

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: P334645

Luminaire Tested: **S123IP-S365U940-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334645
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-S365U940-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 365 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

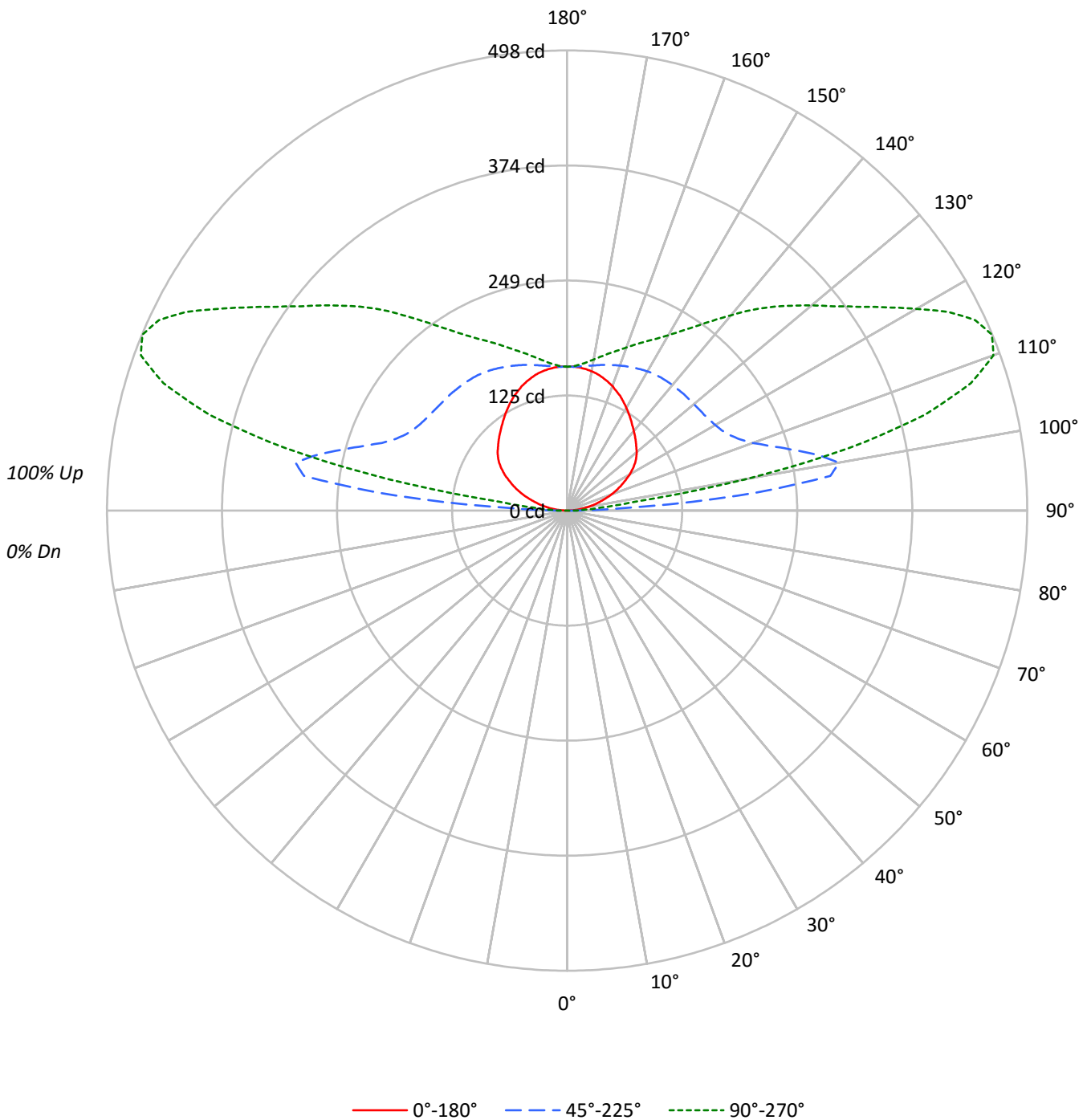
Lumens per Lamp: N/A
Luminaire Lumens: 1171.8 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

