

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: P332025-840

Luminaire Tested: **S123DIP-S1000D805U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332025-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D805U840-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6947.2 lumens  
Efficiency: N/A  
Efficacy: 127.7 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

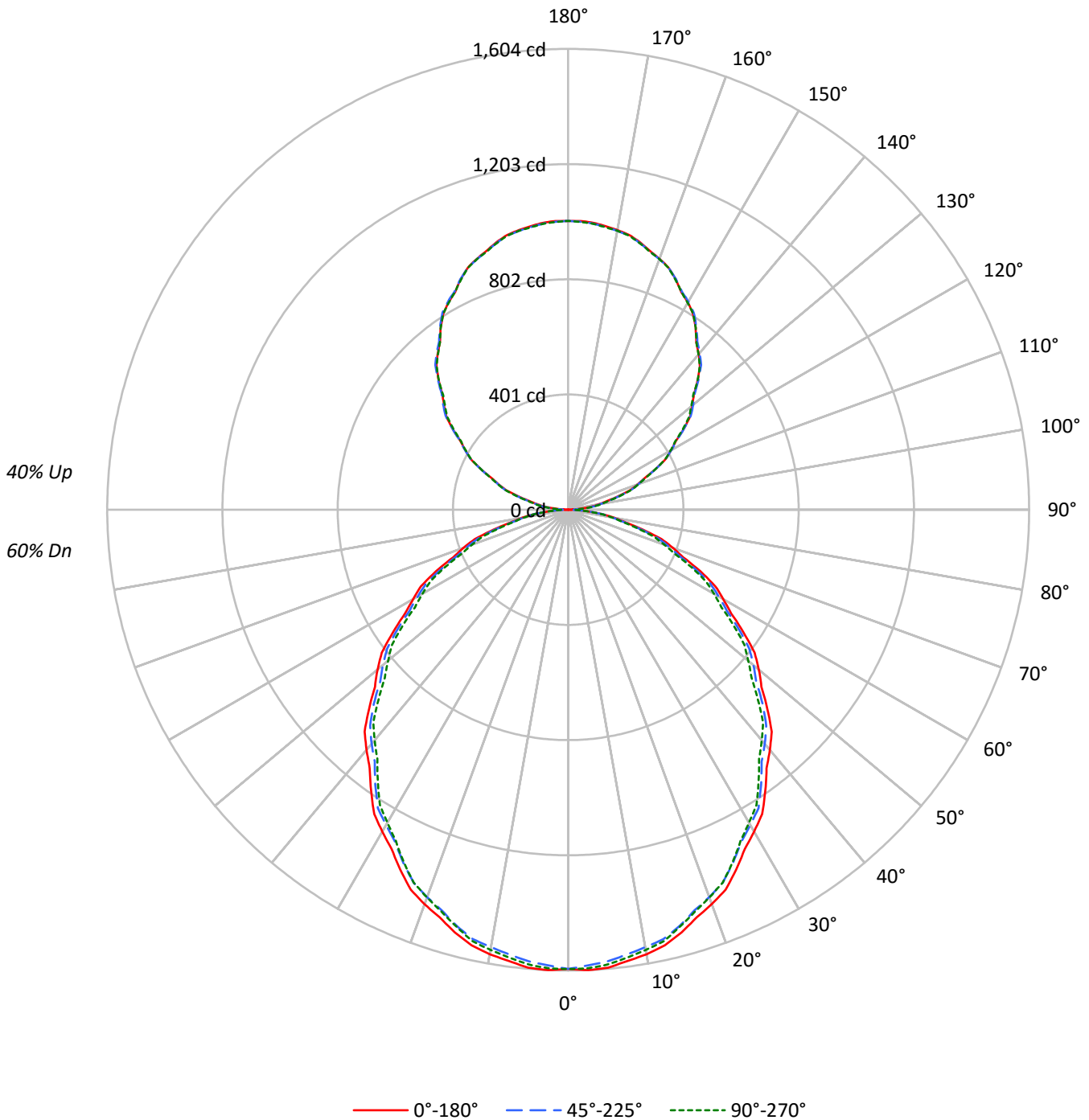
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	100	95	92	88	93	89	86	83	78	75	73	67	65	64	58	56	55	50
2	91	83	77	72	85	78	73	68	68	64	60	59	56	53	51	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	39	36
4	76	65	57	51	71	61	54	48	53	48	43	47	42	38	40	37	34	31
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	30	26	30	26	23	21
8	55	43	35	29	52	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	22	19	17
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

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

	0°	45°	90°
0°	17206	17206	17206
5°	17286	17049	17168
10°	17171	16901	17006
15°	16971	16710	16741
20°	16736	16436	16452
25°	16422	16112	16079
30°	16075	15751	15631
35°	15713	15369	15172
40°	15336	14948	14716
45°	14918	14562	14206
50°	14502	14086	13695
55°	13955	13594	13181
60°	13403	13020	12605
65°	12918	12394	12006
70°	12198	11679	11160
75°	11146	10746	10289
80°	10054	9627	9540
85°	8830	8497	8139



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.6	2.2
10°-20°	425.2	6.1
20°-30°	628.0	9.0
30°-40°	733.6	10.6
40°-50°	737.6	10.6
50°-60°	647.9	9.3
60°-70°	482.7	6.9
70°-80°	275.0	4.0
80°-90°	81.9	1.2
90°-100°	65.5	0.9
100°-110°	196.0	2.8
110°-120°	333.3	4.8
120°-130°	438.5	6.3
130°-140°	492.8	7.1
140°-150°	484.4	7.0
150°-160°	407.8	5.9
160°-170°	271.5	3.9
170°-180°	95.1	1.4
0°-30°	1203.8	17.3
0°-40°	1937.4	27.9
0°-60°	3322.8	47.8
0°-90°	4162.4	59.9
90°-120°	594.8	8.6
90°-150°	2010.5	28.9
90°-180°	2785.0	40.1
0°-180°	6947.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1600	1593	1578	1591	1589	152
15°	1523	1517	1500	1509	1502	429
25°	1383	1374	1357	1358	1354	637
35°	1196	1187	1170	1162	1155	748
45°	980	974	957	941	933	756
55°	744	741	724	710	702	666
65°	507	500	487	476	471	500
75°	268	263	258	252	247	287
85°	72	69	69	66	66	78
90°	1	9	19	22	24	7
95°	47	52	58	61	62	52
105°	178	180	186	186	188	190
115°	336	338	336	337	336	332
125°	491	493	492	489	486	438
135°	637	642	641	638	636	491
