

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: P331958-840

Luminaire Tested: **S123DIP-S775D365U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331958-840
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: S123DIP-S775D365U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4728.1 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

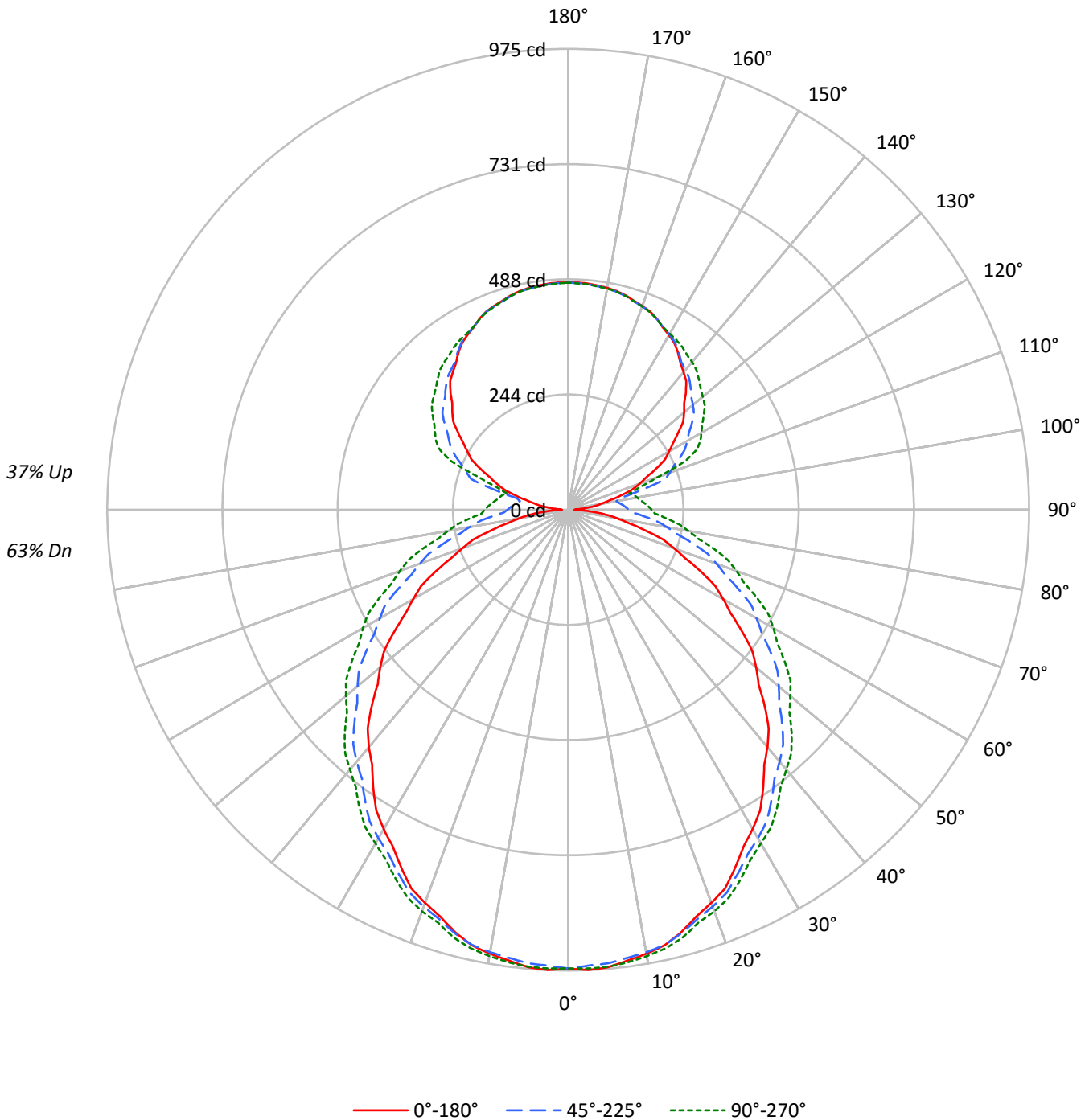
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331958-840

