

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: P332792-927

Luminaire Tested: **S124DIW-S795D1050U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332792-927  
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-S795D1050U927-4F0-1E-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**

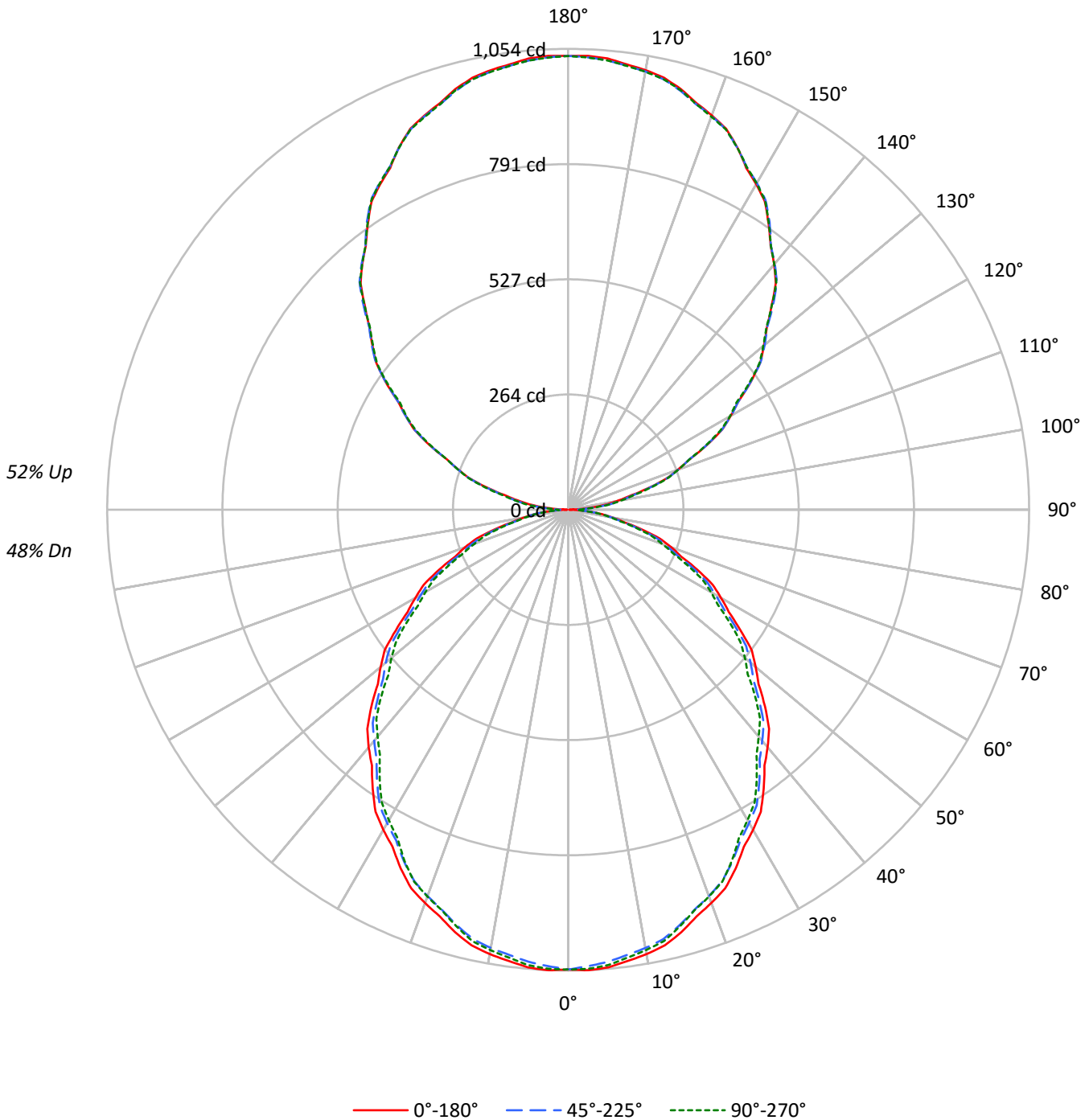
Lumens per Lamp: N/A  
Luminaire Lumens: 5580.5 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (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	51	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°	8490	8490	8490
5°	8515	8413	8474
10°	8461	8344	8385
15°	8359	8226	8247
20°	8223	8079	8086
25°	8068	7911	7888
30°	7879	7713	7643
35°	7681	7508	7407
40°	7477	7273	7140
45°	7263	7042	6907
50°	7027	6836	6625
55°	6773	6570	6356
60°	6516	6273	6082
65°	6229	5989	5746
70°	5908	5611	5391
75°	5415	5153	5022
80°	4816	4621	4505
85°	4215	4057	3974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.0	1.8
10°-20°	279.0	5.0
20°-30°	410.7	7.4
30°-40°	477.4	8.6
40°-50°	477.5	8.6
50°-60°	417.6	7.5
60°-70°	310.2	5.6
70°-80°	176.2	3.2
80°-90°	54.0	1.0
90°-100°	68.4	1.2
100°-110°	202.7	3.6
110°-120°	344.1	6.2
120°-130°	453.7	8.1
130°-140°	509.6	9.1
140°-150°	500.8	9.0
150°-160°	421.2	7.5
160°-170°	280.2	5.0
170°-180°	98.1	1.8
0°-30°	788.7	14.1
0°-40°	1266.2	22.7
0°-60°	2161.3	38.7
0°-90°	2701.6	48.4
90°-120°	615.3	11.0
90°-150°	2079.4	37.3
90°-180°	2879.0	51.6
0°-180°	5580.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1047	1038	1047	1046	100
15°	1000	996	984	989	987	282
25°	906	900	888	889	886	417
35°	779	773	762	756	752	487
45°	636	630	617	608	605	490
55°	481	478	467	457	452	431
65°	326	322	314	305	301	323
75°	174	169	165	162	161	184
85°	46	45	44	44	43	50
90°	2	11	18	22	24	5
95°	48	55	61	63	63	54
105°	187	188	191	193	196	198
115°	350	350	348	348	347	345
125°	510	510	509	507	506	454
135°	657	662	662	660	658	508
145°	798	802	802	802	799	500
155°	915	915	914	917	914	421
165°	996	994	992	996	994	281
175°	1036	1032	1031	1036	1031	98
180°	1038	1038	1038	1038	1038	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1054.3	1053.8	1053.4	1053.0	1052.5	1051.5	1049.8	1048.1	1046.5	1044.9	1046.3
5°	1050.8	1050.0	1049.2	1048.5	1047.7	1046.3	1044.3	1042.2	1040.1	1038.1	1040.1
