

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: P332792-840

Luminaire Tested: **S124DIW-S795D1050U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332792-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1050U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7114.0 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

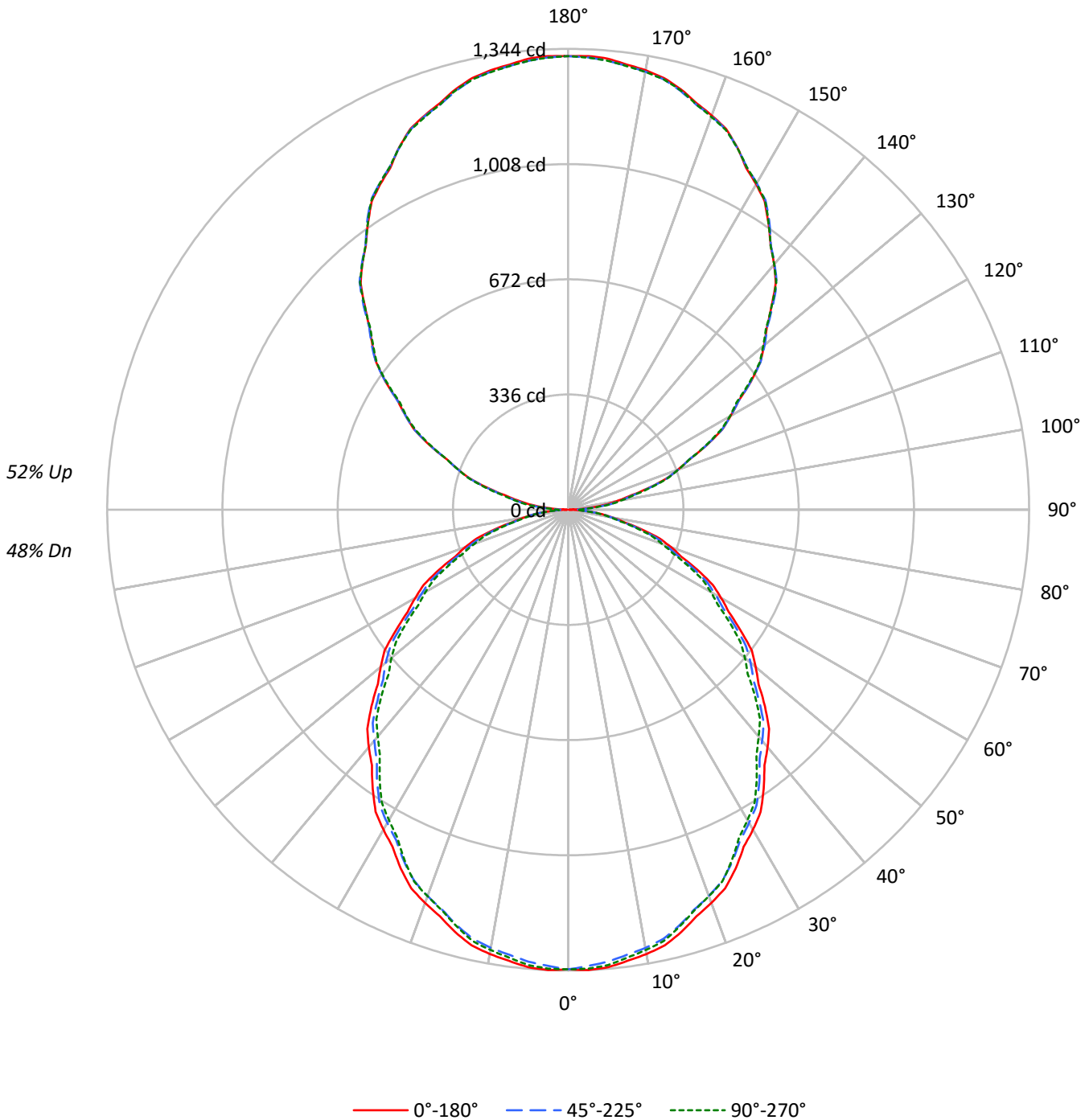
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46	41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	28	25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17
8	54	41	34	28	49	38	32	27	33	27	24	28	24	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10823	10823	10823
5°	10855	10724	10802
10°	10787	10637	10690
15°	10657	10486	10513
20°	10483	10299	10308
25°	10286	10085	10056
30°	10043	9833	9743
35°	9792	9570	9443
40°	9531	9271	9101
45°	9259	8977	8805
50°	8959	8715	8446
55°	8633	8376	8103
60°	8307	7995	7753
65°	7941	7633	7324
70°	7530	7152	6871
75°	6903	6569	6400
80°	6141	5890	5742
85°	5372	5169	5067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.2	1.8
10°-20°	355.7	5.0
20°-30°	523.5	7.4
30°-40°	608.6	8.6
40°-50°	608.7	8.6
50°-60°	532.4	7.5
60°-70°	395.4	5.6
70°-80°	224.6	3.2
80°-90°	68.8	1.0
90°-100°	87.2	1.2
100°-110°	258.4	3.6
110°-120°	438.7	6.2
120°-130°	578.4	8.1
130°-140°	649.6	9.1
140°-150°	638.4	9.0
150°-160°	536.9	7.5
160°-170°	357.2	5.0
170°-180°	125.1	1.8
0°-30°	1005.5	14.1
0°-40°	1614.1	22.7
0°-60°	2755.2	38.7
0°-90°	3444.0	48.4
90°-120°	784.3	11.0
90°-150°	2650.7	37.3
90°-180°	3670.0	51.6
0°-180°	7114.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1340	1335	1323	1334	1333	127
15°	1275	1270	1255	1260	1258	359
25°	1155	1147	1132	1133	1129	531
35°	994	986	971	964	958	621
45°	811	803	786	775	771	625
55°	613	609	595	583	576	549
65°	416	410	400	389	383	411
75°	221	216	211	206	205	235
85°	58	58	56	56	55	64
90°	3	14	22	28	31	7
95°	61	70	78	81	81	68
105°	238	240	244	247	250	253
115°	446	446	444	443	442	440
125°	650	650	649	647	644	579
135°	838	844	844	842	839	648
145°	1018	1022	1023	1022	1019	637
155°	1166	1166	1165	1169	1165	536
165°	1270	1267	1264	1270	1266	358
175°	1321	1316	1315	1321	1315	125
180°	1323	1323	1323	1323	1323	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1344.0	1343.4	1342.8	1342.3	1341.7	1340.4	1338.3	1336.2	1334.0	1332.0	1333.8
5°	1339.5	1338.6	1337.6	1336.7	1335.6	1333.8	1331.2	1328.6	1326.0	1323.3	1326.0
