

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: LUMARK

Report Number: P459847

Luminaire Tested: **NAV-SA2A-AMB-U-SL4**

Issue Date: 1/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P459847  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/6/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SA2A-AMB-U-SL4  
Description: NAVION AREA AND ROADWAY LUMINAIRE  
(2) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2034 lumens  
Efficiency: N/A  
Efficacy: 48.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G2

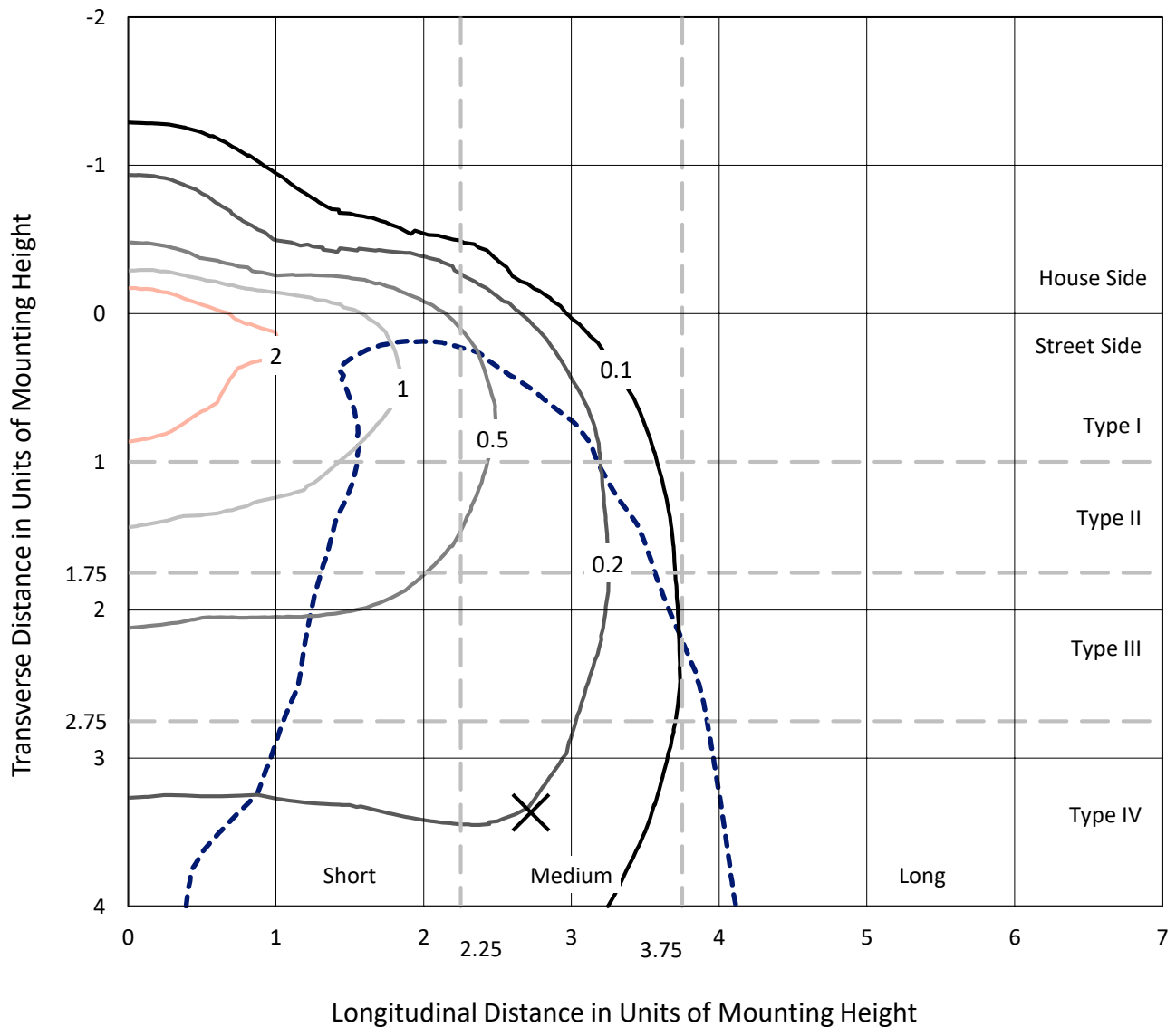
Input Watts (W): 41.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

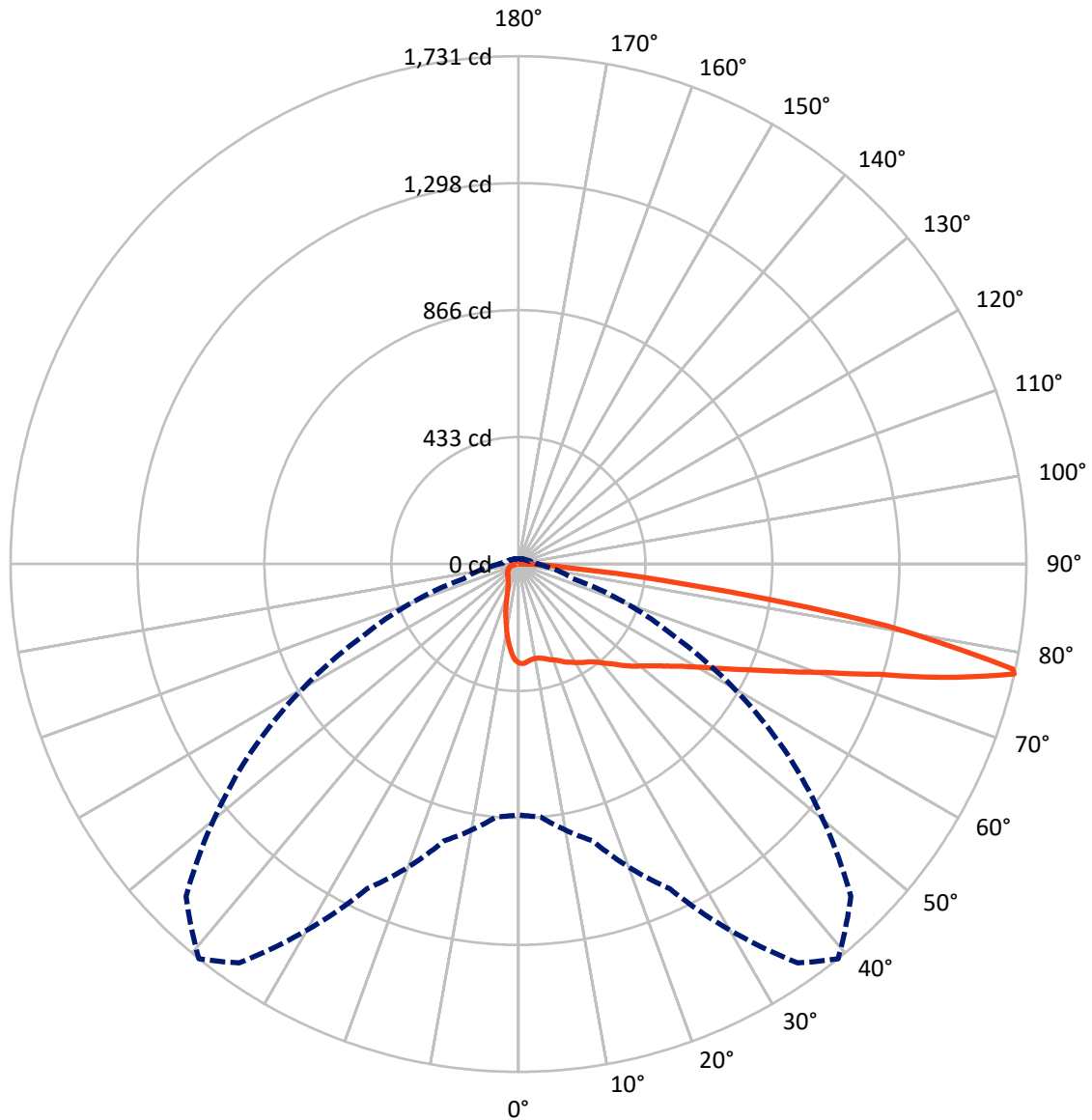


Based on 10 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 77-Deg Vertical



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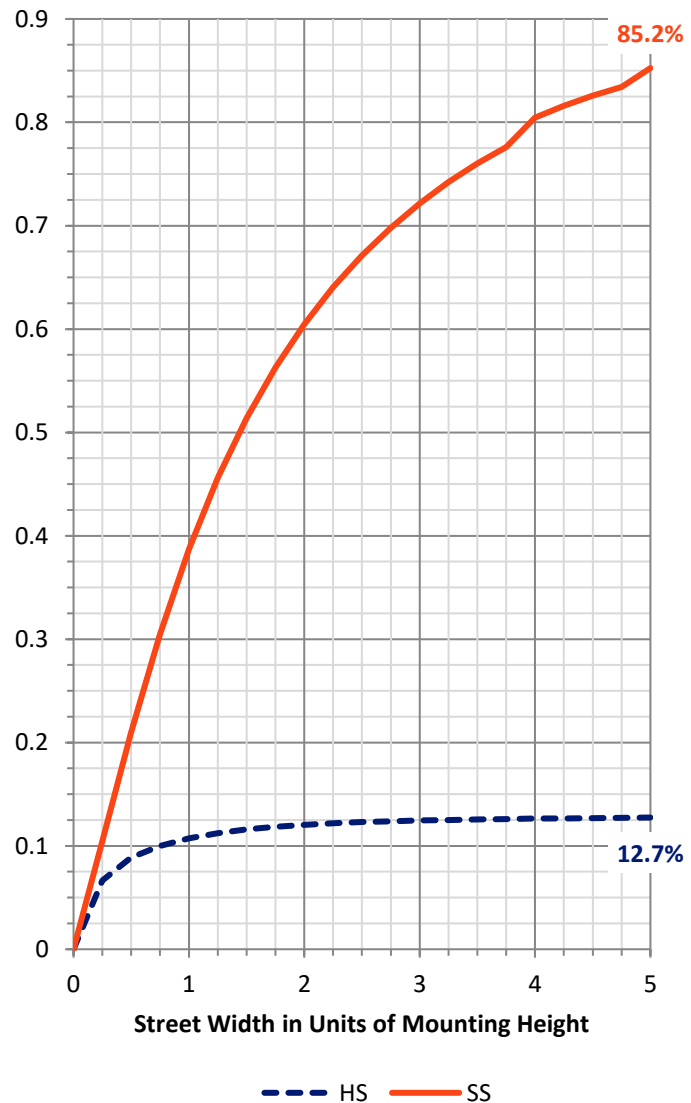
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	262.4	0.0	262.4
	% Fixture	12.9	0.0	12.9
<b>Street Side</b>	Lumens	1771.6	0.0	1771.6
	% Fixture	87.1	0.0	87.1
<b>Total</b>	Lumens	2034.0	0.0	2034.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.5	1.5
