

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: P333057-930

Luminaire Tested: **S124RDIW-S795D470U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333057-930
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-S795D470U930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4146.3 lumens
Efficiency: N/A
Efficacy: 110.0 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: Semi-Direct

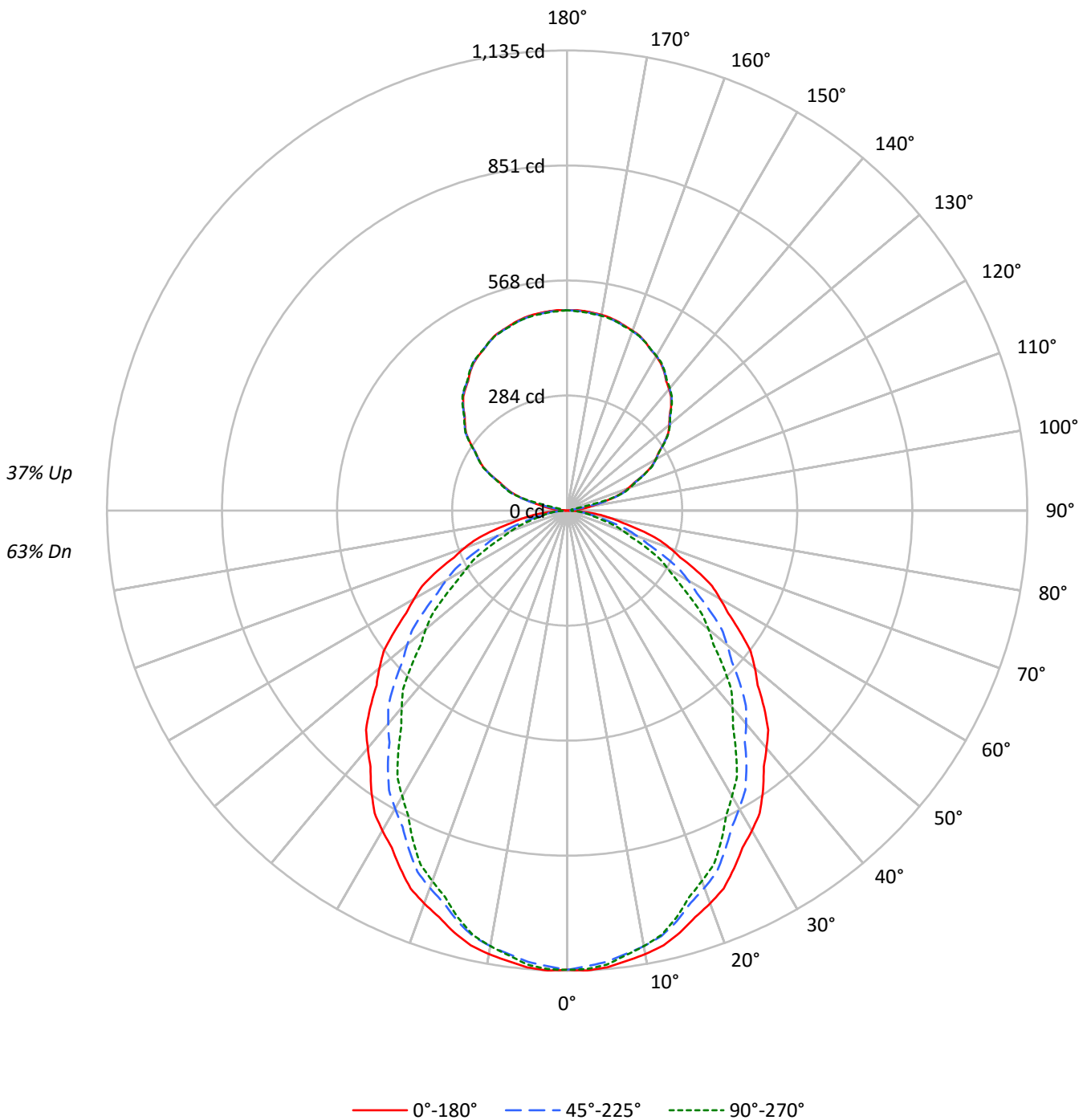
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68
1	101	97	93	90	95	91	88	85	80	78	75	70	68	67	61	60	58
2	92	85	79	74	86	80	75	70	71	66	63	62	59	56	54	52	50
3	84	75	68	62	79	71	64	59	63	57	53	55	51	48	48	45	43
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	40	37
5	71	60	51	45	67	56	49	43	50	44	40	44	40	36	39	35	32
6	66	54	45	40	62	51	43	38	45	39	35	40	35	32	36	32	29
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	33	29	26
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	30	26	23
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	28	24	21
10	49	37	30	25	47	36	29	24	32	26	23	29	24	21	26	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9143	9143	9143
5°	9164	9052	9108
10°	9107	8943	8943
15°	9002	8756	8690
20°	8858	8508	8352
25°	8675	8219	8011
30°	8496	7914	7582
35°	8298	7597	7154
40°	8061	7238	6690
45°	7841	6882	6218
50°	7592	6469	5718
55°	7323	6042	5175
60°	7030	5572	4621
65°	6758	4988	4076
70°	6366	4338	3460
75°	5870	3599	2813
80°	5119	2738	2580
85°	4335	2492	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	2.6
10°-20°	296.7	7.2
20°-30°	428.4	10.3
30°-40°	485.6	11.7
40°-50°	468.9	11.3
50°-60°	389.9	9.4
60°-70°	269.3	6.5
70°-80°	136.5	3.3
80°-90°	36.4	0.9
90°-100°	16.9	0.4
100°-110°	107.7	2.6
110°-120°	206.1	5.0
120°-130°	261.6	6.3
130°-140°	279.9	6.8
140°-150°	261.7	6.3
150°-160°	211.1	5.1
160°-170°	136.1	3.3
170°-180°	46.9	1.1
0°-30°	831.5	20.1
0°-40°	1317.1	31.8
0°-60°	2176.0	52.5
0°-90°	2618.1	63.1
90°-120°	330.7	8.0
90°-150°	1134.0	27.3
90°-180°	1528.0	36.9
0°-180°	4146.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1127	1117	1125	1124	107
15°	1077	1069	1048	1046	1040	303
25°	974	957	923	908	899	449
35°	842	813	771	742	726	526
45°	687	654	603	562	545	529
55°	520	484	429	386	368	465
65°	354	316	261	225	213	349
75°	188	156	115	96	90	199
85°	47	30	27	25	25	53
90°	1	5	8	10	11	3
95°	20	8	8	10	11	26
