

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: P333061-935

Luminaire Tested: **S124RDIW-S795D770U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333061-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S795D770U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5409.1 lumens  
Efficiency: N/A  
Efficacy: 120.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

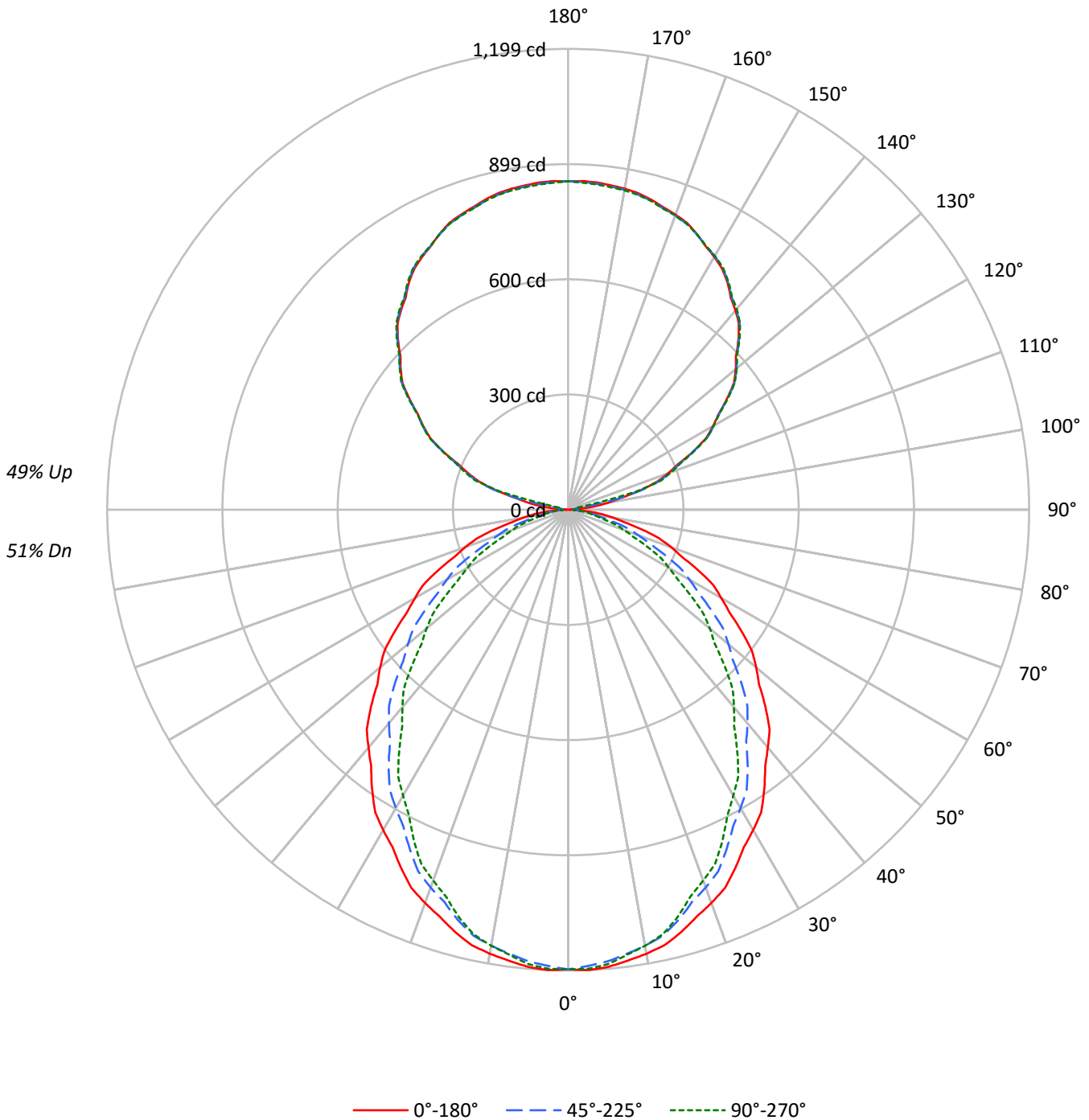
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70	62	60	59	51	50	49	44
2	90	82	76	71	83	76	71	67	65	61	58	55	52	50	45	43	42	37
3	82	73	66	60	76	68	61	56	58	53	49	49	45	42	40	38	36	32
4	75	65	57	51	69	60	53	48	51	46	42	43	40	36	36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36	39	35	32	33	30	27	24
6	64	52	44	38	59	48	41	36	42	36	32	35	31	28	30	26	24	21
7	59	47	39	33	54	44	37	32	38	32	28	32	28	25	27	24	21	19
8	55	43	35	30	51	40	33	28	35	29	25	30	25	22	25	22	19	17
9	51	39	31	26	47	36	30	25	32	26	23	27	23	20	23	20	17	15
10	48	36	29	24	44	33	27	23	29	24	20	25	21	18	21	18	16	14

