

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: P332441-927

Luminaire Tested: **S123RDIW-S775D1030U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332441-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S775D1030U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5144.2 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

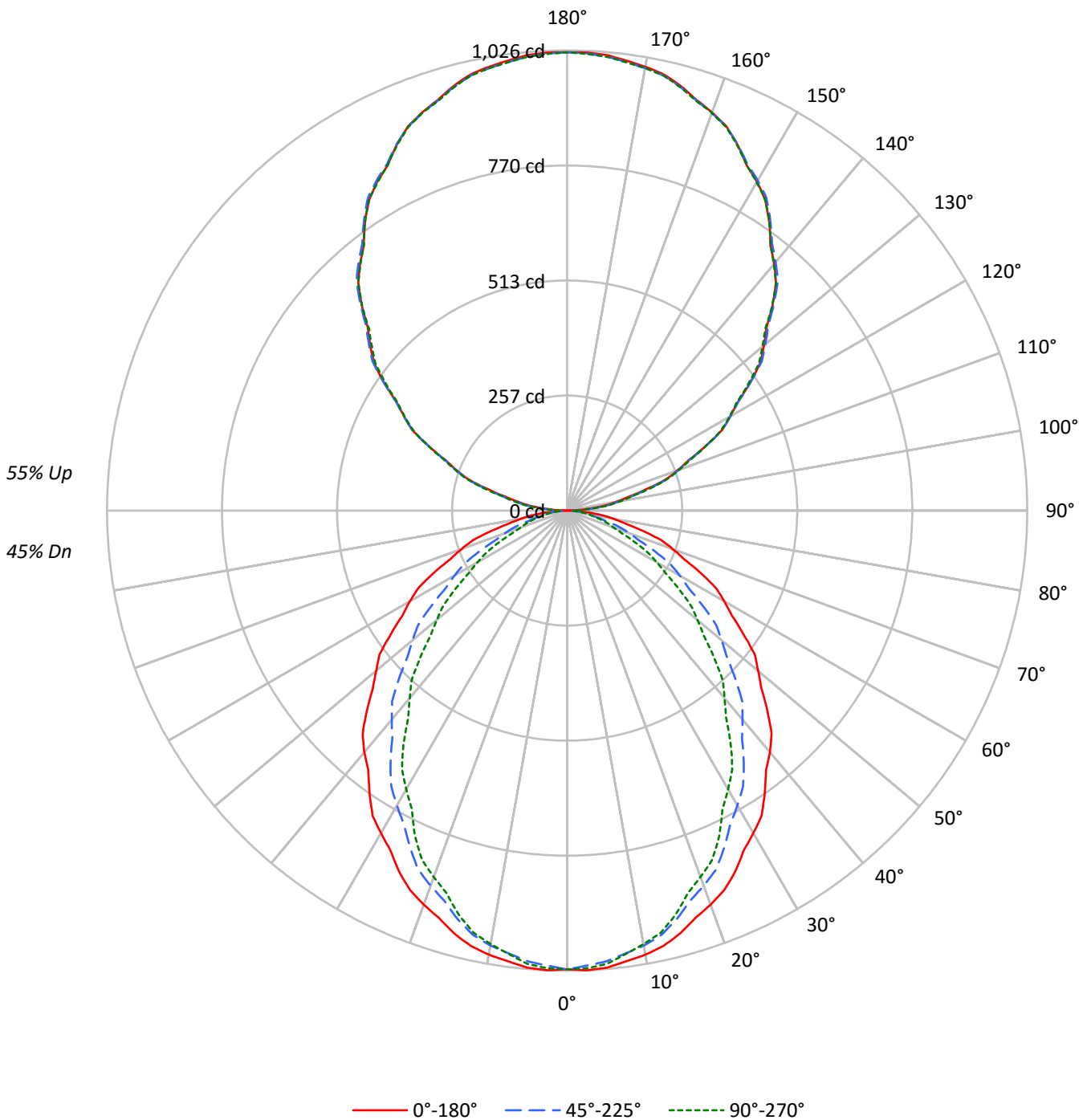
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44
2	88	81	75	70	81	75	70	65	63	59	56	51	49	46	41	39	38
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	36	34	32
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	17	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	1.9
10°-20°	267.2	5.2
20°-30°	384.8	7.5
30°-40°	433.4	8.4
40°-50°	414.6	8.1
50°-60°	339.6	6.6
60°-70°	229.1	4.5
70°-80°	115.3	2.2
80°-90°	33.5	0.7
90°-100°	66.6	1.3
100°-110°	199.2	3.9
110°-120°	338.8	6.6
120°-130°	445.7	8.7
130°-140°	500.9	9.7
140°-150°	492.4	9.6
150°-160°	414.5	8.1
160°-170°	275.9	5.4
170°-180°	96.6	1.9
0°-30°	748.0	14.5
0°-40°	1181.5	23.0
0°-60°	1935.6	37.6
0°-90°	2313.5	45.0
90°-120°	604.6	11.8
90°-150°	2043.6	39.7
90°-180°	2831.0	55.0
0°-180°	5144.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	9	19	22	24	5
95°	47	53	59	62	63	53
105°	181	182	189	190	191	193
115°	341	343	342	343	342	337
125°	499	501	500	497	494	445
135°	648	652	652	649	647	499
145°	786	787	790	789	786	491
155°	900	900	900	903	898	414
165°	980	978	978	982	977	276
175°	1019	1016	1016	1020	1015	97
180°	1022	1022	1022	1022	1022	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.1	14.8	13.5	12.3	11.0	10.6	11.1	11.6	12.0	12.5	12.4
90°	0.8	2.6	4.4	6.2	7.9	10.0	12.3	14.7	17.0	19.3	20.0
92.5°	19.4	20.6	21.9	23.1	24.2	25.5	26.9	28.2	29.5	30.8	31.4
95°	47.4	48.6	49.8	51.1	52.4	53.7	55.1	56.6	58.0	59.4	60.1
97.5°	84.1	85.0	86.0	86.9	87.9	88.8	89.8	90.9	91.9	92.9	93.8
100°	109.2	110.2	111.3	112.3	113.4	114.4	115.3	116.2	117.1	118.0	118.5
102.5°	138.1	138.7	139.3	140.0	140.6	141.5	142.7	143.9	145.0	146.2	146.8
105°	180.6	180.9	181.3	181.6	182.0	183.0	184.6	186.2	187.8	189.4	189.4
107.5°	230.0	230.2	230.4	230.7	230.8	231.3	232.0	232.6	233.2	233.9	234.4
