

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: P332551-940

Luminaire Tested: **S124DIP-S575D590U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332551-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D590U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4048.7 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

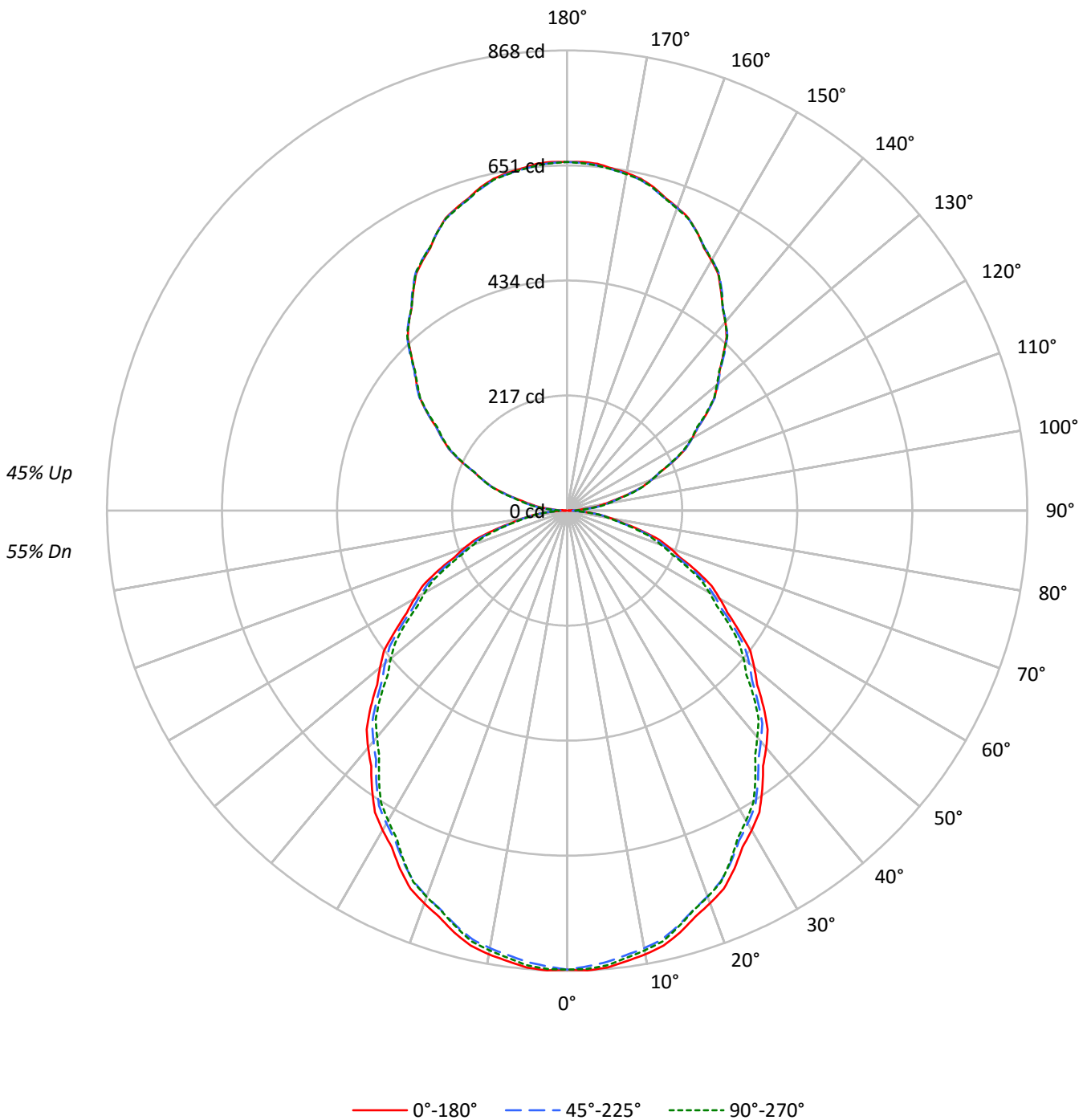
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	55
1	99	94	91	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	28	24
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	31	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	2.0
10°-20°	229.8	5.7
20°-30°	338.2	8.4
30°-40°	393.2	9.7
40°-50°	393.2	9.7
50°-60°	343.9	8.5
60°-70°	255.4	6.3
70°-80°	145.1	3.6
80°-90°	43.8	1.1
90°-100°	43.4	1.1
100°-110°	128.5	3.2
110°-120°	218.1	5.4
120°-130°	287.6	7.1
130°-140°	322.9	8.0
140°-150°	317.3	7.8
150°-160°	266.9	6.6
160°-170°	177.6	4.4
170°-180°	62.2	1.5
0°-30°	649.5	16.0
0°-40°	1042.7	25.8
0°-60°	1779.8	44.0
0°-90°	2224.2	54.9
90°-120°	389.9	9.6
90°-150°	1317.8	32.5
90°-180°	1824.0	45.1
0°-180°	4048.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	2	7	11	14	15	4
95°	30	35	39	40	40	34
105°	118	119	121	123	124	126
115°	222	222	221	220	220	219
125°	323	323	322	321	320	288
135°	416	419	420	419	417	322
145°	506	508	508	508	507	317
155°	580	580	579	581	579	267
165°	631	630	629	631	630	178
175°	657	654	654	657	654	62
180°	658	658	658	658	658	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.7	14.9	15.0	15.1	15.2	15.3	15.4	15.4	15.5	15.6	15.7
90°	1.5	2.8	4.0	5.3	6.5	7.6	8.5	9.4	10.3	11.1	11.9
92.5°	10.9	12.3	13.7	15.2	16.6	17.6	18.3	18.9	19.5	20.2	20.5
95°	30.5	31.6	32.5	33.5	34.6	35.5	36.3	37.1	37.9	38.6	39.0
97.5°	53.3	54.1	54.9	55.7	56.5	57.4	58.3	59.3	60.2	61.2	61.5
100°	71.2	71.7	72.1	72.6	73.0	73.7	74.7	75.8	76.8	77.8	78.0
102.5°	89.9	90.1	90.2	90.4	90.6	91.2	92.1	93.0	94.0	94.9	95.2
105°	118.5	118.6	118.7	118.9	119.0	119.2	119.7	120.1	120.6	121.0	121.4
107.5°	148.5	148.6	148.7	148.9	149.1	149.2	149.2	149.3	149.4	149.5	149.7
