

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: P333037

Luminaire Tested: **S124RDIW-S575D470U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333037
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-S575D470U835-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 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: 4224.1 lumens
Efficiency: N/A
Efficacy: 139.9 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

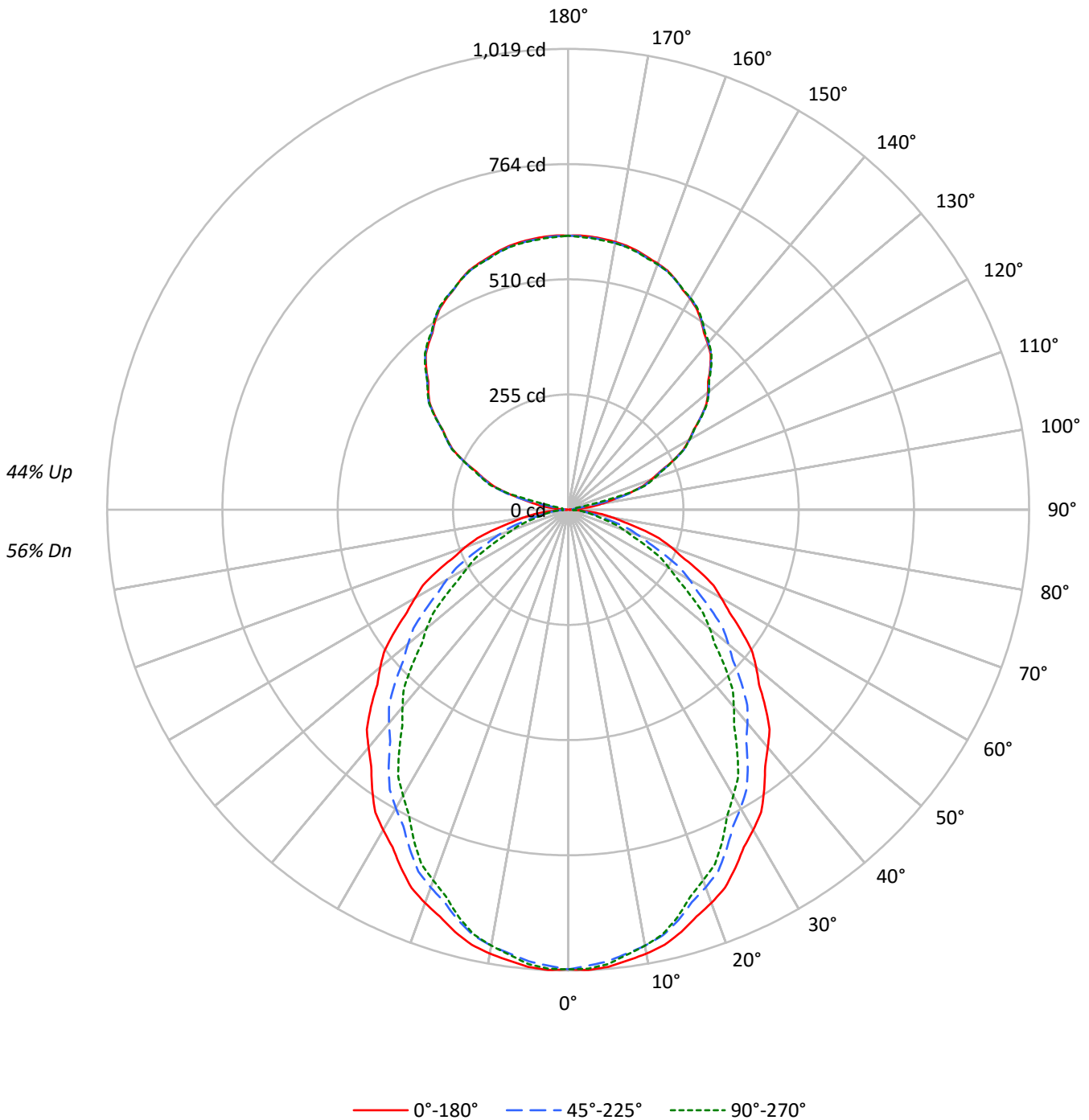
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	56
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	53	52	47
2	91	83	77	72	84	78	72	68	67	63	60	57	55	52	48	46	45	40
3	83	74	66	61	77	69	62	57	60	55	51	51	47	44	43	41	38	34
4	76	65	57	51	70	61	54	49	53	48	43	46	42	38	39	36	33	30
5	70	58	50	44	65	55	47	42	48	42	38	41	37	33	35	32	29	26
6	64	52	44	39	60	49	42	37	43	37	33	37	33	29	32	28	26	23
7	60	47	40	34	55	45	37	32	39	33	29	34	29	26	29	26	23	20
8	55	43	35	30	52	41	34	29	36	30	26	31	27	23	27	23	21	18
9	52	40	32	27	48	37	30	26	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	28	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	2.3
10°-20°	266.2	6.3
20°-30°	384.4	9.1
30°-40°	435.7	10.3
40°-50°	420.8	10.0
50°-60°	349.9	8.3
60°-70°	241.6	5.7
70°-80°	122.5	2.9
80°-90°	33.2	0.8
90°-100°	20.7	0.5
100°-110°	132.1	3.1
110°-120°	252.8	6.0
120°-130°	320.9	7.6
130°-140°	343.3	8.1
140°-150°	321.0	7.6
150°-160°	258.9	6.1
160°-170°	167.0	4.0
170°-180°	57.6	1.4
0°-30°	746.1	17.7
0°-40°	1181.8	28.0
0°-60°	1952.5	46.2
0°-90°	2349.8	55.6
90°-120°	405.6	9.6
90°-150°	1390.9	32.9
90°-180°	1874.0	44.4
0°-180°	4224.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	1	6	10	13	14	3
95°	25	10	10	13	13	32
105°	136	139	141	144	129	143
115°	255	256	256	256	256	251
125°	358	360	359	360	361	320
135°	444	444	446	446	447	342
145°	512	513	514	514	515	320
155°	562	562	561	562	561	259
165°	592	590	590	593	590	167
175°	606	603	604	607	602	58
180°	606	606	606	606	606	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.6	13.7	12.8	11.9	11.0	10.6	10.6	10.7	10.7	10.7	10.7
90°	1.4	2.5	3.6	4.7	5.8	6.7	7.6	8.4	9.2	10.0	10.6
92.5°	5.7	5.8	5.8	5.9	6.0	6.4	7.2	8.0	8.8	9.6	10.2
95°	24.9	21.5	18.1	14.7	11.2	9.6	9.7	9.8	9.9	10.0	10.6
