

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: P334646

Luminaire Tested: **S123IP-S585U940-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334646
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-S585U940-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 585 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1891.3 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

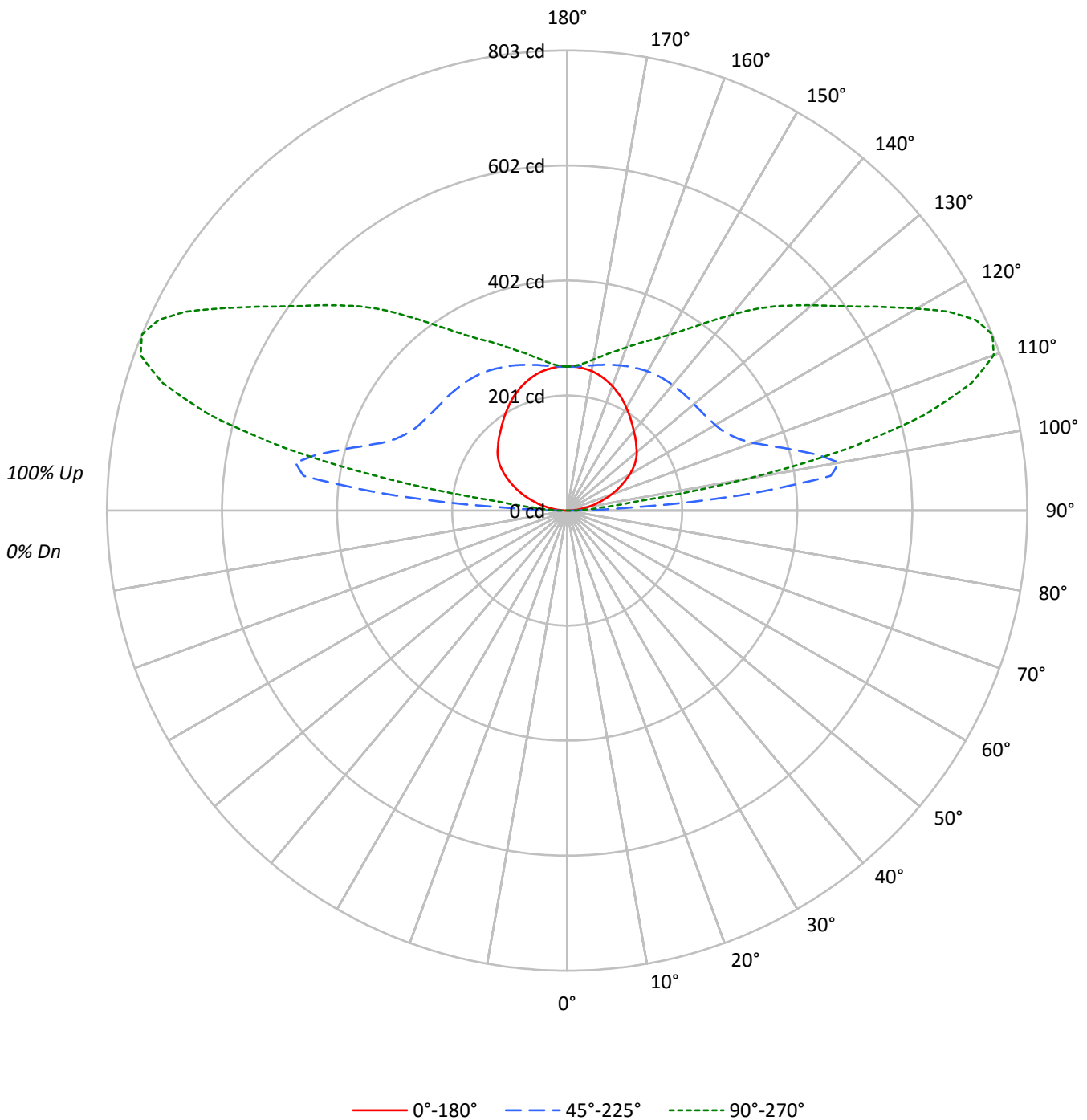
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1.4	0.1
90°-100°	136.3	7.2
100°-110°	399.2	21.1
110°-120°	389.8	20.6
120°-130°	310.4	16.4
130°-140°	244.9	12.9
140°-150°	182.7	9.7
150°-160°	127.4	6.7
160°-170°	74.8	4.0
170°-180°	24.3	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.4	0.1
90°-120°	925.3	48.9
90°-150°	1663.4	87.9
90°-180°	1890.0	99.9
0°-180°	1891.3	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	6	13	14	15	1
95°	17	56	302	88	59	18
105°	59	87	409	715	647	63
115°	104	130	313	686	787	103
125°	145	171	292	529	620	129
135°	170	203	288	436	503	131
145°	194	222	284	357	393	121
155°	220	238	275	313	326	101
165°	241	247	264	280	284	68
175°	251	251	253	256	256	24
180°	251	251	251	251	251	



