

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: P334648

Luminaire Tested: **S123IP-S1025U940-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334648
TEST 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: S123IP-S1025U940-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1025 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

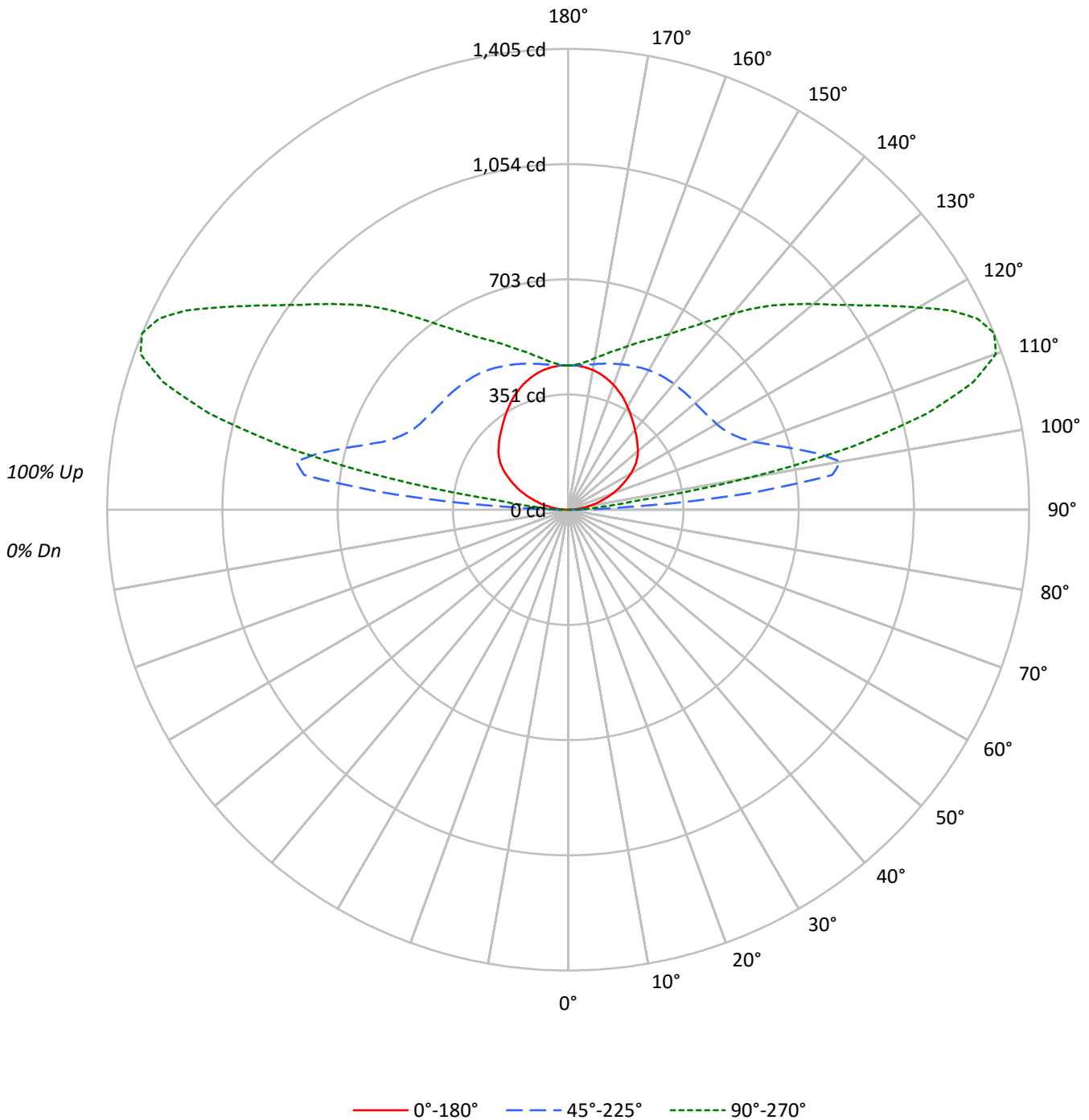
Lumens per Lamp: N/A
Luminaire Lumens: 3309.9 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 35.1
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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	2.4	0.1
90°-100°	238.6	7.2
100°-110°	698.6	21.1
110°-120°	682.2	20.6
120°-130°	543.3	16.4
130°-140°	428.6	12.9
140°-150°	319.8	9.7
150°-160°	222.9	6.7
160°-170°	131.0	4.0
170°-180°	42.6	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.4	0.1
90°-120°	1619.3	48.9
90°-150°	2911.0	87.9
90°-180°	3308.0	99.9
0°-180°	3309.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	2	11	22	25	26	2
95°	30	98	528	154	103	32
105°	103	153	716	1251	1132	110
115°	182	227	547	1200	1377	181
125°	254	300	511	926	1086	225
135°	297	355	504	762	880	230
145°	339	389	498	625	688	213
155°	385	416	482	547	570	177
165°	421	433	461	489	498	119
175°	439	439	442	449	448	42
180°	440	440	440	440	440	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	1.8	3.6	5.3	8.0	9.8	11.6	14.2	16.9	19.6	22.3	21.4
92.5°	13.4	19.6	28.5	36.5	45.4	61.4	89.9	137.1	183.4	165.6	123.7
95°	30.3	32.9	42.7	57.9	81.0	115.7	191.4	324.0	470.0	527.8	428.1
97.5°	48.1	49.0	57.0	70.3	93.5	131.7	206.5	360.5	606.1	811.8	839.4
100°	65.9	66.8	73.0	85.4	106.8	141.5	203.8	335.6	569.7	842.9	1018.3
102.5°	84.6	86.3	91.7	103.3	121.9	153.1	207.4	314.2	516.3	785.1	1027.2
105°	103.3	105.9	111.3	121.9	138.9	166.4	214.5	306.2	474.4	715.6	971.1
107.5°	122.8	125.5	130.8	141.5	157.5	183.4	226.1	304.4	444.2	654.2	891.0
110°	144.2	146.9	151.3	161.1	176.2	201.2	241.2	308.9	428.1	603.5	816.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	163.8	166.4	170.9	180.7	195.8	219.9	256.3	317.8	419.2	569.7	751.2