10°-20°	74.1	3.6
20°-30°	113.2	5.6
30°-40°	162.8	8.0
40°-50°	236.3	11.6
50°-60°	339.2	16.7
60°-70°	467.1	23.0
70°-80°	504.1	24.8
80°-90°	107.8	5.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2034.0	100.0
0°-180°	2034.0	100.0

**Coefficient of Utilization**



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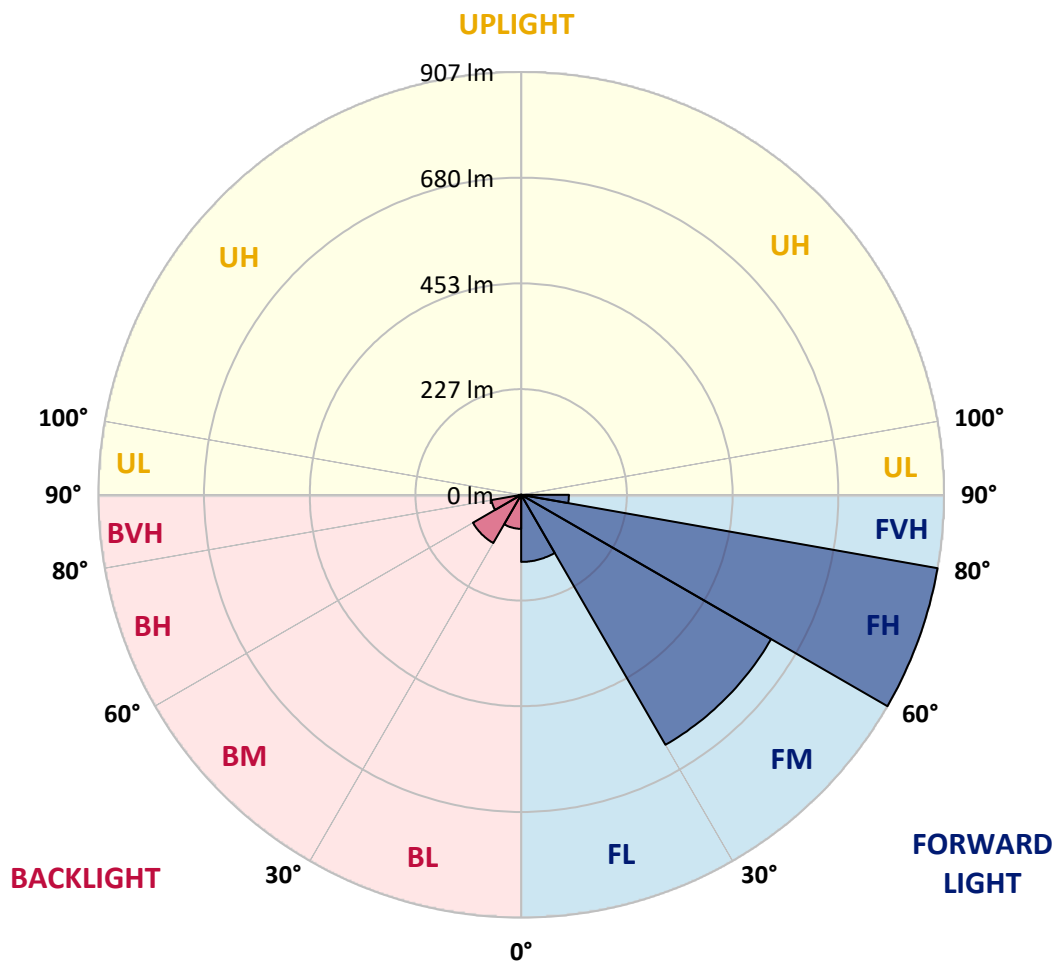
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	143.9	7.1			
FM	(30°-60°)	618.8	30.4			
FH	(60°-80°)	906.5	44.6			G1/1800
FVH	(80°-90°)	102.4	5.0			G2/225
BL	(0°-30°)	72.9	3.6	B0/110		
BM	(30°-60°)	119.4	5.9	B0/220		
BH	(60°-80°)	64.7	3.2	B0/110		G0/110
BVH	(80°-90°)	5.4	0.3			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0
2.5°	341.7	338.9	338.9	341.7	339.8	339.8	338.0	339.8	338.0	336.2	338.0
5°	337.1	335.3	334.4	337.1	335.3	333.4	335.3	334.4	333.4	329.8	329.8
7.5°	328.9	327.0	327.0	329.8	330.7	328.0	328.9	329.8	327.0	323.4	324.3
10°	321.6	320.6	322.5	326.1	328.0	326.1	328.0	327.0	323.4	319.7	318.8
12.5°	316.1	315.2	317.9	325.2	328.9	328.9	329.8	327.0	324.3	319.7	316.1
15°	312.4	312.4	317.9	327.0	332.5	334.4	335.3	333.4	327.0	320.6	316.1
