

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: P331419-927

Luminaire Tested: **SA2XXDIP-C865D1080U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331419-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D1080U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6115.6 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

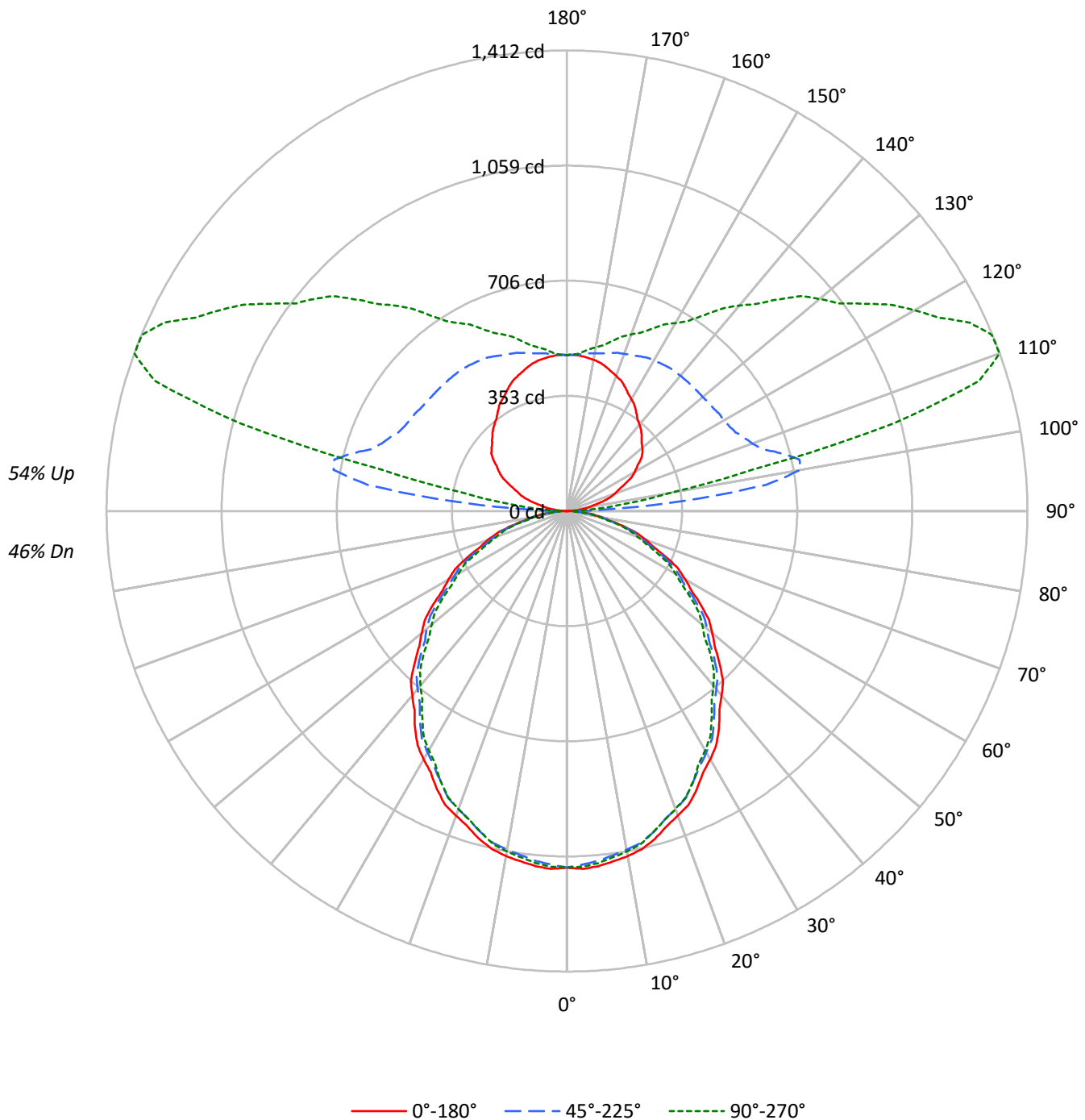
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52
1	97	92	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44
2	88	81	75	69	81	74	69	65	62	58	55	51	48	46	40	39	37
3	80	71	64	58	73	65	59	54	55	50	46	45	42	39	36	33	31
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27
5	67	56	48	42	62	52	44	39	43	38	34	36	32	29	29	26	24
6	62	50	42	36	57	46	39	34	39	34	30	32	28	25	26	23	21
7	57	45	37	32	53	42	35	30	35	30	26	30	25	22	24	21	18
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17
9	50	37	30	25	45	35	28	24	30	24	21	25	21	18	20	17	15
10	46	34	27	22	42	32	25	21	27	22	19	23	19	16	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	1.7
10°-20°	289.3	4.7
20°-30°	425.2	7.0
30°-40°	493.9	8.1
40°-50°	493.3	8.1
50°-60°	430.2	7.0
60°-70°	318.1	5.2
70°-80°	180.2	2.9
80°-90°	52.8	0.9
90°-100°	191.3	3.1
100°-110°	649.3	10.6
110°-120°	689.8	11.3
120°-130°	567.8	9.3
130°-140°	456.0	7.5
140°-150°	344.6	5.6
150°-160°	242.2	4.0
160°-170°	142.6	2.3
170°-180°	46.4	0.8
0°-30°	817.2	13.4
0°-40°	1311.1	21.4
0°-60°	2234.6	36.5
0°-90°	2785.6	45.5
90°-120°	1530.4	25.0
90°-150°	2898.8	47.4
90°-180°	3330.0	54.5
0°-180°	6115.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	12	31	30	30	4
95°	32	79	361	136	105	34
105°	112	169	682	1219	1037	119
115°	198	250	570	1177	1365	196
125°	276	327	548	954	1107	245
135°	324	386	542	802	918	250
145°	370	425	539	670	732	232
155°	421	454	524	592	616	193
165°	458	472	502	532	540	129
175°	478	478	482	488	487	45
180°	479	479	479	479	479	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.3	15.5	15.8	15.8	15.8	16.0	16.6	17.5	18.2	18.1	17.3
90°	1.0	3.6	7.4	9.2	11.0	13.8	18.4	24.9	30.3	31.3	30.3
92.5°	11.2	16.2	22.8	26.9	33.1	41.7	62.6	91.8	118.0	119.6	101.1
95°	32.2	35.9	45.1	53.4	68.1	90.2	132.5	212.5	319.3	360.8	315.7
97.5°	52.4	57.4	67.2	79.7	96.6	121.7	174.8	286.4	463.8	615.8	646.0
100°	70.8	73.6	81.9	96.6	115.0	140.8	189.6	301.8	500.6	727.0	859.5
