

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: P331703-927

Luminaire Tested: **SA2XXRDIP-C675D1080U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331703-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D1080U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4891.3 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

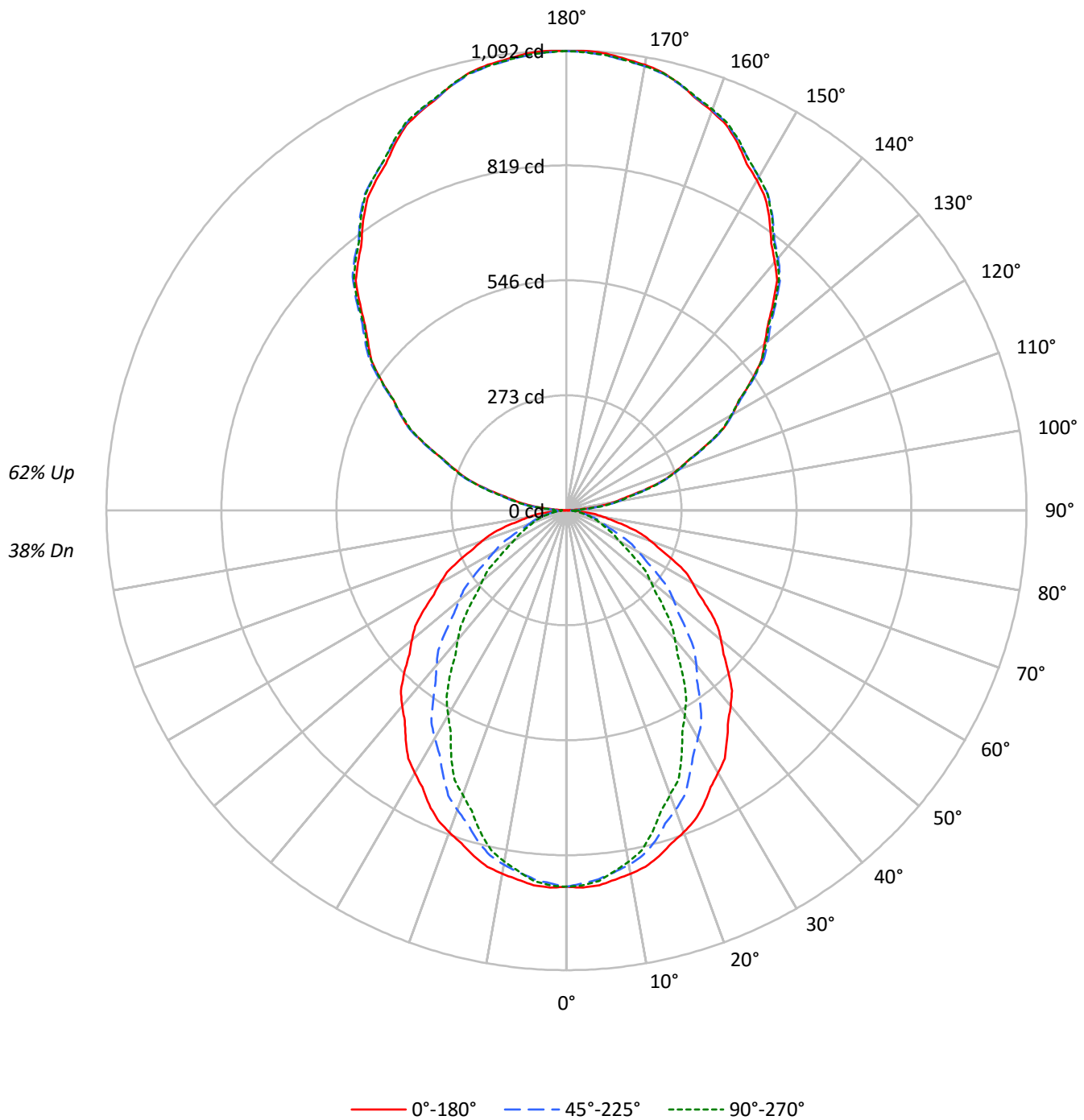
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	95	95	95	95	76	76	76	60	60	60	45	45	45
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	38
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	34	33
3	80	71	64	58	72	64	58	54	53	48	45	42	39	37	32	30	28
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	1.7
10°-20°	229.7	4.7
20°-30°	322.5	6.6
30°-40°	351.7	7.2
40°-50°	323.4	6.6
50°-60°	254.0	5.2
60°-70°	165.6	3.4
70°-80°	85.4	1.7
80°-90°	26.5	0.5
90°-100°	69.1	1.4
100°-110°	214.6	4.4
110°-120°	366.8	7.5
120°-130°	482.4	9.9
130°-140°	541.4	11.1
140°-150°	530.9	10.9
150°-160°	445.3	9.1
160°-170°	295.3	6.0
170°-180°	103.2	2.1
0°-30°	635.8	13.0
0°-40°	987.5	20.2
0°-60°	1564.8	32.0
0°-90°	1842.3	37.7
90°-120°	650.5	13.3
90°-150°	2205.2	45.1
90°-180°	3049.0	62.3
0°-180°	4891.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	12	32	31	31	4
95°	48	57	59	59	57	55
105°	198	201	202	204	204	209
115°	368	373	372	371	368	364
125°	536	543	541	538	537	478
135°	693	703	705	704	701	535
145°	841	847	853	854	850	525
155°	962	964	967	971	969	442
165°	1046	1045	1045	1051	1047	295
175°	1089	1086	1084	1090	1085	103
180°	1090	1090	1090	1090	1090	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.9	9.2	8.6	7.9	8.0	9.0	9.8	10.7	11.6	11.4
90°	1.0	3.4	5.9	8.3	10.8	14.2	18.7	23.2	27.7	32.2	31.8
92.5°	16.4	18.1	20.0	21.8	23.6	25.0	26.1	27.2	28.2	29.2	29.3
95°	47.8	49.9	52.0	53.9	56.0	57.3	57.7	58.1	58.5	58.9	58.9
97.5°	87.5	89.2	91.0	92.8	94.6	95.9	96.6	97.4	98.2	99.0	99.0
100°	116.8	118.5	120.2	121.8	123.4	124.5	125.2	125.7	126.4	127.0	127.0
102.5°	147.8	149.1	150.4	151.7	153.0	154.1	154.9	155.6	156.4	157.2	157.3
105°	197.8	198.4	199.1	199.7	200.3	200.8	201.2	201.6	202.0	202.4	202.9
107.5°	248.3	249.1	250.1	251.0	251.8	252.3	252.3	252.3	252.3	252.3	252.5
