

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: P332305-940

Luminaire Tested: **S123RDIP-S775D365U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332305-940
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-S775D365U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3773.1 lumens
Efficiency: N/A
Efficacy: 107.8 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: Semi-Direct

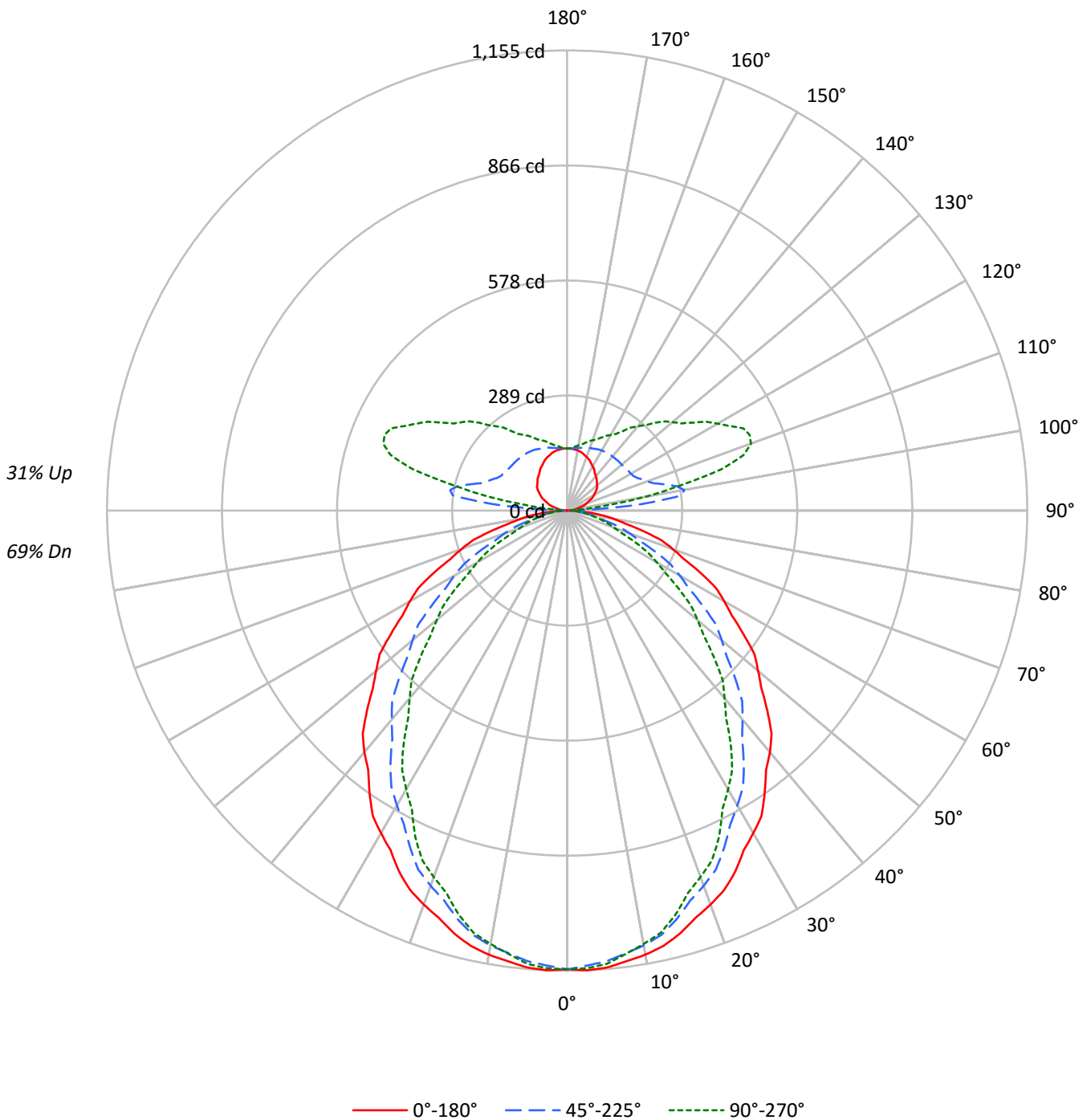
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	74	74	74	69
1	102	98	94	91	97	93	90	87	83	81	78	74	72	70	66	64	63	59
2	94	86	80	75	88	82	76	72	73	69	66	66	62	60	58	56	54	50
3	86	76	69	63	81	72	66	61	65	60	56	58	54	51	52	49	46	43
4	79	68	60	54	74	65	57	52	58	52	48	52	48	44	47	43	40	37
5	73	61	53	47	68	58	50	45	52	46	42	47	42	38	42	38	35	33
6	67	55	47	41	63	52	45	39	47	41	37	43	38	34	39	35	31	29
7	62	50	42	36	59	47	40	35	43	37	33	39	34	30	35	31	28	26
8	58	45	37	32	55	43	36	31	40	33	29	36	31	27	33	28	25	23
9	54	42	34	29	51	40	33	28	36	30	26	33	28	25	30	26	23	21
10	51	38	31	26	48	37	30	25	34	28	24	31	26	22	28	24	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.9
10°-20°	300.8	8.0
20°-30°	433.1	11.5
30°-40°	487.9	12.9
40°-50°	466.7	12.4
50°-60°	382.2	10.1
60°-70°	257.9	6.8
70°-80°	129.7	3.4
80°-90°	35.5	0.9
90°-100°	86.6	2.3
100°-110°	245.3	6.5
110°-120°	241.3	6.4
120°-130°	192.5	5.1
130°-140°	151.8	4.0
140°-150°	113.3	3.0
150°-160°	78.9	2.1
160°-170°	46.4	1.2
170°-180°	15.1	0.4
0°-30°	842.0	22.3
0°-40°	1329.9	35.2
0°-60°	2178.8	57.7
0°-90°	2602.0	69.0
90°-120°	573.2	15.2
90°-150°	1030.7	27.3
90°-180°	1171.0	31.0
0°-180°	3773.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	1	4	8	9	9	3
95°	11	35	187	55	37	12
105°	37	54	253	443	401	39
115°	65	80	194	425	488	64
125°	90	106	181	328	384	80
135°	105	126	178	270	312	81
145°	120	138	176	221	244	75
155°	136	147	170	194	202	63
165°	149	153	163	173	176	42
175°	155	156	157	159	158	15
180°	156	156	156	156	156	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.0	16.3	14.6	13.0	11.3	10.5	10.7	10.9	11.1	11.3	11.1
90°	0.6	1.2	1.9	2.9	3.5	4.1	5.1	6.0	7.0	7.8	7.6
92.5°	3.9	5.8	8.5	10.9	13.6	18.2	26.5	40.0	53.3	48.4	36.6
95°	10.7	11.7	15.2	20.5	28.7	40.9	67.8	114.7	166.4	186.9	151.6