105°	111	113	115	118	105	116
115°	208	209	208	209	209	204
125°	292	293	293	294	294	261
135°	362	362	363	364	365	279
145°	418	419	419	419	420	261
155°	458	458	457	458	458	211
165°	483	481	481	484	481	136
175°	494	492	492	495	491	47
180°	494	494	494	494	494	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1135.4	1134.7	1134.1	1133.5	1132.9	1131.7	1130.0	1128.4	1126.7	1124.9	1126.7
5°	1130.8	1130.1	1129.3	1128.5	1127.7	1126.3	1123.9	1121.6	1119.2	1117.0	1118.9
7.5°	1120.6	1119.8	1119.0	1118.2	1117.4	1115.5	1112.5	1109.5	1106.4	1103.4	1104.6
10°	1110.9	1109.9	1109.0	1108.0	1107.0	1104.8	1101.4	1097.9	1094.5	1091.0	1091.7
12.5°	1098.4	1097.3	1096.2	1095.0	1094.0	1091.4	1087.3	1083.1	1079.0	1075.0	1075.5
15°	1077.1	1075.4	1073.6	1071.9	1070.2	1066.9	1062.0	1057.2	1052.4	1047.6	1047.2
17.5°	1051.2	1048.7	1046.2	1043.7	1041.2	1037.1	1031.3	1025.5	1019.7	1013.9	1012.8
20°	1031.1	1028.6	1026.1	1023.6	1021.1	1016.6	1010.0	1003.5	996.9	990.3	988.8
22.5°	1008.9	1006.1	1003.3	1000.5	997.7	992.7	985.7	978.7	971.7	964.7	962.4
25°	973.9	970.4	966.9	963.4	960.0	954.3	946.4	938.5	930.6	922.7	919.4
27.5°	937.1	932.8	928.4	924.1	919.7	913.3	904.8	896.4	887.9	879.5	875.5
30°	911.4	906.6	901.8	897.0	892.2	885.3	876.2	867.2	858.0	849.0	844.2
32.5°	884.4	879.0	873.5	868.0	862.7	855.2	845.9	836.5	827.1	817.7	812.2
35°	842.0	835.9	829.7	823.5	817.4	809.5	799.9	790.2	780.6	770.9	764.4
37.5°	796.8	790.4	784.1	777.7	771.4	762.9	752.2	741.5	730.8	720.2	712.8
40°	764.9	758.6	752.2	745.8	739.5	730.8	719.7	708.8	697.8	686.8	678.7
42.5°	734.3	727.7	721.1	714.4	707.7	698.6	687.2	675.7	664.3	652.8	644.6
45°	686.8	679.7	672.5	665.4	658.3	649.0	637.4	625.8	614.2	602.8	593.3
47.5°	637.7	630.4	623.1	615.6	608.3	598.6	586.6	574.5	562.6	550.5	540.7
50°	604.5	597.0	589.4	581.9	574.4	564.4	552.1	539.8	527.4	515.1	505.5
52.5°	570.5	563.1	555.7	548.4	541.0	531.0	518.4	505.7	493.1	480.5	470.7
55°	520.3	512.6	504.9	497.2	489.5	479.4	466.8	454.3	441.8	429.3	419.2
57.5°	470.8	462.7	454.7	446.7	438.6	428.4	416.1	403.8	391.5	379.1	369.0
60°	435.4	427.6	420.0	412.2	404.5	394.5	382.1	369.8	357.5	345.1	335.1
62.5°	403.4	395.4	387.4	379.4	371.4	361.0	348.4	335.7	323.1	310.5	301.2
65°	353.8	345.5	337.2	329.0	320.7	310.4	298.0	285.7	273.4	261.1	252.7
67.5°	302.3	294.4	286.4	278.5	270.5	260.9	249.4	238.0	226.5	215.1	207.9
