

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: P332904-935

Luminaire Tested: **SA4XXRDIP-C575D590U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332904-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C575D590U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4054.7 lumens  
Efficiency: N/A  
Efficacy: 123.6 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

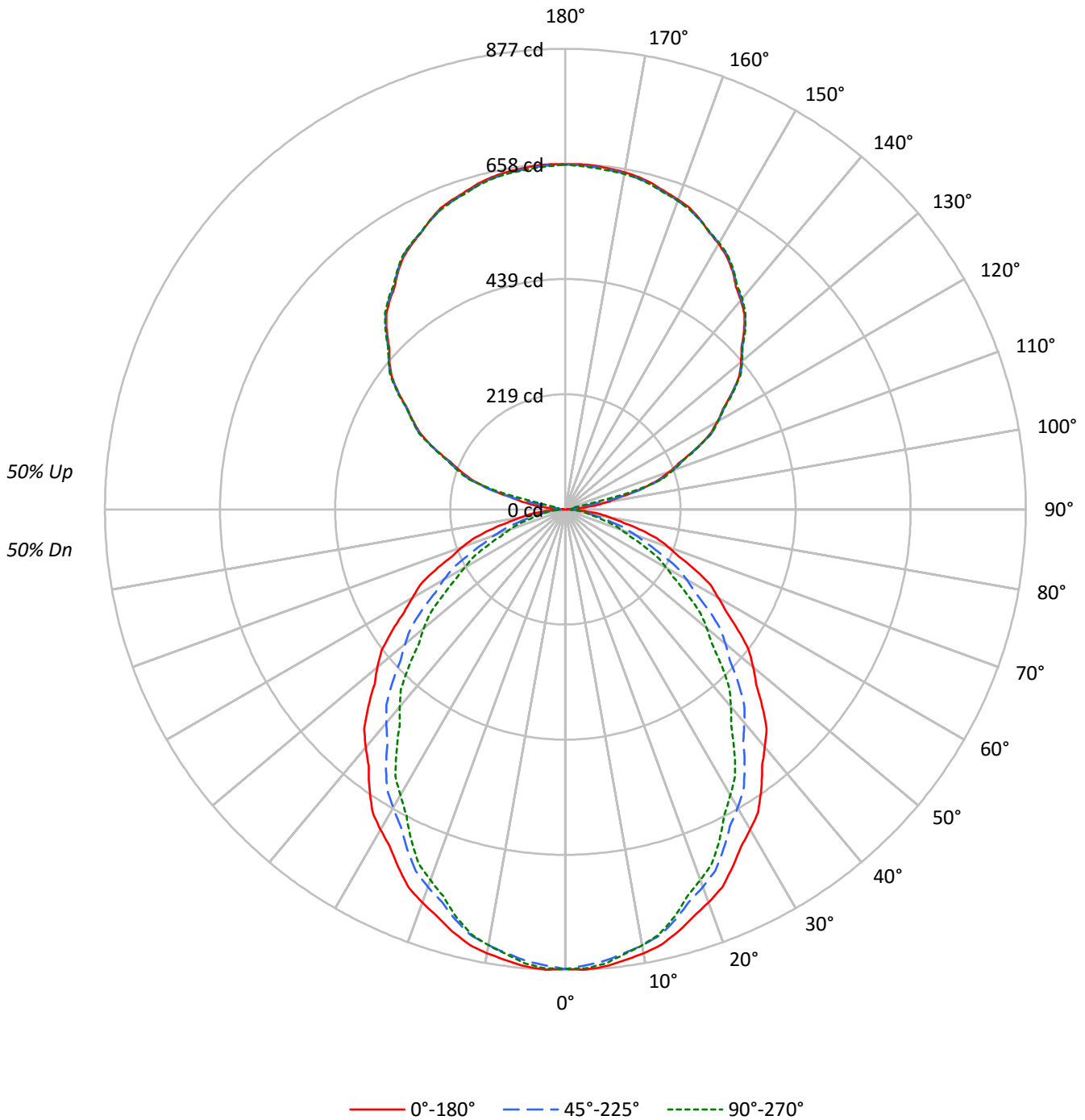
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	98	94	90	87	90	87	83	81	73	71	69	61	60	58	50	49	48	43				
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	44	42	41	36				
3	82	72	65	60	75	67	61	56	57	52	49	48	45	42	39	37	35	31				
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	33	30	27				
5	69	57	49	43	63	53	46	41	46	40	36	39	34	31	32	29	27	23				
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21				
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	27	23	21	18				
8	55	42	35	29	50	40	33	28	34	29	25	29	25	22	24	21	19	16				
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15				
10	47	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	16	14				

