

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: P332311-935

Luminaire Tested: **S123RDIP-S775D585U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332311-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D585U935-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4338.2 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

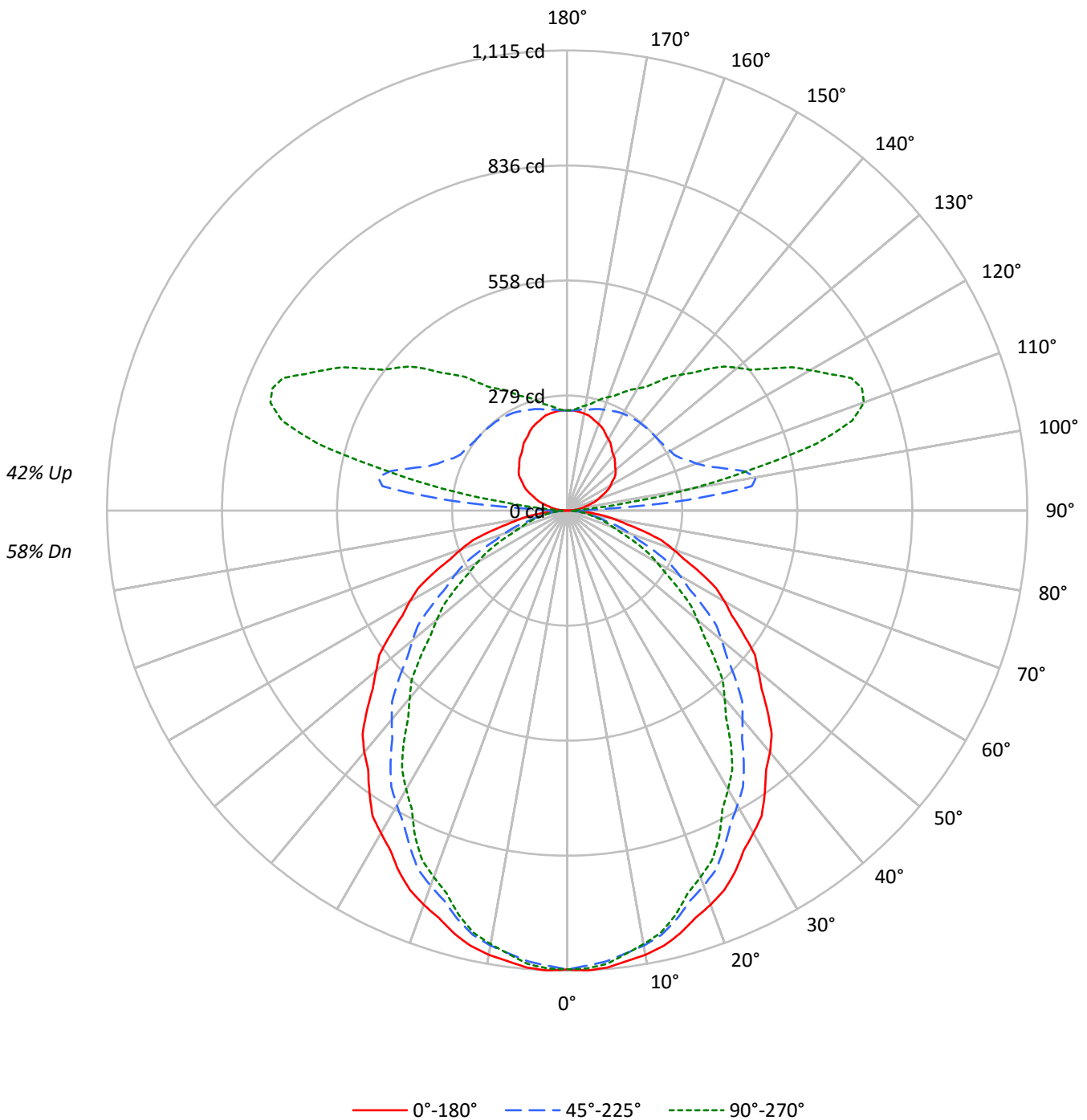
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	100	96	92	88	93	89	86	83	78	75	73	67	65	63	57	55	54	50
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46	42
3	84	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40	36
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	35	31
5	70	59	51	45	66	55	48	43	49	43	39	42	38	34	37	33	30	27
6	65	53	45	39	61	50	43	37	44	38	34	38	34	30	33	30	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24	22
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22	19
9	52	40	33	28	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	2.4
10°-20°	290.4	6.7
20°-30°	418.2	9.6
30°-40°	471.1	10.9
40°-50°	450.7	10.4
50°-60°	369.0	8.5
60°-70°	249.0	5.7
70°-80°	125.3	2.9
80°-90°	35.0	0.8
90°-100°	135.0	3.1
100°-110°	382.3	8.8
110°-120°	376.1	8.7
120°-130°	300.0	6.9
130°-140°	236.5	5.5
140°-150°	176.5	4.1
150°-160°	123.0	2.8
160°-170°	72.3	1.7
170°-180°	23.5	0.5
0°-30°	813.0	18.7
0°-40°	1284.1	29.6
0°-60°	2103.8	48.5
0°-90°	2513.0	57.9
90°-120°	893.4	20.6
90°-150°	1606.4	37.0
90°-180°	1825.0	42.1
0°-180°	4338.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	1	6	12	14	14	3
95°	17	54	291	85	57	18
105°	57	84	395	690	625	61
115°	101	125	302	662	760	100
125°	140	165	282	511	599	124
135°	164	196	278	421	486	127
145°	187	214	274	345	380	117
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.5	15.9	14.4	12.9	11.4	10.7	10.9	11.3	11.5	11.8	11.5
90°	0.9	2.0	2.9	4.4	5.4	6.4	7.8	9.3	10.8	12.3	11.8
92.5°	6.1	9.0	13.2	17.0	21.1	28.4	41.2	62.3	83.1	75.5	57.0
95°	16.7	18.2	23.6	31.9	44.7	63.8	105.6	178.7	259.3	291.2	236.2
97.5°	28.5	29.0	33.2	40.5	53.0	73.8	113.7	196.1	330.4	451.3	482.8
100°	36.3	36.9	40.3	47.2	58.9	78.1	112.4	185.1	314.3	465.0	561.8
102.5°	44.6	45.5	48.6	55.0	65.6	83.2	114.0	175.7	290.8	439.5	565.8
105°	57.0	58.5	61.4	67.2	76.6	91.9	118.4	168.9	261.7	394.9	535.8
107.5°	70.1	71.6	74.5	80.2	89.0	103.1	126.4	168.4	243.3	355.3	483.4
110°	79.6	81.0	83.5	88.9	97.2	111.0	133.1	170.4	236.2	332.9	450.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	88.2	89.7	92.1	97.6	105.9	119.2	139.7	174.4	232.3	318.1	421.6
115°	100.7	102.6	105.6	110.5	118.8	132.1	150.8	180.7	230.8	302.0	387.0