7.5°	1041.0	1040.2	1039.5	1038.7	1038.0	1036.5	1034.2	1031.9	1029.6	1027.3	1029.0
10°	1032.2	1031.5	1030.7	1030.0	1029.2	1027.6	1025.2	1022.8	1020.3	1017.9	1019.4
12.5°	1020.7	1020.0	1019.2	1018.5	1017.8	1016.1	1013.5	1010.9	1008.4	1005.8	1007.4
15°	1000.2	999.4	998.7	997.9	997.2	995.5	992.6	989.8	987.0	984.2	985.3
17.5°	975.4	974.5	973.5	972.6	971.7	969.9	967.3	964.6	961.9	959.3	960.0
20°	957.2	956.2	955.4	954.4	953.5	951.6	948.8	945.9	943.2	940.4	941.0
22.5°	937.7	936.4	935.2	934.0	932.7	930.7	927.9	925.1	922.3	919.5	920.5
25°	905.8	904.5	903.2	901.9	900.6	898.6	896.0	893.3	890.7	888.1	888.3
27.5°	869.4	868.1	866.7	865.4	864.0	862.1	859.7	857.3	854.8	852.4	851.9
30°	845.2	843.7	842.2	840.7	839.2	837.2	834.7	832.3	829.9	827.4	826.7
32.5°	819.5	818.2	816.8	815.5	814.1	812.1	809.6	807.0	804.5	801.8	801.0
35°	779.4	778.1	776.8	775.5	774.2	772.2	769.6	767.0	764.4	761.8	760.4
37.5°	737.1	735.9	734.7	733.6	732.3	730.3	727.5	724.7	721.9	719.1	717.6
40°	709.5	708.0	706.5	705.0	703.5	701.3	698.5	695.7	692.9	690.1	688.2
42.5°	679.9	678.9	678.0	677.2	676.2	674.2	671.1	668.0	664.9	661.8	659.7
45°	636.2	634.9	633.6	632.2	631.0	628.8	625.8	622.8	619.8	616.8	614.7
47.5°	590.5	589.6	588.7	587.8	586.9	585.1	582.3	579.6	576.8	574.0	571.6
50°	559.5	558.7	558.0	557.2	556.5	554.8	552.2	549.6	546.9	544.3	541.7
52.5°	529.2	528.3	527.4	526.5	525.5	523.7	520.9	518.2	515.4	512.6	510.3
55°	481.2	480.5	480.0	479.4	478.9	477.3	474.7	472.1	469.4	466.8	464.5
57.5°	435.3	434.7	434.0	433.4	432.8	431.1	428.6	426.0	423.4	420.8	418.7
60°	403.6	402.7	401.7	400.8	399.9	398.2	395.8	393.3	390.9	388.5	386.7
62.5°	372.6	371.9	371.1	370.3	369.5	367.8	365.2	362.6	360.0	357.4	355.9
65°	326.1	325.2	324.2	323.3	322.3	320.9	319.1	317.2	315.3	313.5	311.6
67.5°	279.2	278.4	277.5	276.6	275.8	274.5	272.7	270.8	269.1	267.3	265.5
70°	250.3	249.0	247.6	246.3	245.0	243.6	242.1	240.6	239.1	237.7	236.1
72.5°	219.3	217.9	216.7	215.3	214.0	212.8	211.6	210.3	209.1	207.9	206.8
75°	173.6	172.6	171.7	170.8	169.8	168.9	167.9	167.0	166.1	165.2	164.4
77.5°	129.9	129.5	129.1	128.7	128.3	127.7	126.8	126.0	125.2	124.4	124.1
80°	103.6	103.1	102.5	102.0	101.4	100.9	100.5	100.2	99.8	99.4	99.0
82.5°	78.0	77.8	77.5	77.2	77.0	76.8	76.8	76.7	76.6	76.5	76.3
85°	45.5	45.5	45.5	45.5	45.5	45.3	44.9	44.6	44.2	43.8	43.8
