

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: P334625

Luminaire Tested: **S123IP-S365U840-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334625
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-S365U840-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 365 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

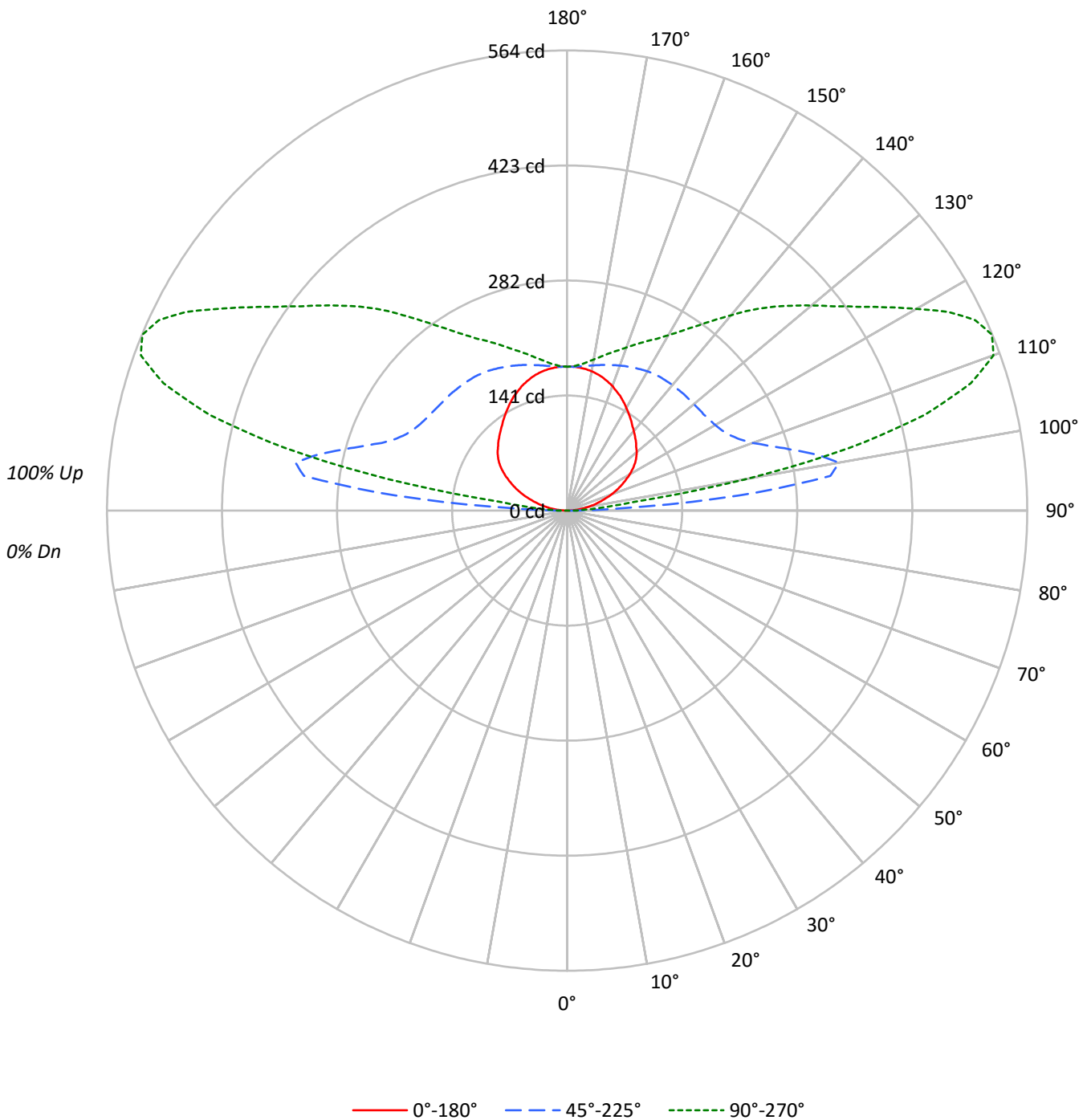
Lumens per Lamp: N/A
Luminaire Lumens: 1327.1 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 11.4
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	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°	1.0	0.1
90°-100°	95.7	7.2
100°-110°	280.1	21.1
110°-120°	273.5	20.6
120°-130°	217.8	16.4
130°-140°	171.9	12.9
140°-150°	128.2	9.7
150°-160°	89.4	6.7
160°-170°	52.5	4.0
170°-180°	17.1	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.0	0.1
90°-120°	649.2	48.9
90°-150°	1167.1	87.9
90°-180°	1326.0	99.9
0°-180°	1327.1	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	4	9	10	10	1
95°	12	39	212	62	41	13
105°	41	61	287	502	454	44
115°	73	91	220	481	552	72
125°	102	120	205	371	435	90
135°	119	142	202	306	353	92
145°	136	156	200	251	276	85
155°	154	167	193	219	229	71
165°	169	174	185	196	200	48
175°	176	176	177	180	180	17
180°	176	176	176	176	176	