**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	2.0
10°-20°	229.2	5.7
20°-30°	331.0	8.2
30°-40°	375.2	9.3
40°-50°	362.3	8.9
50°-60°	301.3	7.4
60°-70°	208.0	5.1
70°-80°	105.4	2.6
80°-90°	29.0	0.7
90°-100°	22.5	0.6
100°-110°	143.2	3.5
110°-120°	273.9	6.8
120°-130°	347.7	8.6
130°-140°	372.1	9.2
140°-150°	347.9	8.6
150°-160°	280.6	6.9
160°-170°	181.0	4.5
170°-180°	62.4	1.5
0°-30°	642.4	15.8
0°-40°	1017.6	25.1
0°-60°	1681.1	41.5
0°-90°	2023.5	49.9
90°-120°	439.6	10.8
90°-150°	1507.3	37.2
90°-180°	2031.0	50.1
0°-180°	4054.7	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	7	11	14	15	3
95°	27	11	11	14	14	35
105°	148	151	153	156	140	155
115°	276	277	277	278	278	272
125°	388	390	389	390	391	346
135°	481	481	483	484	485	371
145°	555	556	556	557	558	347
155°	609	609	608	609	608	280
165°	642	640	640	643	639	181
175°	657	654	654	658	653	63
180°	657	657	657	657	657	



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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	11.9	11.2	10.5	9.7	9.5	9.5	9.6	9.6	9.6	9.6
90°	1.5	2.7	3.9	5.1	6.3	7.3	8.2	9.0	9.9	10.8	11.5
92.5°	6.2	6.3	6.3	6.4	6.5	6.9	7.8	8.7	9.6	10.4	11.1
95°	27.0	23.3	19.6	15.8	12.1	10.3	10.5	10.6	10.7	10.8	11.5
97.5°	57.3	59.7	62.0	64.3	66.6	61.6	49.5	37.4	25.1	13.0	13.0
100°	80.5	82.5	84.5	86.4	88.4	81.9	66.8	51.7	36.7	21.6	19.7
102.5°	106.5	107.9	109.3	110.8	112.3	112.0	110.0	108.1	106.1	104.1	84.1
105°	147.8	148.5	149.1	149.8	150.4	151.0	151.6	152.1	152.7	153.3	154.2
107.5°	186.2	186.6	186.9	187.2	187.5	188.0	188.8	189.6	190.3	191.1	191.6
110°	212.2	212.5	212.8	213.2	213.4	214.0	214.6	215.2	215.9	216.6	216.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	237.3	237.9	238.5	239.1	239.7	240.1	240.4	240.7	241.1	241.3	241.3
115°	276.0	276.4	276.6	277.0	277.3	277.4	277.3	277.2	277.1	277.0	277.2
117.5°	310.9	311.3	311.8	312.2	312.6	313.0	313.2	313.5	313.7	313.9	313.9
120°	334.5	334.9	335.4	335.8	336.2	336.4	336.3	336.1	336.0	336.0	336.1
122.5°	356.5	356.7	357.0	357.2	357.5	357.7	357.9	358.0	358.2	358.3	358.4
125°	388.0	388.4	388.9	389.3	389.8	389.9	389.6	389.4	389.2	389.0	389.3
127.5°	417.8	417.9	418.1	418.2	418.3	418.6	419.1	419.6	420.1	420.6	420.5
130°	437.1	437.2	437.3	437.5	437.6	437.7	438.1	438.4	438.8	439.1	439.2
132.5°	454.8	455.0	455.2	455.4	455.6	455.9	456.3	456.7	457.1	457.5	457.6
135°	481.3	481.2	481.1	481.0	480.9	481.0	481.5	481.9	482.3	482.8	483.0
137.5°	504.8	504.8	504.9	504.9	505.0	505.2	505.7	506.2	506.7	507.1	507.4
140°	520.1	520.3	520.6	520.7	521.0	521.2	521.4	521.7	521.9	522.1	522.4
142.5°	533.9	534.3	534.7	535.0	535.5	535.7	535.8	536.0	536.1	536.2	536.5
145°	555.0	555.3	555.6	555.9	556.3	556.5	556.5	556.5	556.5	556.5	556.6
147.5°	571.8	572.4	573.0	573.6	574.2	574.5	574.4	574.3	574.1	574.0	574.1
150°	583.9	584.4	584.9	585.3	585.7	585.9	585.7	585.7	585.6	585.4	585.4
152.5°	594.2	594.5	594.9	595.2	595.6	595.6	595.5	595.3	595.0	594.9	595.0
155°	608.6	608.6	608.7	608.8	609.0	608.8	608.6	608.2	607.9	607.5	608.0
157.5°	620.6	620.5	620.4	620.4	620.4	620.1	619.7	619.4	619.0	618.6	619.2
160°	627.7	627.3	627.0	626.7	626.4	626.1	626.0	625.9	625.8	625.7	626.4
162.5°	634.0	633.5	633.1	632.7	632.3	632.1	631.9	631.8	631.7	631.6	632.2
165°	641.9	641.4	640.8	640.2	639.7	639.5	639.5	639.5	639.5	639.5	640.3
167.5°	648.2	647.6	647.0	646.5	645.9	645.6	645.6	645.5	645.4	645.3	646.4
170°	651.8	651.1	650.4	649.8	649.1	648.8	648.9	649.0	649.2	649.3	650.1
172.5°	654.1	653.4	652.8	652.1	651.5	651.2	651.3	651.4	651.5	651.6	652.6
175°	656.7	656.0	655.3	654.7	654.0	653.8	653.8	654.0	654.1	654.2	655.1
177.5°	657.8	657.2	656.6	656.0	655.4	655.1	655.3	655.5	655.7	655.8	656.6
180°	656.7	656.7	656.7	656.7	656.7	656.7	656.7	656.7	656.7	656.7	656.7