7.5°	1327.1	1326.1	1325.1	1324.1	1323.2	1321.3	1318.4	1315.5	1312.5	1309.6	1311.7
10°	1315.9	1314.9	1313.9	1313.0	1312.0	1310.0	1306.9	1303.8	1300.7	1297.6	1299.5
12.5°	1301.2	1300.3	1299.3	1298.4	1297.5	1295.3	1292.0	1288.7	1285.5	1282.1	1284.2
15°	1275.1	1274.0	1273.1	1272.1	1271.2	1269.0	1265.4	1261.8	1258.2	1254.7	1256.1
17.5°	1243.4	1242.2	1241.0	1239.9	1238.7	1236.4	1233.0	1229.6	1226.2	1222.8	1223.8
20°	1220.2	1219.0	1217.9	1216.7	1215.5	1213.0	1209.5	1205.9	1202.3	1198.8	1199.5
22.5°	1195.4	1193.8	1192.1	1190.6	1189.0	1186.5	1182.9	1179.3	1175.7	1172.2	1173.5
25°	1154.7	1153.1	1151.3	1149.7	1148.0	1145.5	1142.2	1138.8	1135.5	1132.2	1132.4
27.5°	1108.3	1106.6	1104.9	1103.2	1101.5	1099.0	1095.9	1092.9	1089.7	1086.6	1086.0
30°	1077.4	1075.5	1073.6	1071.7	1069.8	1067.2	1064.1	1061.1	1057.9	1054.8	1053.9
32.5°	1044.7	1043.0	1041.3	1039.6	1037.8	1035.3	1032.1	1028.7	1025.5	1022.2	1021.1
35°	993.6	991.9	990.3	988.6	986.9	984.4	981.1	977.8	974.4	971.1	969.4
37.5°	939.7	938.2	936.6	935.1	933.5	931.0	927.5	923.8	920.3	916.7	914.8
40°	904.4	902.5	900.6	898.7	896.8	894.0	890.5	886.9	883.3	879.7	877.4
42.5°	866.7	865.5	864.3	863.2	862.0	859.5	855.6	851.6	847.6	843.6	840.9
45°	811.0	809.3	807.7	806.0	804.4	801.5	797.8	794.0	790.1	786.3	783.7
47.5°	752.8	751.6	750.5	749.3	748.2	745.9	742.4	738.8	735.3	731.7	728.7
50°	713.3	712.3	711.3	710.3	709.4	707.3	704.0	700.6	697.2	693.9	690.5
52.5°	674.6	673.5	672.3	671.2	669.9	667.6	664.1	660.6	657.0	653.5	650.6
55°	613.4	612.6	611.9	611.2	610.5	608.4	605.1	601.8	598.4	595.1	592.2
57.5°	554.9	554.1	553.3	552.5	551.7	549.6	546.3	543.0	539.8	536.4	533.7
60°	514.5	513.3	512.1	511.0	509.8	507.6	504.5	501.4	498.3	495.2	493.0
62.5°	475.0	474.0	473.0	472.0	471.0	468.9	465.5	462.2	459.0	455.7	453.7
65°	415.7	414.5	413.3	412.1	410.9	409.1	406.8	404.3	401.9	399.6	397.2
67.5°	356.0	354.9	353.8	352.6	351.6	349.9	347.6	345.3	343.1	340.7	338.4
70°	319.0	317.4	315.7	314.0	312.4	310.5	308.6	306.7	304.8	303.0	301.0
72.5°	279.5	277.8	276.2	274.5	272.8	271.2	269.7	268.1	266.6	265.1	263.6
75°	221.3	220.0	218.9	217.7	216.5	215.3	214.1	212.9	211.8	210.6	209.5
77.5°	165.6	165.1	164.6	164.1	163.5	162.8	161.7	160.7	159.6	158.5	158.2
80°	132.1	131.4	130.7	130.0	129.3	128.7	128.2	127.7	127.2	126.7	126.2
82.5°	99.5	99.2	98.8	98.5	98.2	98.0	97.9	97.8	97.7	97.6	97.3
