

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: P333426-840

Luminaire Tested: **S125DIW-S850D1560U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333426-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S850D1560U840-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9615.3 lumens  
Efficiency: N/A  
Efficacy: 141.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

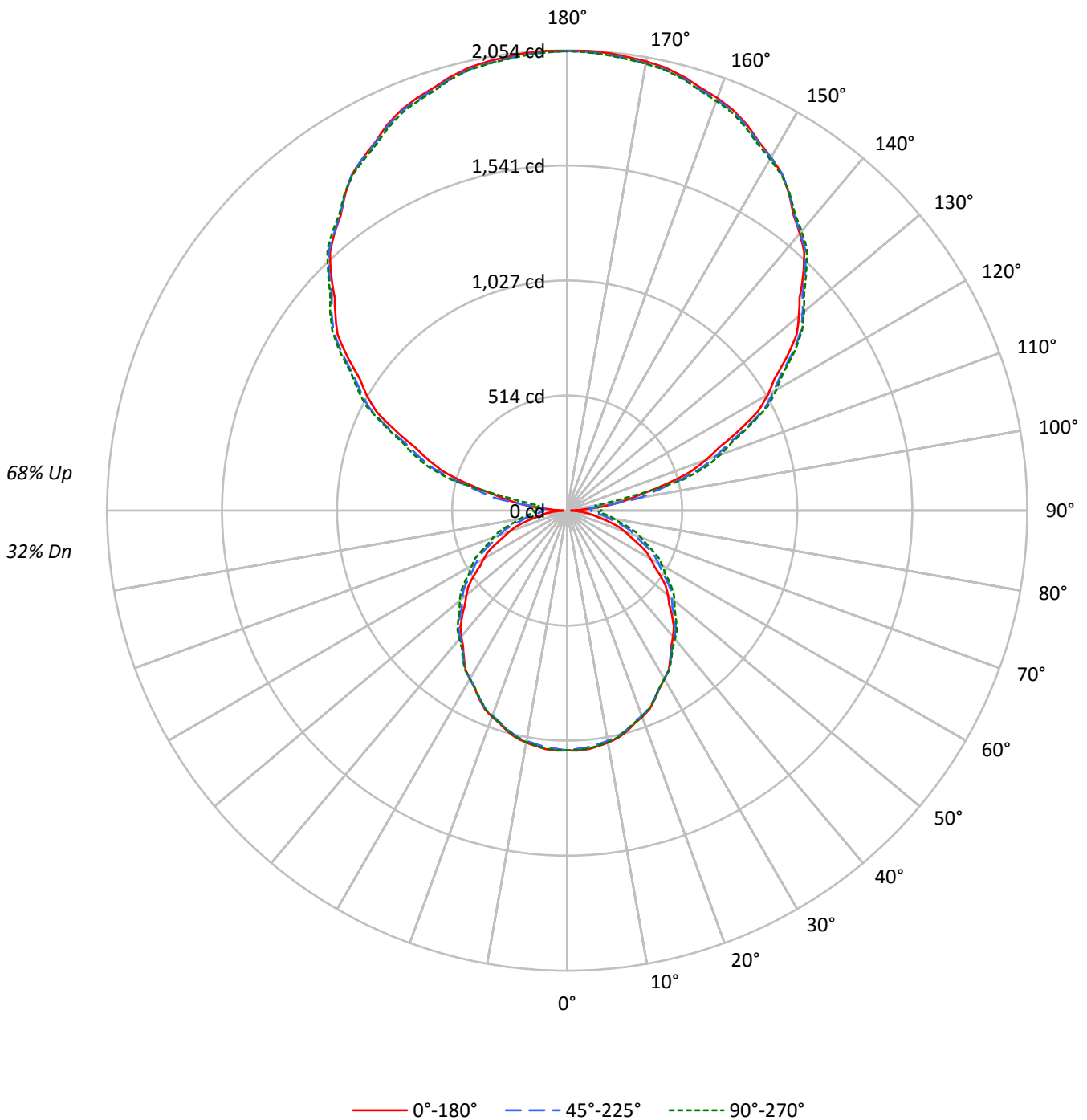
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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CATALOG NUMBER: S125DIW-S850D1560U840-4F0-1E-UDD-D

**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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	32
1	93	89	85	81	84	80	77	74	64	61	59	48	47	46	35	34	33	26
2	85	77	71	66	76	70	65	60	55	52	49	42	40	38	30	29	27	22
3	77	68	60	55	69	61	55	50	49	44	41	37	34	32	26	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	65	53	45	39	58	48	41	36	38	33	29	29	26	23	21	19	17	13
6	59	47	39	34	53	43	36	31	34	29	25	27	23	20	19	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	20	18	17	15	13	10
8	51	39	31	26	45	35	28	24	28	23	20	22	18	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	12	11	8
10	44	32	25	20	39	29	23	19	24	19	16	19	15	13	14	11	10	7

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

	0°	45°	90°
0°	6909	6909	6909
5°	6923	6782	6803
10°	6874	6661	6651
15°	6793	6515	6456
20°	6682	6336	6262
25°	6551	6144	6023
30°	6392	5934	5806
35°	6242	5740	5607
40°	6092	5535	5406
45°	5921	5360	5229
50°	5758	5171	5072
55°	5562	4992	4887
60°	5348	4788	4699
65°	5124	4575	4486
70°	4871	4283	4269
75°	4469	4001	4001
80°	3945	3661	3710
85°	3453	3433	3619



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	1.1
10°-20°	287.2	3.0
20°-30°	427.1	4.4
30°-40°	505.9	5.3
40°-50°	523.0	5.4
50°-60°	481.8	5.0
60°-70°	389.5	4.1
70°-80°	260.8	2.7
80°-90°	139.5	1.5
90°-100°	150.4	1.6
100°-110°	515.3	5.4
110°-120°	870.5	9.1
120°-130°	1090.3	11.3
130°-140°	1159.2	12.1
140°-150°	1081.2	11.2
150°-160°	873.1	9.1
160°-170°	564.7	5.9
170°-180°	194.8	2.0
0°-30°	815.4	8.5
0°-40°	1321.2	13.7
0°-60°	2326.0	24.2
