

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: P332062-927

Luminaire Tested: **S123DIP-S1165D585U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332062-927
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-S1165D585U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5449.4 lumens
Efficiency: N/A
Efficacy: 98.9 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

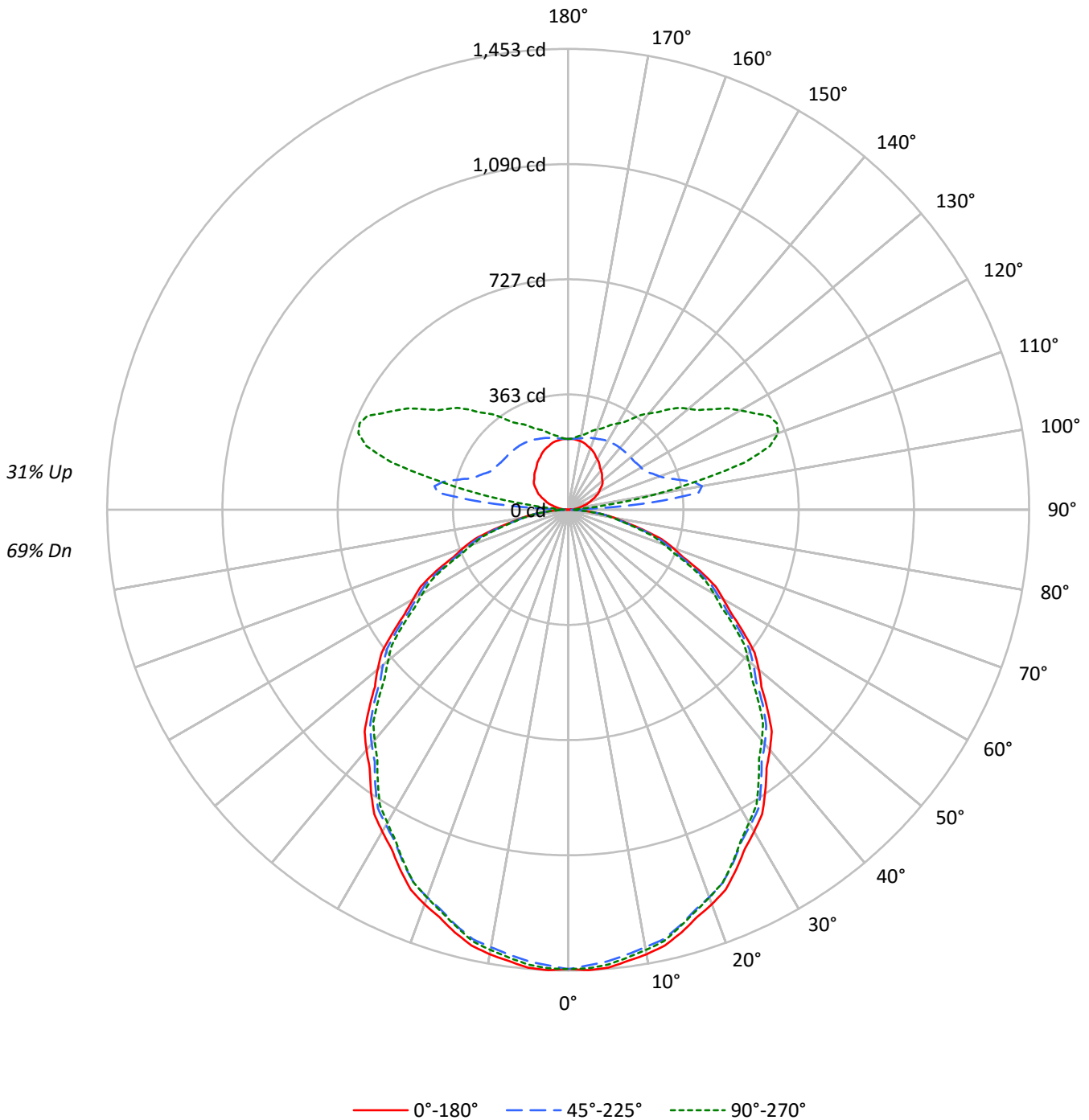
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	94	94	94	83	83	83	74	74	74	69
1	102	98	93	90	96	92	89	85	82	80	77	73	71	69	65	64	62	58
2	93	85	79	73	87	81	75	70	72	68	64	64	61	58	57	55	52	49
3	85	75	67	61	80	71	64	59	64	58	54	57	53	49	51	47	44	41
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	46	40	36	41	37	33	31
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29	27
7	61	48	40	34	57	46	38	33	42	35	31	38	32	28	34	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	29	24	21	19
10	49	37	29	24	47	35	28	24	32	26	22	29	24	21	27	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15588	15588	15588
5°	15662	15446	15554
10°	15557	15312	15407
15°	15375	15139	15166
20°	15163	14892	14905
25°	14878	14598	14567
30°	14564	14270	14162
35°	14236	13925	13745
40°	13893	13543	13333
45°	13516	13192	12871
50°	13137	12762	12407
55°	12643	12314	11941
60°	12144	11795	11418
65°	11703	11227	10878
70°	11053	10581	10112
75°	10098	9736	9320
80°	9106	8722	8647
85°	7991	7694	7385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	2.5
10°-20°	385.2	7.1
20°-30°	569.0	10.4
30°-40°	664.6	12.2
40°-50°	668.2	12.3
50°-60°	587.0	10.8
60°-70°	437.3	8.0
70°-80°	249.1	4.6
80°-90°	73.2	1.3
90°-100°	124.2	2.3
100°-110°	351.7	6.5
110°-120°	346.0	6.3
120°-130°	276.0	5.1
130°-140°	217.6	4.0
140°-150°	162.4	3.0
150°-160°	113.2	2.1
160°-170°	66.5	1.2
170°-180°	21.6	0.4
0°-30°	1090.6	20.0
0°-40°	1755.3	32.2
0°-60°	3010.4	55.2
0°-90°	3770.1	69.2
90°-120°	822.0	15.1
90°-150°	1478.0	27.1
90°-180°	1679.0	30.8
0°-180°	5449.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1450	1443	1430	1441	1440	137
15°	1380	1374	1358	1368	1361	389
25°	1253	1245	1229	1230	1226	577
35°	1083	1075	1060	1052	1046	677
45°	888	882	867	852	846	685
55°	674	672	656	643	636	603
65°	460	453	441	431	427	453
75°	243	238	234	228	224	260
85°	65	62	62	60	60	71
90°	1	5	11	13	13	5
95°	15	50	268	78	52	17
105°	52	78	363	635	575	56
115°	93	115	278	609	699	92