102.5°	87.8	89.8	98.1	112.8	132.0	157.7	202.8	302.6	486.6	730.7	939.1
105°	112.3	116.0	122.4	136.2	156.5	182.2	225.5	307.4	459.2	681.9	926.7
107.5°	138.8	141.7	148.0	160.7	180.8	206.7	248.7	320.0	445.6	629.6	845.9
110°	156.5	160.1	165.6	177.6	196.9	223.6	264.1	330.3	442.7	604.6	795.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.6	176.3	182.6	193.8	212.4	239.8	278.8	341.4	443.4	588.4	759.8
115°	197.9	202.5	207.9	219.0	237.4	262.3	301.8	358.0	447.3	570.5	716.0
117.5°	224.0	227.7	233.2	243.0	260.6	286.4	323.0	375.7	453.8	561.9	688.3
120°	240.2	243.8	249.4	257.7	276.1	301.8	337.7	387.5	458.3	556.7	673.6
122.5°	255.6	258.6	264.1	273.1	291.5	318.1	351.7	397.8	463.4	553.8	661.1
125°	276.1	278.8	284.4	295.4	313.8	339.6	372.7	414.2	471.2	548.5	643.3
127.5°	292.2	296.0	303.7	315.8	333.5	360.0	392.2	429.4	479.1	545.3	626.7
130°	301.8	305.5	314.7	327.6	346.0	371.8	404.0	438.9	485.0	543.8	615.7
132.5°	310.7	315.1	325.0	338.7	357.8	383.6	414.3	448.5	490.8	543.1	606.8
135°	323.9	327.6	338.7	352.4	373.6	399.4	428.8	461.1	497.9	542.0	594.5
137.5°	336.4	340.9	351.9	366.6	387.6	411.5	440.6	470.6	504.1	541.9	585.8
140°	346.0	349.7	360.8	375.5	395.7	419.6	447.3	475.8	507.1	541.1	580.7
142.5°	355.6	358.5	368.8	383.6	403.1	425.6	452.4	480.2	509.3	541.1	575.5
145°	369.9	373.6	382.9	396.6	415.0	435.3	460.1	485.9	511.7	539.2	568.7
147.5°	385.4	388.2	397.0	409.7	425.0	443.0	466.4	489.0	512.4	536.0	561.7
150°	395.7	398.5	405.8	417.8	431.6	448.1	469.4	490.5	511.7	533.8	555.8
152.5°	406.0	407.3	414.6	425.2	438.2	453.3	472.3	491.2	510.2	530.0	550.6
155°	420.6	421.4	427.0	437.1	447.3	461.1	476.7	492.3	507.9	523.6	541.1
157.5°	432.7	433.6	438.1	446.9	455.0	466.6	479.8	492.3	503.7	517.0	532.1
160°	440.8	441.7	445.4	452.7	460.1	470.2	481.3	492.3	501.5	512.6	525.5
162.5°	448.9	448.4	452.0	457.9	464.5	472.5	482.0	491.6	499.3	508.9	519.6
165°	458.3	457.4	459.2	464.7	469.4	474.8	483.2	489.6	495.1	501.5	509.8
167.5°	466.0	464.9	466.6	470.1	473.4	476.9	482.9	488.3	490.8	495.1	500.3
170°	471.2	469.4	470.2	473.0	474.8	477.6	482.2	486.8	488.6	491.4	495.1
172.5°	474.1	473.0	472.5	475.2	476.3	478.3	481.5	484.6	485.7	487.0	490.0
175°	477.6	476.7	475.8	477.6	477.6	478.6	480.4	482.2	481.3	482.2	483.2