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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°	1.0	2.0	3.1	4.6	5.6	6.6	8.1	9.7	11.2	12.7	12.2
92.5°	7.6	11.2	16.3	20.9	25.9	35.1	51.4	78.3	104.8	94.6	70.7
95°	17.3	18.8	24.4	33.1	46.3	66.1	109.4	185.1	268.5	301.6	244.6
97.5°	27.5	28.0	32.6	40.2	53.4	75.3	118.0	206.0	346.4	463.9	479.6
100°	37.6	38.1	41.7	48.8	61.0	80.9	116.5	191.7	325.5	481.7	581.8
102.5°	48.3	49.3	52.4	59.0	69.7	87.5	118.5	179.5	295.0	448.6	586.9
105°	59.0	60.5	63.6	69.7	79.3	95.1	122.6	175.0	271.1	408.9	554.9
107.5°	70.2	71.7	74.8	80.9	90.0	104.8	129.2	173.9	253.8	373.8	509.1
110°	82.4	83.9	86.5	92.1	100.7	114.9	137.8	176.5	244.6	344.8	466.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	93.6	95.1	97.7	103.2	111.9	125.6	146.5	181.6	239.6	325.5	429.3
115°	104.3	106.3	109.4	114.4	123.1	136.8	156.1	187.2	239.0	312.8	400.8
117.5°	114.9	117.5	120.0	124.6	134.3	147.0	166.3	194.3	239.6	304.1	382.0
120°	126.1	127.7	130.2	135.3	145.0	157.7	176.0	202.4	241.6	298.6	367.7
122.5°	135.8	137.3	139.9	145.5	154.6	168.3	186.2	210.1	245.1	295.0	356.0
125°	145.0	146.0	149.0	154.6	164.3	178.0	195.8	218.2	248.7	291.9	346.4
127.5°	152.1	153.6	157.2	162.8	173.4	187.2	204.5	224.8	252.8	290.4	337.2
130°	158.7	160.2	164.8	170.9	181.6	195.3	212.1	231.4	256.8	288.9	330.1
132.5°	163.8	165.8	170.9	178.5	189.2	202.4	218.7	237.5	259.9	288.4	323.5
135°	169.9	171.9	177.5	185.1	195.8	209.5	225.3	242.6	263.0	287.9	317.9
137.5°	175.5	177.5	183.1	191.2	201.9	214.6	229.9	246.7	265.0	286.9	312.8
140°	181.1	183.6	188.7	196.8	207.0	219.7	234.5	249.7	267.0	286.3	308.2
142.5°	187.2	189.2	194.8	201.9	212.1	223.8	238.0	252.8	268.5	285.3	304.1
145°	193.8	195.3	199.9	207.5	216.2	227.9	241.1	254.8	269.1	284.3	300.6
147.5°	200.4	201.4	206.0	212.6	221.2	231.4	243.6	256.3	269.1	282.8	297.0
150°	207.0	207.5	211.6	218.2	225.3	234.5	246.2	256.8	269.1	280.8	293.5
152.5°	213.6	213.6	217.7	223.3	229.4	238.0	247.7	257.9	267.5	278.2	289.4
155°	220.2	220.2	223.3	228.4	234.0	241.1	249.7	257.9	266.5	275.2	285.3
157.5°	225.3	225.8	228.4	232.9	238.0	243.6	250.7	258.4	265.0	272.6	280.8
160°	231.4	231.4	233.5	237.5	241.1	246.2	252.3	258.4	264.0	269.6	276.2
162.5°	236.0	236.0	237.5	240.6	243.6	247.7	252.8	257.9	261.9	266.5	271.6
165°	240.6	240.1	241.1	243.6	245.7	249.2	253.3	256.8	259.9	263.5	267.5
167.5°	244.1	243.6	244.1	246.2	247.7	250.2	253.3	256.3	257.9	260.4	263.5
170°	247.2	246.2	246.7	248.2	249.2	250.2	252.8	254.8	255.8	257.4	259.9
172.5°	249.2	248.7	248.7	249.7	250.2	250.7	252.8	254.3	254.3	254.8	256.3
175°	250.7	250.2	249.7	250.7	250.7	251.3	252.3	253.3	252.8	252.8	253.8
177.5°	251.8	251.3	250.7	251.3	251.3	251.3	251.8	252.8	251.8	251.3	251.8
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