110°	280.7	281.9	283.1	284.3	285.6	286.2	286.2	286.2	286.2	286.2	286.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	316.0	317.2	318.5	319.6	320.9	321.5	321.2	321.1	320.9	320.8	320.3
115°	368.0	369.3	370.5	371.8	373.0	373.4	373.0	372.6	372.2	371.8	371.5
117.5°	419.9	421.6	423.3	424.8	426.5	426.7	425.6	424.5	423.3	422.2	421.7
120°	454.6	456.2	457.9	459.5	461.1	461.1	459.5	457.9	456.2	454.6	454.6
122.5°	486.2	488.2	490.1	492.1	494.1	494.5	493.4	492.2	491.1	489.9	489.4
125°	535.5	537.4	539.2	541.1	542.9	543.5	542.9	542.3	541.7	541.1	540.4
127.5°	583.6	585.9	588.3	590.6	592.9	593.7	592.9	592.2	591.5	590.7	590.0
130°	613.8	616.4	619.1	621.7	624.4	625.5	625.1	624.7	624.3	623.9	623.4
132.5°	647.6	649.8	652.0	654.1	656.3	657.4	657.5	657.6	657.7	657.7	656.9
135°	692.9	695.1	697.4	699.7	701.9	703.2	703.6	704.0	704.5	704.9	704.6
137.5°	740.5	742.4	744.3	746.1	747.9	749.1	749.6	750.2	750.7	751.2	751.1
140°	769.3	771.1	772.9	774.8	776.7	778.1	779.1	780.1	781.2	782.1	782.1
142.5°	798.8	800.6	802.4	804.2	806.0	807.3	808.0	808.7	809.5	810.2	810.3
145°	841.1	842.5	843.9	845.3	846.8	848.1	849.3	850.6	851.8	853.0	853.2
147.5°	878.8	880.5	882.2	883.9	885.7	886.9	887.7	888.6	889.4	890.2	890.7
150°	904.5	905.8	907.0	908.2	909.4	910.5	911.3	912.1	912.9	913.8	914.3
152.5°	927.3	928.6	929.8	931.1	932.2	933.3	934.4	935.3	936.4	937.3	938.1
155°	961.6	962.2	962.8	963.5	964.1	964.6	965.3	965.9	966.5	967.1	968.1
157.5°	990.9	991.3	991.7	992.0	992.5	992.8	993.2	993.6	994.0	994.3	995.8
160°	1008.5	1008.9	1009.3	1009.7	1010.2	1010.4	1010.7	1010.9	1011.1	1011.3	1012.5
162.5°	1024.7	1024.8	1024.8	1024.9	1025.1	1025.2	1025.4	1025.6	1025.8	1026.0	1027.4
165°	1046.2	1046.1	1045.8	1045.6	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1046.8
167.5°	1064.3	1063.7	1063.0	1062.5	1061.8	1061.5	1061.4	1061.4	1061.4	1061.4	1062.8
170°	1073.9	1073.2	1072.6	1072.0	1071.4	1071.0	1070.8	1070.6	1070.4	1070.2	1071.6
172.5°	1080.5	1079.9	1079.3	1078.6	1078.0	1077.6	1077.4	1077.2	1077.0	1076.8	1078.2
175°	1088.6	1088.0	1087.3	1086.7	1086.2	1085.6	1085.2	1084.8	1084.4	1083.9	1085.4
177.5°	1091.9	1091.4	1090.9	1090.4	1090.0	1089.5	1089.2	1088.9	1088.5	1088.2	1089.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	11.2	10.9	10.7	10.6	10.7	10.7	10.8	10.8