115°	182.5	186.0	191.4	200.3	215.4	239.4	273.3	327.6	418.3	547.4	701.4
117.5°	201.2	205.6	210.1	218.1	235.0	257.2	291.1	340.0	419.2	532.3	668.5
120°	220.7	223.4	227.9	236.8	253.7	275.9	308.0	354.3	422.8	522.5	643.5
122.5°	237.7	240.3	244.8	254.6	270.6	294.6	325.8	367.6	429.0	516.3	623.1
125°	253.7	255.5	260.8	270.6	287.5	311.5	342.7	381.8	435.3	510.9	606.1
127.5°	266.1	268.8	275.0	284.8	303.5	327.6	357.8	393.4	442.4	508.2	590.1
130°	277.7	280.4	288.4	299.1	317.8	341.8	371.2	405.0	449.5	505.6	577.7
132.5°	286.6	290.2	299.1	312.4	331.1	354.3	382.7	415.7	454.8	504.7	566.1
135°	297.3	300.8	310.6	324.0	342.7	366.7	394.3	424.6	460.2	503.8	556.3
137.5°	307.1	310.6	320.4	334.7	353.4	375.6	402.3	431.7	463.7	502.0	547.4
140°	316.9	321.3	330.2	344.5	362.3	384.5	410.3	437.0	467.3	501.1	539.4
142.5°	327.6	331.1	340.9	353.4	371.2	391.6	416.6	442.4	470.0	499.3	532.3
145°	339.1	341.8	349.8	363.2	378.3	398.8	421.9	445.9	470.9	497.6	526.0
147.5°	350.7	352.5	360.5	372.1	387.2	405.0	426.4	448.6	470.9	494.9	519.8
150°	362.3	363.2	370.3	381.8	394.3	410.3	430.8	449.5	470.9	491.3	513.6
152.5°	373.8	373.8	381.0	390.7	401.4	416.6	433.5	451.3	468.2	486.9	506.5
155°	385.4	385.4	390.7	399.6	409.4	421.9	437.0	451.3	466.4	481.5	499.3
157.5°	394.3	395.2	399.6	407.7	416.6	426.4	438.8	452.2	463.7	477.1	491.3
160°	405.0	405.0	408.5	415.7	421.9	430.8	441.5	452.2	462.0	471.7	483.3
162.5°	413.0	413.0	415.7	421.0	426.4	433.5	442.4	451.3	458.4	466.4	475.3
165°	421.0	420.1	421.9	426.4	429.9	436.1	443.3	449.5	454.8	461.1	468.2
167.5°	427.2	426.4	427.2	430.8	433.5	437.9	443.3	448.6	451.3	455.7	461.1
170°	432.6	430.8	431.7	434.4	436.1	437.9	442.4	445.9	447.7	450.4	454.8
172.5°	436.1	435.3	435.3	437.0	437.9	438.8	442.4	445.0	445.0	445.9	448.6
175°	438.8	437.9	437.0	438.8	438.8	439.7	441.5	443.3	442.4	442.4	444.2
177.5°	440.6	439.7	438.8	439.7	439.7	439.7	440.6	442.4	440.6	439.7	440.6
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	22.3	23.1	24.0	25.8	24.9	25.8	26.7	25.8
92.5°	88.1	68.5	59.6	53.4	51.6	48.1	49.0	47.2