125°	129	152	259	470	551	114
135°	151	180	256	387	447	117
145°	172	197	252	317	349	108
155°	196	211	244	278	290	90
165°	214	220	234	248	252	60
175°	223	223	225	228	227	21
180°	223	223	223	223	223	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1453.2	1452.3	1451.4	1450.6	1449.6	1448.0	1445.6	1443.1	1440.7	1438.2	1440.4
5°	1449.5	1448.1	1446.7	1445.3	1443.9	1441.7	1438.7	1435.6	1432.6	1429.5	1432.3
7.5°	1435.3	1433.8	1432.5	1431.1	1429.7	1427.4	1424.3	1421.2	1418.0	1414.8	1417.3
10°	1423.3	1421.9	1420.5	1419.1	1417.8	1415.3	1411.7	1408.1	1404.5	1400.9	1403.4
12.5°	1407.4	1406.2	1405.0	1403.9	1402.7	1400.4	1397.1	1393.7	1390.3	1387.0	1388.8
15°	1379.7	1378.6	1377.5	1376.4	1375.3	1372.9	1369.4	1365.7	1362.2	1358.5	1360.7
17.5°	1347.6	1346.2	1344.7	1343.3	1341.8	1339.3	1335.7	1332.1	1328.5	1324.9	1326.5
20°	1323.7	1322.0	1320.3	1318.7	1317.1	1314.4	1310.8	1307.3	1303.6	1300.1	1301.2
22.5°	1296.8	1295.1	1293.5	1291.8	1290.1	1287.5	1283.9	1280.3	1276.8	1273.1	1274.0
25°	1252.7	1251.0	1249.4	1247.7	1246.1	1243.4	1239.8	1236.3	1232.6	1229.1	1229.3
27.5°	1205.6	1204.0	1202.5	1200.8	1199.2	1196.5	1192.6	1188.7	1184.9	1181.0	1181.2
30°	1171.8	1170.4	1169.0	1167.6	1166.3	1163.6	1159.8	1155.9	1152.0	1148.1	1148.1
32.5°	1137.9	1136.1	1134.2	1132.4	1130.6	1128.1	1125.2	1122.2	1119.2	1116.3	1114.7
35°	1083.4	1081.7	1080.1	1078.4	1076.7	1074.1	1070.5	1066.9	1063.3	1059.7	1058.0
37.5°	1027.5	1025.5	1023.3	1021.3	1019.1	1016.3	1012.6	1009.0	1005.4	1001.6	999.7
40°	988.7	987.1	985.4	983.7	982.1	979.3	975.4	971.5	967.7	963.8	961.6
42.5°	949.8	948.0	946.1	944.2	942.3	939.4	935.6	931.7	927.8	924.0	921.8
45°	887.9	886.8	885.7	884.6	883.4	881.1	877.5	873.9	870.3	866.6	863.4
47.5°	826.3	824.7	823.2	821.5	819.9	817.5	814.0	810.6	807.3	803.9	800.7
50°	784.5	783.2	781.7	780.4	779.0	776.5	772.9	769.3	765.6	762.1	759.1
52.5°	740.7	739.7	738.8	737.8	736.9	734.5	730.7	726.9	723.1	719.2	716.6
55°	673.7	673.4	673.1	672.9	672.6	670.7	667.0	663.5	659.8	656.2	653.2
57.5°	609.9	609.0	608.0	607.1	606.2	604.3	601.3	598.5	595.6	592.7	590.0
60°	564.1	563.8	563.6	563.2	563.0	561.2	557.9	554.5	551.2	547.9	545.4
62.5°	523.2	522.5	521.8	521.1	520.4	518.3	515.0	511.7	508.4	505.1	502.6
65°	459.5	458.1	456.7	455.3	453.9	451.9	449.1	446.3	443.5	440.8	438.6
67.5°	392.0	390.8	389.6	388.3	387.1	385.5	383.3	381.3	379.1	377.1	375.1
70°	351.2	349.5	347.8	346.2	344.5	342.9	341.2	339.5	337.9	336.2	334.3