87.5°	18.0	18.2	18.5	18.8	19.0	19.2	19.3	19.4	19.6	19.7	20.0
90°	2.4	4.4	6.3	8.3	10.2	12.0	13.4	14.8	16.2	17.7	18.7
92.5°	17.2	19.4	21.7	23.9	26.1	27.8	28.8	29.8	30.8	31.8	32.4
95°	48.2	49.7	51.3	53.0	54.6	56.0	57.3	58.5	59.7	61.0	61.6
97.5°	84.1	85.4	86.7	87.9	89.3	90.6	92.1	93.6	95.0	96.5	97.1
100°	112.3	113.0	113.8	114.5	115.2	116.4	118.0	119.5	121.2	122.8	123.1
102.5°	141.9	142.2	142.4	142.8	143.0	143.9	145.4	146.8	148.3	149.7	150.3
105°	187.0	187.2	187.4	187.5	187.7	188.1	188.9	189.6	190.3	191.0	191.5
107.5°	234.3	234.6	234.7	235.0	235.2	235.4	235.4	235.6	235.7	235.8	236.3
110°	266.4	266.8	267.1	267.5	267.8	267.9	267.8	267.6	267.4	267.2	266.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	299.8	299.9	300.0	300.0	300.1	300.0	299.7	299.4	299.0	298.7	298.7
115°	349.9	349.9	349.9	349.9	349.9	349.7	349.4	349.0	348.6	348.3	348.1
117.5°	397.1	397.2	397.4	397.5	397.7	397.6	397.4	397.1	396.9	396.6	396.0
120°	428.6	429.3	430.0	430.7	431.4	431.5	430.9	430.4	429.9	429.4	428.5
122.5°	461.3	461.6	461.8	462.2	462.4	462.5	462.2	461.9	461.7	461.4	460.8
125°	509.6	509.6	509.6	509.6	509.6	509.5	509.3	509.1	509.0	508.8	508.4
127.5°	553.4	554.0	554.4	555.0	555.6	555.7	555.4	555.1	554.8	554.5	554.2
130°	584.2	584.8	585.3	585.8	586.4	586.6	586.6	586.6	586.6	586.6	586.3
132.5°	615.7	616.1	616.5	616.9	617.3	617.3	617.3	617.1	617.0	616.8	616.5
135°	657.3	658.3	659.4	660.4	661.6	662.1	662.1	662.1	662.1	662.1	661.7
137.5°	702.5	703.0	703.5	704.0	704.5	704.9	705.2	705.5	705.8	706.1	705.6
140°	732.7	733.1	733.4	733.8	734.1	734.3	734.3	734.3	734.3	734.3	734.1
142.5°	760.3	760.7	761.0	761.4	761.8	761.8	761.7	761.5	761.4	761.3	761.2
145°	798.5	799.2	799.9	800.7	801.4	801.8	802.0	802.2	802.3	802.5	802.3
147.5°	836.4	837.3	838.1	838.9	839.8	840.2	840.0	839.9	839.7	839.6	839.5
150°	859.5	860.2	860.9	861.7	862.4	862.7	862.7	862.7	862.7	862.7	862.7
152.5°	881.3	881.8	882.2	882.6	883.0	883.3	883.4	883.6	883.8	883.9	884.3
155°	914.9	914.9	914.9	914.9	914.9	914.8	914.6	914.4	914.3	914.1	914.8
157.5°	943.1	942.8	942.5	942.1	941.8	941.7	941.6	941.6	941.5	941.5	942.1
160°	959.8	959.6	959.4	959.3	959.1	958.9	958.7	958.5	958.4	958.2	958.7
162.5°	975.2	974.8	974.3	973.8	973.4	973.0	972.9	972.7	972.5	972.3	973.3
