

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: P331963-940

Luminaire Tested: **S123DIP-S775D365U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331963-940
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: S123DIP-S775D365U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3997.9 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

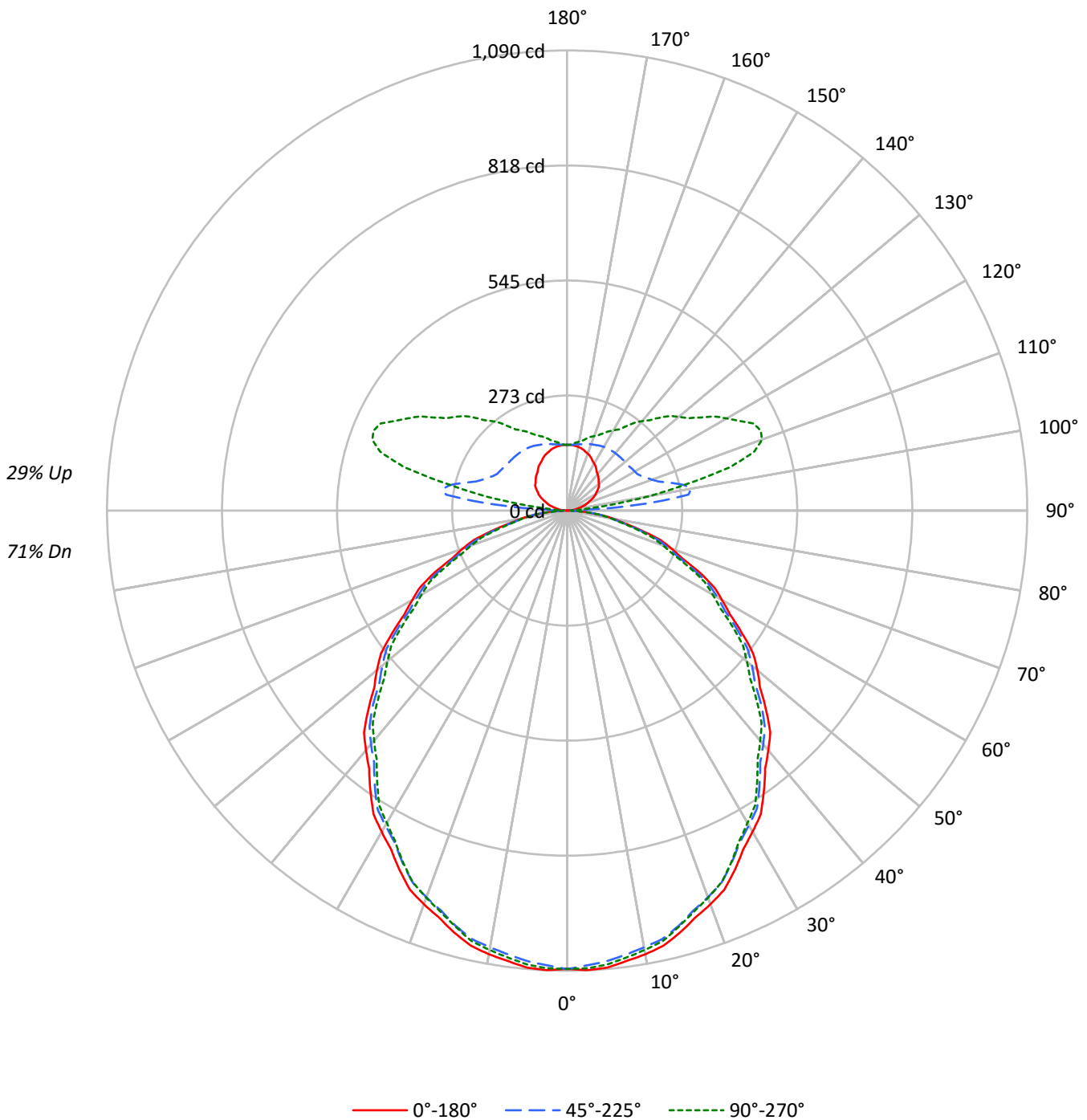
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	65	63	59
2	93	85	79	74	88	81	75	71	73	68	64	65	62	59	58	56	53	50
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	52	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	47	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	42	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	37	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	33	27	50	39	31	26	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	22	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	2.6
10°-20°	288.8	7.2
20°-30°	426.6	10.7
30°-40°	498.4	12.5
40°-50°	501.0	12.5
50°-60°	440.1	11.0
60°-70°	327.9	8.2
70°-80°	186.8	4.7
80°-90°	54.8	1.4
90°-100°	86.6	2.2
100°-110°	245.3	6.1
110°-120°	241.3	6.0
120°-130°	192.5	4.8
130°-140°	151.8	3.8
140°-150°	113.3	2.8
150°-160°	78.9	2.0
160°-170°	46.4	1.2
170°-180°	15.1	0.4
0°-30°	817.7	20.5
0°-40°	1316.1	32.9
0°-60°	2257.3	56.5
0°-90°	2826.8	70.7
90°-120°	573.2	14.3
90°-150°	1030.7	25.8
90°-180°	1171.0	29.3
0°-180°	3997.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
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°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.5	19.2	18.8	18.5	18.1	17.9	17.9	17.9	18.0	18.0	17.7
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°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	17.7	17.6	17.5	17.5	17.5	17.5	17.6	17.5
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)