110°	260.9	261.2	261.6	261.9	262.3	262.6	263.0	263.3	263.7	264.0	264.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.9	293.2	293.3	293.6	293.8	293.9	294.0	294.1	294.1	294.2	295.1
115°	341.1	341.6	342.1	342.7	343.3	343.3	342.9	342.6	342.2	341.9	342.1
117.5°	389.6	389.9	390.3	390.6	391.0	390.9	390.5	390.0	389.5	389.1	389.0
120°	419.8	420.8	421.9	422.9	424.1	424.1	423.2	422.3	421.4	420.6	420.3
122.5°	451.2	452.0	452.8	453.5	454.3	454.5	454.1	453.6	453.1	452.7	452.2
125°	499.2	499.7	500.3	500.8	501.4	501.5	501.1	500.7	500.3	500.0	499.3
127.5°	543.5	544.6	545.8	546.9	548.0	548.4	548.0	547.6	547.2	546.8	545.9
130°	573.1	574.5	575.9	577.3	578.8	579.2	578.7	578.1	577.6	577.0	576.3
132.5°	602.5	604.0	605.4	606.9	608.3	608.8	608.4	608.0	607.6	607.2	606.3
135°	647.7	648.7	649.8	650.9	652.0	652.4	652.2	652.0	651.9	651.6	650.9
137.5°	689.4	690.3	691.2	692.1	693.0	693.6	694.1	694.6	695.1	695.5	694.7
140°	718.3	719.2	720.1	721.0	721.8	722.4	722.5	722.8	722.9	723.1	722.9
142.5°	744.7	745.5	746.4	747.3	748.2	748.8	749.1	749.4	749.8	750.1	749.9
145°	785.7	786.1	786.4	786.8	787.1	787.6	788.1	788.7	789.2	789.7	789.6
147.5°	821.7	822.3	822.9	823.6	824.3	824.8	825.3	825.9	826.3	826.8	826.8
150°	846.7	847.1	847.4	847.8	848.1	848.5	848.8	849.2	849.5	849.9	849.9
152.5°	867.3	867.8	868.2	868.8	869.3	869.6	869.8	870.1	870.3	870.4	870.8
155°	899.7	899.7	899.7	899.7	899.7	899.8	899.9	900.2	900.3	900.5	901.2
157.5°	927.3	927.1	926.9	926.6	926.5	926.4	926.5	926.7	926.9	926.9	927.7
160°	944.6	944.3	943.9	943.6	943.2	943.0	943.0	943.0	943.0	943.0	943.9
162.5°	960.0	959.6	959.0	958.5	958.1	957.8	958.0	958.1	958.3	958.5	959.3
165°	979.9	979.4	978.9	978.3	977.8	977.6	977.6	977.6	977.6	977.6	978.6
167.5°	995.9	995.1	994.4	993.7	993.0	992.7	992.8	993.0	993.2	993.2	994.3
170°	1004.8	1004.1	1003.4	1002.7	1002.0	1001.6	1001.6	1001.6	1001.6	1001.6	1002.8
172.5°	1011.9	1011.1	1010.4	1009.7	1009.0	1008.7	1008.7	1008.7	1008.7	1008.7	1009.8
175°	1019.3	1018.6	1017.9	1017.2	1016.4	1016.1	1016.1	1016.1	1016.1	1016.1	1017.2
177.5°	1022.3	1021.8	1021.2	1020.6	1020.0	1019.8	1019.8	1019.8	1019.8	1019.8	1020.6