95°	320.4	217.2	170.0	138.0	121.1	113.0	106.8	103.3
97.5°	736.1	555.4	437.9	336.5	276.8	243.0	221.6	211.8
100°	1049.4	977.3	873.2	746.8	656.9	591.9	557.2	558.1
102.5°	1153.6	1168.7	1118.8	1050.3	985.3	937.3	909.7	883.9
105°	1157.1	1246.1	1263.0	1239.9	1198.9	1165.1	1136.6	1132.2
107.5°	1103.7	1243.5	1312.9	1336.9	1331.6	1315.5	1304.0	1294.2
110°	1020.0	1183.8	1296.0	1358.3	1383.2	1390.3	1388.5	1386.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	937.3	1105.5	1234.6	1319.1	1369.8	1395.7	1404.6	1405.4
115°	866.1	1020.9	1151.8	1248.8	1315.5	1354.7	1372.5	1377.0
117.5°	810.9	947.9	1068.1	1168.7	1238.1	1281.7	1308.4	1314.7
120°	769.0	889.2	996.0	1085.9	1156.2	1206.1	1227.4	1232.8
122.5°	736.1	842.0	939.0	1020.9	1081.5	1125.1	1149.1	1156.2
125°	707.6	804.6	890.1	961.3	1018.3	1057.4	1079.7	1085.9
127.5°	681.8	769.9	848.3	914.1	965.7	999.6	1020.0	1025.4
130°	657.8	737.9	810.0	870.5	917.7	949.7	968.4	975.5
132.5°	635.5	707.6	773.5	830.5	874.1	906.1	922.1	926.6
135°	615.9	679.1	737.0	787.7	831.3	858.0	874.1	880.3
137.5°	597.2	650.7	702.3	747.7	785.1	812.6	826.0	831.3
140°	581.2	626.6	669.3	707.6	741.4	766.4	780.6	779.7
142.5°	566.1	603.5	639.1	671.1	698.7	720.1	732.5	731.7
145°	554.5	583.9	612.4	638.2	660.4	679.1	686.3	688.0
147.5°	544.7	568.8	592.8	611.5	629.3	642.6	649.8	650.7
150°	534.1	554.5	573.2	590.1	603.5	613.3	618.6	618.6
152.5°	524.3	541.2	557.2	570.5	580.3	589.2	591.9	591.9
155°	514.5	528.7	542.1	552.7	560.8	567.9	569.7	570.5
157.5°	503.8	516.3	526.9	535.8	543.0	548.3	550.1	550.1
160°	494.9	504.7	513.6	519.8	526.0	531.4	531.4	530.5
162.5°	484.2	492.2	500.2	505.6	509.1	513.6	513.6	512.7
165°	475.3	480.6	486.9	491.3	494.9	498.4	497.6	497.6
167.5°	467.3	471.7	475.3	478.9	480.6	483.3	482.4	482.4
170°	459.3	462.0	465.5	467.3	468.2	470.0	469.1	469.1
172.5°	452.2	453.9	456.6	457.5	457.5	459.3	457.5	456.6
175°	445.9	446.8	448.6	448.6	448.6	449.5	448.6	447.7
177.5°	441.5	442.4	443.3	443.3	442.4	443.3	441.5	441.5
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7

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