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

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.4	2.1
10°-20°	313.3	5.8
20°-30°	452.4	8.4
30°-40°	512.8	9.5
40°-50°	495.2	9.2
50°-60°	411.8	7.6
60°-70°	284.4	5.3
70°-80°	144.1	2.7
80°-90°	39.4	0.7
90°-100°	29.2	0.5
100°-110°	186.3	3.4
110°-120°	356.5	6.6
120°-130°	452.5	8.4
130°-140°	484.2	9.0
140°-150°	452.7	8.4
150°-160°	365.1	6.7
160°-170°	235.5	4.4
170°-180°	81.2	1.5
0°-30°	878.1	16.2
0°-40°	1390.9	25.7
0°-60°	2297.9	42.5
0°-90°	2765.9	51.1
90°-120°	572.0	10.6
90°-150°	1961.4	36.3
90°-180°	2643.0	48.9
0°-180°	5409.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	2	9	14	18	19	4
95°	35	15	14	18	18	45
105°	192	196	199	204	182	201
115°	359	361	360	362	362	353
125°	505	507	506	508	509	451
135°	626	626	628	630	631	482
145°	722	724	724	725	726	451
155°	792	792	791	793	791	365
165°	835	832	832	837	832	236
175°	854	851	851	856	849	81
180°	854	854	854	854	854	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.2	16.3	15.2	14.3	13.3	12.8	12.9	12.9	13.0	13.1	13.1
90°	1.9	3.4	5.1	6.6	8.2	9.6	10.7	11.8	12.9	14.0	14.9
92.5°	8.1	8.2	8.3	8.3	8.4	9.0	10.2	11.3	12.4	13.5	14.4
95°	35.1	30.3	25.5	20.7	15.8	13.5	13.6	13.8	13.9	14.0	14.9
97.5°	74.6	77.7	80.7	83.7	86.7	80.2	64.4	48.6	32.7	16.9	17.0
100°	104.8	107.4	109.9	112.4	115.0	106.5	87.0	67.3	47.7	28.2	25.7
102.5°	138.5	140.4	142.3	144.2	146.0	145.7	143.2	140.6	138.0	135.5	109.4
105°	192.3	193.2	194.1	194.9	195.8	196.6	197.3	197.9	198.7	199.4	200.7
107.5°	242.4	242.8	243.2	243.7	244.1	244.8	245.7	246.7	247.6	248.6	249.3
110°	276.1	276.6	277.0	277.4	277.8	278.4	279.3	280.2	281.0	281.8	282.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.8	309.6	310.4	311.1	311.9	312.5	312.9	313.2	313.7	314.1	314.0
115°	359.2	359.6	360.1	360.4	360.8	361.0	360.8	360.8	360.6	360.4	360.8
117.5°	404.6	405.1	405.7	406.2	406.8	407.3	407.6	407.9	408.2	408.5	408.5
120°	435.2	435.8	436.4	437.0	437.5	437.7	437.6	437.5	437.3	437.1	437.5
122.5°	463.9	464.2	464.5	464.9	465.2	465.5	465.7	465.9	466.1	466.3	466.5
125°	504.9	505.5	506.0	506.6	507.1	507.3	507.0	506.8	506.4	506.2	506.6
127.5°	543.7	543.9	544.1	544.2	544.3	544.8	545.4	546.0	546.6	547.3	547.3
130°	568.8	568.9	569.1	569.2	569.4	569.6	570.1	570.5	570.9	571.4	571.5
132.5°	591.9	592.1	592.4	592.5	592.8	593.2	593.7	594.3	594.9	595.4	595.6
135°	626.3	626.2	626.0	625.9	625.8	625.9	626.5	627.1	627.7	628.3	628.5
137.5°	656.9	656.9	657.0	657.0	657.1	657.5	658.1	658.7	659.4	660.0	660.2
140°	676.8	677.1	677.3	677.7	678.0	678.2	678.6	678.8	679.1	679.4	679.8
142.5°	694.7	695.3	695.8	696.2	696.7	697.1	697.2	697.4	697.6	697.8	698.1
145°	722.2	722.6	723.1	723.5	723.9	724.1	724.1	724.1	724.1	724.1	724.3
147.5°	744.1	744.9	745.6	746.4	747.3	747.5	747.4	747.3	747.1	747.0	747.1
150°	759.9	760.4	761.0	761.6	762.2	762.4	762.2	762.1	762.0	761.8	761.8
152.5°	773.2	773.6	774.1	774.6	775.0	775.1	774.8	774.6	774.4	774.1	774.3
155°	791.9	792.0	792.1	792.3	792.5	792.3	791.9	791.4	791.0	790.6	791.2
157.5°	807.6	807.5	807.4	807.4	807.3	806.9	806.5	806.0	805.5	805.0	805.7
160°	816.7	816.3	816.0	815.5	815.1	814.8	814.7	814.5	814.3	814.2	815.1
162.5°	824.9	824.4	823.9	823.4	822.8	822.4	822.3	822.2	822.0	821.9	822.8
165°	835.3	834.6	833.9	833.2	832.5	832.2	832.2	832.2	832.2	832.2	833.3
167.5°	843.5	842.7	842.1	841.3	840.5	840.2	840.1	840.0	839.9	839.8	841.0
170°	848.1	847.2	846.4	845.5	844.7	844.3	844.5	844.6	844.7	844.9	846.0
172.5°	851.2	850.3	849.5	848.6	847.7	847.4	847.6	847.7	847.8	848.0	849.1
175°	854.5	853.6	852.8	852.0	851.1	850.8	850.8	851.0	851.2	851.3	852.6
177.5°	856.0	855.2	854.5	853.6	852.8	852.6	852.8	853.0	853.3	853.4	854.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	13.1	13.1	13.1	13.2	13.4	13.7	13.9	14.1
90°	15.8	16.6	17.5	18.0	18.3	18.6	18.9	19.2
92.5°	15.2	16.1	17.0	17.4	17.5	17.6	17.6	17.7
95°	15.8	16.6	17.5	18.0	18.1	18.3	18.4	18.5
97.5°	17.0	17.1	17.2	17.3	17.5	17.7	17.7	17.9
100°	23.3	20.8	18.4	17.3	17.5	17.7	17.7	17.9
102.5°	83.4	57.3	31.3	18.3	18.3	18.3	18.3	18.4
105°	202.0	203.2	204.5	202.6	197.5	192.3	187.3	182.2
107.5°	249.9	250.5	251.2	251.7	252.3	252.8	253.3	253.8
110°	282.4	282.7	283.0	283.4	283.8	284.2	284.6	285.1