180°	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	12.4	12.4	12.4	12.4	12.4	12.3	12.2	12.1
90°	20.7	21.4	22.1	22.7	23.0	23.4	23.7	24.1
92.5°	31.9	32.6	33.1	33.3	33.0	32.9	32.6	32.4
95°	60.8	61.6	62.3	62.6	62.6	62.6	62.6	62.6
97.5°	94.6	95.4	96.3	96.6	96.5	96.5	96.4	96.3
100°	119.1	119.6	120.1	120.6	120.9	121.3	121.6	122.0
102.5°	147.3	147.8	148.4	148.6	148.5	148.5	148.4	148.3
105°	189.4	189.4	189.4	189.6	190.0	190.3	190.7	191.0
107.5°	235.0	235.6	236.1	236.3	236.1	235.9	235.7	235.4
110°	265.5	266.2	266.9	267.0	266.7	266.3	266.0	265.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	296.0	296.8	297.6	298.0	297.9	297.9	297.9	297.8
115°	342.2	342.5	342.6	342.6	342.5	342.2	342.1	341.9
117.5°	389.0	389.0	389.0	388.6	388.2	387.7	387.1	386.7
120°	420.2	420.0	419.9	419.5	419.2	418.8	418.5	418.1
122.5°	451.7	451.2	450.8	450.3	449.8	449.3	448.9	448.3
125°	498.6	497.9	497.2	496.5	495.7	495.0	494.3	493.6
127.5°	544.9	543.9	542.9	541.9	541.1	540.3	539.5	538.7
130°	575.6	574.9	574.2	573.2	572.0	570.7	569.5	568.2
132.5°	605.5	604.7	603.8	602.9	601.9	600.9	600.0	599.0
135°	650.2	649.5	648.8	648.3	647.9	647.6	647.2	646.9
137.5°	694.0	693.2	692.5	691.8	691.1	690.5	689.8	689.1
140°	722.8	722.5	722.4	721.7	720.4	719.2	718.0	716.7
142.5°	749.7	749.6	749.4	748.8	747.8	746.9	745.9	745.0
145°	789.4	789.2	789.0	788.5	787.8	787.1	786.4	785.7
147.5°	826.8	826.8	826.8	826.2	825.2	824.1	823.1	822.0
150°	849.9	849.9	849.9	849.4	848.3	847.2	846.2	845.1
152.5°	871.0	871.3	871.6	871.3	870.4	869.4	868.5	867.6
155°	901.9	902.6	903.3	903.1	901.8	900.6	899.4	898.1
157.5°	928.4	929.2	929.9	929.9	928.8	927.9	926.9	925.8
160°	944.8	945.7	946.6	946.7	945.9	945.2	944.5	943.8
162.5°	960.2	961.1	962.0	961.9	960.8	959.6	958.5	957.3
165°	979.7	980.7	981.8	981.8	980.5	979.2	977.9	976.8
167.5°	995.5	996.6	997.7	997.7	996.6	995.5	994.3	993.2
170°	1004.1	1005.4	1006.6	1006.6	1005.4	1004.1	1002.8	1001.6
172.5°	1010.9	1012.0	1013.1	1013.0	1011.8	1010.5	1009.2	1008.1
175°	1018.2	1019.3	1020.3	1020.3	1019.0	1017.7	1016.5	1015.3
177.5°	1021.4	1022.3	1023.2	1023.1	1022.1	1021.1	1020.1	1019.1
180°	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7

(END OF REPORT)