177.5°	479.3	477.8	477.1	478.6	478.6	478.6	479.3	480.8	479.3	478.6	479.3
180°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	16.6	15.6	15.4	15.2	15.1	14.9	14.7	14.5
90°	29.5	27.6	29.5	30.3	30.3	30.3	30.3	30.3
92.5°	80.2	68.8	61.1	55.4	54.7	51.7	52.4	51.0
95°	241.1	185.0	146.3	126.0	114.1	106.8	104.0	104.9
97.5°	562.6	460.3	360.8	294.3	250.3	227.7	214.2	206.5
100°	840.2	726.1	600.0	488.6	412.3	372.7	346.0	329.5
102.5°	1022.1	996.2	904.0	786.1	703.1	635.6	602.2	579.8
105°	1118.1	1222.1	1234.1	1203.7	1146.6	1089.6	1050.0	1037.1
107.5°	1048.9	1205.5	1301.2	1345.8	1353.0	1349.8	1341.9	1324.8
110°	989.3	1154.0	1271.8	1347.3	1386.8	1404.3	1412.6	1411.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	934.8	1092.9	1218.8	1305.3	1360.3	1389.6	1405.3	1410.2
115°	867.8	1009.6	1130.0	1224.9	1290.2	1332.5	1356.5	1364.8
117.5°	817.4	941.8	1051.1	1140.0	1206.7	1251.3	1276.6	1283.6
120°	792.3	906.4	1004.0	1087.7	1152.1	1195.4	1222.1	1231.3
122.5°	772.5	877.0	969.4	1045.0	1102.8	1145.3	1169.1	1176.8
125°	743.5	838.4	919.3	988.3	1041.7	1076.7	1099.7	1107.1
127.5°	715.0	800.8	877.2	940.9	987.5	1020.2	1040.1	1046.0
130°	696.6	775.8	848.5	909.2	954.3	985.6	1004.0	1011.4
132.5°	679.0	752.3	819.0	876.1	920.4	951.7	968.7	975.3
135°	654.3	715.0	775.8	827.3	866.9	897.2	913.8	917.5
137.5°	634.6	685.4	733.6	778.6	814.6	840.7	855.3	860.8
140°	622.1	666.3	708.6	749.1	778.6	802.5	816.3	821.8
142.5°	611.8	649.4	685.8	719.6	747.6	769.4	781.6	782.8
145°	597.2	627.6	656.2	682.9	704.9	720.6	729.8	732.5
147.5°	586.1	610.0	632.2	651.7	669.9	682.5	688.7	690.4
150°	577.9	598.2	617.5	634.1	647.8	658.9	664.4	665.4
152.5°	569.8	588.6	605.0	619.3	630.2	639.8	643.8	644.0
155°	558.6	573.3	587.1	597.2	607.4	613.8	617.5	615.7
157.5°	545.5	557.9	569.4	577.3	584.6	589.9	591.5	591.5
160°	537.4	547.6	557.7	564.1	570.5	575.1	576.1	576.1
162.5°	529.3	538.0	546.6	551.6	558.0	561.2	562.1	561.3
165°	517.2	523.6	530.0	533.8	537.4	541.1	541.1	540.2
167.5°	505.6	510.6	515.0	518.3	519.9	522.0	521.8	520.7
170°	499.7	502.5	506.1	507.9	508.9	511.7	510.7	508.9
172.5°	493.1	495.1	498.0	499.2	500.1	501.4	500.4	499.3
175°	485.9	486.8	487.7	488.6	488.6	489.6	488.6	486.8
177.5°	480.8	480.8	481.5	481.5	481.5	481.5	480.8	479.3
180°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6

(END OF REPORT)