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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°	12.7	13.2	13.7	14.7	14.2	14.7	15.3	14.7
92.5°	50.4	39.2	34.1	30.5	29.5	27.5	28.0	27.0
95°	183.1	124.1	97.1	78.8	69.2	64.6	61.0	59.0
97.5°	420.6	317.4	250.2	192.3	158.2	138.9	126.6	121.0
100°	599.6	558.5	498.9	426.7	375.4	338.2	318.4	318.9
102.5°	659.2	667.8	639.3	600.2	563.0	535.6	519.8	505.0
105°	661.2	712.1	721.7	708.5	685.1	665.8	649.5	647.0
107.5°	630.7	710.5	750.2	763.9	760.9	751.7	745.1	739.5
110°	582.9	676.4	740.5	776.1	790.4	794.4	793.4	792.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	535.6	631.7	705.4	753.8	782.7	797.5	802.6	803.1
115°	494.9	583.4	658.1	713.6	751.7	774.1	784.3	786.8
117.5°	463.3	541.7	610.3	667.8	707.5	732.4	747.7	751.2
120°	439.4	508.1	569.1	620.5	660.7	689.2	701.4	704.4
122.5°	420.6	481.1	536.6	583.4	618.0	642.9	656.6	660.7
125°	404.3	459.8	508.6	549.3	581.8	604.2	616.9	620.5
127.5°	389.6	439.9	484.7	522.3	551.8	571.2	582.9	585.9
130°	375.9	421.6	462.8	497.4	524.4	542.7	553.4	557.4
132.5°	363.1	404.3	442.0	474.5	499.5	517.8	526.9	529.5
135°	352.0	388.1	421.1	450.1	475.0	490.3	499.5	503.0
137.5°	341.3	371.8	401.3	427.2	448.6	464.4	472.0	475.0
140°	332.1	358.1	382.5	404.3	423.7	437.9	446.0	445.5
142.5°	323.5	344.8	365.2	383.5	399.3	411.5	418.6	418.1
145°	316.9	333.6	349.9	364.7	377.4	388.1	392.1	393.2
147.5°	311.3	325.0	338.7	349.4	359.6	367.2	371.3	371.8
150°	305.2	316.9	327.5	337.2	344.8	350.4	353.5	353.5
152.5°	299.6	309.2	318.4	326.0	331.6	336.7	338.2	338.2
155°	294.0	302.1	309.7	315.8	320.4	324.5	325.5	326.0
157.5°	287.9	295.0	301.1	306.2	310.3	313.3	314.3	314.3
160°	282.8	288.4	293.5	297.0	300.6	303.6	303.6	303.1
162.5°	276.7	281.3	285.8	288.9	290.9	293.5	293.5	293.0
165°	271.6	274.6	278.2	280.8	282.8	284.8	284.3	284.3
167.5°	267.0	269.6	271.6	273.6	274.6	276.2	275.7	275.7
170°	262.4	264.0	266.0	267.0	267.5	268.5	268.0	268.0
172.5°	258.4	259.4	260.9	261.4	261.4	262.4	261.4	260.9
175°	254.8	255.3	256.3	256.3	256.3	256.8	256.3	255.8
177.5°	252.3	252.8	253.3	253.3	252.8	253.3	252.3	252.3
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

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