110°	168.9	169.1	169.3	169.5	169.8	169.8	169.7	169.6	169.5	169.3	169.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	190.0	190.0	190.1	190.1	190.2	190.1	189.9	189.7	189.5	189.3	189.2
115°	221.8	221.8	221.8	221.8	221.8	221.6	221.4	221.1	221.0	220.7	220.6
117.5°	251.6	251.7	251.8	251.9	252.0	252.0	251.8	251.6	251.5	251.4	250.9
120°	271.6	272.1	272.5	273.0	273.4	273.5	273.1	272.8	272.4	272.1	271.5
122.5°	292.3	292.5	292.7	292.8	293.0	293.1	292.9	292.7	292.6	292.5	292.0
125°	323.0	323.0	323.0	323.0	323.0	322.9	322.8	322.7	322.5	322.4	322.2
127.5°	350.7	351.1	351.4	351.8	352.0	352.1	352.0	351.8	351.6	351.4	351.2
130°	370.2	370.6	371.0	371.3	371.6	371.8	371.8	371.8	371.8	371.8	371.6
132.5°	390.2	390.5	390.7	390.9	391.2	391.3	391.2	391.1	391.0	390.9	390.7
135°	416.5	417.2	417.9	418.6	419.3	419.5	419.5	419.5	419.5	419.5	419.4
137.5°	445.2	445.5	445.9	446.1	446.5	446.7	446.9	447.1	447.3	447.5	447.2
140°	464.3	464.6	464.8	465.0	465.2	465.4	465.4	465.4	465.4	465.4	465.2
142.5°	481.8	482.1	482.3	482.5	482.8	482.8	482.7	482.6	482.5	482.4	482.4
145°	506.0	506.5	506.9	507.4	507.8	508.1	508.3	508.4	508.5	508.5	508.5
147.5°	530.0	530.6	531.1	531.6	532.3	532.4	532.4	532.3	532.2	532.1	532.0
150°	544.7	545.2	545.6	546.1	546.5	546.7	546.7	546.7	546.7	546.7	546.7
152.5°	558.6	558.8	559.1	559.4	559.6	559.8	559.9	560.0	560.1	560.2	560.4
155°	579.8	579.8	579.8	579.8	579.8	579.7	579.6	579.5	579.4	579.3	579.7
157.5°	597.7	597.4	597.3	597.1	596.9	596.7	596.7	596.7	596.7	596.6	597.0
160°	608.2	608.1	608.1	608.0	607.8	607.7	607.6	607.5	607.3	607.3	607.6
162.5°	618.0	617.8	617.4	617.2	616.9	616.6	616.5	616.4	616.4	616.2	616.8
165°	631.2	630.8	630.4	630.2	629.8	629.5	629.3	629.1	628.8	628.7	629.3
167.5°	641.2	640.8	640.2	639.8	639.4	639.1	639.1	639.2	639.2	639.2	639.9
170°	646.9	646.4	645.8	645.2	644.6	644.4	644.5	644.6	644.8	644.9	645.6
172.5°	650.9	650.5	650.1	649.6	649.1	648.9	648.9	648.9	648.9	649.0	649.7
175°	656.6	656.0	655.5	654.9	654.3	654.0	653.9	653.8	653.6	653.5	654.3
177.5°	658.4	658.0	657.5	657.1	656.6	656.4	656.4	656.4	656.4	656.4	657.0
