

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: P334823

Luminaire Tested: **S124IP-S1035U940-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334823
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124IP-S1035U940-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1035 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3301.9 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

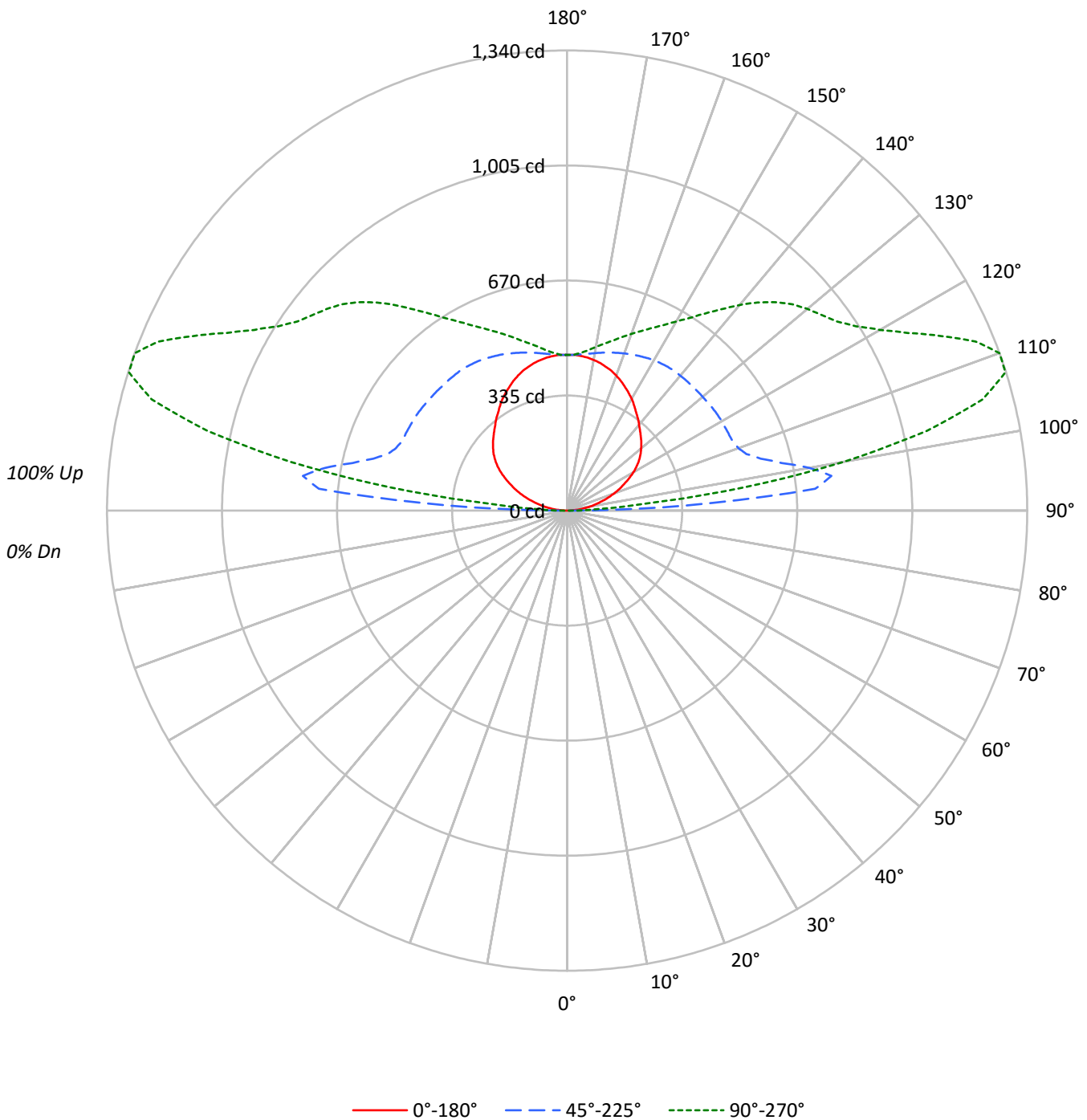
Input Watts (W): 35.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1.8	0.1
90°-100°	328.4	9.9
100°-110°	685.6	20.8
110°-120°	609.5	18.5
120°-130°	513.0	15.5
130°-140°	428.0	13.0
140°-150°	326.8	9.9
150°-160°	229.7	7.0
160°-170°	135.1	4.1
170°-180°	43.9	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.8	0.1
90°-120°	1623.5	49.2
90°-150°	2891.3	87.6
90°-180°	3300.0	99.9
0°-180°	3301.9	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°	1	7	16	18	19	2
95°	29	93	726	359	217	32
105°	104	151	584	1257	1252	111
115°	183	230	521	1001	1203	182
125°	256	304	518	852	960	228
135°	304	361	514	756	858	235
145°	350	401	511	637	701	220
155°	398	430	497	563	587	183
165°	434	447	476	504	512	122
175°	452	453	457	463	461	43
180°	453	453	453	453	453	