145°	773	775	777	776	773	483
155°	885	885	886	889	884	407
165°	964	962	962	966	961	272
175°	1003	1000	1000	1004	999	95
180°	1005	1005	1005	1005	1005	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1604.0	1603.1	1602.0	1601.0	1600.1	1598.2	1595.6	1592.9	1590.2	1587.5	1589.9
5°	1599.8	1598.3	1596.8	1595.3	1593.8	1591.3	1588.0	1584.6	1581.2	1577.9	1580.9
7.5°	1584.2	1582.7	1581.1	1579.6	1578.1	1575.6	1572.2	1568.6	1565.2	1561.7	1564.4
10°	1571.0	1569.5	1567.9	1566.4	1564.9	1562.2	1558.2	1554.2	1550.2	1546.3	1549.0
12.5°	1553.4	1552.2	1550.8	1549.5	1548.3	1545.8	1542.1	1538.3	1534.6	1530.9	1532.9
15°	1522.9	1521.7	1520.5	1519.2	1518.0	1515.4	1511.5	1507.5	1503.5	1499.5	1502.0
17.5°	1487.4	1485.8	1484.3	1482.7	1481.1	1478.3	1474.3	1470.4	1466.4	1462.4	1464.1
20°	1461.1	1459.3	1457.4	1455.5	1453.7	1450.8	1446.8	1442.9	1439.0	1434.9	1436.1
22.5°	1431.4	1429.6	1427.7	1425.8	1424.0	1421.2	1417.1	1413.2	1409.3	1405.2	1406.2
25°	1382.7	1380.9	1379.1	1377.3	1375.3	1372.5	1368.5	1364.5	1360.6	1356.6	1356.9
27.5°	1330.8	1329.0	1327.2	1325.4	1323.6	1320.6	1316.4	1312.1	1307.8	1303.5	1303.7
30°	1293.3	1291.8	1290.3	1288.8	1287.3	1284.3	1280.1	1275.8	1271.5	1267.3	1267.3
32.5°	1256.0	1253.9	1251.9	1249.9	1247.9	1245.3	1241.9	1238.7	1235.4	1232.0	1230.3
35°	1195.8	1194.0	1192.1	1190.3	1188.4	1185.6	1181.5	1177.6	1173.7	1169.6	1167.8
37.5°	1134.2	1131.9	1129.5	1127.2	1124.9	1121.8	1117.7	1113.7	1109.6	1105.6	1103.4
40°	1091.4	1089.4	1087.6	1085.8	1084.0	1081.0	1076.6	1072.4	1068.1	1063.8	1061.4
42.5°	1048.4	1046.3	1044.3	1042.2	1040.2	1036.9	1032.7	1028.4	1024.1	1019.9	1017.4
45°	980.0	978.8	977.5	976.3	975.1	972.5	968.6	964.5	960.6	956.6	953.0
47.5°	912.1	910.3	908.6	906.8	905.0	902.2	898.6	894.8	891.1	887.4	883.7
50°	866.0	864.3	862.8	861.3	859.8	857.1	853.0	849.1	845.2	841.2	837.8
52.5°	817.5	816.5	815.5	814.5	813.3	810.7	806.6	802.3	798.1	793.9	791.0
55°	743.6	743.3	743.0	742.7	742.4	740.2	736.3	732.3	728.3	724.4	720.9
57.5°	673.2	672.2	671.2	670.1	669.0	666.9	663.8	660.6	657.4	654.3	651.3
60°	622.6	622.3	622.0	621.7	621.4	619.5	615.7	612.1	608.4	604.8	602.0
62.5°	577.5	576.7	575.9	575.1	574.4	572.2	568.5	564.8	561.2	557.4	554.7
65°	507.2	505.6	504.1	502.6	501.1	498.8	495.7	492.7	489.6	486.6	484.1
67.5°	432.7	431.3	430.0	428.7	427.3	425.5	423.1	420.8	418.5	416.2	414.0
70°	387.6	385.8	384.0	382.1	380.3	378.4	376.6	374.8	372.9	371.1	369.0