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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°	9.7	9.7	9.7	9.8	10.0	10.2	10.2	10.4
90°	12.1	12.7	13.4	13.9	14.1	14.3	14.6	14.7
92.5°	11.7	12.4	13.0	13.3	13.4	13.4	13.5	13.5
95°	12.1	12.7	13.4	13.8	13.9	14.0	14.1	14.2
97.5°	13.1	13.2	13.3	13.3	13.4	13.5	13.6	13.8
100°	17.9	16.0	14.2	13.3	13.4	13.5	13.6	13.8
102.5°	64.1	44.1	24.0	14.0	14.1	14.1	14.1	14.1
105°	155.2	156.2	157.1	155.7	151.8	147.8	143.9	140.0
107.5°	192.0	192.5	193.0	193.4	193.8	194.2	194.7	195.1
110°	217.1	217.2	217.5	217.7	218.1	218.3	218.7	219.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	241.3	241.3	241.2	241.3	241.8	242.2	242.6	243.0
115°	277.4	277.7	277.8	278.0	278.0	278.0	278.0	278.0
117.5°	313.8	313.8	313.7	313.7	313.7	313.7	313.6	313.6
120°	336.4	336.6	336.8	336.8	336.6	336.4	336.1	336.0
122.5°	358.6	358.7	358.9	358.8	358.6	358.3	358.2	357.9
125°	389.6	389.9	390.3	390.5	390.6	390.7	390.8	391.0
127.5°	420.5	420.4	420.3	420.3	420.2	420.1	420.0	419.9
130°	439.3	439.4	439.5	439.5	439.5	439.5	439.5	439.5
132.5°	457.8	457.9	458.0	458.0	457.9	457.8	457.7	457.6
135°	483.2	483.5	483.6	483.9	484.1	484.3	484.6	484.7
137.5°	507.6	507.9	508.1	508.2	508.2	508.1	508.0	507.9
140°	522.7	523.1	523.4	523.6	523.7	523.8	523.9	524.0
142.5°	536.7	536.9	537.2	537.4	537.4	537.4	537.4	537.4
145°	556.6	556.8	556.9	557.1	557.2	557.5	557.8	557.9
147.5°	574.2	574.3	574.4	574.5	574.6	574.7	574.8	574.9
150°	585.4	585.4	585.4	585.5	585.6	585.7	585.8	585.9
152.5°	595.2	595.4	595.6	595.6	595.6	595.5	595.4	595.4
155°	608.4	608.8	609.2	609.3	609.0	608.6	608.4	608.0
157.5°	619.7	620.4	620.9	620.9	620.4	619.7	619.2	618.6
160°	627.0	627.7	628.4	628.4	627.7	627.0	626.4	625.7
162.5°	632.9	633.5	634.2	634.2	633.4	632.7	632.0	631.2
165°	641.2	642.0	643.0	642.9	641.9	640.9	640.0	638.9
167.5°	647.3	648.2	649.2	649.1	648.1	647.0	645.8	644.8
170°	651.0	651.9	652.8	652.6	651.6	650.5	649.4	648.3
172.5°	653.4	654.3	655.1	655.0	653.8	652.6	651.4	650.2
175°	656.2	657.1	658.1	658.0	656.7	655.3	654.0	652.7
177.5°	657.3	658.0	658.7	658.5	657.5	656.4	655.3	654.3
180°	656.7	656.7	656.7	656.7	656.7	656.7	656.7	656.7

(END OF REPORT)