

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: P332160-930

Luminaire Tested: **S123DIW-S775D755U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332160-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIW-S775D755U930-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 755 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5048.3 lumens  
Efficiency: N/A  
Efficacy: 112.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

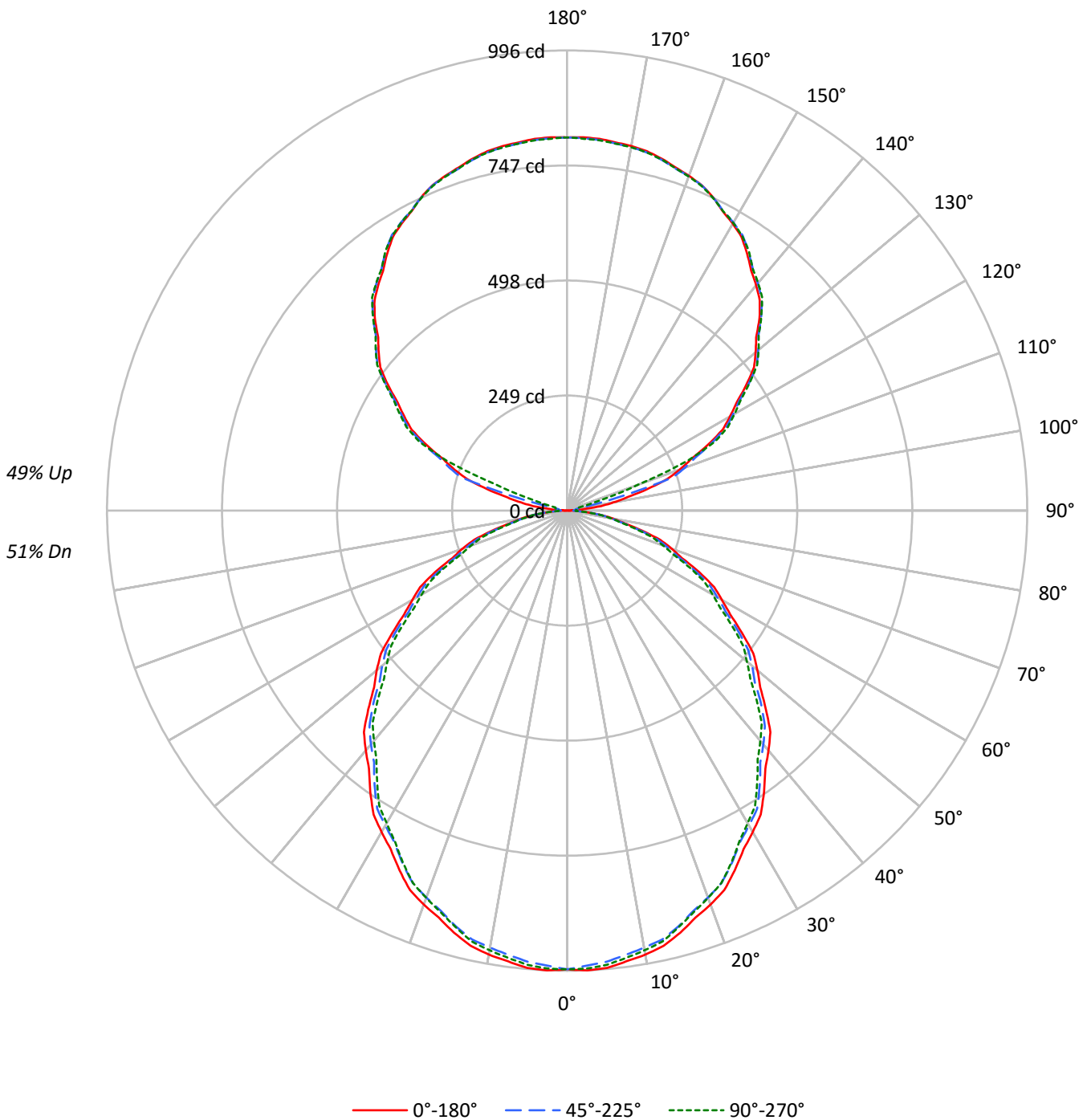
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	86	90	87	83	80	74	71	69	62	60	58	50	49	48	43
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	34	30
4	74	64	56	49	68	59	52	47	50	45	41	43	38	35	35	32	30	26
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	32	28	26	23
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	29	25	23	20
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13

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

	0°	45°	90°
0°	10687	10687	10687
5°	10737	10589	10662
10°	10665	10497	10563
15°	10541	10379	10398
20°	10394	10208	10219
25°	10200	10007	9987
30°	9984	9783	9708
35°	9759	9546	9423
40°	9524	9284	9140
45°	9266	9045	8824
50°	9008	8748	8505
55°	8668	8443	8188
60°	8325	8086	7830
65°	8023	7697	7457
70°	7578	7254	6930
75°	6924	6675	6392
80°	6248	5976	5926
85°	5483	5274	5064



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.5	1.9
10°-20°	264.1	5.2
20°-30°	390.1	7.7
30°-40°	455.7	9.0
40°-50°	458.1	9.1
50°-60°	402.4	8.0
60°-70°	299.8	5.9
70°-80°	170.8	3.4
80°-90°	51.3	1.0
90°-100°	29.4	0.6
100°-110°	139.9	2.8
110°-120°	336.1	6.7
120°-130°	428.0	8.5
130°-140°	457.3	9.1
140°-150°	427.6	8.5
150°-160°	344.9	6.8
160°-170°	222.6	4.4
170°-180°	76.7	1.5
0°-30°	747.7	14.8
0°-40°	1203.3	23.8
0°-60°	2063.8	40.9
0°-90°	2585.7	51.2
90°-120°	505.4	10.0
90°-150°	1818.3	36.0
90°-180°	2463.0	48.8
0°-180°	5048.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	994	989	980	988	987	94
15°	946	942	931	938	933	267
25°	859	853	843	843	841	395
35°	743	737	726	721	717	464
45°	609	605	594	584	580	470
55°	462	460	450	441	436	414
65°	315	310	302	296	293	311
75°	166	163	160	156	154	178
85°	44	43	43	41	41	49
90°	1	7	14	17	18	4
95°	37	14	19	23	23	45
105°	179	182	131	31	26	190
115°	335	339	344	350	353	331
125°	473	477	480	481	482	422
