835.4	835.6	836.0	836.2	836.6	836.9
152.5°	848.1	848.4	848.6	848.8	849.0	849.2	849.4	849.5	849.8	850.0	850.5
155°	869.3	869.1	868.7	868.4	868.1	868.0	868.2	868.3	868.4	868.6	869.4
157.5°	885.7	885.7	885.7	885.6	885.6	885.6	885.4	885.3	885.1	884.9	885.9
160°	895.8	895.6	895.5	895.4	895.2	895.0	894.9	894.7	894.6	894.4	895.4
162.5°	905.3	904.9	904.5	904.1	903.7	903.4	903.2	903.1	902.9	902.8	903.8
165°	916.8	916.2	915.8	915.3	914.9	914.5	914.4	914.3	914.1	913.9	915.2
167.5°	925.7	925.1	924.4	923.8	923.2	922.8	922.8	922.8	922.8	922.8	924.1
170°	930.7	930.1	929.4	928.8	928.2	927.9	927.9	927.9	927.9	927.9	929.2
172.5°	934.0	933.3	932.6	931.7	931.0	930.8	930.9	930.9	931.1	931.2	932.5
175°	938.3	937.5	936.8	936.0	935.2	935.0	935.0	935.2	935.4	935.6	936.7
177.5°	939.4	938.9	938.3	937.6	937.0	936.7	936.8	937.0	937.1	937.2	938.3
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1	1630.1
2.5°	1623.9	1626.4	1628.9	1630.0	1629.8	1629.5	1629.2	1629.1
5°	1615.3	1618.5	1621.6	1622.8	1622.2	1621.6	1621.0	1620.3
7.5°	1598.2	1601.0	1603.8	1605.0	1604.6	1604.3	1603.9	1603.6
10°	1582.5	1585.3	1588.1	1589.2	1588.6	1588.0	1587.3	1586.7
12.5°	1565.3	1567.4	1569.4	1570.3	1569.9	1569.5	1569.1	1568.8
15°	1534.2	1536.7	1539.2	1539.5	1537.7	1535.8	1533.9	1532.0
17.5°	1494.9	1496.6	1498.3	1498.9	1498.3	1497.5	1496.8	1496.2
20°	1465.9	1467.1	1468.4	1468.5	1467.6	1466.6	1465.7	1464.7
22.5°	1435.1	1436.1	1437.1	1437.0	1435.8	1434.6	1433.4	1432.3
25°	1384.1	1384.4	1384.7	1384.4	1383.5	1382.5	1381.6	1380.6
27.5°	1329.9	1330.1	1330.3	1329.9	1328.7	1327.5	1326.3	1325.2
30°	1292.4	1292.4	1292.4	1291.3	1289.1	1286.9	1284.7	1282.5
32.5°	1252.9	1251.2	1249.5	1248.0	1246.9	1245.6	1244.5	1243.3
35°	1189.1	1187.2	1185.4	1183.7	1182.1	1180.5	1178.9	1177.4
37.5°	1123.0	1120.8	1118.6	1117.0	1115.9	1114.9	1113.9	1112.9
40°	1080.0	1077.5	1075.0	1073.1	1071.8	1070.6	1069.3	1068.1
42.5°	1035.1	1032.6	1030.1	1028.2	1027.0	1025.7	1024.5	1023.2
45°	968.1	964.4	960.6	958.0	956.4	954.8	953.3	951.7
47.5°	897.6	893.9	890.2	887.7	886.4	884.9	883.6	882.3
50°	851.0	847.6	844.1	841.5	839.6	837.8	835.9	834.0
52.5°	803.8	800.8	797.9	795.5	793.6	791.8	789.9	788.0
55°	731.8	728.4	725.0	722.5	720.9	719.3	717.8	716.2
57.5°	661.1	658.1	655.0	652.6	650.8	649.0	647.1	645.3
60°	611.2	608.3	605.6	603.3	601.8	600.2	598.7	597.1
62.5°	562.9	560.1	557.3	555.4	554.3	553.2	552.2	551.2
65°	491.2	488.7	486.2	484.6	483.6	482.7	481.7	480.8
67.5°	420.1	417.9	415.7	413.9	412.7	411.3	410.0	408.8