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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°	0.7	1.4	2.1	3.2	3.9	4.6	5.7	6.8	7.9	8.9	8.6
92.5°	5.4	7.9	11.4	14.6	18.2	24.6	36.0	55.0	73.5	66.4	49.6
95°	12.1	13.2	17.1	23.2	32.5	46.4	76.7	129.9	188.4	211.6	171.7
97.5°	19.3	19.6	22.8	28.2	37.5	52.8	82.8	144.5	243.0	325.5	336.5
100°	26.4	26.8	29.3	34.3	42.8	56.7	81.7	134.5	228.4	338.0	408.3
102.5°	33.9	34.6	36.8	41.4	48.9	61.4	83.2	126.0	207.0	314.8	411.8
105°	41.4	42.5	44.6	48.9	55.7	66.7	86.0	122.8	190.2	286.9	389.3
107.5°	49.2	50.3	52.5	56.7	63.2	73.5	90.6	122.0	178.1	262.3	357.2
110°	57.8	58.9	60.7	64.6	70.7	80.7	96.7	123.8	171.7	242.0	327.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	65.7	66.7	68.5	72.4	78.5	88.1	102.8	127.4	168.1	228.4	301.2
115°	73.2	74.6	76.7	80.3	86.4	96.0	109.6	131.3	167.7	219.5	281.2
117.5°	80.7	82.4	84.2	87.4	94.2	103.1	116.7	136.3	168.1	213.4	268.0
120°	88.5	89.6	91.4	94.9	101.7	110.6	123.5	142.0	169.5	209.5	258.0
122.5°	95.3	96.4	98.1	102.1	108.5	118.1	130.6	147.4	172.0	207.0	249.8
125°	101.7	102.4	104.6	108.5	115.3	124.9	137.4	153.1	174.5	204.8	243.0
127.5°	106.7	107.8	110.3	114.2	121.7	131.3	143.5	157.7	177.4	203.8	236.6
130°	111.3	112.4	115.6	119.9	127.4	137.0	148.8	162.4	180.2	202.7	231.6
132.5°	114.9	116.3	119.9	125.3	132.8	142.0	153.5	166.7	182.4	202.3	227.0
135°	119.2	120.6	124.5	129.9	137.4	147.0	158.1	170.2	184.5	202.0	223.0
137.5°	123.1	124.5	128.5	134.2	141.7	150.6	161.3	173.1	185.9	201.3	219.5
140°	127.0	128.8	132.4	138.1	145.2	154.2	164.5	175.2	187.4	200.9	216.3
142.5°	131.3	132.8	136.7	141.7	148.8	157.0	167.0	177.4	188.4	200.2	213.4
145°	136.0	137.0	140.2	145.6	151.7	159.9	169.2	178.8	188.8	199.5	210.9
147.5°	140.6	141.3	144.5	149.2	155.2	162.4	170.9	179.9	188.8	198.4	208.4
150°	145.2	145.6	148.5	153.1	158.1	164.5	172.7	180.2	188.8	197.0	205.9
152.5°	149.9	149.9	152.7	156.7	160.9	167.0	173.8	180.9	187.7	195.2	203.1
155°	154.5	154.5	156.7	160.2	164.2	169.2	175.2	180.9	187.0	193.1	200.2
157.5°	158.1	158.4	160.2	163.4	167.0	170.9	175.9	181.3	185.9	191.3	197.0
160°	162.4	162.4	163.8	166.7	169.2	172.7	177.0	181.3	185.2	189.1	193.8
162.5°	165.6	165.6	166.7	168.8	170.9	173.8	177.4	180.9	183.8	187.0	190.6
165°	168.8	168.4	169.2	170.9	172.4	174.9	177.7	180.2	182.4	184.9	187.7
167.5°	171.3	170.9	171.3	172.7	173.8	175.6	177.7	179.9	180.9	182.7	184.9
170°	173.4	172.7	173.1	174.2	174.9	175.6	177.4	178.8	179.5	180.6	182.4
172.5°	174.9	174.5	174.5	175.2	175.6	175.9	177.4	178.4	178.4	178.8	179.9
175°	175.9	175.6	175.2	175.9	175.9	176.3	177.0	177.7	177.4	177.4	178.1
177.5°	176.6	176.3	175.9	176.3	176.3	176.3	176.6	177.4	176.6	176.3	176.6
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3