135°	589	592	594	596	594	453
145°	679	683	684	686	686	425
155°	748	747	748	750	747	345
165°	789	787	786	791	787	223
175°	808	805	805	809	804	77
180°	808	808	808	808	808	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	996.2	995.6	995.1	994.4	993.8	992.7	991.0	989.4	987.7	986.0	987.5
5°	993.7	992.7	991.8	990.8	989.9	988.4	986.3	984.2	982.1	980.0	981.9
7.5°	984.0	983.0	982.0	981.1	980.2	978.6	976.4	974.3	972.1	970.0	971.7
10°	975.8	974.8	973.9	972.9	972.0	970.3	967.8	965.3	962.9	960.4	962.1
12.5°	964.8	964.0	963.3	962.5	961.6	960.1	957.8	955.4	953.2	950.8	952.1
15°	945.9	945.1	944.4	943.6	942.8	941.3	938.7	936.3	933.8	931.4	932.9
17.5°	923.8	922.8	921.9	920.9	919.9	918.2	915.7	913.2	910.8	908.3	909.4
20°	907.4	906.3	905.2	904.1	902.9	901.1	898.6	896.2	893.7	891.2	892.0
22.5°	889.0	887.9	886.7	885.6	884.4	882.6	880.2	877.8	875.3	872.8	873.4
25°	858.8	857.7	856.6	855.4	854.3	852.5	849.9	847.5	845.1	842.6	842.8
27.5°	826.6	825.4	824.3	823.2	822.1	820.3	817.6	815.0	812.3	809.6	809.8
30°	803.3	802.3	801.4	800.5	799.5	797.7	795.1	792.4	789.8	787.1	787.1
32.5°	780.1	778.9	777.6	776.3	775.1	773.5	771.4	769.3	767.3	765.2	764.2
35°	742.7	741.6	740.5	739.3	738.2	736.4	733.9	731.4	729.0	726.5	725.4
37.5°	704.4	703.0	701.6	700.1	698.7	696.8	694.2	691.7	689.2	686.7	685.3
40°	677.8	676.7	675.6	674.4	673.3	671.4	668.7	666.1	663.4	660.7	659.3
42.5°	651.2	649.9	648.6	647.3	646.0	644.1	641.4	638.7	636.1	633.4	631.9
45°	608.7	607.9	607.2	606.4	605.6	604.1	601.5	599.1	596.6	594.2	591.9
47.5°	566.5	565.4	564.3	563.2	562.1	560.4	558.1	555.8	553.4	551.1	548.9
50°	537.9	536.9	535.9	535.0	534.0	532.3	529.9	527.4	524.9	522.4	520.4
52.5°	507.8	507.1	506.5	505.8	505.2	503.5	500.9	498.3	495.7	493.1	491.3
55°	461.9	461.6	461.5	461.3	461.1	459.7	457.3	454.9	452.3	449.9	447.8
57.5°	418.2	417.5	416.9	416.2	415.6	414.3	412.3	410.3	408.3	406.3	404.5
60°	386.7	386.5	386.4	386.1	386.0	384.7	382.5	380.2	377.9	375.6	373.9
62.5°	358.7	358.2	357.8	357.3	356.8	355.4	353.1	350.8	348.5	346.3	344.5
65°	315.0	314.1	313.1	312.2	311.2	309.8	307.9	306.0	304.1	302.2	300.7
67.5°	268.7	267.9	267.1	266.2	265.4	264.2	262.9	261.4	259.9	258.5	257.1
70°	240.8	239.6	238.5	237.3	236.2	235.1	233.9	232.8	231.6	230.5	229.2
72.5°	211.4	210.5	209.7	208.9	208.1	207.0	205.7	204.4	203.1	201.8	200.6