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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°	0.9	2.7	5.3	6.2	7.1	7.1	12.5	12.5	14.2	16.0	15.1
92.5°	12.5	17.8	27.6	40.9	57.0	80.1	135.3	221.7	305.3	349.0	290.2
95°	29.4	32.0	40.9	52.5	73.9	111.3	188.7	334.7	547.5	725.5	746.0
97.5°	49.0	49.0	57.0	67.7	86.3	118.4	179.8	305.3	524.3	776.3	935.6
100°	67.7	67.7	73.9	84.6	101.5	130.0	182.5	283.1	464.7	715.7	943.6
102.5°	85.5	87.2	92.6	102.4	118.4	145.1	191.4	276.9	424.6	640.1	876.9
105°	104.2	106.8	111.3	122.0	138.0	163.8	206.5	280.4	405.0	584.0	793.2
107.5°	124.6	126.4	130.9	142.4	157.6	183.4	222.6	291.1	399.7	547.5	724.6
110°	145.1	146.9	151.3	162.0	178.0	202.1	241.2	303.6	401.5	530.6	675.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	164.7	166.5	171.8	181.6	197.6	221.7	259.0	316.9	406.8	522.5	648.1
115°	183.4	186.1	192.3	201.2	218.1	242.1	277.7	331.2	413.9	520.8	632.9
117.5°	203.0	205.6	211.0	220.8	236.8	261.7	295.5	345.4	421.1	519.9	624.9
120°	222.6	224.3	230.6	240.4	255.5	280.4	314.2	360.5	429.1	519.9	618.7
122.5°	240.4	242.1	248.4	257.3	274.2	298.2	332.0	374.8	437.1	519.0	611.6
125°	255.5	259.0	264.4	274.2	291.1	316.0	348.1	389.0	445.1	518.1	603.6
127.5°	269.7	272.4	278.6	289.3	307.1	332.0	363.2	401.5	451.3	516.3	592.9
130°	281.3	284.9	292.0	305.3	322.3	348.1	378.3	413.1	458.5	515.4	583.1
132.5°	292.9	295.5	305.3	317.8	336.5	360.5	390.8	424.6	464.7	514.5	574.2
135°	303.6	307.1	316.0	331.2	349.9	373.0	402.4	434.4	470.9	513.6	565.3
137.5°	314.2	317.8	327.6	341.8	361.4	383.7	411.3	441.5	474.5	513.6	557.3
140°	325.8	328.5	338.3	353.4	372.1	393.5	420.2	448.7	478.9	512.8	551.0
142.5°	338.3	340.9	349.9	364.1	381.9	402.4	428.2	454.0	482.5	512.8	545.7
145°	349.9	352.5	361.4	373.9	390.8	410.4	433.5	457.6	483.4	511.0	539.5
147.5°	363.2	364.1	372.1	385.5	399.7	417.5	439.8	461.1	484.3	508.3	534.1
150°	375.7	376.6	383.7	394.4	407.7	424.6	444.2	463.8	484.3	505.6	527.9
152.5°	387.2	387.2	394.4	404.2	415.7	430.9	447.8	465.6	482.5	501.2	520.8
155°	397.9	398.8	404.2	413.1	422.8	436.2	451.3	466.5	480.7	496.7	513.6
157.5°	408.6	408.6	413.9	421.1	430.0	440.7	454.0	466.5	478.9	492.3	506.5
160°	418.4	418.4	422.0	428.2	435.3	445.1	455.8	466.5	476.3	486.9	498.5
162.5°	427.3	426.4	429.1	434.4	440.7	447.8	457.6	466.5	473.6	481.6	491.4
165°	433.5	433.5	435.3	439.8	444.2	449.6	457.6	464.7	470.0	476.3	483.4
167.5°	440.7	439.8	440.7	444.2	446.9	451.3	457.6	462.9	466.5	470.9	476.3
170°	445.1	444.2	445.1	447.8	449.6	452.2	456.7	461.1	462.9	465.6	469.1
172.5°	449.6	448.7	448.7	450.4	451.3	453.1	455.8	459.3	459.3	460.2	462.9
175°	452.2	451.3	451.3	452.2	453.1	453.1	454.9	457.6	456.7	456.7	458.5
177.5°	454.0	453.1	452.2	453.1	453.1	453.1	454.0	455.8	454.0	454.0	454.9
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1