17.5°	314.3	313.3	320.6	331.6	338.0	342.6	342.6	339.8	331.6	323.4	317.9
20°	318.8	317.0	326.1	339.8	348.1	349.0	350.8	345.3	337.1	328.0	321.6
22.5°	320.6	325.2	335.3	350.8	355.4	358.1	358.1	352.6	340.7	334.4	327.0
25°	335.3	336.2	348.1	361.8	366.3	370.0	368.2	356.3	346.2	342.6	336.2
27.5°	350.8	351.7	363.6	373.6	376.4	379.1	380.0	363.6	353.5	352.6	344.4
30°	364.5	368.2	380.0	387.3	387.3	390.1	389.2	374.5	363.6	365.4	357.2
32.5°	388.2	387.3	399.2	400.1	395.6	400.1	400.1	383.7	376.4	384.6	371.8
35°	408.3	412.0	417.5	412.9	406.5	410.2	412.0	396.5	392.8	409.3	395.6
37.5°	435.8	433.0	435.8	427.5	418.4	423.0	427.5	413.8	415.7	439.4	422.0
40°	456.8	452.2	454.0	443.1	433.9	443.1	447.6	434.8	443.1	481.4	460.4
42.5°	474.1	470.5	466.8	460.4	453.1	465.0	472.3	462.2	479.6	528.0	507.9
45°	486.0	483.3	477.8	476.9	477.8	492.4	501.5	493.3	517.1	586.5	560.9
47.5°	493.3	490.6	491.5	493.3	500.6	519.8	536.2	528.0	566.4	647.7	611.1
50°	503.4	498.8	499.7	515.2	526.2	546.3	572.8	569.1	619.4	712.5	666.0
52.5°	516.1	508.8	508.8	536.2	553.6	576.4	610.2	614.8	674.2	779.2	721.7
55°	537.2	528.0	521.6	559.1	589.2	613.9	653.2	673.3	733.6	848.7	772.8