97.5°	18.3	18.5	21.3	25.9	34.1	47.3	72.9	125.8	212.0	289.6	309.8
100°	23.4	23.6	25.9	30.2	37.8	50.1	72.1	118.8	201.7	298.5	360.5
102.5°	28.6	29.2	31.1	35.3	42.1	53.4	73.2	112.7	186.5	282.0	363.0
105°	36.6	37.5	39.4	43.2	49.1	58.9	76.0	108.4	168.0	253.3	343.8
107.5°	45.0	45.9	47.8	51.5	57.1	66.2	81.1	108.1	156.1	228.0	310.1
110°	51.0	52.0	53.6	57.1	62.4	71.2	85.4	109.3	151.6	213.7	289.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.6	57.5	59.1	62.6	67.9	76.5	89.7	111.9	149.0	204.0	270.5
115°	64.6	65.9	67.8	70.9	76.2	84.8	96.8	115.9	148.1	193.8	248.3
117.5°	72.6	74.0	75.6	78.6	84.5	92.4	104.2	121.4	148.6	187.7	234.9
120°	78.1	79.1	80.7	83.8	89.8	97.6	109.1	125.4	149.7	184.9	227.8
122.5°	82.9	83.9	85.4	88.9	94.6	103.0	114.0	129.2	151.4	183.2	222.0
125°	89.8	90.4	92.3	95.8	101.7	110.3	121.4	135.2	154.1	180.8	214.6
127.5°	95.1	95.9	98.4	101.8	108.4	117.0	127.6	140.1	157.1	179.8	208.0
130°	98.4	99.2	102.1	105.8	112.5	121.0	131.4	143.4	159.2	179.0	204.5
132.5°	100.9	102.0	105.1	109.7	116.3	124.6	134.6	146.4	160.7	178.7	201.3
135°	105.2	106.5	109.9	114.7	121.4	129.8	139.6	150.3	162.9	178.3	197.0
137.5°	109.4	110.8	114.1	119.1	125.7	133.6	143.0	153.2	164.4	177.6	193.2
140°	112.2	113.8	116.9	122.0	128.2	136.2	145.3	154.7	165.4	177.5	190.9
142.5°	115.2	116.5	119.9	124.5	130.8	138.1	147.0	156.2	166.2	176.9	189.0
145°	120.0	121.0	123.9	128.6	133.9	141.2	149.4	157.8	166.7	176.1	186.2
147.5°	125.0	125.6	128.3	132.4	137.6	143.7	151.2	158.9	166.7	175.0	183.6
150°	128.2	128.6	131.1	135.2	139.6	145.3	152.5	159.2	166.7	174.0	181.8
152.5°	131.5	131.6	134.1	137.7	141.6	147.0	153.3	159.6	165.9	172.7	179.8
155°	136.4	136.4	138.3	141.5	145.0	149.4	154.7	159.8	165.1	170.5	176.7
157.5°	140.4	140.6	142.1	144.9	147.8	151.2	155.5	160.1	164.1	168.5	173.3
160°	143.4	143.4	144.6	147.1	149.4	152.5	156.3	160.1	163.5	167.0	171.1
162.5°	145.6	145.6	146.7	148.6	150.6	153.3	156.6	159.8	162.6	165.5	168.8
165°	149.0	148.7	149.4	151.0	152.2	154.4	156.9	159.2	161.0	163.3	165.8
167.5°	151.6	151.2	151.6	152.8	153.6	155.1	156.9	158.6	159.5	161.0	162.8
170°	153.1	152.5	152.8	153.7	154.4	155.1	156.6	157.8	158.5	159.4	161.0
172.5°	154.2	153.7	153.8	154.5	154.9	155.2	156.6	157.7	157.7	158.2	159.3
175°	155.3	155.1	154.7	155.3	155.3	155.7	156.3	156.9	156.6	156.6	157.2