97.5°	52.9	55.1	57.2	59.3	61.5	56.9	45.7	34.4	23.2	12.0	12.0
100°	74.3	76.1	78.0	79.8	81.6	75.5	61.6	47.7	33.8	19.9	18.2
102.5°	98.3	99.6	100.9	102.2	103.6	103.3	101.5	99.7	97.9	96.1	77.6
105°	136.4	137.0	137.6	138.2	138.8	139.4	139.9	140.4	140.9	141.4	142.3
107.5°	171.9	172.2	172.5	172.8	173.1	173.6	174.2	174.9	175.6	176.3	176.7
110°	195.8	196.1	196.4	196.7	197.0	197.4	198.0	198.7	199.3	199.9	200.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.0	219.5	220.1	220.6	221.2	221.6	221.9	222.1	222.4	222.7	222.7
115°	254.7	255.0	255.3	255.6	255.9	256.0	255.9	255.8	255.7	255.6	255.8
117.5°	286.9	287.3	287.7	288.1	288.5	288.8	289.0	289.2	289.5	289.7	289.6
120°	308.6	309.0	309.4	309.8	310.2	310.4	310.3	310.2	310.1	310.0	310.2
122.5°	328.9	329.2	329.4	329.7	329.9	330.1	330.2	330.4	330.5	330.7	330.8
125°	358.0	358.4	358.8	359.2	359.6	359.7	359.5	359.3	359.1	358.9	359.2
127.5°	385.6	385.7	385.8	385.9	386.0	386.3	386.7	387.2	387.7	388.1	388.1
130°	403.3	403.4	403.6	403.7	403.8	404.0	404.3	404.6	404.9	405.2	405.3
132.5°	419.7	419.8	420.0	420.2	420.4	420.7	421.1	421.4	421.8	422.2	422.3
135°	444.1	444.0	443.9	443.8	443.7	443.9	444.3	444.7	445.1	445.5	445.7
137.5°	465.8	465.8	465.9	465.9	466.0	466.2	466.6	467.1	467.5	468.0	468.2
140°	479.9	480.1	480.3	480.5	480.7	480.9	481.1	481.4	481.6	481.8	482.1
142.5°	492.6	493.0	493.4	493.7	494.1	494.3	494.4	494.6	494.7	494.8	495.0
145°	512.1	512.4	512.7	513.0	513.3	513.5	513.5	513.5	513.5	513.5	513.6
147.5°	527.6	528.2	528.7	529.3	529.9	530.1	530.0	529.9	529.8	529.7	529.8
150°	538.9	539.3	539.7	540.1	540.5	540.6	540.5	540.4	540.3	540.2	540.2
152.5°	548.3	548.6	548.9	549.2	549.6	549.6	549.5	549.3	549.1	548.9	549.1
155°	561.5	561.6	561.7	561.8	561.9	561.8	561.5	561.2	560.9	560.6	561.0
157.5°	572.7	572.6	572.5	572.5	572.4	572.2	571.9	571.5	571.2	570.9	571.4
160°	579.2	578.9	578.6	578.3	578.0	577.8	577.7	577.6	577.5	577.4	578.0
162.5°	585.0	584.6	584.2	583.8	583.5	583.2	583.1	583.0	582.9	582.8	583.4
165°	592.3	591.8	591.3	590.8	590.3	590.1	590.1	590.1	590.1	590.1	590.9
167.5°	598.1	597.6	597.1	596.6	596.0	595.7	595.7	595.6	595.6	595.5	596.4
170°	601.4	600.8	600.2	599.6	599.0	598.7	598.8	598.9	599.0	599.1	599.9
172.5°	603.6	603.0	602.4	601.8	601.2	600.9	601.0	601.1	601.2	601.3	602.1