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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	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63
1	99	94	90	86	93	89	85	81	78	75	72	68	65	63	58	57	55	50
2	90	82	75	69	84	77	71	65	67	63	58	59	55	52	51	48	45	41
3	82	71	63	57	76	67	60	54	59	53	49	51	47	43	44	41	38	34
4	75	63	54	48	70	59	52	46	52	46	41	46	41	37	39	36	32	29
5	69	56	47	41	64	53	45	39	47	40	35	41	36	32	35	31	28	25
6	63	50	42	35	59	47	40	34	42	35	31	37	32	28	32	28	25	22
7	58	45	37	31	54	43	35	30	38	32	27	33	28	24	29	25	22	19
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	18	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.9
10°-20°	262.3	5.5
20°-30°	392.3	8.3
30°-40°	468.5	9.9
40°-50°	490.2	10.4
50°-60°	460.0	9.7
60°-70°	384.2	8.1
70°-80°	274.9	5.8
80°-90°	165.3	3.5
90°-100°	120.3	2.5
100°-110°	158.8	3.4
110°-120°	250.4	5.3
120°-130°	283.4	6.0
130°-140°	284.9	6.0
140°-150°	257.1	5.4
150°-160°	205.2	4.3
160°-170°	132.4	2.8
170°-180°	45.6	1.0
0°-30°	746.7	15.8
0°-40°	1215.2	25.7
0°-60°	2165.4	45.8
0°-90°	2989.8	63.2
90°-120°	529.5	11.2
90°-150°	1355.0	28.7
90°-180°	1738.0	36.8
0°-180°	4728.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	14	70	128	164	177	10
95°	33	62	116	150	162	36
105°	115	143	157	126	134	121
115°	205	221	261	289	300	202
125°	284	289	319	341	350	254
135°	352	354	366	386	391	271
145°	405	406	407	416	421	253
155°	445	444	445	446	444	205
165°	469	468	468	470	468	133
175°	480	479	479	481	479	46
180°	480	480	480	480	480	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.2	40.1	51.9	63.8	75.6	87.7	99.9	112.1	124.2	136.4	144.5
90°	14.1	26.5	38.7	51.0	63.3	75.9	89.0	102.0	115.0	128.1	136.3
92.5°	19.5	29.7	39.9	50.0	60.2	71.6	84.1	96.7	109.3	121.9	130.2
95°	33.4	39.3	45.2	51.1	57.1	66.2	78.6	91.0	103.4	115.7	123.6
97.5°	54.1	60.9	67.8	74.5	81.4	87.5	92.7	98.0	103.3	108.6	116.2
100°	69.8	79.0	88.1	97.1	106.2	110.0	108.5	106.9	105.3	103.8	111.2
102.5°	87.9	95.7	103.6	111.6	119.5	122.0	119.1	116.1	113.3	110.4	115.0
105°	114.8	121.3	127.8	134.3	140.9	145.6	148.6	151.5	154.5	157.4	150.0
107.5°	142.2	147.7	153.2	158.6	164.2	172.3	183.0	193.7	204.4	215.1	211.2
110°	160.5	165.4	170.3	175.1	180.0	187.5	197.8	208.0	218.3	228.6	232.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.7	182.8	186.8	191.0	195.0	202.0	211.9	221.8	231.7	241.6	247.5
115°	204.8	208.0	211.4	214.7	217.9	224.2	233.4	242.6	251.7	260.8	267.3
117.5°	230.8	233.1	235.4	237.7	240.0	245.4	253.7	262.0	270.3	278.6	284.8
120°	246.2	248.0	249.9	251.9	253.8	258.6	266.7	274.7	282.7	290.6	296.7
122.5°	262.8	264.0	265.1	266.3	267.5	272.0	279.6	287.3	295.0	302.7	308.3
125°	284.4	285.0	285.7	286.3	286.9	290.8	297.9	305.1	312.1	319.3	324.4
127.5°	306.4	306.8	307.2	307.6	307.9	311.1	317.2	323.2	329.2	335.3	340.1
130°	320.0	320.4	320.8	321.2	321.6	324.4	329.4	334.4	339.4	344.5	349.2
132.5°	332.3	333.0	333.6	334.1	334.7	337.0	341.0	345.1	349.0	353.0	357.7
135°	352.1	352.4	352.6	352.9	353.1	354.8	357.6	360.5	363.5	366.4	370.8
137.5°	369.1	369.5	369.9	370.3	370.7	371.8	373.4	375.1	376.7	378.3	382.4
140°	379.7	380.1	380.6	381.1	381.6	382.3	383.2	384.2	385.2	386.1	389.9
142.5°	390.2	390.5	390.8	391.1	391.4	391.7	392.1	392.5	392.8	393.2	396.7