72.5°	340.3	339.0	337.6	336.3	335.0	333.3	331.1	329.1	327.0	324.9	323.1
75°	268.0	266.8	265.6	264.4	263.2	262.1	261.2	260.2	259.3	258.4	256.9
77.5°	204.0	203.3	202.6	202.0	201.3	200.4	199.3	198.2	197.1	196.0	195.0
80°	162.2	161.3	160.4	159.5	158.5	157.7	157.1	156.5	155.9	155.3	155.0
82.5°	121.5	121.3	121.2	121.0	120.8	120.6	120.5	120.4	120.3	120.2	119.6
85°	71.5	70.9	70.3	69.7	69.1	68.8	68.8	68.8	68.8	68.8	68.1
87.5°	28.8	28.4	28.0	27.6	27.3	27.2	27.4	27.6	27.8	28.0	27.9
90°	0.8	2.5	4.3	6.1	7.8	9.8	12.1	14.3	16.7	19.0	19.7
92.5°	19.1	20.3	21.5	22.7	23.8	25.1	26.5	27.8	29.0	30.3	30.9
95°	46.6	47.8	49.1	50.3	51.5	52.8	54.2	55.6	57.1	58.5	59.2
97.5°	82.7	83.6	84.5	85.4	86.4	87.4	88.4	89.4	90.4	91.4	92.2
100°	107.3	108.5	109.5	110.6	111.6	112.6	113.4	114.3	115.2	116.0	116.6
102.5°	135.8	136.4	137.0	137.7	138.4	139.3	140.4	141.6	142.7	143.9	144.4
105°	177.6	178.0	178.3	178.7	179.0	180.1	181.6	183.2	184.8	186.3	186.3
107.5°	226.3	226.5	226.7	226.9	227.1	227.5	228.2	228.8	229.4	230.0	230.7
110°	256.6	256.9	257.3	257.6	258.0	258.3	258.7	259.0	259.4	259.7	260.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.2	288.4	288.6	288.8	289.0	289.1	289.2	289.3	289.4	289.4	290.3
115°	335.6	336.1	336.6	337.1	337.7	337.8	337.4	337.1	336.7	336.4	336.5
117.5°	383.2	383.6	384.0	384.3	384.7	384.6	384.2	383.6	383.2	382.7	382.7
120°	412.9	413.9	415.1	416.1	417.2	417.3	416.4	415.5	414.7	413.7	413.5
122.5°	443.9	444.6	445.5	446.2	447.0	447.2	446.7	446.3	445.8	445.4	444.8
125°	491.1	491.6	492.1	492.7	493.2	493.3	492.9	492.6	492.2	491.9	491.2
127.5°	534.7	535.8	536.9	538.1	539.2	539.6	539.2	538.8	538.4	538.0	537.0
130°	563.7	565.1	566.5	567.9	569.4	569.8	569.3	568.8	568.3	567.6	566.9
132.5°	592.8	594.2	595.6	597.0	598.4	599.0	598.5	598.1	597.7	597.3	596.5
135°	637.1	638.2	639.2	640.4	641.4	641.9	641.7	641.5	641.3	641.2	640.5
137.5°	678.2	679.1	679.9	680.9	681.8	682.4	682.9	683.3	683.8	684.2	683.5
140°	706.6	707.5	708.4	709.3	710.1	710.6	710.8	711.0	711.2	711.3	711.2
142.5°	732.6	733.5	734.3	735.2	736.1	736.7	737.0	737.3	737.6	737.9	737.7
145°	773.0	773.4	773.7	774.1	774.4	774.8	775.4	775.9	776.4	776.9	776.8
147.5°	808.4	809.0	809.6	810.2	810.9	811.4	811.9	812.4	812.9	813.4	813.4
150°	832.9	833.3	833.6	834.0	834.4	834.8	835.1	835.5	835.8	836.2	836.2
152.5°	853.2	853.6	854.1	854.6	855.2	855.6	855.8	856.0	856.2	856.4	856.7
155°	885.0	885.0	885.0	885.0	885.0	885.1	885.3	885.6	885.8	885.9	886.6