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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°	8.9	9.3	9.6	10.3	10.0	10.3	10.7	10.3
92.5°	35.3	27.5	23.9	21.4	20.7	19.3	19.6	18.9
95°	128.5	87.1	68.2	55.3	48.5	45.3	42.8	41.4
97.5°	295.1	222.7	175.6	134.9	111.0	97.4	88.9	84.9
100°	420.7	391.8	350.1	299.4	263.4	237.3	223.4	223.8
102.5°	462.5	468.6	448.6	421.1	395.1	375.8	364.7	354.4
105°	463.9	499.6	506.4	497.1	480.7	467.1	455.7	453.9
107.5°	442.5	498.5	526.4	536.0	533.9	527.4	522.8	518.9
110°	409.0	474.6	519.6	544.6	554.6	557.4	556.7	556.0



TEST NUMBER: P334625

CATALOG NUMBER: S123IP-S365U840-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	375.8	443.2	495.0	528.9	549.2	559.6	563.1	563.5
115°	347.2	409.3	461.8	500.7	527.4	543.2	550.3	552.1
117.5°	325.1	380.1	428.2	468.6	496.4	513.9	524.6	527.1
120°	308.3	356.5	399.3	435.4	463.6	483.6	492.1	494.3
122.5°	295.1	337.6	376.5	409.3	433.6	451.1	460.7	463.6
125°	283.7	322.6	356.9	385.4	408.3	424.0	432.9	435.4
127.5°	273.4	308.7	340.1	366.5	387.2	400.8	409.0	411.1
130°	263.7	295.8	324.7	349.0	367.9	380.8	388.3	391.1
132.5°	254.8	283.7	310.1	333.0	350.4	363.3	369.7	371.5
135°	247.0	272.3	295.5	315.8	333.3	344.0	350.4	352.9
137.5°	239.5	260.9	281.6	299.8	314.8	325.8	331.2	333.3
140°	233.0	251.2	268.4	283.7	297.3	307.3	313.0	312.6
142.5°	227.0	242.0	256.2	269.1	280.1	288.7	293.7	293.3
145°	222.3	234.1	245.5	255.9	264.8	272.3	275.1	275.9
147.5°	218.4	228.0	237.7	245.2	252.3	257.7	260.5	260.9
150°	214.1	222.3	229.8	236.6	242.0	245.9	248.0	248.0
152.5°	210.2	217.0	223.4	228.8	232.7	236.2	237.3	237.3
155°	206.3	212.0	217.3	221.6	224.8	227.7	228.4	228.8
157.5°	202.0	207.0	211.3	214.8	217.7	219.8	220.5	220.5
160°	198.4	202.3	205.9	208.4	210.9	213.0	213.0	212.7
162.5°	194.1	197.3	200.6	202.7	204.1	205.9	205.9	205.6
165°	190.6	192.7	195.2	197.0	198.4	199.8	199.5	199.5
167.5°	187.4	189.1	190.6	192.0	192.7	193.8	193.4	193.4
170°	184.1	185.2	186.6	187.4	187.7	188.4	188.1	188.1
172.5°	181.3	182.0	183.1	183.4	183.4	184.1	183.4	183.1
175°	178.8	179.1	179.9	179.9	179.9	180.2	179.9	179.5
177.5°	177.0	177.4	177.7	177.7	177.4	177.7	177.0	177.0
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3

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