70°	269.7	261.6	253.5	245.4	237.3	227.8	216.8	205.8	194.9	183.8	177.5
72.5°	235.1	227.7	220.4	213.0	205.7	196.9	186.5	176.1	165.8	155.4	149.9
75°	188.2	181.1	173.9	166.8	159.6	151.6	142.5	133.5	124.4	115.4	110.9
77.5°	140.6	134.6	128.6	122.5	116.4	109.7	102.5	95.1	87.8	80.5	77.9
80°	110.1	104.5	99.0	93.4	87.8	82.1	76.3	70.5	64.7	58.9	58.4
82.5°	83.8	78.7	73.5	68.4	63.3	59.0	55.8	52.4	49.1	45.8	45.3
85°	46.8	43.0	39.1	35.3	31.4	29.2	28.6	28.0	27.5	26.9	26.5
87.5°	16.1	15.2	14.1	13.0	12.0	11.4	11.4	11.4	11.3	11.3	11.3
90°	1.1	2.0	2.9	3.8	4.7	5.5	6.2	6.8	7.5	8.2	8.6
92.5°	4.6	4.7	4.7	4.8	4.9	5.2	5.9	6.5	7.2	7.8	8.3
95°	20.3	17.5	14.8	12.0	9.1	7.8	7.9	8.0	8.1	8.2	8.6
97.5°	43.1	44.9	46.6	48.3	50.1	46.4	37.3	28.0	18.9	9.8	9.8
100°	60.6	62.0	63.6	65.1	66.5	61.6	50.2	38.9	27.6	16.2	14.8
102.5°	80.1	81.2	82.3	83.3	84.5	84.2	82.8	81.3	79.8	78.4	63.3
105°	111.2	111.7	112.2	112.7	113.2	113.7	114.1	114.5	114.9	115.3	116.0
107.5°	140.1	140.4	140.6	140.9	141.1	141.5	142.0	142.6	143.2	143.7	144.1
110°	159.6	159.9	160.1	160.4	160.6	160.9	161.4	162.0	162.5	163.0	163.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.6	179.0	179.4	179.9	180.3	180.7	180.9	181.1	181.3	181.6	181.6
115°	207.7	207.9	208.1	208.4	208.6	208.7	208.6	208.6	208.5	208.4	208.6
117.5°	233.9	234.2	234.6	234.9	235.2	235.5	235.6	235.8	236.0	236.2	236.1
120°	251.6	251.9	252.3	252.6	252.9	253.1	253.0	252.9	252.8	252.7	252.9
122.5°	268.2	268.4	268.6	268.8	269.0	269.1	269.2	269.4	269.5	269.6	269.7
125°	291.9	292.2	292.5	292.9	293.2	293.3	293.1	292.9	292.8	292.6	292.9
127.5°	314.4	314.5	314.5	314.6	314.7	315.0	315.3	315.7	316.1	316.4	316.4
130°	328.8	328.9	329.1	329.1	329.2	329.4	329.6	329.9	330.1	330.4	330.4
132.5°	342.2	342.3	342.4	342.6	342.8	343.0	343.3	343.6	343.9	344.2	344.3
135°	362.1	362.0	361.9	361.8	361.7	361.9	362.2	362.6	362.9	363.2	363.4
137.5°	379.8	379.8	379.8	379.8	379.9	380.1	380.4	380.8	381.2	381.6	381.7
140°	391.3	391.4	391.6	391.8	391.9	392.1	392.2	392.5	392.6	392.8	393.1
142.5°	401.6	401.9	402.3	402.5	402.8	403.0	403.1	403.2	403.3	403.4	403.6
145°	417.5	417.8	418.0	418.2	418.5	418.7	418.7	418.7	418.7	418.7	418.7
147.5°	430.2	430.6	431.0	431.5	432.0	432.2	432.1	432.0	431.9	431.9	431.9
150°	439.4	439.7	440.0	440.3	440.7	440.8	440.7	440.6	440.5	440.4	440.4
152.5°	447.0	447.3	447.5	447.8	448.1	448.1	448.0	447.8	447.7	447.5	447.7