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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°	16.0	16.9	17.8	17.8	18.7	19.6	18.7	18.7
92.5°	214.5	160.2	126.4	104.2	90.8	84.6	81.0	81.0
95°	659.6	521.7	402.4	316.0	272.4	244.8	228.8	217.2
97.5°	949.8	881.3	783.4	683.7	623.1	569.7	543.0	521.7
100°	1073.6	1091.4	1047.8	981.9	904.4	850.1	823.4	816.3
102.5°	1067.4	1173.3	1200.0	1182.2	1142.1	1106.5	1078.0	1072.7
105°	997.0	1151.0	1239.2	1275.7	1277.4	1270.3	1257.9	1252.5
107.5°	910.7	1077.1	1200.0	1274.8	1313.9	1330.0	1337.1	1338.0
110°	834.1	988.1	1117.2	1215.1	1278.3	1315.7	1331.7	1339.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	778.0	909.8	1030.0	1127.9	1201.8	1249.0	1273.0	1287.2
115°	744.2	853.7	957.9	1043.3	1113.6	1167.1	1195.5	1202.7
117.5°	724.6	817.2	901.8	976.6	1038.9	1085.2	1115.4	1119.9
120°	712.2	795.0	866.2	929.4	980.1	1019.3	1042.4	1052.2
122.5°	701.5	780.7	843.9	897.3	938.3	970.3	989.0	998.8
125°	689.0	765.6	827.0	876.0	911.6	937.4	954.3	959.6
127.5°	674.8	748.7	810.1	856.4	892.0	915.1	929.4	934.7
130°	657.0	727.3	787.8	835.0	871.5	893.8	908.0	913.3
132.5°	638.3	703.3	762.0	809.2	844.8	870.6	884.0	889.3
135°	621.4	679.2	733.5	778.0	813.6	838.6	852.8	858.2
137.5°	605.3	656.1	703.3	744.2	778.0	803.9	815.4	821.7
140°	592.0	633.8	673.9	711.3	742.4	762.0	774.5	781.6
142.5°	579.5	615.1	648.1	679.2	705.9	723.7	734.4	738.9
145°	568.0	598.2	624.9	649.8	672.1	687.2	696.1	700.6
147.5°	558.2	583.1	605.3	625.8	642.7	656.1	663.2	665.0
150°	549.3	569.7	587.5	603.6	617.8	629.4	634.7	635.6
152.5°	539.5	556.4	572.4	584.9	596.4	605.3	608.0	608.9
155°	529.7	543.9	557.3	568.0	576.9	584.0	586.6	586.6
157.5°	519.0	531.5	543.0	551.9	559.0	564.4	566.2	566.2
160°	509.2	519.0	528.8	535.9	541.2	546.6	547.5	547.5
162.5°	499.4	507.4	514.5	520.8	524.3	529.7	530.6	529.7
165°	490.5	495.8	502.1	506.5	510.1	513.6	512.8	511.9
167.5°	481.6	486.1	491.4	494.1	495.8	498.5	498.5	497.6
170°	473.6	476.3	479.8	482.5	484.3	485.2	484.3	484.3
172.5°	466.5	468.2	470.0	471.8	472.7	473.6	472.7	470.9
175°	460.2	461.1	462.9	462.9	462.9	464.7	462.9	461.1
177.5°	455.8	456.7	456.7	457.6	456.7	457.6	455.8	454.0
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1

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