0°-90°	3115.9	32.4
90°-120°	1536.2	16.0
90°-150°	4866.9	50.6
90°-180°	6499.0	67.6
0°-180°	9615.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1070	1067	1060	1068	1068	101
15°	1022	1022	1015	1021	1017	288
25°	928	931	925	929	924	427
35°	803	810	808	811	811	503
45°	662	673	678	686	687	511
55°	509	526	542	553	558	455
65°	350	374	400	415	420	347
75°	193	221	254	274	280	205
85°	58	92	129	151	160	61
90°	18	64	110	141	154	15
95°	100	121	101	130	139	121
105°	456	480	511	531	538	484
115°	846	861	889	901	899	838
125°	1198	1208	1228	1238	1240	1069
135°	1490	1498	1503	1513	1509	1148
145°	1726	1728	1728	1734	1730	1079
155°	1900	1892	1894	1898	1886	875
165°	2005	1997	1998	2006	1994	566
175°	2051	2042	2043	2054	2042	195
180°	2051	2051	2051	2051	2051	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8
2.5°	1072.3	1072.0	1071.6	1071.2	1070.8	1070.0	1068.6	1067.3	1066.0	1064.7	1066.0
5°	1069.8	1069.3	1068.8	1068.3	1067.9	1066.8	1065.2	1063.6	1062.0	1060.4	1062.2
7.5°	1060.4	1060.2	1060.0	1059.8	1059.6	1058.6	1057.0	1055.3	1053.6	1052.0	1053.6
10°	1052.0	1052.0	1052.0	1052.0	1052.0	1051.1	1049.1	1047.3	1045.4	1043.6	1045.2
12.5°	1040.2	1040.4	1040.6	1040.8	1041.0	1040.3	1038.8	1037.3	1035.8	1034.3	1035.6
15°	1021.6	1021.8	1022.0	1022.2	1022.5	1021.8	1020.2	1018.5	1016.8	1015.2	1016.6
17.5°	997.2	997.6	998.2	998.6	999.1	998.5	996.8	995.2	993.6	992.0	993.0
20°	979.6	980.1	980.5	981.0	981.5	980.9	979.3	977.7	975.9	974.3	975.0
22.5°	959.5	960.3	961.1	962.0	962.8	962.3	960.5	958.7	956.8	955.0	955.9
25°	928.2	928.9	929.6	930.3	931.0	930.6	929.3	927.9	926.5	925.0	925.9
27.5°	893.3	894.4	895.4	896.5	897.5	897.2	895.6	894.0	892.4	890.9	891.5
30°	867.4	868.8	870.2	871.5	872.9	872.9	871.5	870.2	868.8	867.4	867.9
32.5°	843.8	845.1	846.3	847.5	848.7	848.8	847.8	846.8	845.8	844.8	845.2
35°	803.3	805.1	806.7	808.3	809.9	810.4	809.7	809.0	808.3	807.6	808.3
37.5°	762.9	764.4	765.9	767.4	768.9	769.5	769.2	769.0	768.8	768.6	769.5
40°	735.2	737.1	738.9	740.8	742.7	743.5	743.3	743.1	742.8	742.6	743.5
42.5°	705.0	707.4	709.8	712.3	714.7	716.2	716.7	717.2	717.7	718.2	719.3