165°	995.9	995.4	994.8	994.3	993.8	993.3	993.0	992.6	992.3	991.9	993.0
167.5°	1011.8	1011.1	1010.3	1009.6	1008.8	1008.4	1008.5	1008.5	1008.5	1008.6	1009.6
170°	1020.8	1019.9	1019.0	1018.1	1017.2	1016.8	1017.1	1017.2	1017.4	1017.6	1018.7
172.5°	1027.2	1026.4	1025.7	1025.0	1024.2	1023.9	1023.9	1024.0	1024.0	1024.0	1025.2
175°	1036.0	1035.1	1034.3	1033.4	1032.5	1032.0	1031.7	1031.6	1031.4	1031.3	1032.5
177.5°	1038.9	1038.2	1037.5	1036.8	1036.1	1035.7	1035.7	1035.7	1035.7	1035.7	1036.7
180°	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1047.8	1049.3	1050.8	1051.5	1051.4	1051.2	1051.1	1050.9
5°	1042.2	1044.3	1046.3	1047.2	1046.8	1046.5	1046.1	1045.7
7.5°	1030.6	1032.3	1033.9	1034.6	1034.4	1034.2	1034.0	1033.7
10°	1020.9	1022.4	1023.9	1024.5	1024.1	1023.7	1023.3	1022.9
12.5°	1009.1	1010.7	1012.3	1012.9	1012.4	1011.9	1011.3	1010.8
15°	986.4	987.5	988.6	989.0	988.4	987.9	987.3	986.7
17.5°	960.7	961.4	962.1	962.3	961.9	961.5	961.2	960.8
20°	941.5	942.1	942.6	942.7	942.3	942.0	941.6	941.2
22.5°	921.5	922.5	923.5	923.7	923.0	922.3	921.6	921.0
25°	888.5	888.7	888.9	888.6	887.9	887.1	886.4	885.6
27.5°	851.5	851.0	850.6	849.9	849.0	848.0	847.1	846.1
30°	825.9	825.2	824.4	823.6	822.7	821.7	820.8	819.9
32.5°	800.0	799.2	798.3	797.3	796.4	795.4	794.5	793.6
35°	759.1	757.8	756.5	755.3	754.4	753.5	752.6	751.6
37.5°	716.2	714.8	713.4	712.1	710.8	709.6	708.4	707.1
40°	686.3	684.5	682.6	681.2	680.2	679.4	678.4	677.5
42.5°	657.4	655.3	653.1	651.7	651.1	650.5	649.8	649.2
45°	612.7	610.6	608.6	607.3	606.7	606.1	605.5	605.0
47.5°	569.3	567.0	564.7	562.8	561.4	560.0	558.6	557.1
50°	539.1	536.5	533.9	532.0	530.8	529.7	528.6	527.5
52.5°	508.0	505.6	503.4	501.5	500.1	498.7	497.3	495.8
55°	462.3	460.1	457.8	456.1	455.0	453.9	452.7	451.6
57.5°	416.5	414.4	412.3	410.7	409.6	408.4	407.4	406.3
60°	385.1	383.4	381.7	380.4	379.5	378.5	377.6	376.7
62.5°	354.3	352.8	351.3	350.1	349.1	348.2	347.3	346.3
65°	309.7	307.8	305.9	304.6	303.6	302.7	301.7	300.8
67.5°	263.7	261.9	260.1	259.0	258.8	258.6	258.3	258.0
70°	234.6	233.1	231.6	230.6	230.0	229.5	228.9	228.4
72.5°	205.6	204.4	203.2	202.3	201.7	201.1	200.6	200.0
75°	163.7	162.9	162.2	161.7	161.5	161.3	161.1	161.0
77.5°	123.9	123.7	123.5	123.1	122.6	122.2	121.7	121.2
80°	98.7	98.3	97.9	97.7	97.4	97.3	97.1	96.9