TEST NUMBER: P333061-935

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	313.9	313.9	313.8	314.1	314.6	315.1	315.7	316.2
115°	361.0	361.3	361.6	361.7	361.7	361.7	361.7	361.7
117.5°	408.4	408.4	408.3	408.2	408.2	408.1	408.0	408.0
120°	437.7	438.0	438.2	438.2	438.0	437.7	437.5	437.1
122.5°	466.7	466.8	467.0	466.9	466.7	466.3	466.1	465.8
125°	507.0	507.5	507.9	508.2	508.3	508.4	508.6	508.8
127.5°	547.2	547.1	547.0	546.9	546.8	546.6	546.6	546.5
130°	571.6	571.8	572.0	572.0	572.0	572.0	572.0	572.0
132.5°	595.6	595.8	596.0	596.0	595.9	595.7	595.6	595.6
135°	628.8	629.1	629.4	629.6	629.9	630.3	630.5	630.8
137.5°	660.6	660.9	661.2	661.3	661.2	661.2	661.1	661.0
140°	680.2	680.6	681.1	681.4	681.5	681.7	681.8	681.9
142.5°	698.4	698.7	699.0	699.2	699.2	699.2	699.3	699.3
145°	724.4	724.5	724.7	724.9	725.1	725.5	725.7	726.0
147.5°	747.2	747.3	747.4	747.6	747.7	747.9	748.0	748.1
150°	761.8	761.8	761.8	761.9	762.1	762.2	762.3	762.4
152.5°	774.6	774.7	775.0	775.1	775.0	774.9	774.8	774.7
155°	791.7	792.3	792.8	792.9	792.5	792.0	791.6	791.3
157.5°	806.5	807.3	808.0	808.0	807.3	806.5	805.7	805.0
160°	816.0	816.7	817.6	817.6	816.7	816.0	815.1	814.2
162.5°	823.6	824.4	825.3	825.3	824.3	823.3	822.3	821.4
165°	834.4	835.5	836.6	836.6	835.3	834.1	832.8	831.5
167.5°	842.3	843.5	844.8	844.7	843.3	841.9	840.4	839.0
170°	847.1	848.3	849.5	849.3	847.9	846.4	845.1	843.6
172.5°	850.2	851.4	852.5	852.3	850.8	849.3	847.7	846.2
175°	853.9	855.1	856.4	856.2	854.5	852.8	851.1	849.4
177.5°	855.3	856.2	857.1	856.9	855.5	854.1	852.8	851.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5

(END OF REPORT)