177.5°	156.0	155.7	155.4	155.7	155.7	155.7	156.0	156.4	156.0	155.7	156.0
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	11.0	10.9	10.8	10.7	10.5	10.3	10.3	10.1
90°	7.8	8.2	8.5	9.1	8.8	9.1	9.5	9.1
92.5°	26.6	21.0	18.5	16.9	16.4	15.4	15.8	15.2
95°	113.4	76.9	60.2	48.9	42.9	40.0	37.8	36.6
97.5°	282.8	226.5	185.8	148.2	124.9	110.8	102.2	99.5
100°	371.5	346.0	309.2	264.4	232.6	209.6	197.2	197.6
102.5°	401.0	400.2	378.7	350.4	325.6	307.4	297.1	289.8
105°	409.7	441.1	447.1	439.0	424.5	412.5	402.4	400.8
107.5°	384.8	436.0	463.6	474.8	475.1	471.0	467.6	464.8
110°	361.1	419.1	458.8	480.9	489.7	492.2	491.6	491.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.7	396.9	441.4	469.8	485.9	493.7	496.1	496.2
115°	306.6	361.4	407.8	442.1	465.7	479.6	485.9	487.5
117.5°	284.1	331.4	373.0	407.9	432.6	448.4	457.4	459.6
120°	272.2	314.8	352.6	384.4	409.3	427.0	434.5	436.4
122.5°	263.0	301.4	336.4	366.0	388.2	404.0	412.3	414.7
125°	250.5	284.9	315.1	340.4	360.5	374.3	382.3	384.4
127.5°	239.7	270.3	297.6	320.6	338.5	350.4	357.5	359.4
130°	232.8	261.3	286.8	308.2	324.9	336.3	342.9	345.4
132.5°	226.6	252.6	276.4	296.9	312.5	323.9	329.8	331.5
135°	218.0	240.4	260.9	278.8	294.4	303.8	309.4	311.7
137.5°	210.3	228.6	246.3	261.9	274.8	284.5	289.2	290.7
140°	205.8	221.9	236.9	250.5	262.5	271.3	276.3	276.1
142.5°	201.5	215.3	228.4	240.1	250.4	258.2	262.7	262.4
145°	196.4	206.7	216.8	226.0	233.8	240.4	243.0	243.6
147.5°	192.1	200.4	208.5	215.0	221.0	225.4	227.8	228.1
150°	189.0	196.4	203.0	208.9	213.7	217.1	219.0	219.0
152.5°	186.3	192.5	198.4	203.4	207.1	210.3	211.4	211.4
155°	182.2	187.2	191.9	195.6	198.5	201.1	201.7	202.0
157.5°	177.7	181.9	185.6	188.6	191.0	192.9	193.4	193.3
160°	175.2	178.7	181.8	184.0	186.2	188.2	188.2	187.8
162.5°	172.2	175.1	178.1	180.0	181.5	183.1	183.1	182.8
165°	168.3	170.1	172.4	174.0	175.2	176.5	176.1	176.1
167.5°	164.9	166.3	167.6	168.7	169.2	170.1	169.9	169.9
170°	162.6	163.5	164.8	165.4	165.8	166.4	166.0	166.0
172.5°	160.6	161.3	162.3	162.6	162.7	163.4	162.8	162.6
175°	157.8	158.2	158.8	158.8	158.8	159.2	158.8	158.5
177.5°	156.1	156.4	156.7	156.7	156.4	156.7	156.1	156.1
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7

(END OF REPORT)