180°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	15.9	16.0	16.1	16.2	16.2	16.3	16.3	16.4
90°	12.6	13.2	13.9	14.4	14.6	14.8	15.1	15.2
92.5°	21.0	21.4	21.8	22.0	22.2	22.3	22.5	22.6
95°	39.3	39.7	40.0	40.2	40.2	40.2	40.2	40.2
97.5°	62.0	62.3	62.8	63.0	63.0	63.0	63.0	63.0
100°	78.3	78.5	78.7	78.8	78.8	78.8	78.8	78.8
102.5°	95.5	95.9	96.1	96.4	96.5	96.6	96.7	96.8
105°	121.7	122.1	122.4	122.7	123.1	123.4	123.8	124.1
107.5°	150.1	150.3	150.7	150.9	150.8	150.8	150.8	150.8
110°	168.9	168.7	168.4	168.5	168.9	169.2	169.5	169.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	189.2	189.1	189.1	189.1	189.2	189.2	189.3	189.4
115°	220.5	220.4	220.3	220.2	220.1	219.9	219.8	219.7
117.5°	250.6	250.2	249.8	249.5	249.2	249.1	248.8	248.6
120°	271.0	270.4	269.8	269.7	269.9	270.1	270.4	270.5
122.5°	291.7	291.3	290.9	290.5	290.1	289.7	289.3	288.9
125°	322.0	321.7	321.6	321.3	321.1	320.8	320.7	320.4
127.5°	351.0	350.8	350.5	350.4	350.2	350.0	349.8	349.6
130°	371.3	371.1	370.9	370.5	370.1	369.6	369.2	368.7
132.5°	390.5	390.2	390.0	389.8	389.6	389.4	389.2	389.1
135°	419.1	418.9	418.7	418.4	418.0	417.7	417.4	417.1
137.5°	446.8	446.6	446.3	446.1	446.2	446.3	446.4	446.5
140°	465.1	465.0	464.9	464.8	464.7	464.6	464.5	464.3
142.5°	482.4	482.4	482.3	482.3	482.3	482.3	482.2	482.2
145°	508.4	508.3	508.1	507.9	507.6	507.2	506.8	506.6
147.5°	531.9	531.8	531.7	531.6	531.5	531.4	531.3	531.2
150°	546.7	546.7	546.7	546.7	546.5	546.4	546.4	546.3
152.5°	560.7	561.0	561.2	561.2	561.0	560.6	560.4	560.1
155°	580.1	580.6	581.1	581.1	580.6	580.1	579.7	579.3
157.5°	597.4	597.7	598.1	598.0	597.6	597.3	596.8	596.5
160°	608.0	608.2	608.6	608.5	608.0	607.3	606.8	606.3
162.5°	617.4	618.0	618.7	618.7	618.1	617.5	617.0	616.4
165°	630.0	630.6	631.3	631.4	631.0	630.5	630.1	629.6
167.5°	640.5	641.2	641.9	641.9	641.2	640.5	639.8	639.1
170°	646.2	646.9	647.6	647.6	646.8	646.0	645.2	644.4
172.5°	650.5	651.3	652.0	652.0	651.2	650.4	649.6	648.9
175°	655.1	655.9	656.7	656.7	655.9	655.1	654.3	653.5
177.5°	657.6	658.3	658.9	658.9	658.2	657.5	656.7	655.9
180°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6

(END OF REPORT)