145°	405.1	405.4	405.7	406.0	406.3	406.6	406.7	406.9	407.0	407.2	409.2
147.5°	417.9	418.3	418.6	419.0	419.3	419.6	419.8	419.9	420.1	420.2	420.9
150°	426.5	426.7	426.9	427.2	427.4	427.6	427.8	427.9	428.1	428.2	428.4
152.5°	434.1	434.2	434.3	434.4	434.5	434.7	434.7	434.8	434.9	435.0	435.4
155°	445.0	444.8	444.6	444.5	444.3	444.3	444.4	444.4	444.5	444.6	445.0
157.5°	453.4	453.4	453.4	453.3	453.3	453.3	453.2	453.1	453.0	453.0	453.4
160°	458.6	458.5	458.4	458.3	458.3	458.2	458.1	458.0	458.0	457.9	458.3
162.5°	463.4	463.2	463.0	462.8	462.6	462.4	462.3	462.3	462.2	462.1	462.6
165°	469.3	469.0	468.8	468.6	468.3	468.2	468.1	468.0	467.9	467.9	468.5
167.5°	473.8	473.5	473.2	472.9	472.5	472.4	472.4	472.4	472.4	472.4	473.0
170°	476.4	476.1	475.7	475.4	475.1	474.9	474.9	474.9	474.9	474.9	475.6
172.5°	478.1	477.8	477.4	477.0	476.6	476.5	476.5	476.6	476.7	476.7	477.4
175°	480.3	479.9	479.5	479.2	478.8	478.6	478.7	478.8	478.8	478.9	479.5
177.5°	480.9	480.6	480.3	480.0	479.6	479.5	479.6	479.6	479.7	479.8	480.3
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	152.5	160.6	168.6	173.9	176.2	178.6	181.0	183.4
90°	144.7	153.0	161.3	166.7	169.2	171.7	174.2	176.7
92.5°	138.5	146.7	155.1	160.4	162.6	164.9	167.1	169.4
95°	131.4	139.3	147.1	152.2	154.5	156.9	159.3	161.6
97.5°	123.8	131.5	139.1	144.1	146.5	149.0	151.4	153.9
100°	118.7	126.1	133.6	138.6	141.0	143.4	145.8	148.2
102.5°	119.8	124.4	129.1	132.6	135.1	137.6	140.1	142.6
105°	142.6	135.1	127.6	125.0	127.3	129.6	131.9	134.1
107.5°	207.1	203.2	199.1	192.9	184.4	175.9	167.3	158.9
110°	235.6	239.1	242.6	239.6	230.1	220.7	211.3	201.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	253.5	259.4	265.4	268.2	267.9	267.6	267.2	266.9
115°	273.8	280.1	286.6	290.9	293.2	295.3	297.5	299.7
117.5°	291.0	297.3	303.5	307.6	309.4	311.3	313.3	315.2
120°	302.8	308.7	314.8	318.6	320.3	321.9	323.6	325.2
122.5°	314.0	319.6	325.3	329.0	330.7	332.4	334.2	335.9
125°	329.5	334.6	339.7	343.2	345.0	346.8	348.5	350.3
127.5°	345.1	349.9	354.9	358.0	359.5	360.9	362.3	363.8
130°	354.0	358.8	363.6	366.6	367.8	369.1	370.3	371.6
132.5°	362.2	366.8	371.4	374.5	375.8	377.2	378.5	379.9
135°	375.3	379.7	384.2	386.9	387.9	388.8	389.7	390.6
137.5°	386.5	390.6	394.7	397.3	398.3	399.3	400.3	401.3
140°	393.7	397.6	401.4	403.8	404.9	405.9	406.9	407.9
142.5°	400.0	403.4	406.9	409.0	410.0	410.9	411.9	412.8
145°	411.2	413.3	415.4	416.8	417.8	418.7	419.6	420.6
147.5°	421.7	422.4	423.1	423.7	424.2	424.6	425.2	425.7
150°	428.6	428.7	428.9	429.1	429.3	429.5	429.8	430.0
152.5°	435.7	436.0	436.3	436.3	436.0	435.7	435.5	435.2
155°	445.5	445.9	446.3	446.2	445.8	445.2	444.7	444.2
157.5°	453.9	454.4	454.9	454.8	454.2	453.6	452.9	452.3
160°	458.8	459.3	459.8	459.7	459.2	458.6	458.1	457.5
162.5°	463.2	463.7	464.2	464.3	463.8	463.3	462.8	462.3
165°	469.1	469.8	470.4	470.4	469.9	469.3	468.8	468.2
167.5°	473.6	474.3	474.9	474.9	474.3	473.6	473.0	472.4
170°	476.3	476.9	477.5	477.5	476.9	476.3	475.6	474.9
172.5°	478.0	478.6	479.2	479.2	478.5	477.8	477.1	476.4
175°	480.0	480.6	481.1	481.1	480.5	479.8	479.2	478.6
177.5°	480.8	481.3	481.8	481.7	481.1	480.5	479.8	479.2
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3

(END OF REPORT)