155°	457.8	457.9	458.0	458.0	458.1	458.0	457.8	457.5	457.3	457.1	457.4
157.5°	466.9	466.8	466.8	466.8	466.7	466.5	466.3	465.9	465.7	465.5	465.9
160°	472.2	472.0	471.7	471.5	471.2	471.1	471.0	470.9	470.8	470.8	471.2
162.5°	477.0	476.6	476.3	476.0	475.7	475.5	475.4	475.3	475.2	475.2	475.6
165°	482.9	482.5	482.1	481.7	481.3	481.1	481.1	481.1	481.1	481.1	481.8
167.5°	487.6	487.2	486.8	486.4	485.9	485.7	485.7	485.6	485.6	485.5	486.2
170°	490.3	489.8	489.3	488.9	488.4	488.1	488.2	488.3	488.4	488.4	489.1
172.5°	492.1	491.6	491.1	490.6	490.2	489.9	490.0	490.1	490.2	490.2	490.9
175°	494.0	493.5	493.0	492.5	492.0	491.9	492.0	492.0	492.1	492.2	492.9
177.5°	494.9	494.5	494.0	493.5	493.1	492.9	493.0	493.2	493.3	493.4	493.9
180°	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1128.4	1130.0	1131.7	1132.5	1132.4	1132.2	1132.0	1131.9
5°	1120.8	1122.7	1124.7	1125.4	1125.0	1124.7	1124.3	1123.9
7.5°	1105.9	1107.2	1108.4	1108.6	1108.1	1107.4	1106.9	1106.2
10°	1092.5	1093.2	1094.1	1094.1	1093.2	1092.5	1091.7	1091.0
12.5°	1076.0	1076.4	1076.8	1076.5	1075.5	1074.4	1073.3	1072.2
15°	1046.8	1046.4	1046.0	1045.2	1043.8	1042.4	1041.1	1039.8
17.5°	1011.8	1010.7	1009.6	1008.0	1006.0	1004.0	1001.9	999.9
20°	987.2	985.7	984.1	982.2	979.7	977.1	974.6	972.2
22.5°	960.1	957.7	955.4	953.2	951.2	949.2	947.1	945.1
25°	916.2	912.9	909.6	907.0	905.1	903.2	901.2	899.3
27.5°	871.4	867.4	863.3	859.9	857.1	854.4	851.6	848.8
30°	839.4	834.5	829.7	825.7	822.7	819.6	816.5	813.4
32.5°	806.6	801.0	795.4	791.2	788.2	785.3	782.4	779.4
35°	757.8	751.3	744.8	739.7	736.3	732.8	729.3	725.9
37.5°	705.5	698.1	690.8	685.4	682.0	678.5	675.1	671.6
40°	670.7	662.5	654.4	648.7	645.2	641.7	638.3	634.8
42.5°	636.3	628.1	619.9	613.9	610.3	606.7	603.1	599.4
45°	583.8	574.4	564.9	558.5	555.0	551.5	548.0	544.6
47.5°	530.9	521.1	511.4	504.5	500.8	496.9	493.1	489.3
50°	495.9	486.2	476.5	469.9	466.3	462.6	458.9	455.3
52.5°	460.9	451.1	441.2	434.5	430.6	426.8	423.1	419.2
55°	409.2	399.2	389.2	382.4	378.7	375.0	371.4	367.7
57.5°	358.8	348.6	338.4	332.0	329.2	326.4	323.7	320.9
60°	325.1	315.1	305.1	298.5	295.5	292.4	289.3	286.2
62.5°	292.0	282.7	273.5	267.6	265.1	262.7	260.2	257.7
65°	244.4	236.2	227.9	222.6	220.3	217.9	215.6	213.4
67.5°	200.8	193.7	186.5	181.7	179.2	176.6	174.1	171.5
70°	171.1	164.8	158.4	154.3	152.4	150.4	148.5	146.6