45°	661.8	664.4	666.9	669.4	672.1	673.9	675.1	676.2	677.4	678.5	680.2
47.5°	617.5	620.0	622.3	624.7	627.0	629.2	631.3	633.3	635.2	637.2	639.6
50°	587.3	589.9	592.5	595.0	597.5	600.2	602.7	605.3	607.8	610.4	613.0
52.5°	555.4	558.6	561.7	564.8	567.9	571.1	574.2	577.3	580.5	583.6	586.3
55°	508.7	512.4	516.1	519.9	523.6	527.4	531.1	534.8	538.5	542.2	544.8
57.5°	460.8	465.3	469.8	474.2	478.8	483.1	487.5	491.7	495.9	500.3	503.2
60°	429.0	433.6	438.3	442.9	447.6	452.3	457.0	461.6	466.3	470.9	474.4
62.5°	397.9	402.5	407.3	411.9	416.6	421.4	426.5	431.5	436.5	441.5	445.5
65°	350.3	355.7	361.0	366.4	371.7	377.2	382.8	388.4	394.0	399.6	403.1
67.5°	305.4	310.6	315.8	320.9	326.1	331.5	337.2	343.0	348.6	354.3	358.5
70°	272.7	278.0	283.4	288.8	294.2	299.8	305.9	311.9	318.0	324.1	328.5
72.5°	240.9	246.3	251.9	257.4	263.0	269.0	275.7	282.4	288.9	295.6	300.3
75°	193.0	199.0	205.1	211.2	217.2	224.0	231.5	238.9	246.3	253.8	258.4
77.5°	147.0	154.0	161.1	168.0	175.0	182.1	189.2	196.4	203.6	210.9	215.9
80°	118.6	125.5	132.5	139.5	146.5	153.9	161.9	169.8	177.7	185.6	190.8
82.5°	92.5	99.9	107.2	114.6	122.0	129.7	137.8	145.9	154.0	162.2	167.1
85°	57.7	65.3	73.1	80.8	88.5	96.3	104.5	112.7	120.9	129.0	134.1
87.5°	33.0	41.0	49.0	57.1	65.0	73.2	81.6	90.0	98.4	106.8	112.5
90°	18.3	28.5	38.6	48.8	59.0	69.2	79.5	89.8	100.1	110.3	117.3
92.5°	38.5	43.5	48.6	53.5	58.6	66.1	76.3	86.5	96.7	106.9	113.8
95°	100.3	105.3	110.4	115.4	120.5	120.6	115.6	110.7	105.8	100.9	107.8
97.5°	193.3	200.6	207.8	215.1	222.4	217.1	199.3	181.7	163.9	146.1	141.5
100°	265.4	271.4	277.2	283.2	289.0	296.4	305.2	314.1	322.9	331.6	286.2
102.5°	338.7	344.6	350.3	356.2	361.9	368.9	377.0	385.1	393.1	401.2	396.5
105°	456.4	461.5	466.6	471.6	476.7	482.7	489.7	496.8	503.7	510.7	515.3
107.5°	578.6	581.7	584.9	588.0	591.3	596.5	603.9	611.3	618.6	626.1	630.8
110°	658.0	660.8	663.6	666.4	669.1	674.2	681.4	688.6	695.8	703.0	706.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	733.4	736.4	739.5	742.6	745.6	750.4	757.2	764.0	770.7	777.5	780.4
115°	845.5	848.8	852.1	855.5	858.7	863.6	870.0	876.4	882.8	889.2	892.0