75°	166.5	165.7	164.9	164.2	163.5	162.7	162.2	161.6	161.0	160.5	159.6
77.5°	126.7	126.3	125.9	125.5	125.0	124.5	123.8	123.1	122.5	121.7	121.1
80°	100.8	100.2	99.6	99.1	98.5	98.0	97.6	97.3	96.9	96.4	96.3
82.5°	75.5	75.3	75.3	75.1	75.0	74.9	74.8	74.8	74.7	74.6	74.3
85°	44.4	44.0	43.6	43.3	42.9	42.7	42.7	42.7	42.7	42.7	42.3
87.5°	17.9	17.7	17.5	17.3	17.1	17.1	17.3	17.5	17.7	17.9	17.9
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.2	10.9	12.6	14.4	14.9
92.5°	11.2	10.8	10.4	10.0	9.7	10.1	11.4	12.7	14.0	15.3	16.2
95°	36.6	31.1	25.7	20.2	14.8	12.7	14.2	15.7	17.1	18.6	19.6
97.5°	73.5	71.1	68.6	66.2	63.8	57.7	48.1	38.5	28.9	19.3	20.4
100°	101.4	104.0	106.7	109.4	112.0	103.0	82.2	61.4	40.6	19.8	20.9
102.5°	133.1	135.0	136.9	138.8	140.7	130.4	107.6	84.9	62.2	39.5	36.2
105°	178.8	180.3	181.7	183.2	184.7	179.4	167.4	155.4	143.4	131.4	107.8
107.5°	227.0	228.2	229.3	230.6	231.7	233.3	235.1	237.0	239.0	240.8	223.5
110°	259.2	260.2	261.3	262.4	263.4	264.7	266.2	267.7	269.1	270.6	266.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	289.9	290.8	291.8	292.8	293.8	295.0	296.4	297.9	299.4	300.8	300.9
115°	335.3	336.1	337.0	337.8	338.6	339.6	340.8	341.9	343.2	344.4	345.7
117.5°	379.4	380.4	381.4	382.4	383.4	384.2	384.7	385.4	386.0	386.6	387.7
120°	406.8	408.0	409.2	410.3	411.6	412.4	412.8	413.2	413.6	413.9	415.1
122.5°	434.6	435.6	436.6	437.6	438.5	439.3	439.8	440.3	440.8	441.3	442.1
125°	472.8	473.9	474.9	476.0	477.0	477.8	478.3	478.9	479.4	480.0	480.2
127.5°	509.7	510.8	511.8	512.9	514.0	514.9	515.5	516.1	516.7	517.4	517.8
130°	532.7	533.9	534.9	536.0	537.0	537.9	538.3	538.9	539.4	540.0	540.5
132.5°	554.8	555.9	556.9	558.0	559.1	559.9	560.3	560.7	561.1	561.6	562.1
135°	588.6	589.4	590.1	590.9	591.7	592.4	593.0	593.5	594.0	594.5	594.9
137.5°	617.3	618.3	619.4	620.4	621.4	622.1	622.3	622.6	623.0	623.2	623.9
140°	636.5	637.3	638.1	639.0	639.8	640.3	640.7	641.2	641.6	642.0	642.5
142.5°	654.3	655.1	655.9	656.7	657.5	658.1	658.5	658.9	659.3	659.7	660.1
145°	679.1	680.0	681.0	681.9	682.9	683.5	683.7	684.0	684.3	684.5	684.8
147.5°	702.5	703.1	703.8	704.3	705.0	705.4	705.7	706.0	706.2	706.5	706.8
150°	717.0	717.3	717.7	718.1	718.5	718.8	719.2	719.4	719.7	719.9	720.2
152.5°	729.9	730.1	730.3	730.4	730.7	730.8	731.0	731.2	731.3	731.5	731.9