157.5°	912.2	912.0	911.8	911.6	911.4	911.4	911.5	911.7	911.8	911.9	912.7
160°	929.3	929.0	928.6	928.3	927.9	927.8	927.8	927.8	927.8	927.8	928.6
162.5°	944.4	944.0	943.5	943.0	942.5	942.3	942.5	942.6	942.7	942.9	943.7
165°	964.0	963.5	963.0	962.5	961.9	961.7	961.7	961.7	961.7	961.7	962.7
167.5°	979.7	979.0	978.3	977.5	976.8	976.6	976.7	976.8	977.0	977.1	978.3
170°	988.6	987.8	987.1	986.4	985.7	985.3	985.3	985.3	985.3	985.3	986.6
172.5°	995.4	994.8	994.1	993.4	992.7	992.3	992.3	992.3	992.3	992.3	993.4
175°	1002.7	1002.0	1001.4	1000.7	1000.0	999.6	999.6	999.6	999.6	999.6	1000.7
177.5°	1005.7	1005.2	1004.6	1004.0	1003.5	1003.2	1003.2	1003.2	1003.2	1003.2	1004.0
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1592.4	1594.9	1597.3	1598.4	1598.1	1597.9	1597.6	1597.4
5°	1584.0	1587.0	1590.1	1591.3	1590.7	1590.1	1589.5	1588.9
7.5°	1567.2	1569.9	1572.7	1573.9	1573.5	1573.2	1572.8	1572.4
10°	1551.8	1554.5	1557.3	1558.3	1557.7	1557.1	1556.5	1555.9
12.5°	1534.9	1536.9	1538.9	1539.7	1539.4	1539.0	1538.6	1538.3
15°	1504.4	1506.8	1509.3	1509.6	1507.8	1505.9	1504.1	1502.3
17.5°	1465.8	1467.5	1469.3	1469.8	1469.2	1468.4	1467.7	1467.1
20°	1437.3	1438.7	1439.9	1440.0	1439.1	1438.1	1437.2	1436.3
22.5°	1407.2	1408.2	1409.2	1409.1	1408.0	1406.7	1405.6	1404.4
25°	1357.2	1357.6	1357.9	1357.6	1356.6	1355.6	1354.7	1353.8
27.5°	1304.0	1304.2	1304.5	1304.0	1302.9	1301.7	1300.6	1299.4
30°	1267.3	1267.3	1267.3	1266.2	1264.0	1261.9	1259.8	1257.6
32.5°	1228.6	1227.0	1225.3	1223.8	1222.6	1221.4	1220.3	1219.1
35°	1166.0	1164.2	1162.4	1160.6	1159.1	1157.6	1156.1	1154.6
37.5°	1101.3	1099.0	1096.8	1095.2	1094.3	1093.3	1092.3	1091.4
40°	1058.9	1056.5	1054.1	1052.2	1051.0	1049.8	1048.5	1047.3
42.5°	1014.9	1012.5	1010.1	1008.2	1007.0	1005.8	1004.6	1003.4
45°	949.3	945.6	942.0	939.4	937.9	936.3	934.8	933.2
47.5°	880.1	876.6	872.9	870.5	869.1	867.8	866.5	865.1
50°	834.5	831.1	827.7	825.2	823.3	821.4	819.6	817.8
52.5°	788.1	785.3	782.4	780.0	778.2	776.4	774.6	772.7
55°	717.6	714.3	710.9	708.4	706.9	705.4	703.9	702.4
57.5°	648.2	645.3	642.3	639.9	638.1	636.3	634.6	632.8
60°	599.3	596.5	593.8	591.7	590.1	588.5	587.0	585.5
62.5°	552.0	549.3	546.4	544.6	543.5	542.5	541.5	540.5
65°	481.7	479.2	476.8	475.1	474.2	473.3	472.3	471.4
67.5°	411.9	409.8	407.7	406.0	404.7	403.3	402.0	400.8
70°	366.8	364.7	362.5	360.7	359.2	357.7	356.2	354.6