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°	0.9	0.1
90°-100°	84.5	7.2
100°-110°	247.3	21.1
110°-120°	241.5	20.6
120°-130°	192.3	16.4
130°-140°	151.7	12.9
140°-150°	113.2	9.7
150°-160°	78.9	6.7
160°-170°	46.4	4.0
170°-180°	15.1	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	0.9	0.1
90°-120°	573.3	48.9
90°-150°	1030.6	87.9
90°-180°	1171.0	99.9
0°-180°	1171.8	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	8	9	9	1
95°	11	35	187	54	37	11
105°	37	54	253	443	401	39
115°	65	81	194	425	488	64
125°	90	106	181	328	384	80
135°	105	126	178	270	312	81
145°	120	138	176	221	244	75
155°	136	147	170	194	202	63
165°	149	153	163	173	176	42
175°	155	156	157	159	158	15
180°	156	156	156	156	156	



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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°	0.6	1.3	1.9	2.8	3.5	4.1	5.0	6.0	6.9	7.9	7.6
92.5°	4.7	6.9	10.1	12.9	16.1	21.7	31.8	48.5	64.9	58.6	43.8
95°	10.7	11.7	15.1	20.5	28.7	41.0	67.7	114.7	166.4	186.9	151.6
97.5°	17.0	17.3	20.2	24.9	33.1	46.6	73.1	127.6	214.6	287.4	297.2
100°	23.3	23.6	25.8	30.3	37.8	50.1	72.2	118.8	201.7	298.4	360.5
102.5°	29.9	30.6	32.5	36.6	43.2	54.2	73.4	111.2	182.8	277.9	363.6
105°	36.6	37.5	39.4	43.2	49.2	58.9	75.9	108.4	168.0	253.4	343.8
107.5°	43.5	44.4	46.3	50.1	55.8	64.9	80.0	107.8	157.2	231.6	315.4
110°	51.0	52.0	53.6	57.0	62.4	71.2	85.4	109.3	151.6	213.6	289.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	58.0	58.9	60.5	64.0	69.3	77.8	90.8	112.5	148.4	201.7	266.0
115°	64.6	65.9	67.7	70.9	76.3	84.8	96.7	116.0	148.1	193.8	248.3
117.5°	71.2	72.8	74.4	77.2	83.2	91.1	103.0	120.4	148.4	188.4	236.7
120°	78.1	79.1	80.7	83.8	89.8	97.7	109.0	125.4	149.7	185.0	227.8
122.5°	84.1	85.1	86.7	90.1	95.8	104.3	115.3	130.1	151.9	182.8	220.6
125°	89.8	90.4	92.3	95.8	101.8	110.3	121.3	135.2	154.1	180.9	214.6
127.5°	94.2	95.2	97.4	100.8	107.5	116.0	126.7	139.3	156.6	179.9	208.9
130°	98.3	99.3	102.1	105.9	112.5	121.0	131.4	143.4	159.1	179.0	204.5
132.5°	101.5	102.7	105.9	110.6	117.2	125.4	135.5	147.2	161.0	178.7	200.4
135°	105.2	106.5	110.0	114.7	121.3	129.8	139.6	150.3	162.9	178.4	196.9
137.5°	108.7	110.0	113.4	118.5	125.1	133.0	142.4	152.8	164.2	177.7	193.8
140°	112.2	113.8	116.9	121.9	128.3	136.1	145.3	154.7	165.4	177.4	191.0
142.5°	116.0	117.2	120.7	125.1	131.4	138.6	147.5	156.6	166.4	176.8	188.4
145°	120.1	121.0	123.8	128.6	133.9	141.2	149.4	157.9	166.7	176.1	186.2
147.5°	124.2	124.8	127.6	131.7	137.1	143.4	150.9	158.8	166.7	175.2	184.0
150°	128.3	128.6	131.1	135.2	139.6	145.3	152.5	159.1	166.7	173.9	181.8
152.5°	132.3	132.3	134.9	138.3	142.1	147.5	153.5	159.8	165.7	172.4	179.3
155°	136.4	136.4	138.3	141.5	145.0	149.4	154.7	159.8	165.1	170.5	176.8
157.5°	139.6	139.9	141.5	144.3	147.5	150.9	155.4	160.1	164.2	168.9	173.9
160°	143.4	143.4	144.6	147.2	149.4	152.5	156.3	160.1	163.5	167.0	171.1
162.5°	146.2	146.2	147.2	149.0	150.9	153.5	156.6	159.8	162.3	165.1	168.3
165°	149.0	148.7	149.4	150.9	152.2	154.4	156.9	159.1	161.0	163.2	165.7
167.5°	151.3	150.9	151.3	152.5	153.5	155.0	156.9	158.8	159.8	161.3	163.2
170°	153.1	152.5	152.8	153.8	154.4	155.0	156.6	157.9	158.5	159.4	161.0
172.5°	154.4	154.1	154.1	154.7	155.0	155.4	156.6	157.6	157.6	157.9	158.8
175°	155.4	155.0	154.7	155.4	155.4	155.7	156.3	156.9	156.6	156.6	157.2
177.5°	156.0	155.7	155.4	155.7	155.7	155.7	156.0	156.6	156.0	155.7	156.0
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