70°	374.1	371.9	369.7	367.8	366.3	364.7	363.2	361.7
72.5°	327.5	325.6	323.6	322.3	321.5	320.7	319.9	319.1
75°	260.4	258.9	257.3	256.0	255.1	254.1	253.2	252.3
77.5°	197.8	196.7	195.6	195.1	195.1	195.1	195.1	195.1
80°	157.7	157.5	157.1	157.0	157.0	157.0	157.0	157.0
82.5°	121.4	120.8	120.3	119.8	119.6	119.4	119.1	118.9
85°	68.8	68.2	67.6	67.3	67.3	67.3	67.3	67.3
87.5°	27.7	27.6	27.6	27.5	27.6	27.6	27.6	27.7
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	19.8	20.8	21.8	22.4	22.6	22.7	22.9	23.2
95°	23.8	24.9	25.9	26.5	26.5	26.5	26.5	26.5
97.5°	25.0	26.1	27.4	28.1	28.3	28.4	28.5	28.7
100°	25.5	26.8	28.0	28.6	28.8	29.0	29.2	29.2
102.5°	38.2	34.3	30.5	28.7	29.0	29.2	29.5	29.9
105°	97.8	70.4	43.0	29.4	29.8	30.1	30.4	30.7
107.5°	239.6	219.5	199.4	179.0	158.4	137.7	117.0	96.3
110°	304.2	299.1	294.0	280.4	258.2	236.0	213.8	191.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.7	349.8	349.9	347.6	343.0	338.2	333.6	329.0
115°	403.2	404.8	406.4	407.4	408.0	408.7	409.3	409.9
117.5°	451.7	453.0	454.1	454.9	455.0	455.1	455.2	455.4
120°	483.5	484.7	486.0	486.6	486.6	486.6	486.6	486.6
122.5°	514.5	515.4	516.3	516.7	516.9	517.0	517.2	517.3
125°	558.3	558.7	558.9	559.3	559.5	559.9	560.2	560.5
127.5°	602.2	602.7	603.2	603.2	603.0	602.7	602.4	602.1
130°	628.7	629.3	629.9	630.1	629.7	629.5	629.1	628.8
132.5°	653.7	654.3	655.0	655.1	654.7	654.2	653.8	653.4
135°	691.8	692.2	692.7	692.7	692.2	691.8	691.3	690.9
137.5°	725.7	726.4	727.2	727.4	727.1	726.7	726.5	726.1
140°	747.2	747.8	748.4	748.6	748.2	748.0	747.6	747.3
142.5°	767.6	768.0	768.6	768.6	768.1	767.7	767.3	766.9
145°	796.0	796.4	796.7	796.8	796.8	796.8	796.8	796.8
147.5°	821.5	821.9	822.2	822.0	821.3	820.6	819.8	819.1
150°	837.1	837.5	837.8	837.8	837.2	836.8	836.3	835.9
152.5°	851.0	851.6	852.2	852.1	851.4	850.7	850.0	849.3
155°	870.2	870.9	871.7	871.6	870.8	869.8	868.9	867.9
157.5°	886.8	887.7	888.7	888.5	887.3	886.1	884.9	883.7
160°	896.3	897.2	898.1	898.0	897.0	895.9	894.8	893.8
162.5°	904.9	906.0	907.0	907.0	906.1	905.1	904.2	903.2
165°	916.4	917.7	918.9	919.0	917.9	916.8	915.7	914.6
167.5°	925.3	926.6	927.8	927.8	926.6	925.3	924.1	922.8
170°	930.3	931.6	932.8	932.8	931.6	930.3	929.2	927.9
172.5°	933.7	935.0	936.2	936.1	934.8	933.4	932.0	930.7
175°	937.7	938.8	939.9	939.8	938.6	937.4	936.1	934.9
177.5°	939.2	940.2	941.2	941.1	939.9	938.6	937.4	936.1
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

(END OF REPORT)