85°	58.0	58.0	58.0	58.0	58.0	57.8	57.3	56.9	56.4	55.8	55.8
87.5°	22.9	23.2	23.5	23.9	24.2	24.4	24.6	24.7	24.9	25.1	25.4
90°	3.0	5.6	8.1	10.6	13.0	15.2	17.1	18.9	20.7	22.5	23.8
92.5°	21.9	24.7	27.7	30.5	33.3	35.4	36.7	38.0	39.3	40.5	41.3
95°	61.4	63.4	65.4	67.6	69.6	71.4	73.0	74.5	76.1	77.8	78.5
97.5°	107.2	108.9	110.5	112.1	113.8	115.5	117.3	119.3	121.1	123.0	123.8
100°	143.2	144.1	145.0	145.9	146.8	148.3	150.4	152.4	154.5	156.5	156.9
102.5°	180.9	181.3	181.6	182.0	182.3	183.4	185.3	187.1	189.0	190.9	191.6
105°	238.3	238.6	238.8	239.0	239.2	239.8	240.8	241.7	242.6	243.5	244.2
107.5°	298.7	299.0	299.2	299.5	299.8	300.0	300.1	300.3	300.4	300.5	301.2
110°	339.6	340.1	340.5	341.0	341.4	341.5	341.3	341.1	340.9	340.6	340.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.2	382.3	382.4	382.4	382.5	382.4	382.0	381.6	381.2	380.8	380.7
115°	446.1	446.1	446.1	446.1	446.1	445.9	445.4	444.9	444.4	444.0	443.7
117.5°	506.2	506.3	506.5	506.8	507.0	506.9	506.5	506.2	505.9	505.5	504.8
120°	546.3	547.2	548.2	549.1	550.0	550.1	549.4	548.7	548.1	547.3	546.2
122.5°	588.0	588.4	588.8	589.2	589.5	589.6	589.2	588.9	588.5	588.2	587.4
125°	649.6	649.6	649.6	649.6	649.6	649.5	649.2	649.0	648.8	648.6	648.1
127.5°	705.5	706.2	706.8	707.5	708.2	708.4	708.0	707.6	707.3	706.9	706.5
130°	744.8	745.5	746.1	746.8	747.5	747.8	747.8	747.8	747.8	747.8	747.4
132.5°	784.9	785.4	785.9	786.4	786.9	787.0	786.9	786.7	786.5	786.3	785.9
135°	837.9	839.2	840.6	841.9	843.3	844.0	844.0	844.0	844.0	844.0	843.5
137.5°	895.5	896.2	896.9	897.5	898.1	898.6	899.0	899.4	899.7	900.1	899.5
140°	934.0	934.5	934.9	935.4	935.8	936.0	936.0	936.0	936.0	936.0	935.8
142.5°	969.3	969.7	970.2	970.6	971.1	971.2	971.0	970.8	970.7	970.5	970.4
145°	1017.9	1018.9	1019.8	1020.7	1021.6	1022.1	1022.4	1022.6	1022.8	1023.0	1022.8
147.5°	1066.2	1067.3	1068.4	1069.4	1070.6	1071.1	1070.9	1070.7	1070.5	1070.3	1070.2
150°	1095.7	1096.6	1097.5	1098.4	1099.3	1099.7	1099.7	1099.7	1099.7	1099.7	1099.7
152.5°	1123.5	1124.1	1124.6	1125.1	1125.7	1126.0	1126.2	1126.4	1126.6	1126.8	1127.3
155°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.2	1165.9	1165.7	1165.5	1165.3	1166.2
157.5°	1202.2	1201.8	1201.4	1201.0	1200.6	1200.4	1200.3	1200.3	1200.2	1200.2	1200.9
160°	1223.6	1223.4	1223.0	1222.8	1222.6	1222.4	1222.1	1221.9	1221.7	1221.5	1222.1
162.5°	1243.1	1242.6	1242.0	1241.4	1240.8	1240.4	1240.2	1240.0	1239.7	1239.5	1240.7