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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°	7.9	8.2	8.5	9.1	8.8	9.1	9.5	9.1
92.5°	31.2	24.3	21.1	18.9	18.3	17.0	17.3	16.7
95°	113.4	76.9	60.2	48.8	42.9	40.0	37.8	36.6
97.5°	260.6	196.6	155.0	119.1	98.0	86.0	78.5	75.0
100°	371.5	346.0	309.1	264.4	232.6	209.6	197.3	197.6
102.5°	408.4	413.7	396.1	371.8	348.8	331.8	322.0	312.9
105°	409.6	441.2	447.1	439.0	424.5	412.5	402.4	400.8
107.5°	390.7	440.2	464.8	473.3	471.4	465.7	461.6	458.2
110°	361.1	419.1	458.8	480.9	489.7	492.2	491.6	490.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	331.8	391.4	437.1	467.0	485.0	494.1	497.2	497.6
115°	306.6	361.4	407.8	442.1	465.7	479.6	485.9	487.5
117.5°	287.1	335.6	378.1	413.7	438.3	453.8	463.2	465.4
120°	272.3	314.8	352.6	384.4	409.3	427.0	434.5	436.4
122.5°	260.6	298.1	332.4	361.4	382.9	398.3	406.8	409.3
125°	250.5	284.9	315.1	340.3	360.5	374.4	382.2	384.4
127.5°	241.4	272.6	300.3	323.6	341.9	353.9	361.1	363.0
130°	232.9	261.2	286.8	308.2	324.9	336.2	342.8	345.4
132.5°	225.0	250.5	273.8	294.0	309.4	320.8	326.5	328.0
135°	218.1	240.4	260.9	278.9	294.3	303.8	309.4	311.6
137.5°	211.4	230.3	248.6	264.7	277.9	287.7	292.4	294.3
140°	205.8	221.8	237.0	250.5	262.5	271.3	276.4	276.0
142.5°	200.4	213.6	226.3	237.6	247.4	254.9	259.3	259.0
145°	196.3	206.7	216.8	225.9	233.8	240.4	243.0	243.6
147.5°	192.8	201.4	209.9	216.5	222.8	227.5	230.0	230.3
150°	189.1	196.3	202.9	208.9	213.6	217.1	219.0	219.0
152.5°	185.6	191.6	197.3	202.0	205.5	208.6	209.6	209.6
155°	182.1	187.2	191.9	195.7	198.5	201.0	201.7	202.0
157.5°	178.4	182.8	186.5	189.7	192.2	194.1	194.7	194.7
160°	175.2	178.7	181.8	184.0	186.2	188.1	188.1	187.8
162.5°	171.4	174.3	177.1	179.0	180.2	181.8	181.8	181.5
165°	168.3	170.2	172.4	173.9	175.2	176.5	176.1	176.1
167.5°	165.4	167.0	168.3	169.5	170.2	171.1	170.8	170.8
170°	162.6	163.5	164.8	165.4	165.7	166.4	166.1	166.1
172.5°	160.1	160.7	161.7	162.0	162.0	162.6	162.0	161.7
175°	157.9	158.2	158.8	158.8	158.8	159.1	158.8	158.5
177.5°	156.3	156.6	156.9	156.9	156.6	156.9	156.3	156.3
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7

(END OF REPORT)