72.5°	308.3	307.1	305.9	304.7	303.5	301.9	300.0	298.1	296.3	294.4	292.6
75°	242.8	241.7	240.6	239.5	238.4	237.4	236.6	235.8	235.0	234.1	232.7
77.5°	184.8	184.2	183.5	183.0	182.4	181.6	180.5	179.6	178.6	177.6	176.7
80°	146.9	146.1	145.3	144.4	143.6	142.9	142.4	141.8	141.2	140.7	140.5
82.5°	110.1	109.9	109.7	109.6	109.4	109.2	109.2	109.1	108.9	108.8	108.4
85°	64.7	64.2	63.6	63.1	62.5	62.3	62.3	62.3	62.3	62.3	61.7
87.5°	26.1	25.6	25.1	24.7	24.2	24.0	24.0	24.1	24.2	24.2	23.8
90°	0.9	1.8	2.7	4.0	5.0	5.9	7.2	8.6	9.9	11.3	10.9
92.5°	5.6	8.3	12.1	15.6	19.4	26.1	37.9	57.4	76.4	69.5	52.4
95°	15.4	16.7	21.7	29.4	41.1	58.7	97.1	164.5	238.6	267.9	217.3
97.5°	26.2	26.7	30.6	37.2	48.8	67.9	104.6	180.5	304.0	415.3	444.3
100°	33.4	33.9	37.1	43.4	54.2	71.9	103.5	170.3	289.1	427.9	516.9
102.5°	41.0	41.8	44.7	50.6	60.4	76.5	104.9	161.7	267.5	404.4	520.5
105°	52.4	53.8	56.5	61.9	70.5	84.5	108.9	155.4	240.8	363.3	493.0
107.5°	64.5	65.9	68.5	73.8	81.9	94.9	116.3	155.0	223.9	326.9	444.7
110°	73.2	74.5	76.8	81.8	89.4	102.1	122.5	156.8	217.3	306.3	414.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	81.1	82.5	84.8	89.8	97.4	109.7	128.6	160.4	213.7	292.6	387.9
115°	92.6	94.4	97.1	101.6	109.3	121.5	138.7	166.3	212.4	277.9	356.1
117.5°	104.1	106.2	108.4	112.6	121.2	132.5	149.5	174.0	213.2	269.2	336.8
120°	112.1	113.4	115.7	120.2	128.8	140.1	156.3	179.8	214.6	265.2	326.7
122.5°	118.9	120.3	122.6	127.4	135.6	147.7	163.6	185.3	217.1	262.7	318.4
125°	128.8	129.7	132.4	137.4	145.9	158.1	174.0	193.8	220.9	259.4	307.7
127.5°	136.3	137.6	141.0	146.0	155.5	167.7	183.0	200.9	225.3	257.7	298.3
130°	141.0	142.4	146.4	151.8	161.3	173.5	188.4	205.6	228.1	256.7	293.3
132.5°	144.6	146.3	150.8	157.2	166.8	178.6	193.1	209.9	230.4	256.3	288.5
135°	150.9	152.7	157.7	164.5	174.0	186.2	200.2	215.6	233.6	255.7	282.4
137.5°	156.9	158.8	163.7	170.9	180.3	191.5	205.0	219.7	235.8	254.8	277.1
140°	160.9	163.1	167.6	174.8	183.9	195.2	208.3	221.9	237.2	254.4	273.8
142.5°	165.2	167.1	172.0	178.5	187.5	198.1	210.8	224.0	238.3	253.7	270.9
145°	172.1	173.5	177.6	184.3	192.0	202.4	214.2	226.4	239.0	252.5	267.0
147.5°	179.2	180.0	184.0	189.9	197.3	206.1	216.9	227.8	239.0	250.9	263.2
150°	183.9	184.3	188.0	193.8	200.2	208.3	218.7	228.1	239.0	249.4	260.7
152.5°	188.6	188.7	192.3	197.5	203.0	210.8	219.8	228.9	238.0	247.6	257.9