165°	1269.6	1268.9	1268.2	1267.6	1266.9	1266.3	1265.9	1265.4	1265.0	1264.5	1265.9
167.5°	1289.8	1288.9	1288.0	1287.0	1286.1	1285.6	1285.7	1285.7	1285.7	1285.8	1287.1
170°	1301.3	1300.2	1299.0	1297.9	1296.8	1296.3	1296.6	1296.8	1297.0	1297.2	1298.6
172.5°	1309.5	1308.5	1307.6	1306.7	1305.7	1305.3	1305.3	1305.4	1305.4	1305.4	1307.0
175°	1320.7	1319.6	1318.5	1317.4	1316.2	1315.6	1315.2	1315.0	1314.8	1314.6	1316.2
177.5°	1324.4	1323.5	1322.6	1321.7	1320.8	1320.3	1320.3	1320.3	1320.3	1320.3	1321.6
180°	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1335.7	1337.7	1339.6	1340.5	1340.3	1340.1	1339.9	1339.7
5°	1328.6	1331.2	1333.8	1334.9	1334.4	1334.0	1333.5	1333.0
7.5°	1313.8	1316.0	1318.0	1318.9	1318.7	1318.4	1318.1	1317.8
10°	1301.4	1303.3	1305.3	1306.0	1305.5	1304.9	1304.5	1304.0
12.5°	1286.4	1288.4	1290.5	1291.2	1290.6	1289.9	1289.2	1288.6
15°	1257.5	1258.9	1260.3	1260.7	1260.0	1259.3	1258.6	1257.9
17.5°	1224.7	1225.6	1226.5	1226.7	1226.2	1225.7	1225.3	1224.8
20°	1200.2	1200.9	1201.6	1201.7	1201.2	1200.8	1200.3	1199.8
22.5°	1174.7	1176.0	1177.3	1177.5	1176.6	1175.8	1174.9	1174.1
25°	1132.7	1132.9	1133.2	1132.8	1131.9	1130.8	1129.9	1128.9
27.5°	1085.5	1084.9	1084.3	1083.5	1082.3	1081.1	1079.8	1078.6
30°	1052.9	1052.0	1051.0	1050.0	1048.7	1047.5	1046.3	1045.2
32.5°	1019.9	1018.8	1017.6	1016.4	1015.2	1014.0	1012.8	1011.7
35°	967.8	966.0	964.3	962.9	961.7	960.6	959.4	958.2
37.5°	913.0	911.2	909.5	907.8	906.2	904.6	903.0	901.4
40°	874.9	872.6	870.2	868.4	867.2	866.1	864.8	863.6
42.5°	838.1	835.4	832.5	830.8	830.0	829.2	828.4	827.6
45°	781.0	778.4	775.8	774.2	773.4	772.6	771.9	771.2
47.5°	725.8	722.9	719.8	717.5	715.7	713.9	712.1	710.2
50°	687.2	683.9	680.5	678.1	676.7	675.3	673.9	672.5
52.5°	647.6	644.6	641.7	639.3	637.5	635.7	633.9	632.1
55°	589.4	586.5	583.6	581.5	580.1	578.7	577.1	575.7
57.5°	531.0	528.3	525.5	523.5	522.1	520.7	519.4	518.0
60°	490.9	488.8	486.6	484.9	483.7	482.5	481.3	480.2
62.5°	451.7	449.8	447.9	446.3	445.0	443.8	442.7	441.5
65°	394.9	392.4	390.0	388.3	387.1	385.9	384.7	383.4
67.5°	336.2	333.9	331.5	330.2	329.9	329.6	329.2	328.9
70°	299.1	297.2	295.3	294.0	293.3	292.6	291.9	291.1
72.5°	262.1	260.5	259.0	257.9	257.1	256.4	255.7	255.0
75°	208.6	207.6	206.7	206.1	205.9	205.6	205.4	205.2
77.5°	157.9	157.6	157.4	156.9	156.3	155.7	155.1	154.5