72.5°	321.1	319.2	317.3	316.0	315.2	314.4	313.7	312.9
75°	255.4	253.8	252.3	251.1	250.1	249.2	248.3	247.4
77.5°	193.9	192.9	191.9	191.4	191.4	191.4	191.4	191.4
80°	154.7	154.4	154.1	153.9	153.9	153.9	153.9	153.9
82.5°	119.1	118.5	118.0	117.5	117.2	117.0	116.8	116.5
85°	67.5	66.9	66.2	65.9	65.9	65.9	65.9	65.9
87.5°	27.8	27.7	27.6	27.6	27.6	27.7	27.8	27.9
90°	20.4	21.0	21.7	22.3	22.6	23.0	23.3	23.7
92.5°	31.4	32.0	32.5	32.7	32.5	32.3	32.1	31.9
95°	59.8	60.5	61.2	61.6	61.6	61.6	61.6	61.6
97.5°	93.0	93.8	94.6	95.0	94.9	94.9	94.8	94.7
100°	117.1	117.6	118.2	118.7	119.0	119.3	119.7	120.0
102.5°	144.9	145.4	145.9	146.2	146.1	146.0	146.0	145.9
105°	186.3	186.3	186.3	186.5	186.8	187.2	187.5	187.9
107.5°	231.2	231.8	232.4	232.5	232.3	232.1	231.9	231.7
110°	261.2	261.9	262.6	262.8	262.4	262.1	261.7	261.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.1	292.0	292.9	293.2	293.2	293.1	293.0	293.0
115°	336.7	336.9	337.1	337.1	336.9	336.7	336.5	336.4
117.5°	382.7	382.6	382.6	382.3	381.9	381.4	380.9	380.4
120°	413.3	413.2	413.0	412.7	412.4	412.0	411.7	411.3
122.5°	444.4	443.9	443.5	443.0	442.5	442.0	441.5	441.0
125°	490.5	489.8	489.1	488.4	487.7	487.0	486.3	485.5
127.5°	536.0	535.0	534.1	533.2	532.4	531.6	530.8	530.0
130°	566.3	565.6	564.9	563.9	562.7	561.5	560.3	559.0
132.5°	595.7	594.8	594.0	593.1	592.2	591.2	590.3	589.4
135°	639.7	639.0	638.3	637.8	637.4	637.1	636.7	636.4
137.5°	682.8	682.1	681.3	680.5	679.9	679.2	678.6	677.9
140°	711.0	710.8	710.6	710.0	708.7	707.5	706.3	705.1
142.5°	737.6	737.4	737.2	736.7	735.7	734.8	733.8	732.9
145°	776.6	776.4	776.2	775.8	775.1	774.4	773.7	773.0
147.5°	813.4	813.4	813.4	812.8	811.8	810.7	809.7	808.7
150°	836.2	836.2	836.2	835.7	834.6	833.5	832.4	831.4
152.5°	856.9	857.2	857.5	857.2	856.3	855.4	854.4	853.5
155°	887.3	888.0	888.7	888.4	887.2	886.0	884.7	883.5
157.5°	913.4	914.1	914.8	914.7	913.8	912.8	911.8	910.8
160°	929.5	930.4	931.2	931.3	930.6	929.9	929.2	928.5
162.5°	944.6	945.5	946.4	946.2	945.1	944.0	942.9	941.8
165°	963.8	964.8	965.9	965.8	964.6	963.3	962.1	960.9
167.5°	979.4	980.4	981.5	981.5	980.4	979.4	978.3	977.1
170°	987.8	989.1	990.3	990.3	989.1	987.8	986.6	985.3
172.5°	994.5	995.6	996.6	996.6	995.3	994.1	992.9	991.7
175°	1001.7	1002.7	1003.8	1003.7	1002.5	1001.3	1000.0	998.8
177.5°	1004.9	1005.7	1006.5	1006.5	1005.5	1004.5	1003.6	1002.6
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1

(END OF REPORT)