155°	195.7	195.7	198.4	202.9	207.9	214.2	221.9	229.1	236.8	244.5	253.5
157.5°	201.2	201.6	203.7	207.8	212.0	216.9	223.0	229.6	235.2	241.6	248.6
160°	205.6	205.6	207.4	211.0	214.2	218.7	224.1	229.6	234.5	239.5	245.3
162.5°	208.8	208.8	210.3	213.2	215.9	219.8	224.5	229.2	233.1	237.3	242.1
165°	213.7	213.3	214.2	216.4	218.2	221.4	225.0	228.1	230.9	234.1	237.7
167.5°	217.5	216.9	217.3	219.0	220.3	222.3	224.9	227.4	228.7	230.8	233.5
170°	219.6	218.7	219.1	220.5	221.4	222.3	224.6	226.4	227.3	228.6	230.9
172.5°	221.0	220.5	220.6	221.6	222.1	222.7	224.6	226.0	226.2	226.8	228.4
175°	222.8	222.3	221.9	222.8	222.8	223.2	224.1	225.0	224.6	224.6	225.5
177.5°	223.6	223.2	222.8	223.2	223.2	223.2	223.6	224.3	223.6	223.2	223.6
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1442.6	1444.9	1447.1	1448.1	1447.9	1447.6	1447.4	1447.2
5°	1435.0	1437.8	1440.6	1441.7	1441.1	1440.6	1440.0	1439.5
7.5°	1419.8	1422.3	1424.8	1425.8	1425.5	1425.2	1424.9	1424.6
10°	1405.9	1408.3	1410.9	1411.8	1411.3	1410.7	1410.2	1409.6
12.5°	1390.6	1392.4	1394.2	1395.0	1394.6	1394.3	1394.0	1393.7
15°	1362.9	1365.2	1367.4	1367.7	1366.0	1364.4	1362.7	1361.0
17.5°	1328.0	1329.6	1331.1	1331.6	1331.0	1330.4	1329.8	1329.2
20°	1302.3	1303.4	1304.5	1304.6	1303.8	1302.9	1302.1	1301.2
22.5°	1274.9	1275.8	1276.7	1276.6	1275.6	1274.5	1273.4	1272.4
25°	1229.6	1229.9	1230.2	1229.9	1229.1	1228.2	1227.4	1226.5
27.5°	1181.5	1181.6	1181.9	1181.5	1180.4	1179.3	1178.3	1177.3
30°	1148.1	1148.1	1148.1	1147.2	1145.2	1143.3	1141.3	1139.4
32.5°	1113.1	1111.6	1110.0	1108.7	1107.7	1106.6	1105.6	1104.5
35°	1056.4	1054.7	1053.0	1051.5	1050.1	1048.8	1047.3	1046.0
37.5°	997.7	995.7	993.7	992.3	991.3	990.5	989.6	988.7
40°	959.4	957.2	955.0	953.3	952.2	951.1	950.0	948.9
42.5°	919.6	917.3	915.1	913.5	912.4	911.2	910.1	909.0
45°	860.1	856.7	853.4	851.0	849.7	848.3	846.9	845.5
47.5°	797.4	794.2	790.8	788.6	787.4	786.2	785.0	783.8
50°	756.0	753.0	749.9	747.6	745.9	744.3	742.6	740.9
52.5°	714.1	711.5	708.8	706.7	705.0	703.4	701.7	700.1
55°	650.1	647.1	644.0	641.8	640.5	639.1	637.7	636.3
57.5°	587.3	584.6	581.9	579.7	578.1	576.6	574.9	573.3
60°	543.0	540.4	538.0	536.0	534.6	533.2	531.9	530.4
62.5°	500.1	497.6	495.1	493.4	492.4	491.5	490.6	489.6
65°	436.4	434.2	432.0	430.5	429.6	428.8	427.9	427.1
67.5°	373.2	371.2	369.3	367.7	366.6	365.4	364.2	363.1
70°	332.3	330.4	328.4	326.8	325.4	324.0	322.7	321.3
72.5°	291.0	289.2	287.5	286.3	285.6	284.9	284.2	283.4