80°	125.8	125.3	124.8	124.5	124.2	124.0	123.8	123.5
82.5°	96.9	96.6	96.3	96.1	95.9	95.6	95.4	95.1
85°	55.8	55.8	55.8	55.7	55.5	55.2	55.0	54.7
87.5°	25.7	26.0	26.3	26.4	26.5	26.6	26.7	26.8
90°	25.2	26.6	28.0	28.9	29.3	29.8	30.2	30.7
92.5°	42.1	42.9	43.8	44.3	44.6	44.8	45.1	45.4
95°	79.1	79.8	80.5	80.8	80.8	80.8	80.8	80.8
97.5°	124.6	125.4	126.2	126.6	126.6	126.6	126.6	126.6
100°	157.4	157.8	158.3	158.5	158.5	158.5	158.5	158.5
102.5°	192.2	192.8	193.5	193.9	194.0	194.2	194.4	194.6
105°	244.9	245.5	246.2	246.9	247.6	248.2	248.9	249.6
107.5°	301.8	302.5	303.2	303.4	303.4	303.4	303.3	303.3
110°	339.7	339.3	338.8	339.0	339.6	340.3	341.0	341.7



TEST NUMBER: P332792-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.6	380.5	380.4	380.4	380.6	380.7	380.8	381.0
115°	443.5	443.3	443.1	442.8	442.6	442.4	442.2	441.9
117.5°	504.0	503.2	502.5	501.9	501.4	501.0	500.5	500.1
120°	545.0	543.9	542.8	542.4	542.9	543.3	543.8	544.2
122.5°	586.7	585.9	585.1	584.3	583.5	582.7	581.9	581.1
125°	647.7	647.2	646.8	646.3	645.9	645.4	645.0	644.5
127.5°	706.0	705.6	705.1	704.7	704.3	704.0	703.6	703.3
130°	746.9	746.5	746.0	745.4	744.5	743.6	742.7	741.7
132.5°	785.4	785.0	784.5	784.1	783.8	783.4	782.9	782.6
135°	843.1	842.6	842.2	841.6	840.9	840.2	839.6	838.9
137.5°	898.9	898.3	897.7	897.5	897.6	897.8	897.9	898.0
140°	935.6	935.4	935.1	934.9	934.7	934.5	934.2	934.0
142.5°	970.4	970.3	970.3	970.2	970.2	970.2	970.1	970.1
145°	1022.6	1022.4	1022.1	1021.7	1021.0	1020.3	1019.7	1019.0
147.5°	1070.0	1069.8	1069.5	1069.3	1069.1	1068.9	1068.6	1068.4
150°	1099.7	1099.7	1099.7	1099.6	1099.4	1099.2	1098.9	1098.7
152.5°	1127.8	1128.4	1128.9	1128.9	1128.3	1127.7	1127.1	1126.6
155°	1167.1	1168.0	1168.9	1168.9	1168.0	1167.1	1166.2	1165.3
157.5°	1201.6	1202.2	1203.0	1203.0	1202.1	1201.3	1200.6	1199.8
160°	1222.8	1223.6	1224.3	1224.0	1222.8	1221.7	1220.6	1219.4
162.5°	1241.9	1243.1	1244.5	1244.5	1243.3	1242.2	1241.0	1239.9
165°	1267.2	1268.6	1269.9	1270.1	1269.2	1268.3	1267.4	1266.5
167.5°	1288.5	1289.8	1291.2	1291.2	1289.8	1288.4	1287.0	1285.6
170°	1299.9	1301.3	1302.6	1302.5	1301.0	1299.4	1297.8	1296.2
172.5°	1308.5	1310.0	1311.6	1311.5	1310.0	1308.4	1306.8	1305.1
175°	1317.8	1319.4	1321.0	1321.0	1319.4	1317.8	1316.2	1314.6
177.5°	1322.9	1324.1	1325.4	1325.3	1323.8	1322.4	1321.0	1319.5
180°	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8

(END OF REPORT)