72.5°	144.6	139.1	133.6	130.0	128.3	126.5	124.7	122.9
75°	106.5	102.1	97.6	94.8	93.7	92.5	91.3	90.2
77.5°	75.3	72.7	70.1	68.6	68.3	68.0	67.7	67.3
80°	57.8	57.2	56.7	56.3	56.1	55.8	55.7	55.5
82.5°	44.9	44.5	44.1	43.8	43.6	43.4	43.2	43.0
85°	26.1	25.8	25.4	25.1	25.1	25.1	25.1	25.1
87.5°	11.3	11.2	11.1	11.2	11.3	11.6	11.7	11.9
90°	9.1	9.6	10.1	10.4	10.6	10.8	10.9	11.1
92.5°	8.8	9.3	9.8	10.0	10.1	10.1	10.2	10.2
95°	9.1	9.6	10.1	10.4	10.4	10.5	10.6	10.7
97.5°	9.9	9.9	9.9	10.0	10.1	10.2	10.3	10.4
100°	13.5	12.1	10.7	10.0	10.1	10.2	10.3	10.4
102.5°	48.2	33.2	18.1	10.6	10.6	10.6	10.6	10.7
105°	116.8	117.5	118.2	117.2	114.1	111.2	108.3	105.3
107.5°	144.5	144.8	145.2	145.5	145.9	146.1	146.4	146.8
110°	163.3	163.5	163.6	163.8	164.0	164.3	164.5	164.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	181.5	181.5	181.4	181.6	181.9	182.2	182.5	182.8
115°	208.7	208.9	209.0	209.1	209.1	209.1	209.1	209.1
117.5°	236.1	236.1	236.0	236.0	235.9	235.9	235.9	235.9
120°	253.1	253.2	253.4	253.4	253.2	253.1	252.9	252.7
122.5°	269.8	269.9	269.9	269.9	269.8	269.6	269.5	269.3
125°	293.1	293.3	293.6	293.8	293.8	293.9	294.0	294.1
127.5°	316.3	316.3	316.3	316.2	316.1	316.0	316.0	315.9
130°	330.5	330.6	330.7	330.7	330.7	330.7	330.7	330.7
132.5°	344.4	344.5	344.5	344.5	344.5	344.5	344.4	344.3
135°	363.5	363.7	363.9	364.0	364.2	364.4	364.5	364.7
137.5°	381.9	382.0	382.3	382.3	382.3	382.2	382.2	382.1
140°	393.3	393.5	393.8	394.0	394.0	394.1	394.2	394.3
142.5°	403.7	404.0	404.1	404.2	404.2	404.3	404.3	404.3
145°	418.8	418.9	419.0	419.1	419.2	419.4	419.6	419.7
147.5°	432.0	432.0	432.1	432.2	432.3	432.4	432.4	432.5
150°	440.4	440.4	440.4	440.5	440.6	440.7	440.8	440.8
152.5°	447.8	447.9	448.1	448.1	448.1	448.0	447.9	447.9
155°	457.7	458.0	458.4	458.4	458.2	458.0	457.7	457.5
157.5°	466.3	466.7	467.1	467.1	466.7	466.3	465.9	465.5
160°	471.7	472.2	472.7	472.7	472.2	471.7	471.2	470.8
162.5°	476.1	476.6	477.1	477.1	476.5	476.0	475.4	474.9
165°	482.4	483.1	483.7	483.6	482.9	482.2	481.4	480.7
167.5°	487.0	487.7	488.4	488.4	487.5	486.7	485.9	485.1
170°	489.8	490.4	491.1	491.1	490.2	489.3	488.5	487.7
172.5°	491.5	492.2	492.8	492.8	491.9	491.0	490.1	489.2
175°	493.7	494.4	495.1	495.0	494.0	493.0	492.0	491.1
177.5°	494.5	495.0	495.5	495.4	494.6	493.8	493.0	492.3
180°	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0

(END OF REPORT)