57.5°	560.0	550.9	540.8	588.3	628.5	657.7	702.5	731.7	801.2	910.8	809.4
60°	595.6	579.2	569.1	625.8	683.3	713.5	768.3	805.7	872.4	967.4	842.3
62.5°	621.2	608.4	605.7	673.3	750.9	785.6	837.7	877.0	938.2	1022.2	870.6
65°	647.7	640.4	641.3	724.4	831.3	869.7	926.3	968.3	1023.1	1072.5	873.3
67.5°	685.1	677.8	693.4	786.5	924.5	974.7	1032.3	1068.8	1103.5	1080.7	824.0
70°	734.5	725.3	753.7	861.5	1040.5	1105.4	1171.1	1210.4	1142.8	1052.4	666.0
72.5°	785.6	779.2	825.8	968.3	1203.1	1286.2	1361.2	1339.2	1162.0	902.6	433.9
75°	847.8	849.6	924.5	1106.3	1462.6	1542.0	1605.1	1388.6	981.1	533.5	165.3
77°	855.1	865.1	976.6	1221.4	1659.9	1731.1	1602.3	1109.0	590.1	190.9	93.2
77.5°	824.9	834.0	964.7	1237.8	1683.6	1722.9	1552.1	1035.9	473.2	153.5	82.2
80°	614.8	605.7	748.2	1032.3	1352.9	1272.5	929.1	402.0	137.9	79.5	50.2
82.5°	243.0	259.4	349.9	508.8	661.4	581.0	348.1	175.4	83.1	42.9	21.0
85°	112.4	120.6	131.5	135.2	170.8	176.3	130.6	162.6	60.3	20.1	12.8
87.5°	82.2	85.9	96.8	85.9	83.1	78.6	95.9	177.2	30.1	11.9	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0	338.0
2.5°	335.3	332.5	333.4	332.5	330.7	328.9	327.0	325.2	326.1	326.1	323.4
