

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: P333041-935

Luminaire Tested: **S124RDIW-S575D770U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333041-935  
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-S575D770U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4667.3 lumens  
Efficiency: N/A  
Efficacy: 124.1 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

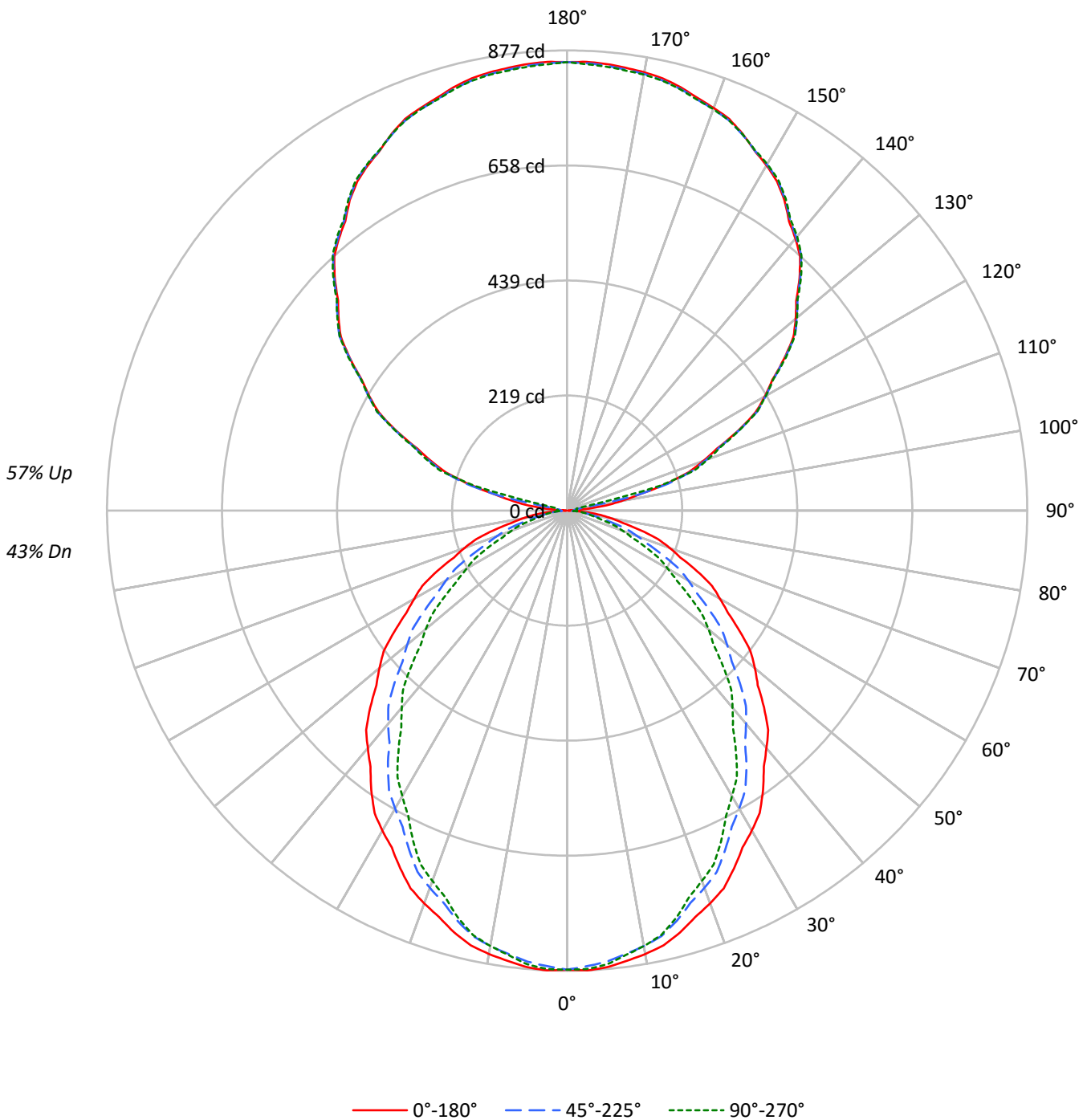
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	39	38	36	31
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	35	33	31	27
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	29	49	38	32	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12

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

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	1.8
10°-20°	229.2	4.9
20°-30°	331.0	7.1
30°-40°	375.2	8.0
40°-50°	362.3	7.8
50°-60°	301.3	6.5
60°-70°	208.0	4.5
70°-80°	105.4	2.3
80°-90°	29.5	0.6
90°-100°	29.2	0.6
100°-110°	186.3	4.0
110°-120°	356.5	7.6
120°-130°	452.5	9.7
130°-140°	484.2	10.4
140°-150°	452.7	9.7
150°-160°	365.1	7.8
160°-170°	235.5	5.0
170°-180°	81.2	1.7
0°-30°	642.4	13.8
0°-40°	1017.6	21.8
0°-60°	1681.1	36.0
0°-90°	2024.1	43.4
90°-120°	572.0	12.3
90°-150°	1961.4	42.0
90°-180°	2643.0	56.6
0°-180°	4667.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	2	9	14	18	19	3
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°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.7	12.1	11.5	10.8	10.2	9.9	10.0	10.1	10.2	10.3	10.3
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°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	10.4	10.5	10.5	10.7	10.8	11.0	11.2	11.4
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





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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)