117.5°	961.5	962.5	963.4	964.4	965.4	969.5	976.5	983.5	990.6	997.5	999.8
120°	1034.4	1034.8	1035.1	1035.5	1035.8	1039.3	1045.6	1052.0	1058.3	1064.7	1068.0
122.5°	1098.0	1099.6	1101.3	1102.9	1104.5	1108.1	1113.8	1119.4	1125.1	1130.7	1133.8
125°	1197.6	1199.7	1201.8	1204.0	1206.1	1209.5	1214.2	1218.8	1223.5	1228.1	1230.5
127.5°	1291.7	1293.1	1294.5	1296.1	1297.5	1300.0	1303.6	1307.3	1310.9	1314.5	1317.3
130°	1350.1	1351.5	1352.9	1354.4	1355.8	1358.4	1362.0	1365.6	1369.2	1372.8	1375.0
132.5°	1407.5	1409.5	1411.4	1413.3	1415.2	1417.0	1418.9	1420.6	1422.4	1424.2	1427.2
135°	1490.4	1492.2	1494.0	1495.7	1497.5	1498.9	1499.9	1500.9	1501.8	1502.8	1505.1
137.5°	1566.5	1568.0	1569.6	1571.1	1572.8	1573.7	1573.8	1574.0	1574.2	1574.4	1577.3
140°	1615.5	1616.2	1616.9	1617.5	1618.2	1618.5	1618.4	1618.3	1618.2	1618.1	1621.3
142.5°	1660.5	1660.7	1660.9	1661.1	1661.3	1661.7	1662.2	1662.7	1663.3	1663.9	1666.2
145°	1726.5	1727.0	1727.4	1727.8	1728.3	1728.5	1728.5	1728.5	1728.5	1728.5	1730.0
147.5°	1783.2	1783.0	1782.9	1782.8	1782.6	1782.8	1783.2	1783.6	1784.0	1784.4	1785.2
150°	1819.7	1819.0	1818.4	1817.7	1816.9	1816.9	1817.7	1818.4	1819.0	1819.7	1820.4
152.5°	1854.9	1853.5	1852.0	1850.5	1849.0	1848.6	1849.3	1850.0	1850.7	1851.3	1852.0
155°	1900.3	1898.2	1896.2	1894.2	1892.2	1891.5	1892.2	1892.8	1893.5	1894.2	1895.2
157.5°	1935.2	1934.0	1932.8	1931.6	1930.4	1929.8	1929.9	1930.0	1930.0	1930.1	1931.2
160°	1959.5	1957.5	1955.5	1953.5	1951.5	1950.6	1951.0	1951.3	1951.6	1952.0	1953.3
162.5°	1979.0	1977.0	1975.0	1972.9	1970.9	1970.0	1970.3	1970.8	1971.1	1971.4	1973.3
165°	2005.2	2003.2	2001.0	1999.0	1997.0	1996.2	1996.5	1996.9	1997.2	1997.5	1999.5
167.5°	2024.6	2022.6	2020.4	2018.3	2016.2	2015.4	2015.7	2016.0	2016.4	2016.7	2019.1
170°	2035.6	2033.2	2030.8	2028.4	2026.1	2025.1	2025.4	2025.8	2026.1	2026.4	2029.1
172.5°	2042.9	2040.5	2038.1	2035.8	2033.4	2032.6	2033.2	2033.8	2034.4	2035.0	2037.4
175°	2050.7	2048.7	2046.7	2044.7	2042.7	2041.8	2042.1	2042.5	2042.9	2043.2	2045.9
177.5°	2054.4	2052.8	2051.1	2049.5	2047.9	2047.2	2047.5	2047.8	2048.0	2048.3	2050.2
180°	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8