90°	31.4	31.0	30.6	30.5	30.7	30.9	31.1	31.3
92.5°	29.4	29.5	29.6	29.6	29.7	29.7	29.8	29.8
95°	58.9	58.9	58.9	58.7	58.3	57.9	57.4	57.0
97.5°	99.0	99.0	99.0	99.0	98.9	98.9	98.9	98.9
100°	127.0	127.0	127.0	126.9	126.7	126.5	126.3	126.0
102.5°	157.5	157.6	157.8	157.8	157.6	157.4	157.2	157.0
105°	203.3	203.7	204.1	204.3	204.3	204.3	204.3	204.3
107.5°	252.6	252.8	252.9	252.5	251.7	250.7	249.8	248.8
110°	286.2	286.2	286.2	285.9	285.3	284.6	284.0	283.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.8	319.3	318.9	318.4	317.9	317.4	317.0	316.6
115°	371.4	371.1	370.9	370.5	369.9	369.3	368.7	368.0
117.5°	421.2	420.7	420.3	419.7	419.1	418.4	417.8	417.2
120°	454.6	454.6	454.6	454.2	453.7	453.0	452.4	451.8
122.5°	488.9	488.5	487.9	487.5	487.0	486.6	486.2	485.7
125°	539.9	539.2	538.6	538.2	538.0	537.8	537.6	537.4
127.5°	589.3	588.5	587.8	587.1	586.5	585.8	585.2	584.5
130°	623.1	622.7	622.3	621.6	620.8	620.0	619.2	618.4
132.5°	655.9	655.1	654.2	653.4	652.8	652.0	651.4	650.8
135°	704.5	704.3	704.0	703.6	703.0	702.4	701.8	701.2
137.5°	750.9	750.8	750.6	750.1	749.2	748.5	747.7	746.8
140°	782.1	782.1	782.1	781.7	780.9	780.1	779.3	778.5
142.5°	810.5	810.6	810.8	810.5	809.6	808.8	808.0	807.2
145°	853.4	853.7	853.8	853.5	852.7	851.9	851.0	850.2
147.5°	891.1	891.5	892.0	891.8	891.0	890.3	889.5	888.7
150°	915.0	915.6	916.2	916.2	915.6	915.0	914.3	913.8
152.5°	938.9	939.6	940.4	940.4	939.6	938.9	938.1	937.3
155°	969.2	970.2	971.2	971.4	970.8	970.2	969.6	968.9
157.5°	997.1	998.5	999.9	1000.1	999.1	998.1	997.2	996.2
160°	1013.8	1014.9	1016.2	1016.4	1015.6	1014.8	1013.9	1013.1
162.5°	1028.8	1030.2	1031.6	1031.7	1030.8	1029.8	1028.8	1027.9
165°	1048.2	1049.6	1051.1	1051.2	1050.3	1049.2	1048.2	1047.2
167.5°	1064.2	1065.6	1067.1	1067.2	1066.2	1065.1	1064.1	1063.0
170°	1073.0	1074.4	1075.9	1076.0	1074.8	1073.6	1072.3	1071.1
172.5°	1079.7	1081.1	1082.5	1082.6	1081.4	1080.1	1079.0	1077.7
175°	1086.9	1088.3	1089.7	1089.8	1088.6	1087.3	1086.2	1084.9
177.5°	1090.2	1091.2	1092.1	1092.1	1091.2	1090.2	1089.2	1088.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

(END OF REPORT)