155°	748.1	747.9	747.6	747.3	747.1	747.0	747.1	747.3	747.4	747.5	748.2
157.5°	762.3	762.3	762.2	762.2	762.2	762.1	762.0	761.8	761.7	761.6	762.4
160°	770.9	770.8	770.7	770.5	770.4	770.3	770.1	770.0	769.9	769.7	770.5
162.5°	779.1	778.8	778.4	778.0	777.7	777.5	777.3	777.2	777.1	776.9	777.9
165°	789.0	788.6	788.1	787.7	787.3	787.1	786.9	786.8	786.7	786.5	787.6
167.5°	796.6	796.1	795.6	795.0	794.5	794.2	794.2	794.2	794.2	794.2	795.2
170°	801.0	800.4	799.9	799.3	798.8	798.5	798.5	798.5	798.5	798.5	799.6
172.5°	803.8	803.2	802.5	801.9	801.3	801.0	801.1	801.2	801.3	801.4	802.5
175°	807.6	806.8	806.2	805.5	804.9	804.6	804.7	804.9	805.0	805.1	806.1
177.5°	808.5	808.0	807.4	806.9	806.3	806.2	806.2	806.3	806.5	806.6	807.4
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	989.0	990.6	992.1	992.8	992.6	992.5	992.3	992.1
5°	983.8	985.7	987.7	988.4	988.0	987.7	987.2	986.8
7.5°	973.4	975.1	976.8	977.5	977.3	977.1	976.8	976.6
10°	963.8	965.5	967.2	967.9	967.5	967.1	966.8	966.4
12.5°	953.3	954.6	955.9	956.3	956.1	955.9	955.7	955.4
15°	934.4	935.9	937.4	937.6	936.5	935.3	934.3	933.1
17.5°	910.4	911.5	912.6	912.9	912.5	912.1	911.7	911.3
20°	892.8	893.5	894.3	894.4	893.8	893.2	892.7	892.1
22.5°	874.0	874.7	875.2	875.1	874.5	873.8	873.0	872.3
25°	842.9	843.2	843.3	843.2	842.6	842.0	841.5	840.9
27.5°	809.9	810.1	810.2	809.9	809.3	808.5	807.8	807.1
30°	787.1	787.1	787.1	786.4	785.1	783.7	782.4	781.1
32.5°	763.1	762.1	761.0	760.1	759.4	758.6	757.9	757.2
35°	724.2	723.1	721.9	720.9	719.9	719.0	718.0	717.1
37.5°	684.0	682.6	681.3	680.3	679.6	679.1	678.4	677.8
40°	657.7	656.2	654.7	653.5	652.8	652.0	651.3	650.5
42.5°	630.4	628.8	627.4	626.2	625.5	624.7	623.9	623.2
45°	589.6	587.3	585.1	583.4	582.5	581.6	580.6	579.7
47.5°	546.7	544.5	542.2	540.6	539.8	539.0	538.2	537.3
50°	518.3	516.2	514.1	512.5	511.4	510.2	509.1	507.9
52.5°	489.5	487.7	485.9	484.5	483.4	482.2	481.1	480.0
55°	445.7	443.6	441.6	440.0	439.0	438.1	437.2	436.3
57.5°	402.6	400.8	398.9	397.5	396.3	395.3	394.1	393.1
60°	372.2	370.5	368.8	367.5	366.5	365.6	364.6	363.7
62.5°	342.8	341.1	339.4	338.3	337.6	337.0	336.3	335.7
65°	299.1	297.7	296.1	295.1	294.5	293.9	293.3	292.8
67.5°	255.8	254.5	253.2	252.1	251.4	250.5	249.7	248.9
70°	227.9	226.5	225.2	224.0	223.1	222.2	221.2	220.2
72.5°	199.4	198.3	197.1	196.2	195.8	195.3	194.8	194.3