175°	605.9	605.3	604.7	604.1	603.5	603.3	603.4	603.5	603.6	603.7	604.6
177.5°	607.0	606.5	605.9	605.3	604.8	604.6	604.7	604.9	605.0	605.2	605.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	10.7	10.7	10.6	10.7	10.9	11.1	11.3	11.4
90°	11.2	11.8	12.4	12.8	13.0	13.2	13.4	13.6
92.5°	10.8	11.4	12.0	12.3	12.4	12.4	12.5	12.5
95°	11.2	11.8	12.4	12.7	12.8	12.9	13.0	13.1
97.5°	12.1	12.1	12.2	12.3	12.4	12.5	12.6	12.7
100°	16.5	14.8	13.1	12.3	12.4	12.5	12.6	12.7
102.5°	59.1	40.7	22.2	13.0	13.0	13.0	13.0	13.1
105°	143.2	144.1	145.0	143.7	140.0	136.4	132.8	129.2
107.5°	177.2	177.6	178.1	178.5	178.9	179.2	179.6	180.0
110°	200.3	200.5	200.7	200.9	201.2	201.5	201.8	202.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.6	222.6	222.5	222.7	223.1	223.5	223.9	224.2
115°	256.0	256.2	256.4	256.5	256.5	256.5	256.5	256.5
117.5°	289.6	289.6	289.5	289.5	289.4	289.4	289.4	289.3
120°	310.4	310.6	310.8	310.8	310.6	310.4	310.2	310.0
122.5°	330.9	331.0	331.1	331.1	330.9	330.7	330.5	330.3
125°	359.5	359.8	360.1	360.3	360.4	360.5	360.6	360.7
127.5°	388.0	387.9	387.9	387.8	387.7	387.6	387.6	387.5
130°	405.4	405.5	405.6	405.6	405.6	405.6	405.6	405.6
132.5°	422.4	422.5	422.6	422.6	422.5	422.5	422.4	422.3
135°	445.9	446.1	446.3	446.5	446.7	446.9	447.1	447.3
137.5°	468.4	468.6	468.9	468.9	468.9	468.8	468.8	468.7
140°	482.4	482.7	483.0	483.2	483.3	483.4	483.5	483.6
142.5°	495.2	495.5	495.7	495.8	495.8	495.9	495.9	495.9
145°	513.7	513.8	513.9	514.0	514.2	514.4	514.6	514.8
147.5°	529.9	529.9	530.0	530.1	530.2	530.3	530.4	530.5
150°	540.2	540.2	540.2	540.3	540.4	540.5	540.6	540.7
152.5°	549.2	549.4	549.6	549.6	549.6	549.5	549.4	549.4
155°	561.4	561.8	562.2	562.3	562.0	561.7	561.4	561.1
157.5°	571.9	572.4	572.9	572.9	572.4	571.9	571.4	570.9
160°	578.6	579.2	579.8	579.8	579.2	578.6	578.0	577.4
162.5°	584.0	584.6	585.2	585.2	584.5	583.8	583.1	582.5
165°	591.7	592.5	593.3	593.2	592.3	591.4	590.5	589.6
167.5°	597.3	598.2	599.1	599.0	598.0	597.0	596.0	595.0
170°	600.7	601.5	602.4	602.3	601.2	600.2	599.2	598.2
172.5°	602.9	603.7	604.5	604.4	603.3	602.2	601.1	600.0
175°	605.5	606.4	607.3	607.1	605.9	604.7	603.5	602.3
177.5°	606.5	607.1	607.8	607.6	606.7	605.7	604.7	603.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9

(END OF REPORT)