2.5°	1067.3	1068.6	1070.0	1070.6	1070.4	1070.2	1070.0	1069.8
5°	1064.1	1065.9	1067.8	1068.6	1068.3	1068.1	1067.9	1067.7
7.5°	1055.2	1056.8	1058.4	1059.1	1058.9	1058.7	1058.4	1058.2
10°	1046.8	1048.4	1050.1	1050.8	1050.6	1050.4	1050.1	1049.9
12.5°	1036.8	1038.1	1039.4	1039.7	1039.1	1038.4	1037.8	1037.2
15°	1018.0	1019.5	1020.9	1021.1	1020.2	1019.2	1018.2	1017.3
17.5°	994.1	995.2	996.2	996.5	995.9	995.4	994.8	994.3
20°	975.7	976.4	977.1	977.4	977.4	977.4	977.4	977.4
22.5°	956.8	957.7	958.6	958.8	958.2	957.7	957.0	956.5
25°	927.0	927.9	928.8	928.7	927.5	926.3	925.1	924.0
27.5°	892.1	892.8	893.4	893.6	893.1	892.7	892.3	891.9
30°	868.3	868.8	869.2	869.4	869.1	868.9	868.7	868.4
32.5°	845.7	846.1	846.6	846.7	846.5	846.3	846.0	845.8
35°	809.0	809.7	810.4	810.7	810.7	810.7	810.7	810.7
37.5°	770.4	771.3	772.2	772.7	772.6	772.5	772.4	772.3
40°	744.4	745.4	746.3	747.0	747.4	747.9	748.4	748.8
42.5°	720.4	721.5	722.7	723.3	723.4	723.5	723.6	723.7
45°	681.9	683.5	685.1	686.0	686.3	686.5	686.7	687.0
47.5°	642.0	644.4	646.7	648.2	648.7	649.2	649.7	650.3
50°	615.5	618.1	620.7	622.3	623.0	623.7	624.4	625.1
52.5°	589.1	591.8	594.5	596.2	596.7	597.2	597.7	598.2
55°	547.3	550.0	552.5	554.2	555.1	556.1	557.0	558.0
57.5°	506.1	509.1	512.0	513.8	514.5	515.2	515.9	516.6
60°	477.9	481.4	484.9	487.0	487.7	488.4	489.1	489.8
62.5°	449.3	453.1	457.1	459.4	460.3	461.2	462.0	462.9
65°	406.6	410.1	413.5	415.8	416.8	417.7	418.6	419.5
67.5°	362.7	367.0	371.2	374.0	375.2	376.4	377.6	378.8
70°	333.0	337.4	341.8	344.7	346.1	347.5	348.9	350.3
72.5°	305.2	309.9	314.8	317.7	318.7	319.7	320.7	321.7
75°	263.2	267.8	272.5	275.4	276.5	277.7	278.8	280.0
77.5°	221.1	226.2	231.4	234.4	235.3	236.2	237.1	238.1
80°	195.9	201.1	206.1	209.1	210.2	211.1	212.0	212.9
82.5°	172.0	176.9	181.9	185.2	186.9	188.5	190.3	192.0
85°	139.3	144.4	149.6	153.0	154.9	156.7	158.6	160.5
87.5°	118.3	123.9	129.6	133.4	135.2	137.0	138.9	140.7
90°	124.4	131.5	138.6	143.4	146.0	148.7	151.3	153.9
92.5°	120.7	127.5	134.4	138.9	141.0	143.1	145.2	147.3
95°	114.5	121.4	128.2	132.4	134.0	135.6	137.2	138.9
97.5°	136.8	132.2	127.5	126.0	127.6	129.3	130.8	132.4