75°	158.6	157.7	156.7	156.0	155.4	154.8	154.3	153.7
77.5°	120.4	119.8	119.1	118.9	118.9	118.9	118.9	118.9
80°	96.1	95.9	95.7	95.6	95.6	95.6	95.6	95.6
82.5°	73.9	73.6	73.2	73.0	72.9	72.7	72.6	72.4
85°	41.9	41.6	41.2	41.0	41.0	41.0	41.0	41.0
87.5°	17.9	17.8	17.7	17.7	17.8	17.9	17.9	17.9
90°	15.5	16.0	16.6	17.0	17.2	17.4	17.7	18.0
92.5°	17.0	17.9	18.8	19.2	19.4	19.6	19.7	19.9
95°	20.5	21.4	22.3	22.8	22.8	22.8	22.8	22.8
97.5°	21.4	22.5	23.6	24.2	24.3	24.5	24.6	24.7
100°	21.9	23.0	24.1	24.7	24.8	24.9	25.0	25.2
102.5°	32.9	29.6	26.3	24.7	24.9	25.2	25.4	25.7
105°	84.2	60.6	37.0	25.4	25.6	25.8	26.2	26.4
107.5°	206.2	188.9	171.6	154.1	136.2	118.5	100.7	82.9
110°	261.8	257.4	253.0	241.2	222.2	203.1	184.0	165.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	301.0	301.1	301.2	299.1	295.1	291.1	287.1	283.1
115°	347.1	348.4	349.7	350.7	351.1	351.7	352.2	352.8
117.5°	388.7	389.8	390.9	391.4	391.6	391.7	391.8	391.9
120°	416.1	417.2	418.2	418.7	418.7	418.7	418.7	418.7
122.5°	442.8	443.5	444.3	444.7	444.8	444.9	445.1	445.2
125°	480.5	480.8	481.0	481.3	481.6	481.8	482.1	482.3
127.5°	518.3	518.7	519.1	519.2	518.9	518.6	518.4	518.1
130°	541.0	541.5	542.1	542.3	541.9	541.7	541.4	541.1
132.5°	562.6	563.1	563.7	563.8	563.4	563.0	562.6	562.2
135°	595.3	595.7	596.1	596.1	595.7	595.3	594.9	594.5
137.5°	624.5	625.2	625.8	626.0	625.7	625.4	625.2	624.9
140°	643.0	643.5	644.1	644.2	643.9	643.7	643.4	643.1
142.5°	660.6	661.0	661.4	661.5	661.0	660.7	660.3	659.9
145°	685.1	685.3	685.6	685.7	685.7	685.7	685.7	685.7
147.5°	707.0	707.3	707.6	707.4	706.8	706.1	705.6	704.9
150°	720.5	720.7	721.0	721.0	720.6	720.2	719.7	719.3
152.5°	732.4	732.9	733.4	733.3	732.7	732.1	731.5	730.8
155°	748.9	749.5	750.2	750.2	749.3	748.5	747.7	746.9
157.5°	763.2	763.9	764.8	764.7	763.6	762.5	761.6	760.5
160°	771.4	772.2	772.9	772.9	771.9	771.0	770.1	769.2
162.5°	778.8	779.7	780.6	780.6	779.8	778.9	778.1	777.3
165°	788.6	789.7	790.8	790.8	789.9	789.0	788.1	787.1
167.5°	796.3	797.4	798.5	798.5	797.4	796.3	795.2	794.2
170°	800.6	801.8	802.8	802.8	801.8	800.6	799.6	798.5
172.5°	803.6	804.6	805.7	805.6	804.5	803.3	802.1	801.0
175°	807.0	808.0	808.9	808.8	807.7	806.7	805.6	804.5
177.5°	808.3	809.1	810.0	809.8	808.8	807.7	806.7	805.6
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6

(END OF REPORT)