82.5°	76.0	75.8	75.6	75.4	75.3	75.0	74.9	74.6
85°	43.8	43.8	43.8	43.7	43.6	43.3	43.2	42.9
87.5°	20.1	20.4	20.6	20.7	20.8	20.8	20.9	21.0
90°	19.8	20.8	21.9	22.7	23.0	23.4	23.7	24.1
92.5°	33.0	33.7	34.4	34.8	35.0	35.2	35.4	35.6
95°	62.0	62.6	63.1	63.4	63.4	63.4	63.4	63.4
97.5°	97.8	98.4	99.0	99.3	99.3	99.3	99.3	99.3
100°	123.5	123.8	124.2	124.4	124.4	124.4	124.4	124.4
102.5°	150.8	151.2	151.8	152.1	152.2	152.3	152.5	152.7
105°	192.1	192.6	193.1	193.7	194.2	194.7	195.3	195.8
107.5°	236.8	237.3	237.8	238.0	238.0	238.0	237.9	237.9
110°	266.5	266.2	265.8	265.9	266.4	267.0	267.5	268.1





TEST NUMBER: P332792-927

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	298.6	298.5	298.4	298.4	298.6	298.7	298.7	298.9
115°	347.9	347.8	347.6	347.4	347.2	347.1	346.9	346.7
117.5°	395.4	394.7	394.2	393.7	393.3	393.0	392.6	392.3
120°	427.5	426.7	425.8	425.5	425.9	426.2	426.6	426.9
122.5°	460.3	459.6	459.0	458.4	457.7	457.1	456.5	455.8
125°	508.1	507.7	507.4	507.0	506.7	506.3	506.0	505.6
127.5°	553.8	553.5	553.1	552.8	552.5	552.2	551.9	551.7
130°	585.9	585.6	585.2	584.7	584.0	583.3	582.6	581.9
132.5°	616.1	615.8	615.4	615.1	614.8	614.5	614.2	613.9
135°	661.4	661.0	660.7	660.2	659.7	659.1	658.6	658.1
137.5°	705.1	704.6	704.2	704.0	704.1	704.3	704.3	704.4
140°	734.0	733.8	733.6	733.4	733.2	733.1	732.8	732.7
142.5°	761.2	761.1	761.1	761.0	761.0	761.0	761.0	761.0
145°	802.2	802.0	801.8	801.5	800.9	800.3	799.9	799.3
147.5°	839.3	839.2	839.0	838.8	838.7	838.5	838.3	838.1
150°	862.7	862.7	862.7	862.6	862.4	862.3	862.1	861.9
152.5°	884.7	885.2	885.6	885.6	885.1	884.6	884.2	883.8
155°	915.5	916.2	917.0	917.0	916.2	915.5	914.8	914.1
157.5°	942.6	943.1	943.6	943.6	943.0	942.4	941.8	941.2
160°	959.3	959.8	960.4	960.1	959.3	958.4	957.5	956.6
162.5°	974.2	975.2	976.2	976.2	975.3	974.5	973.5	972.6
165°	994.0	995.1	996.2	996.3	995.6	994.9	994.2	993.5
167.5°	1010.7	1011.8	1012.9	1012.9	1011.8	1010.7	1009.6	1008.4
170°	1019.7	1020.8	1021.8	1021.8	1020.6	1019.3	1018.0	1016.8
172.5°	1026.4	1027.6	1028.9	1028.8	1027.6	1026.4	1025.1	1023.8
175°	1033.7	1035.0	1036.3	1036.3	1035.0	1033.7	1032.5	1031.3
177.5°	1037.8	1038.7	1039.7	1039.7	1038.5	1037.4	1036.3	1035.1
180°	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7

(END OF REPORT)