100°	240.8	195.3	149.9	127.1	127.2	127.2	127.3	127.3
102.5°	391.6	386.8	381.9	368.8	347.2	325.7	304.1	282.5
105°	520.0	524.7	529.4	532.3	533.6	534.9	536.2	537.6
107.5°	635.4	640.2	644.8	647.3	647.8	648.2	648.6	649.0
110°	709.8	713.3	716.6	719.3	721.3	723.3	725.3	727.2





TEST NUMBER: P333426-840

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	783.4	786.4	789.3	791.3	792.5	793.7	794.9	796.0
115°	894.8	897.7	900.6	901.7	901.0	900.4	899.8	899.2
117.5°	1002.0	1004.2	1006.3	1007.8	1008.6	1009.3	1010.0	1010.7
120°	1071.3	1074.6	1077.8	1079.3	1079.0	1078.8	1078.5	1078.2
122.5°	1136.9	1140.0	1143.1	1144.4	1143.8	1143.3	1142.7	1142.2
125°	1232.8	1235.3	1237.6	1238.9	1239.0	1239.2	1239.3	1239.5
127.5°	1319.9	1322.6	1325.3	1326.2	1324.9	1323.8	1322.7	1321.5
130°	1377.3	1379.6	1381.8	1382.7	1382.1	1381.6	1381.1	1380.6
132.5°	1430.3	1433.4	1436.4	1437.5	1436.8	1436.1	1435.4	1434.7
135°	1507.4	1509.8	1512.2	1512.9	1512.1	1511.2	1510.4	1509.4
137.5°	1580.1	1583.1	1585.9	1586.9	1586.1	1585.3	1584.5	1583.7
140°	1624.6	1627.8	1631.0	1632.1	1631.0	1629.9	1628.8	1627.7
142.5°	1668.5	1670.8	1673.1	1673.8	1672.6	1671.5	1670.4	1669.4
145°	1731.5	1733.0	1734.4	1734.6	1733.6	1732.5	1731.4	1730.3
147.5°	1785.9	1786.8	1787.6	1787.0	1784.9	1782.9	1780.9	1778.9
150°	1821.0	1821.7	1822.4	1821.5	1819.1	1816.5	1814.1	1811.6
152.5°	1852.7	1853.3	1854.0	1853.1	1850.8	1848.4	1846.0	1843.6
155°	1896.2	1897.2	1898.2	1897.3	1894.7	1892.0	1889.3	1886.5
157.5°	1932.2	1933.3	1934.4	1933.6	1930.9	1928.1	1925.4	1922.8
160°	1954.6	1956.0	1957.3	1956.7	1954.0	1951.3	1948.5	1945.9
162.5°	1975.2	1977.1	1978.9	1978.4	1975.5	1972.5	1969.5	1966.5
165°	2001.6	2003.7	2005.7	2005.3	2002.7	1999.9	1997.2	1994.5
167.5°	2021.5	2024.0	2026.4	2026.1	2023.1	2020.0	2017.0	2014.0
170°	2031.8	2034.6	2037.2	2037.1	2034.1	2031.0	2027.9	2024.9
172.5°	2039.8	2042.3	2044.7	2044.4	2041.3	2038.3	2035.3	2032.3
175°	2048.5	2051.2	2054.0	2053.8	2050.7	2047.7	2044.7	2041.6
177.5°	2052.1	2054.0	2055.9	2055.8	2053.6	2051.4	2049.2	2047.1
180°	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7

(END OF REPORT)