117.5°	113.1	115.4	117.9	122.3	131.7	144.0	162.5	189.2	231.7	292.6	366.1
120°	121.8	123.3	125.7	130.6	140.0	152.2	169.9	195.4	233.2	288.3	355.1
122.5°	129.2	130.7	133.2	138.4	147.4	160.5	177.8	201.4	236.0	285.5	346.0
125°	140.0	140.9	143.9	149.3	158.6	171.9	189.1	210.7	240.1	281.9	334.4
127.5°	148.1	149.6	153.3	158.7	169.0	182.3	198.9	218.3	244.9	280.1	324.3
130°	153.3	154.7	159.1	165.0	175.3	188.6	204.7	223.4	248.0	279.0	318.7
132.5°	157.1	159.0	163.8	170.9	181.2	194.1	209.9	228.2	250.4	278.5	313.6
135°	164.0	166.0	171.4	178.7	189.1	202.3	217.6	234.3	253.9	277.9	306.9
137.5°	170.5	172.5	177.9	185.7	196.0	208.2	222.8	238.8	256.2	276.9	301.2
140°	174.9	177.3	182.2	190.0	199.8	212.2	226.4	241.2	257.8	276.5	297.6
142.5°	179.5	181.6	186.9	194.0	203.8	215.3	229.1	243.5	259.0	275.7	294.5
145°	187.1	188.6	193.0	200.4	208.7	220.0	232.8	246.1	259.8	274.5	290.2
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.1
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	11.5	11.5	11.4	11.5	11.2	11.1	11.0	10.8
90°	12.3	12.7	13.3	14.2	13.8	14.2	14.7	14.2
92.5°	41.3	32.8	29.0	26.4	25.6	24.0	24.5	23.7
95°	176.8	119.9	93.8	76.1	66.8	62.3	58.9	57.0
97.5°	440.7	353.0	289.6	230.9	194.7	172.5	159.3	155.1
100°	579.0	539.2	481.7	412.0	362.4	326.6	307.5	307.9
102.5°	625.0	623.7	590.2	546.0	507.4	479.0	463.0	451.7
105°	638.4	687.5	696.9	684.1	661.5	642.8	627.2	624.7
107.5°	599.7	679.5	722.5	739.9	740.4	734.1	728.8	724.3
110°	562.7	653.2	715.1	749.4	763.2	767.1	766.1	765.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	526.2	618.5	687.9	732.1	757.2	769.5	773.2	773.4
115°	477.9	563.3	635.5	689.0	725.8	747.4	757.2	759.7
117.5°	442.7	516.5	581.3	635.7	674.1	698.8	713.0	716.3
120°	424.3	490.6	549.5	599.2	637.9	665.5	677.2	680.2
122.5°	409.7	469.8	524.3	570.4	604.9	629.6	642.7	646.4
125°	390.4	443.9	491.1	530.4	561.8	583.4	595.7	599.2
127.5°	373.5	421.3	463.8	499.6	527.5	546.0	557.1	560.3
130°	362.9	407.1	446.9	480.3	506.4	524.0	534.3	538.2
132.5°	353.1	393.7	430.8	462.6	487.1	504.7	513.8	516.6
135°	339.8	374.7	406.7	434.6	458.7	473.4	482.2	485.7
137.5°	327.8	356.4	383.8	408.1	428.3	443.2	450.7	453.0
140°	320.7	345.7	369.3	390.4	409.1	422.8	430.7	430.2
142.5°	314.0	335.5	355.9	374.3	390.2	402.4	409.5	409.0
145°	305.9	322.2	337.9	352.1	364.4	374.7	378.7	379.6
147.5°	299.4	312.2	324.9	335.0	344.3	351.3	355.1	355.4
150°	294.6	305.9	316.2	325.6	332.9	338.4	341.3	341.3
152.5°	290.3	300.1	309.2	316.9	322.7	327.8	329.5	329.5
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

(END OF REPORT)