75°	231.3	230.0	228.5	227.4	226.6	225.8	225.0	224.1
77.5°	175.7	174.8	173.8	173.3	173.3	173.3	173.3	173.3
80°	140.1	139.9	139.6	139.5	139.5	139.5	139.5	139.5
82.5°	107.8	107.3	106.9	106.5	106.2	106.1	105.8	105.6
85°	61.2	60.6	60.0	59.8	59.8	59.8	59.8	59.8
87.5°	23.8	23.6	23.4	23.5	23.4	23.5	23.6	23.5
90°	11.3	11.7	12.2	13.1	12.7	13.1	13.5	13.1
92.5°	38.0	30.2	26.7	24.3	23.5	22.1	22.6	21.8
95°	162.6	110.3	86.3	70.0	61.5	57.4	54.2	52.4
97.5°	405.5	324.8	266.5	212.5	179.1	158.8	146.6	142.7
100°	532.7	496.1	443.2	379.1	333.4	300.5	282.9	283.3
102.5°	575.0	573.9	543.0	502.3	466.8	440.7	426.0	415.6
105°	587.4	632.6	641.2	629.4	608.6	591.4	577.0	574.7
107.5°	551.8	625.2	664.7	680.8	681.2	675.4	670.5	666.4
110°	517.8	600.9	657.9	689.5	702.2	705.8	704.9	703.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	484.2	569.1	633.0	673.6	696.7	708.0	711.4	711.5
115°	439.7	518.2	584.7	633.9	667.8	687.7	696.7	699.0
117.5°	407.3	475.2	534.9	584.9	620.2	642.9	656.0	659.0
120°	390.4	451.4	505.6	551.3	586.9	612.3	623.1	625.8
122.5°	377.0	432.2	482.4	524.8	556.6	579.3	591.3	594.7
125°	359.2	408.4	451.9	488.0	516.9	536.8	548.1	551.3
127.5°	343.6	387.6	426.7	459.6	485.4	502.3	512.5	515.5
130°	333.9	374.5	411.1	441.9	465.9	482.1	491.6	495.2
132.5°	324.9	362.3	396.3	425.6	448.1	464.4	472.8	475.3
135°	312.7	344.8	374.1	399.9	422.0	435.5	443.7	446.9
137.5°	301.6	327.9	353.2	375.5	394.1	407.8	414.7	416.8
140°	295.1	318.1	339.8	359.2	376.4	389.0	396.2	395.8
142.5°	288.9	308.7	327.5	344.4	359.0	370.3	376.8	376.3
145°	281.5	296.4	310.9	324.0	335.3	344.8	348.4	349.3
147.5°	275.4	287.2	299.0	308.2	316.8	323.2	326.7	327.0
150°	271.1	281.5	291.0	299.6	306.3	311.3	314.0	314.0
152.5°	267.1	276.1	284.5	291.6	296.9	301.6	303.2	303.2
155°	261.2	268.4	275.2	280.6	284.6	288.3	289.1	289.6
157.5°	254.8	260.9	266.2	270.4	273.9	276.6	277.3	277.3
160°	251.2	256.2	260.7	263.9	267.0	269.7	269.7	269.3
162.5°	246.9	251.1	255.3	258.1	260.2	262.5	262.5	262.1
165°	241.3	244.0	247.2	249.4	251.2	253.0	252.5	252.5
167.5°	236.4	238.4	240.3	241.9	242.7	244.0	243.5	243.5
170°	233.1	234.5	236.3	237.2	237.7	238.6	238.1	238.1
172.5°	230.3	231.2	232.7	233.2	233.3	234.2	233.5	233.1
175°	226.4	226.8	227.8	227.8	227.8	228.1	227.8	227.3
177.5°	223.9	224.3	224.7	224.7	224.3	224.7	223.9	223.9
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2

(END OF REPORT)