5°	328.0	324.3	322.5	317.9	312.4	306.9	300.5	296.0	292.3	290.5	292.3
7.5°	320.6	316.1	312.4	301.5	292.3	276.8	266.7	253.0	251.2	249.4	247.6
10°	315.2	311.5	302.4	287.8	268.6	250.3	227.5	212.9	203.7	198.2	200.1
12.5°	311.5	306.9	292.3	269.5	244.8	217.4	191.8	172.7	161.7	154.4	152.6
15°	310.6	302.4	281.4	251.2	218.3	187.3	161.7	138.9	121.5	116.0	114.2
17.5°	310.6	299.6	271.3	232.0	193.7	159.0	130.6	109.6	95.0	89.5	87.7
20°	312.4	298.7	259.4	212.9	169.0	130.6	106.0	88.6	80.4	76.7	76.7
22.5°	315.2	297.8	246.7	191.8	145.3	109.6	87.7	77.6	74.0	71.3	71.3
25°	320.6	296.9	235.7	172.7	124.2	94.1	78.6	72.2	68.5	67.6	67.6
27.5°	328.0	297.8	224.7	154.4	105.1	83.1	72.2	68.5	66.7	65.8	65.8
30°	335.3	299.6	212.9	134.3	91.4	74.9	67.6	64.9	63.9	63.0	63.0
32.5°	343.5	301.5	199.1	117.8	81.3	68.5	63.9	62.1	62.1	61.2	60.3
35°	357.2	305.1	183.6	102.3	73.1	63.9	61.2	59.4	59.4	58.5	58.5
37.5°	376.4	309.7	168.1	91.4	67.6	60.3	57.6	57.6	56.6	56.6	55.7
40°	404.7	322.5	155.3	82.2	63.0	57.6	55.7	54.8	54.8	53.9	53.9
42.5°	436.7	338.0	143.4	75.8	60.3	54.8	53.0	53.0	53.0	52.1	51.2
45°	474.1	352.6	132.5	71.3	57.6	53.0	51.2	51.2	50.2	49.3	49.3
47.5°	514.3	370.9	125.2	68.5	56.6	52.1	50.2	48.4	48.4	47.5	47.5
50°	554.5	386.4	118.8	66.7	55.7	50.2	48.4	47.5	46.6	44.8	44.8
52.5°	592.9	402.9	116.9	64.9	53.9	49.3	46.6	45.7	44.8	42.9	42.9
55°	625.8	422.0	118.8	63.9	53.0	47.5	44.8	43.8	42.9	41.1	41.1
57.5°	649.5	432.1	119.7	63.9	52.1	44.8	42.0	42.9	41.1	40.2	40.2
60°	674.2	441.2	118.8	63.9	51.2	42.0	39.3	41.1	40.2	39.3	39.3
62.5°	690.6	437.6	114.2	63.9	50.2	40.2	37.5	40.2	41.1	39.3	40.2
65°	666.9	396.5	100.5	62.1	50.2	38.4	34.7	39.3	42.0	41.1	41.1
67.5°	581.0	299.6	84.0	58.5	48.4	37.5	32.0	35.6	39.3	38.4	39.3
70°	412.0	180.9	69.4	52.1	43.8	35.6	30.1	30.1	31.1	32.0	32.9
72.5°	213.8	98.7	56.6	45.7	38.4	32.0	27.4	25.6	25.6	25.6	26.5
75°	94.1	64.9	46.6	37.5	32.0	27.4	24.7	21.9	21.9	21.0	21.0
77°	65.8	51.2	38.4	31.1	26.5	22.8	21.9	19.2	19.2	18.3	18.3
77.5°	59.4	47.5	37.5	29.2	25.6	21.9	21.0	18.3	18.3	18.3	18.3
80°	40.2	37.5	28.3	21.9	20.1	17.4	16.4	15.5	14.6	14.6	14.6
82.5°	23.8	27.4	20.1	15.5	14.6	12.8	11.9	11.9	11.9	11.0	10.0
85°	14.6	20.1	12.8	10.0	10.0	8.2	8.2	7.3	7.3	6.4	6.4
87.5°	6.4	12.8	7.3	4.6	3.7	2.7	3.7	2.7	2.7	1.8	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)